RESIDENTIAL REAL ESTATE IN CANADA

RESIDENTIAL REAL ESTATE IN CANADA

BY

O. J. FIRESTONE

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TO MY WIFE

FOREWORD

DURING the last five years Central Mortgage and Housing Corporation has received many requests for information upon housing supply and demand in Canada. Interest has also been expressed in the economic impact of housing expenditures on employment and income. Generally, there has been a lack of material in these fields. Therefore, in accordance with Section 25(a) of the National Housing Act, 1944, it was felt desirable to proceed with an investigation into housing conditions and the adequacy of existing housing accommodation in Canada.

At the time of the formation of Central Mortgage and Housing Corporation we found a deficiency in statistics in the housing field. During its first two or three years of operation Central Mortgage and Housing Corporation directed its efforts towards the establishment of current statistical material in order to meet the needs of day to day operations. *Housing in Canada,* a quarterly publication, contains a comprehensive series of information about housing. In the mortgage field progress has been made by the annual publication of the Corporation entitled *Mortgage Lending in Canada.*

This book is the first effort by the Corporation to provide historical background material concerning our housing supply and needs. The material in this book has been organized in a fashion not only to relate what has taken place in the past, but also to provide a basis upon which future statistics and information may be built.

This book is basically a technical report, but to facilitate its use by different types of readers, it has been divided into parts which seem appropriate for such a purpose. The first part deals with the summary of the study. This is followed by an appraisal of the economic analysis of housing and related information. Then comes tabular material, followed by an appreciation or an assessment of the availability of data and the validity of the estimates. The final part of the book is devoted to supplementary data dealing with housing statistics before 1921, as well as the operations of governmental assistance to house builders.

A word about the author. Dr. O. J. Firestone has had wide experience in the field of economics and statistics of housing. He was associated with the Advisory Committee on Reconstruction

and worked with the Sub-Committee on Housing and Community Planning. Upon the formation of Central Mortgage and Housing Corporation, Dr. Firestone became the economic advisor of the Corporation and organized and developed the Economic Research branch of the Corporation. The content of this book is based not only upon Dr. Firestone's comprehensive understanding of the problem as a whole, but also upon the many requests for information which Dr. Firestone has received since being associated with Central Mortgage and Housing Corporation. We are grateful to the University of Toronto Press for undertaking the publication of this book.

Central Mortgage and Housing Corporation is happy to have been able to sponsor the publication of this volume. We feel that it will create a better understanding of our housing conditions and requirements.

D. B. MANSUR

President
Central Mortgage and Housing Corporation

Ottawa, January 1951

INTRODUCTION

HAS Canada enough homes for her people? This is a question that has occupied many generations of Canadians. It has not been easy to answer the question. What appeared to be appropriate at one time was outdated at another time, and what seemed to be reasonable to one group was unsatisfactory to another group. Lack of continuing quantitative and qualitative evidence has been one of the difficulties of linking the knowledge of one generation with that of another generation, and of providing Canadian society as a whole with the background information and systematic analysis it has the right to expect as its social sciences progress.

Canadians in 1951 face many vital questions of how to use human and natural resources most effectively for both civilian and defence purposes. These questions call for important decisions that may affect the life of every Canadian. In a future period the situation may be different again. The problem may then be how to ensure sufficient demand to make full use of Canadian resources and lessen the possibility of mass unemployment and low incomes. But whatever situation may develop, more adequate insight into what is involved and greater appreciation of what may be ahead should aid in the formulation of intelligent decisions. It is with this in mind that this investigation about Canadians and their homes has been undertaken.

The book is a study of the supply of and demand for housing in Canada from Confederation to the present. This 83-year period has been divided into two parts: 1867 to 1921 and 1921 to 1949. It is on the more recent period that analysis is concentrated and annual and monthly data are provided. To extend the perspective of housing developments and population growth beyond the last three decades, which with a great depression and a World War represent a distinct phase in Canadian economic development, historical data mainly in the form of decade totals are provided for the years 1867 to 1921.

The purpose of this book is two-fold: first, to provide a framework for past, present and forward-looking housing and population analysis; secondly, to make a progress report on empirical research carried out up to date and to assess its value and meaning. One of the salient features of a progress report is that it answers some questions—frequently in a preliminary and tentative fashion—but

also raises many additional questions which remain unanswered. Knowledge of economic and social behaviour is never complete. Thus this book is designed to provide information to the inquiring mind, invite improvement from the critical mind, and stimulate further thought and investigation on the part of the searching mind.

To meet the purposes set out above this book provides some two dozen new statistical series related to housing and population, including estimates of the housing stock and its gross and net changes, for urban, rural non-farm and farm areas; the number of new dwellings built by areas and type of structure; the volume and value of publicly and privately initiated house building; the number of destroyed, demolished, and abandoned dwellings; the changes in the occupancy of the housing stock, including units occupied by their owners, rented and vacant; the value of new residential construction work put in place; major improvements and alterations, repairs and maintenance; gross residential capital formation, residential capital consumption, and new residential capital formation in current prices and in real terms; value of the housing stock and of total residential real estate in current prices and in real terms; number and value of transfers of existing real estate; net family formation, including allowance for changes in the birth rate; non-family households occupying separate dwellings, families without houses of their own, and many other related series and cross-section data for selected years. Information is provided in national and provincial terms and for Canada's major cities. Finally, to set out an analytical and statistical framework for a systematic appraisal of housing progress and conditions a section dealing with concepts, definition and measurements has been added. In the setting of two schedules the latter attempts to outline the basic changes that affect the size of the housing stock in a country, and to relate the economic impact of activity in the housing field to total economic activity as measured within the framework of the national accounts.

In the preparation of this book I have had the able assistance of several very competent people, Mrs. J. M. Nickson in the statistical field, Mr. R. T. Adamson and Mr. J. B. Thwaites in the editing of the study, and Miss Eleanor Harman in seeing the book through the press. Other contributions on specific phases of investigations are acknowledged in the text.

O. J. FIRESTONE

Ottawa, January 1951

CONTENTS

FOREWORD BY D. B. MANSUR vii

INTRODUCTION ix

TABLES xiii

CHARTS xxi

SCHEDULES xxii

Part I. Summary of Analysis 1

Part II. Concept and Analysis 29
1. Concept and Method of Measurement . . 31
2. Housing Stock, Composition and Changes . 44
3. Investment in Residential Real Estate . . 77
4. Financing of the Housing Program . . . 106
5. Transfers of Existing Real Estate 132
6. Housing in Regions and Localities 160
7. Housing and Population 195
8. Housing and the National Economy . . . 237

Part III. Tabular Material, 1921-1949 265
9. Estimates 267
10. Basic Data 290

Part IV. Methodology and Testing 345
11. Review of Available Data 347
12. Sources and Methods of Estimates 358
13. Tests of Estimates 456

Part V. Supplementary Data 475
Appendix A. Housing Statistics, 1867-1921 477
Appendix B. National Housing Legislation—Operations, 1918-1949 480

INDEX 507

TABLES

Tables in Text and Statistical Sections[1]

1. Total and Occupied Housing Stock, Canada, 1921-1949 . . 45
2. Age Distribution of Housing Stock, Canada, 1949 47
3. Average Age of Housing Stock, by Area, Canada, 1921-1949 48
4. Location of Occupied Housing Stock, Canada, 1949 . . . 50
5. Net Annual Change in Occupancy of Dwellings, Canada, 1922-1949 54
6. Dwellings Completed, Destroyed, Demolished and Abandoned, Canada, 1921-1949 57
7. Dwellings in New Structures Started, by Area, Canada, 1948 and 1949 61
8. Stages of Construction for Dwellings in New Structures, Canada, 1947-1949 62
9. Dwellings Completed, by Type of Structure, Canada, 1921-1949 66
10. Housing Construction in Canada, United Kingdom and United States, 1921-1949 73
11. Population and Housing Construction, Canada, United Kingdom and United States, 1945-1949 74
12. Value of Residential Capital and Residential Real Estate, Canada, 1921-1949 78
13. Value of Residential Real Estate in Use and Available, Canada, Selected Years, 1929-1949 80
14. Value of Dwellings Completed and Residential Construction Work Carried Out, Canada, 1921-1949 84
15. Value of Dwellings Completed, by Location and Type of Structure, Canada, Selected Years, 1929-1949 88
16. Gross and Net Residential Capital Formation, Canada, 1921-1949 93
17. Gross and Net Additions to Residential Real Estate, Canada, 1921-1949 97
18. Average Value of Existing Dwellings, Including Land, and Price Indices of Residential Real Estate, Canada, 1921-1949 99
19. Dwellings Started, by Source of Initiation and Financing, Canada, 1947-1949 112

[1]This includes all tables, except those shown in Section 12.

20. Expenditures on New Housing, by Source of Funds, Canada, 1949 114
21. Housing Stock by Type of Ownership and Occupancy, Canada, 1949 115
22. Dwellings Completed, With and Without Public Assistance, Canada, 1921-1949 125
23. Expenditures on New Housing Construction by Federal Government, Private Persons with Federal Government Loan and Guarantee Assistance, and Without Federal Government Assistance, Canada, 1935-1949 126
24. Estimated Number and Value of Real Estate Transfers, Canada, 1947-1949 138
25. Number and Value of Transfers of Real Estate, Ontario and Quebec, 1921-1949 142
26. Number and Value of Real Estate Transfers and Population, Ontario and Greater Toronto, Selected Years, 1921-1949 . 144
27. Per Thousand Population Comparison of the Number and Value of Real Estate Transfers with Dwellings Completed and Business Construction, Ontario, Quebec and British Columbia, 1949 149
28. Number and Value of Real Estate Transfers, by Type of Area and on a Per Thousand Population Basis, Ontario, 1931 and 1941 150
29. Actual Sales of Real Estate Registered, by Type of Property, Carleton and Hull Registry Divisions, Monthly, 1947-1948 152
30. Actual Sales of Real Estate Registered, by Type of Structure, Carleton and Hull Registry Divisions, 1947-1948 . 154
31. Actual Sales of Real Estate Registered, by Size of Transaction, Carleton and Hull Registry Divisions, 1947-1948 155
32. Number and Average Sales Price of Real Estate Sold, by Type of Property, Carleton and Hull Registry Divisions, 1947-1948 156
33. Type of Instrument Accompanying Transfers of Real Estate Registered, Carleton and Hull Registry Divisions, 1947-1948 157
34. Number of Occupied Dwellings, by Region, Canada, Selected Years, 1921-1949 161
35. Average Annual Number of Dwellings Completed, by Region, Canada, 1921-1949 163
36. Population by Province, Canada, Selected Years, 1921-1949 164
37. Dwellings Completed Per Thousand Population, by Province, Canada, 1948 and 1949 170
38. Population and Dwellings Completed, by City and Area, Canada, 1949 173

39. Number of Dwellings Completed, Single and Multiple Type, and Built for Ownership, by Province, Canada, 1949 . . 174
40. Dwellings Completed and Investment in Manufacturing Per Thousand Population, by Province, Canada, 1947-1949 . 177
41. Dwellings Completed and Investment in Manufacturing, Per Thousand Population, for 12 Metropolitan Centres, Canada, 1947-1949 181
42. Occupied Dwellings, Population, Industrial Employment, Car Loadings and Personal Income Per Capita in Constant (1949) Dollars, Canada, 1929 and 1949 184
43. Persons Per Dwelling, by Region and Area, Canada, Selected Years, 1921-1949 189
44. Number of Families Without Homes of Their Own, by Region, Canada, 1947 and 1948 191
45. Population and Stock of Dwellings, Canada, 1921-1949 . . 198
46. Families and Dwellings, Canada, 1921-1949 201
47. Indicators of Pressure on the Housing Market, Canada, 1921-1949 205
48. Number and Per Cent of Families Occupying Newly Built Dwellings, Classified by Type of Accommodation Vacated, Five Cities Sampled, Canada, 1947 and 1949 211
49. Number of Self-Contained Dwellings Vacated as a Result of a Chain of Moves Started by Families Moving into Newly Built Dwellings, Five Cities Sampled, Canada, 1947 and 1949 213
50. Principal Reasons for Seeking New Housing Accommodation, Five Cities Sampled, Canada, 1947 and 1949 214
51. Rent, Consumer Expenditures and Personal Disposable Income, Canada, Selected Years, 1928-1949 217
52. Average Cost and Size of Dwelling, Average Income and Age of Owner and Size of his Family, by Income Group, Survey of 14,953 Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 224
53. Number and Distribution of House Purchasers, by Occupation and Income, Survey of 14,953 Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 228
54. Average Cost and Size of Dwelling, Average Income and Age of Owner and Size of His Family, by Occupation of Owner, Survey of 14,953 Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 . . 230
55. Average Cost and Size of Dwelling, Average Income and Age of Owner and Size of His Family, by Estimated Cost of Dwelling, Survey of 14,953 Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 231

56. Purchase Price, Mortgage Loans and Down Payments, Sample Survey of 1,406 Single Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 233
57. Income and Personal Savings Used as Down Payment, Sample Survey of 1,406 Single Dwellings Built for Owner Occupancy Under the National Housing Act, 1944, Canada, 1949 235
58. Change in the Volume of Residential Construction on a Per Thousand Population Basis, Canada, 1929, 1948 and 1949 239
59. Population and Selected Components of Gross National Expenditure, Canada, 1929, 1948 and 1949 241
60. Change in Output per Man Year, Canada, 1929, 1948 and 1949 245
61. New Construction, Major Improvements and Alterations and Repair and Maintenance, by Type of Enterprise, Canada, 1948 and 1949 249
62. Role of New Residential Construction and Major Improvements and Alterations in Investment, Canada, 1948 and 1949 250
63. Role of New Residential Construction, Major Improvements and Alterations, and Repair and Maintenance in the National Economy, Canada, 1948 and 1949 251
64. Residential Construction as a Proportion of Gross National Expenditure, Canada, 1926-1949 252
65. Components of Gross National Expenditure, Including Segments Comprising Residential Construction, Canada, 1948 and 1949 253
66. Income Effect of New House Building, Canada, 1948 and 1949 259
67. Dwellings Completed, by Type of Structure and Area, Canada, 1921-1949 267
68. Dwellings Completed, by Type of Dwelling and Area, Canada, 1921-1949 268
69. Changes in the Housing Stock, by Area, Canada, 1921-1949 269
70. Changes in the Housing Stock, by Tenure, Canada, 1921-1949 272
71. Dwellings Completed, Permanent and Temporary, Canada, 1941-1949 275
72. Value of Dwellings Completed, by Type of Structure and Area, Canada, 1921-1949 276
73. Value of Dwellings Completed, by Type of Dwelling and Area, Canada, 1921-1949 277
74. Value of New Residential Construction Work Carried Out, Permanent and Temporary Dwellings, Canada, 1941-1949 278
75. Value of New Residential Construction Work Carried Out, by Type of Dwelling and Area, Canada, 1921-1949 279

76. Value of All Residential Construction Work Carried Out, New Structures and Conversions, Major Improvements and Alterations, and Repairs and Maintenance, Canada, 1921-1949 280
77. Gross Residential Capital Formation and Gross Additions to Residential Real Estate, in Current and Constant Dollars, Canada, 1921-1949 281
78. Residential Capital Consumption and Deductions from Residential Real Estate, in Current and Constant Dollars, Canada, 1921-1949 283
79. Net Residential Capital Formation, Net Value of Land Added to Residential Real Estate, and Net Changes in Residential Real Estate, in Current and Constant Dollars, Canada, 1921-1949 284
80. Value of Residential Capital and Residential Real Estate, by Area, in Current Dollars, Canada, 1921-1949 285
81. Value of Residential Capital and Residential Real Estate, by Area, in Constant Dollars, Canada, 1921-1949 286
82. Population Aggregates and Changes, Canada, 1921-1949 . 287
83. Net Family Formation, Canada, 1921-1949 288
84. Families, Non-Family Households and Stock of Dwellings, Canada, 1921-1949 289
85. Expenditures on New Housing, by Source of Funds and Individual Sectors, Canada, 1948-1949 290
86. Dwellings Completed with Public Assistance, by Type of Assistance, Canada, 1935-1949 292
87. Expenditures on New Housing Construction with Public Assistance, by Type of Assistance, Canada, 1935-1949 . 294
88. Value of Real Estate Transfers, Ontario, by Month, 1928-1949 296
89. Number and Value of Real Estate Transfers, Greater Toronto, by Month, 1921-1949 298
90. Number and Value of Real Estate Transfers, Selected Provinces, by Month, Canada, 1949 303
91. Number and Value of Real Estate Transfers and Population, by Registry Division and Type of Area, Ontario, 1941 . 304
92. Number and Value of Real Estate Transfers, by Type of Area, Ontario, 1928-1949 306
93. Selected Indicators of National Economic Activity, Canada, 1921-1949 307
94. Contracts Awarded, Residential and Other Construction, Canada, by Month, 1919-1949 309
95. Building Permits Issued, Residential and Other Construction, 35 Cities, Canada, by Month, 1921-1949 315
96. Indices of Employment in Building, Highway and Railway Construction, Canada, by Month, 1921-1949 320

97. Percentages of Unemployment in the Building and Construction Trade Unions, Canada, by Month, 1921-1949 . 328
98. Railway Freight of Building Materials Loaded in Canada, by Month, 1921-1949 331
99. Series to be Tested and Series Serving as Test Material for Residential Construction, Canada, 1921-1949 461
100. Tests of Turning-Points of Fluctuations in Residential Construction as Estimated in this Report for Canada, 1921-1949 464
101. Tests of Amplitudes of Fluctuations in Residential Construction as Estimated in this Report for Canada, 1921-1949 470
102. Population, Stock of Dwellings and Annual Average Completions per Decade, Canada, Selected Years, 1867-1949 . 478
103. Number of Occupied Dwellings, by Region, Canada, Selected Years, 1867-1921 478
104. Average Annual Number of Dwellings Constructed per Decade, by Region, Canada, 1867-1921 479
105. Operations under The Canadian Farm Loan Act, 1927, Loans Approved and Expenditures for Residential Purposes, Canada, 1935-1949 482
106. Operations under The Dominion Housing Act, 1935, Gross and Net Loans Approved, Number of Dwellings Started and Completed, and Expenditures, Canada, 1935-1942 . 483
107. Operations under The Home Improvement Loans Guarantee Act, 1937, Loans Approved, Number of Conversions Completed and Conversion Expenditures, Canada, 1936-1940 484
108. Operations under The National Housing Act, 1938, Gross and Net Loans Approved, Number of Dwellings Started and Completed, and Expenditures, Canada, 1938-1947 . 486
109. Direct Housing Operations for War Workers and Veterans, by Wartime Housing Limited and Central Mortgage and Housing Corporation, Number of Dwellings Started and Completed, and Expenditures, Canada, 1941-1949 . . . 488
110. Construction Operations under The Veterans' Land Act, 1942, Number of Dwellings Started and Completed, and Expenditures, Canada, 1946-1949 489
111. Home Extension Guarantee Operations under The Appropriations Act, No. 2, 1942, Loans Approved, Conversions Constructed, and Expenditures, Canada, 1942-1944 . . 490
112. Operations under The Home Conversion Plan, Number of Conversions Completed and Expenditures, Canada, 1943-1946 491
113. Operations under The Farm Improvement Loans Act, 1944, Loans Approved for New Residential Construction and Improvement, and Expenditures, Canada, 1945-1949 . . 491

114. Construction Operations under The National Housing Act, 1944, Number of Dwellings Started and Completed, and Expenditures, Canada, 1945-1949 495
115. Lending Operations under The National Housing Act, 1944, Gross and Net Loans Approved and Expenditures, by Type of Loan, Canada, 1945-1949 496
116. Home Extension Loan Guarantee Operations under The National Housing Act, 1944, Loans Approved and Expenditures, Canada, 1946-1948 498
117. Rental Insurance Projects under The National Housing Act, 1944, Projects Approved, Number of Dwellings Started and Completed, and Expenditures, Canada, 1948 and 1949 499
118. Operations under The Emergency Shelter Regulations, Number of Conversions Started and Completed, and Expenditures, Canada, 1945-1949 500
119. Housing Operations of The Department of National Defence, Number of Dwellings Started and Completed, and Expenditures, Canada, 1946-1949 501
120. Direct Housing Operations by Federal Government Departments, Number of Dwellings Constructed and Expenditures, Canada, 1946-1949 502
121. Operations under The Double Depreciation Plan for Rental Housing Projects, Number of Dwellings Started and Completed and Expenditures, Canada, 1947-1950 502
122. Operations under The Double Depreciation Plan for Rental Housing, Projects Approved, Canada, 1947-1950 . . . 503

Tables on Source Material[1]

I. Available Data of Number and Value of Real Estate Transfers, Eight Provinces, Canada, 1947-1949 . . . 363
II. Purchases of Land, Used Buildings and Equipment by Selected Business Enterprises in Canada, 1947 . . . 364
III. Number and Amount of Mortgage Loans Approved on Existing Non-Farm Property by Lending Institutions, Canada, 1947-1949 365
IV. Number of Occupied Dwellings as of Census Dates, Actual Series 378
V. Number of Occupied Dwellings as of Census Dates, Adjusted Series 380
VI. Total Number of Available Dwellings as of Census Dates 381
VII. Net Increases in the Number of Available Dwellings for Census Periods, Preliminary Series 381

[1] This includes the tables contained in Section 12.

VIII. Net Increase in the Number of Available Dwellings for Census Periods, Adjusted Series 382
IX. Gross Increase in the Number of Available Dwelling Units for Census Periods 384
X. Gross Increase of Dwellings, Percentage Distribution, by Area 387
XI. Dwellings Completed in New Structures, Metropolitan and Other Urban and Rural Non-Farm, Canada, 1921-1949 389
XII. Distribution of Single and Multiple Occupied Dwellings, as of Census Dates, Adjusted Series 391
XIII. Distribution of Single and Multiple Available Dwellings, as of Census Dates 391
XIV. Net Increase in the Number of Available Single and Multiple Dwellings for Census Periods 392
XV. Gross Increase in the Number of Single and Multiple Dwellings, for Census Periods 393
XVI. Dwellings Completed, Single and Multiple Types, Metropolitan and Other Urban and Rural Non-Farm, Canada, 1921-1949 394
XVII. Owner and Tenant-Occupied Dwellings, as of Census Dates, Adjusted Series 397
XVIII. Owner and Tenant-Occupied Dwellings, as of Census Dates, Completed Series 398
XIX. Indices of Wholesale Prices of House Building Materials and Wage Rates in Building Trades, Combined and Adjusted, for New and Converted Dwellings in Non-Farm Areas, Canada, 1921-1949 406
XX. Average Unit Value of New Farm Dwellings Constructed Under the Veterans' Land Act, Application of Results of Sample Survey, 1946 409
XXI. Indices of Wholesale Prices of House-building Materials and Wage Rates of Common and Farm Labour, Combined Index for Farm Areas, Canada, 1921-1949 . . 410
XXII. Components of Estimated Average Costs of Owned and Rented Dwellings with Loans Approved Under the National Housing Act, 1944, Canada, 1948 419
XXIII. Average Construction Costs of Newly-Constructed Owned and Rented Dwellings, National Housing Act Records, 1948, and Estimates used in this Report, Non-Farm Areas, Canada, 1948 421
XXIV. Non-Family Households as at Census Dates, Available Data, Canada, 1921-1941 439
XXV. Non-Family Households as at Census Dates, Available Data and Estimates, Canada, 1921-1941 440

CHARTS

1. Dwellings Available by Type of Occupancy, Canada, 1921-1949 46
2. Age of Canadian Housing Stock, 1949 49
3. Annual Change of Occupancy of Dwellings, by Tenure, Canada, 1921-1949 55
4. Net Additions to Dwelling Stock, Total Dwellings Completed less Destroyed, Demolished and Abandoned, Canada, 1921-1949 64
5. Dwellings Completed, by Type of Structure, Canada, 1921-1949 68
6. Value of Residential Real Estate, in Current and Constant Dollars, Canada, 1921-1949 79
7. New Residential Construction Work Carried Out in Current and Constant Dollars and Value of Dwellings Completed, in Current Dollars, Canada, 1921-1949 83
8. Value of Residential Construction Work Carried Out, Canada, 1921-1949 86
9. Net Residential Capital Formation, Canada, 1921-1949 . . 95
10. Indices of Price Changes of Residential Real Estate and Rentals, Canada, 1921-1949 102
11. Dwellings Started, by Source of Initiation and Financing, Canada, 1949 113
12. Dwellings Completed With and Without Public Assistance, Canada, 1921-1949 127
13. Total Number of Dwellings Completed Compared with Number of Transfers Registered in Ontario and Quebec, Canada, 1921-1949 146
14. Occupied Dwellings by Region, Canada, Selected Years, 1921-1949 162
15. Dwellings Completed and Investment in Manufacturing, Per Thousand Population, by Province, Canada, 1949 . . . 176
16. Dwellings Completed and Investment in Manufacturing, Per Thousand Population, for 12 Metropolitan Centres, Canada, 1949 180
17. Occupied Dwellings, Population, Industrial Employment, Car Loadings and Personal Per Capita Real Income, by Regions, Canada, 1929 and 1949 187
18. Incomes and Costs of Houses Purchased, Sample Survey, Canada, 1949 223

19. Incomes and Equity of House Purchasers, Sample Survey, Canada, 1949 234
20. Canadian House Building Capacity, 1960 244
21. Value of New Residential Construction Compared with Gross National Product at Market Prices and Merchandise Exports, Canada, 1921-1949 458
22. Number of Dwellings Completed Compared with Industrial Employment and Total Revenue Freight Carried, Canada, 1921-1949 458
23. Value of New Residential Construction Compared with Contracts Awarded and Building Permits Issued, Canada, 1921-1949 466
24. Total Number of Dwellings Completed Compared with Employment in the Building Industry and Dwellings Completed in 25 Municipalities, Canada, 1921-1949 466

SCHEDULES

A. Types of Flows Affecting Stock of Available Dwellings, Residential Capital and Residential Real Estate *opposite* 36

B. Gross Residential Capital Formation and Residential Capital Consumption, Relation to Gross National Expenditure and Gross National Product at Market Prices and Net National Income at Factor Cost as per Canadian National Accounts 43

C. Source of Initiation and Financing of House Building 108

D. Summary of References and Purposes of Major Housing Legislative Provisions, Canada, 1918-1949 129

E. Classification of Transfers of Real Estate Registered in Registry and Land Titles Offices in Canada 135

Part I

SUMMARY OF ANALYSIS

SUMMARY OF ANALYSIS

1. *Purpose of Study.* This study deals with the quantity of housing in Canada and its changes. Measurement of the effort involved and its impact on the economy is important for three reasons: (*a*) It indicates the progress made in expanding and improving the housing stock of the country and thus reflects changes in the standard of living. (*b*) It provides quantitative information on the resources, both human and natural, used up in this process and thus indicates the effect which the volume of residential construction and related efforts has had on total economic activity. (*c*) It shows the importance of the real estate industry and the extent of the total investment in land and structures, and emphasizes the stake that modern society has in preserving and developing the wealth that results from its labour.

Housing Stock, Composition and Changes

2. *Increase in Housing Stock.* At the end of 1949 there were over 3.1 million dwellings in Canada. Over the last seven decades, Canada's population trebled but the housing stock increased fourfold, contributing to a gradual and continuing improvement in housing standards as reflected in terms of persons per dwelling (pp. 44-46).

3. *Age of Housing.* About three-fifths of the housing stock was less than 40 years of age, one-fifth between 40 and 60 years, and the remaining fifth over 60 years. Since the life expectancy for the average Canadian house has been estimated as 60 years for a farm home and 75 years for an urban dwelling, some 400,000 houses in Canada were over age. Many of these are slum and substandard homes in need of replacement (pp. 46-49).

4. *Vacancy Rate.* Virtually all houses available in Canada were occupied at the end of 1949. Only about 65,000 dwellings, or 2 per cent of the housing stock, were estimated to be vacant. In most of the major cities the rate was less than 1 per cent. Unoccupied units were mainly homes being repaired or undergoing a change of occupancy. Few units were vacant because of lack of demand. The 1949 vacancy rate was about half that of the last pre-war peak of economic activity in 1929. Not until new houses are built in sufficient numbers to allow a national vacancy rate of 3 to 4 per cent will some of the most pressing tightness of the post-war housing situation subside (pp. 50-51).

5. *Owner and Tenant Occupancy.* At the end of 1949 some 1.8 million dwellings were occupied by their owners and 1.3 millions were rented. But if farm homes are excluded, owner-occupied dwellings were about the same in number as rented dwellings, 1.2 million. Over most of the last three decades rental housing increased more rapidly than owner-occupied housing. From 1944 to 1949 this trend has been reversed. In this period investors in rental property were somewhat discouraged from building by high building costs combined with rental ceilings (pp. 51-52).

6. *Housing Completions.* In 1949 a total of 91,700 dwellings were built in Canada, including Newfoundland, Yukon and the Northwest Territories. Excluding the three last-mentioned regions, completions numbered 91,000 units. House building proceeded at the rate of one dwelling every six minutes. Completions in 1949 involved the largest number on record in any one year up to that time, there were about 65,000 in 1929 and 52,000 in 1939 (p. 56).

7. *Housing Demand Overcomes Material and Manpower Shortages.* More houses were built when materials and labour were scarce during the war and immediate post-war period than in the 'thirties when materials and labour were plentiful but remained unused to a large extent. This suggests that changing levels of housing demand have a more important impact on the volume of housing supply than the competing demand on construction resources which comes from different sectors of the economy, such as military construction during World War II and industrial and commercial construction during the immediate post World War II period (p. 58).

8. *Substantial Fluctuations of House Building Activity.* The largest protracted drop occurred from 1929 to 1933 at an average annual rate of 17 per cent, reaching a low of 22,000 completions. It took 13 years to reach the 1929 level again. In the main the reasons for such substantial fluctuations can be summed up under the following headings: (*a*) population (size, geographical distribution, marital status, child population), (*b*) income and assets (size, distribution, willingness and ability to spend on shelter), (*c*) governments (financial assistance, direct house building, subsidies, guarantees), (*d*) quantity and quality of housing stock (construction standards, state of upkeep, occupancy status, replacement rate, emergencies like war, floods, earthquake), (*e*) house building methods (on contract, by speculative builder, by owner-builder), (*f*) costs and prices (materials, labour, profits, margins between prices of existing residential real estate and newly built houses) and (*g*) economic outlook (employment and income prospects, future rental levels, and profitability of residential investment) (pp. 58-59).

9. *Seasonal Pattern.* Because of the dependence of house building on the weather, dwellings started and completed vary substantially during the year. The number of new houses started usually shows a distinct peak in May or June, continues at a high level during the third quarter, and falls off at the end of the year. Houses completed usually show smaller seasonal variations because they involve some indoor work not dependent on the weather. Monthly data of starts and completions represent a much more sensitive barometer of housing demand and residential building activity than annual data and should be used where possible (pp. 59-62).

10. *Destroyed, Demolished and Abandoned Dwellings.* Only a small fraction of new house building has been occasioned by replacement requirements. In 1949 an estimated 9,000 units were destroyed, demolished and abandoned, or about one for every ten completions. Over the last three decades the proportion was one to seven (pp. 62-63).

11. *Single and Multiple Dwellings.* Three out of four dwellings built in Canada in 1949 were single units, reflecting the preference of Canadians for self-contained homes constructed as single units, and the effects of government measures encouring home ownership. In the 'twenties and 'thirties the number of single units built was proportionately smaller, between one-half and seven-tenths of the total (p. 65).

12. *Variations in Fluctuations of Houses Built for Rent and Owner Occupancy.* Over the last three decades, building for rental purposes shows for certain parts of the pre-war period wider fluctuations than building for owner occupancy. Among the reasons for this difference in the amplitude of fluctuations should be included the fact that individual householders and businessmen are affected by different degrees of optimism and pessimism about future prospects, the personal element which enters into the decision of the individual family man to build or to buy a new home but which is absent when an entrepreneur makes up his mind to embark on a rental housing project, and the prevalence of "speculative" house building (pp. 65-69).

13. *New and Converted Structures.* In 1949, some 3,000 units or 4 per cent of total completions were in converted structures. The remainder were dwellings in new structures of various kinds, single houses, duplexes, triplexes, row houses and apartment buildings. This represents a return to the pre-war ratio, notably lower than the high of 15 per cent in 1944 (p. 70).

14. *Permanent and Temporary Dwellings.* From 1941 to 1948 a total of 28,000 temporary units were built, representing 6 per cent

of total completions. These dwellings were mainly built on government account. The temporary house building program came to an end in 1948 and completions of temporary units in 1949 were negligible (p. 70).

15. *Non-Farm and Farm Completions.* Of the 91,000 dwellings built in 1949, only 5,000 units, or 6 per cent, were farm homes. In contrast to this small proportion, people living on farms comprised about one-quarter of Canada's population. The main reason suggested for this small volume of farm home building is the movement off the farms and the low priority which farmers have been inclined to give in the past to expenditures on home improvements in relation to labour-saving and revenue-creating expenditures. The estimates support the claim that comparatively little effort has so far been devoted to improving farm housing standards in Canada (pp. 70-71).

16. *Housing Accomplishments in Canada, the United States and the United Kingdom.* On a population basis, Canada built more houses in the post-war period than the United States. This was the case up to and including 1949. In 1950, however, the situation was reversed, with the United States the leading country. Over the last three decades, the Canadian housing achievement per capita about equalled that of the United States. Both countries built more homes on a population basis than the United Kingdom (pp. 71-75).

17. *International Fluctuations of House Building.* During the pre-war period, fluctuations in house building were more severe in the United States than in either Canada or the United Kingdom. Dwellings started in the United States, excluding farm areas, declined by 90 per cent from a peak of 937,000 in 1925 to a low of 93,000 in 1933. On a similar basis, house building in Canada fell off by 66 per cent from a peak of 61,000 dwellings completed in 1929 to 21,000 in 1933. In the United Kingdom there was a corresponding decline of only 20 per cent from 255,000 completions in 1927 to 203,000 in 1931, and from this low house building in the United Kingdom recovered to reach an all-time peak of 365,000 units completed in 1936. In the United States and Canada, house building in the 'thirties never reached the peak levels of the 'twenties. The situation was reversed in the post-war period when North American countries were able to expand house building activity much more rapidly than the United Kingdom. The after-effects of World War II, which fell more heavily on the United Kingdom than on the United States or Canada, were mainly responsible for this (pp. 75-76).

Investment in Residential Real Estate

18. *Value of Residential Real Estate.* Residential real estate in Canada, including Newfoundland, Yukon and the Northwest Territories, is estimated at $15.3 billion at the end of 1949, about equal to Canada's funded debt, which amounted to $15.6 billion as of March 31, 1949. Excluding Newfoundland, Yukon and the Northwest Territories, the value of residential real estate is put at $15 billion, of which $13.5 billion represented the value of structures and installed equipment, and $1.5 billion the value of land (p. 77).

19. *Increase in the Value of Residential Real Estate.* Between 1921 and 1949 the value of residential real estate in Canada rose from $5.3 billion to $15 billion, an increase of 56 per cent in volume and 127 per cent in price (pp. 77-79).

20. *Residential Real Estate Not in Use.* Vacant houses are residential real estate not in use. An examination of the reasons why residential real estate was not fully used in the pre-war period, but virtually fully used in the post-war period, suggests that the problem of the 'twenties and 'thirties was not necessarily one of over-supply of housing, but rather the inability of the country in times of both prosperity and depression to provide housing for a sector of the population whose levels of income remained consistently below current levels of prices charged for housing accommodation (pp. 79-82).

21. *Value of Housing Completions.* Construction work involved in building the 91,000 dwellings *completed* in 1949 was estimated at $709 million, or an average of about $7,800 per unit. The $709 million figure includes the value of work performed on units started in 1948 but completed in 1949. New residential construction work *put in place* was slightly higher in 1949, amounting to $716 million, because housing starts continued to exceed completions in that year (pp. 83-86).

22. *Residential Construction Work Carried Out.* Total residential construction work carried out, or work put in place, was estimated at $938 million in 1949, consisting of $716 million for new housing projects, $47 million for major improvements and alterations to existing property, and $175 million for repair and maintenance work on residential structures. If allowance is made for Newfoundland, Yukon and the Northwest Territories, which are not included in the above estimates, the total exceeded $943 million in 1949. This is almost twice the value of Canada's wheat crop in 1949, which was valued at $567 million, or more than twice the domestic consumption in the same year of motor vehicles of all kinds, which was estimated at $426 million (p. 89).

23. *Differences in Fluctuations of Components of Residential Construction Work Carried Out.* New residential construction work carried out showed the greatest fluctuations, followed by major improvements and alterations of existing buildings, with the smallest fluctuations indicated for repair and maintenance expenditures on housing. Varying degrees of postponability for both physical and economic reasons were mainly responsible for this (pp. 89-90).

24. *Gross Residential Capital Formation and Residential Capital.* In 1949 gross residential capital formation, that is, new residential construction including major improvements and alterations and some small non-construction items, such as the value of installed equipment and service costs associated with new dwelling construction, amounted to $778 million, or about 6 per cent of residential capital in existence, that is, the value of all residential structures and supplementary buildings, excluding land (pp. 90-91).

25. *Fluctuations of Gross Residential Capital Formation.* In 1949 gross residential capital formation in constant dollars proceeded at a rate of more than twice that of 1922, almost one and two-thirds that of 1929, more than four times that of 1933, and almost twice that of 1939 and 1945. These data indicate an unsurpassed level of residential construction activity in 1949. But when account is taken of changes in productive capacity of the country and increase in population, it appears that Canadians have devoted less of their output to house building in the post-war period than at some of the earlier pre-war peaks (pp. 91-92).

26. *Residential Capital Consumption.* Residential capital consumption covers the value of destroyed and damaged dwellings and an allowance for wear and tear and obsolescence of residential capital, usually expressed in the form of depreciation. In 1949 residential capital consumption was estimated at $316 million, or 41 per cent of gross residential capital formation. In 1929 the proportion was 45 per cent. This means that because houses may be usable for from 50 to over 100 years, something like two-fifths of new work in times of a high level of building activity is needed to make good the deterioration of residential capital, while the other three-fifths adds to the housing stock. In times of little residential construction activity the value of new work may be insufficient to compensate for the deterioration of the housing stock which occurs with the passing of time. This was the case between 1932 and 1934 (pp. 92-94).

27. *Net Residential Capital Formation.* This is the difference between gross residential capital formation and residential capital

consumption. In 1949 net residential capital formation amounted to about $462 million. At that rate it would take about 29 years to create additional residential capital equal in value to that at the end of that year. Over the last three decades residential capital was increasing at an average rate of 2 per cent per annum (pp. 94-96).

28. *Variations of Net Residential Capital Formation.* The average annual net residential capital formation in constant dollars in the 'twenties, $93 million, compares favourably with that of the 'thirties, $35 million, and the 'forties, $108 million. These figures point to the tremendous housing effort that must have gone into expanding Canada's housing supply in the 'twenties, when population and productivity were about one-third smaller than they were in 1949 (pp. 95-96).

29. *Average Value of Residential Real Estate.* The average value of dwellings in existence in 1949 was estimated at $4,800. To purchase a new house in that year cost an average of $8,500 (both figures include an allowance for supplementary house building costs and land). In 1949 average prices of residential real estate were more than double what they had been before the war, and about four-fifths higher than they had been in 1929 (pp. 98-101).

30. *Price Differential Between Existing and New Residential Property.* Prices of existing residential real estate fluctuated more widely than prices of newly built houses. Identical houses sold in the 'twenties and re-sold in the 'thirties declined by an average of 37 per cent. Replacement costs (after allowing for depreciation), however, had declined only 18 per cent in the same period. Houses sold in the second half of the 'thirties and re-sold in 1945 were about one-half higher in price, but the replacement cost of these properties was only about two-fifths higher than it had been before the war (pp. 101-103).

31. *Amplitudes and Timing Aspects of Price Fluctuations of Residential Real Estate.* Three tentative conclusions are indicated:

(*a*) In times of rising levels of economic activity, incomes and employment, accompanied by increasing demand for housing, the price of existing residential real estate will also be rising, with prices of choice property in good locations rising more rapidly than prices of ordinary property. Some existing property may sell for more than its current replacement value simply because of its availability. But such a situation may not last too long, as an increasing volume of new residential construction will bring new property on the market at prices which will be competing with the premium prices being paid for existing property. As new additions become more plentiful, and choice existing property finds owners who

intend to retain their homes for a number of years, the price of existing property may level off or turn downward, while prices of newly built houses may still be moving upward.

(*b*) Following a decline in the price of existing property, and after new residential construction has increased sufficiently to meet most of the current and backlog demand, the volume of house building will decline accordingly, accompanied, if there are no compensating types of other construction, by some decline in construction costs. On the downward swing in the volume of residential real estate transfers and new house building, prices of existing property may decline more rapidly and reach lower levels than construction costs of new homes.

(*c*) On the whole, sales prices of existing residential real estate are likely to undergo greater fluctuations than prices of newly built homes. Sales prices of existing residential property are likely to turn downward before house building costs reach their peak, and are also likely to turn upward somewhat earlier than costs of newly built homes. In turn, the volume of new residential construction is likely to vary more substantially than the volume of sales of existing real estate. The main reason for this is that sales of residential property in depressed periods will include a large number of forced or sacrifice sales, which would keep the total number of transactions from reaching as low a level as that of new units built (pp. 103-105).

Financing of the Housing Program

32. *Houses Built With and Without Public Assistance.* In 1949 about two out of every five houses built were undertaken with some type of public assistance ranging from veterans' housing built directly on Federal Government account to houses built by loans extended to owner and apartment builders under the National Housing Act, 1944. Publicly assisted houses made up 38 per cent of total units started and 39 per cent of all units completed in 1949. This compares with 3 per cent of total completions in 1936, 12 per cent in 1939, 22 per cent in 1942 and 9 per cent in 1944 (p. 109).

33. *Houses Built by Private and Public Initiative.* Not all houses built with public assistance in 1949 were publicly initiated. In fact the majority, 29 per cent out of 38 per cent, were privately initiated and built with Government financial aid, as outlined below under 41 (pp. 110-111).

34. *Houses Built With and Without Financial Assistance from Lending Institutions.* In 1949 the number of houses built with

loans from lending institutions numbered 40,800, or 44 per cent of all dwellings started. The proportion, however, is considerably smaller, 23 per cent, for conventional loans, that is, loans other than joint financing under the National Housing Act, 1944 (p. 111).

35. *Government, Lending Institutions and Other Sources of House Financing.* Government and lending institutions represented the major source of financing for the housing program in 1949, involving 57 per cent of all houses started. The remaining 43 per cent were financed either in full by the owners themselves or with borrowing from cooperatives, individuals and miscellaneous other sources such as employers and private institutions (pp. 111-113).

36. *Where Does the Money Come From?* More than one-half, 54 per cent, of all the money spent on new housing in Canada in 1949 represented the savings of the owners. The other 46 per cent consisted of direct Government disbursements, 17 per cent; borrowing from lending institutions, 22 per cent; and borrowing from other sources, 7 per cent. Without attaching too great importance to the exact percentage distribution because estimates of this sort are of necessity approximate, available information points to the substantial stake which Canadians have in building homes (p. 114).

37. *Owners' Equity and Personal Savings.* New investment by owners in residential real estate in 1949, estimated at approximately $420 million, represents two-fifths of personal savings amounting to about $1 billion. Not all personal savings flowing into investment in residential real estate in 1949 consisted of savings actually made in that year. A great proportion of the funds date back to personal savings made in previous years and held in liquid form, or represent returns from the liquidation of assets by prospective home purchasers. The figures, however, suggest that in times of favourable economic conditions such as prevailed in the post World War II period a significant proportion of personal savings finds its way through various channels into homes for Canadians (pp. 114-115).

38. *Who Owns Houses in Canada?* In view of the great emphasis on private ownership of housing in Canada it is not surprising that out of a total of 3.1 million dwellings in existence in this country at the end of 1949 only about 41,000, or 1.3 per cent, were publicly owned and the remainder were in the hands of private individuals, corporations and institutions (p. 115).

39. *Basic Philosophy Behind Housing Legislation.* Two aspects are paramount: (*a*) that it should be possible through Government assistance to get houses built that would otherwise not have been built, thereby improving the standard of living of the Canadian

people, and (*b*) that the building of a number of houses *in addition* to the number that would be built without public assistance would involve expenditures which in turn would provide jobs and incomes to Canadians, thereby—if measures were propitiously timed—contributing to economic stability in the country (p. 116).

40. *Common Characteristics of Housing Legislation.* Some experimentation followed World War I, but continuing housing legislation in Canada dates from 1935. Most housing measures taken have several characteristics in common. Legislation developed *gradually*, with provisions being expanded, revised and modified in each succeeding stage to take account of changing economic and social conditions and of experience gained in the administration of preceding housing acts. Emphasis was placed in almost all housing legislation on the *residual* character of Government measures. The primary objective was to leave existing financial and house building methods as undisturbed as possible and to confine assistance to marginal cases which would not have resulted in the building of new homes without Government encouragement. The emphasis on the residual nature of the Federal Government's housing activity was also evident in its relation to provincial and municipal governments. Housing matters in peacetime have been considered as falling primarily within provincial jurisdiction, the Federal Government being willing to participate in the development and to share in the costs of joint Federal-provincial (and municipal) housing projects (p. 117).

41. *Type of Housing Legislation in Operation.* Three types of Government assistance to housing were in operation at the end of 1949:

(*a*) *direct* Government house building including the Veterans' Rental Housing Program of Central Mortgage and Housing Corporation, presently coming to an end and to be replaced by joint Federal-provincial projects under Section 35 of the National Housing Act, 1944, as revised in 1949, and including the Armed Services Married Quarters Program of the Department of National Defence;

(*b*) *loans* for house building including the Canadian Farm Loan Act of 1927, the Veterans' Land Act of 1942, and the National Housing Act of 1944;

(*c*) *guarantees* under the Home Extension and the Rental Insurance provisions of the National Housing Act, 1944, and under the Farm Improvement Loans Act of 1944 (p. 123).

42. *Effect of Housing Legislation on House Building.* During the 15 years of continuing operations of the Canadian Government

in the housing field, a total of 155,000 dwellings were built with public assistance, representing an annual average of 19 per cent of total completions over the period. This means that nearly every fifth house completed from 1935 to 1949 was built with some form of Government financial assistance, or represented part of a Government-sponsored and owned low or moderate rental housing project. As a result, some 600,000 people have benefited by the housing measures introduced by the Federal Government since 1935 (p. 124).

43. *New Residential Construction Expenditures Induced by Public Assistance.* To build 155,000 dwellings a total of $870 million was spent on new construction, made up as follows: expenditures by the Federal Government on housing, $326 million; expenditures by private persons on housing with Federal loan assistance, $512 million; expenditures by private persons on housing with Federal guarantee assistance, $32 million. This is more than twice what was usually involved in a peacetime Federal Government budget before World War II (p. 124).

44. *Main Lesson to be Learned from Canadian Housing Experience.* Among the many lessons that can be learned from Canadian housing experience in the last several decades, one stands out: there is no magic and all-embracing formula for solving the housing problem in a country in which housing supply, demand and need vary between regions and within each region. No single scheme can take care of all the varying requirements, nor can one particular piece of legislation allow for all contigencies which may arise. This lesson is reflected in some of the basic thinking behind the amendment to the National Housing Act passed by Parliament in the fall of 1949, which provides in the form of enabling legislation an opportunity for the various governments in Canada to examine, explore and work out such arrangements as are most suitable to meet local housing requirements, in accordance with Canada's constitutional framework (pp. 127-128).

Transfers of Existing Real Estate

45. *Real Estate Transfers of All Types.* About 450,000 transfers of real estate took place in Canada in 1949. The majority of these transactions involved actual sales for considerations of approximately $1.7 billion. The remainder represented nominal sales and other types of transfers, without considerations involved, e.g. a will. About two-fifths of the value of transactions took place in Ontario, another quarter in Quebec, with the remainder, in the

people, and (*b*) that the building of a number of houses *in addition* to the number that would be built without public assistance would involve expenditures which in turn would provide jobs and incomes to Canadians, thereby—if measures were propitiously timed—contributing to economic stability in the country (p. 116).

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order of the amount of transactions involved, in the Prairies, British Columbia and the Maritimes (p. 137).

46. *Residential Real Estate Transfers.* A preliminary estimate indicates that residential real estate comprised between one-half and two-thirds of the value of all real estate transactions. On this basis between 5 and 7 per cent of the total value of existing residential real estate is turned over annually in periods of buoyant real estate markets such as prevailed in the immediate post-war period. On a unit basis, for every new house built in 1949 about two and one-half existing dwellings, both owner-occupied and rented, changed hands (pp. 140-141).

47. *Rate of Housing Turnover.* At the 1949 rate of real estate transfers of existing residential property, the average Canadian house appears to be changing ownership every fourteen years. Since the average life expectancy of a non-farm home is estimated at seventy-five years, this would mean that at the 1949 rate of turnover the average Canadian house changes hands more than five times during its life time (p. 141).

48. *Fluctuations in the Volume of Real Estate Transfers in Ontario.* Transfers of real estate fluctuated substantially in Ontario from 1921 to 1949, from a high of between 90,000 and 100,000 transactions during 1921 to 1923, through an intermediate level of 70,000 to 80,000 transactions during 1927 to 1929, to a low volume of 40,000 to 50,000 during 1933 to 1935, and then surpassing the post World War I peak in the post World War II period with transactions numbering 173,000 in 1946 and then declining to 156,000 in 1949 (pp. 141-145).

49. *Fluctuations in the Volume of Real Estate Transfers in Quebec.* Fluctuations in the number of real estate transactions in the Province of Quebec followed broadly the pattern shown for Ontario, with one notable exception. Peak activity in the pre-war period is indicated for the early 'twenties in Ontario, but in Quebec it appears in the later 'twenties. Two other less pronounced variations in Quebec not evident in the Ontario trend are breaks in the Quebec series in 1939 and 1943 (p. 145).

50. *Comparison with Dwelling Completions.* Three tentative conclusions are indicated: (*a*) that fluctuations of real estate transfers in Ontario were more substantial than those of similar transactions in Quebec or of new housing construction in Canada as a whole; (*b*) that in times of generally rising economic activity real estate transfers in volume terms are likely to turn sooner than new construction; and (*c*) that in times of declining economic activity or in periods of slow economic recovery the volume of

property transfers reflects not only real estate business activity but also forced liquidation of real estate through financial failures, and is therefore less likely to be a sensitive indicator than in periods of high economic activity when the series reflects in the main voluntary business transactions between sellers and buyers (pp. 145-146).

51. *Fluctuations in the Value of Real Estate Transfers in Ontario.* In the inter-war period the value of real estate transfers in Ontario showed a peak of transactions in 1928-1929, a 1933-1935 low, a moderate high 1936-1938, and a slight decline in 1939. In some measure the value series of real estate sales in Ontario shows for these years a closer similarity to the pattern of value of new residential construction than is apparent from a comparison of the volume series. Differences between the value of real estate transfers and new construction series are apparent in the early 'twenties, the war and immediate post-war periods. The data suggest a slowness of the real estate market to adjust itself to changing economic conditions and demand for new property (pp. 146-147).

52. *Seasonal Fluctuations.* Real estate transactions follow a pattern of two peaks a year, one in late spring and the other in late fall. Low points are usually observed in February and August and high points in May-June and October-November (pp. 147-148).

53. *Inter-Provincial Comparisons.* On a per capita basis British Columbia registered the largest volume of real estate activity among the different regions in Canada in 1949. In this province real estate transfers per thousand population numbered 42 instruments, and involved an outlay of $186,000. Ontario followed with 35 and $153,000, and Quebec with 24 and $110,000. This ranking is in line with other indicators of economic activity bearing on the real estate market, e.g. housing completions and new business construction (p. 148).

54. *Intra-Provincial Comparisons.* Within the Province of Ontario, for which detailed data are available, about half of the total transactions and almost three-quarters of the considerations involved took place in predominantly urban areas. On a per thousand population basis, however, areas other than predominantly urban seemed to be doing almost as well. Real estate transfers per thousand population in predominantly urban areas numbered 22, in mixed urban-rural and northern areas each 21, and predominantly rural areas 20 (pp. 149-151).

55. *Actual Sales and Nominal Sales.* Actual sales, that is, transactions involving considerations exceeding one dollar or a similar nominal amount, represented the bulk of real estate

transfers. Spot checks indicate that nominal sales involving a consideration of one dollar and other transactions without consideration varied from 5 to 12 per cent in the period under review. Notable variations existed also between different regions in the same year (p. 156).

56. *Voluntary and Forced Sales.* In times of prosperity forced sales of real estate are reduced to less than 1 per cent of all transactions in a year. In times of depressed economic conditions a much larger proportion of real estate transfers will involve forced sales. The exact proportion will vary for different regions (p. 156).

57. *Real Estate Transfers Accompanied by Mortgages.* The type of financing used for real estate transactions varies significantly in different localities. Intensive surveys in two Ontario and Quebec registry divisions indicate that between one-quarter and two-fifths of all transactions of built up non-farm property (i.e. excluding building lots) were accompanied by new mortgages taken out on the property (p. 157).

58. *Sales as an Occasion for New Mortgages.* Between two-fifths and one-half of all mortgages registered in the two Ontario and Quebec registry divisions examined were occasioned by the sale of property. The remaining mortgages were either associated with new construction or taken on the security of existing real estate to be used for purposes other than financing the sale of the property (p. 158).

59. *Implications of Analysis.* Housing provides the largest second-hand commodity market that exists. This market is on occasion several times larger than the market for newly built houses. Supply and demand conditions and price levels of existing real estate may at some times precede, and at other times follow similar conditions in the new housing field. The relationship between the market for new housing and the market for second-hand housing is so close that an adequate understanding of the former requires deeper insight into the latter. As the preliminary appraisal in this report attempts to show, only a beginning has been made of systematic study of the existing real estate market (p. 159).

Housing in Regions and Localities

60. *Location of Housing Stock.* At the end of 1949, one-third of all Canadian houses were situated in Ontario, one-quarter in Quebec, one-fifth in the Prairies, and one-tenth each in the Maritimes and British Columbia (p. 161).

61. *Growth of the Housing Stock.* Over the last three decades British Columbia's housing stock rose more rapidly than that of any other province: 131 per cent. Increases in other provinces were as follows: Quebec, 86 per cent; Ontario, 61 per cent; Prairies, 50 per cent, and Maritimes, 37 per cent (pp. 161-163).

62. *Housing Completions in Regions.* In 1949, for every house built in the Maritimes two were built in British Columbia, three in the Prairies, four in Quebec, and six in Ontario. On a per thousand population basis in 1949, housing completions, including conversions, were as follows: Alberta eleven, British Columbia ten, Ontario seven, Manitoba and Quebec six each, Nova Scotia five, Saskatchewan and New Brunswick four each, Prince Edward Island three and Newfoundland, about two (pp. 163-169).

63. *Housing Completions in Localities.* About 55 per cent of all houses built in 1949 were in twenty-four major cities with population of 30,000 and over. Almost 70 per cent of all completions were in cities and towns with population of 5,000 and over. On a population basis the most rapid rate of house building was taking place in some of the smaller cities. Calgary, Kitchener and Edmonton led the twenty-four major cities, with metropolitan centres like Greater Vancouver following tenth, Greater Montreal twelfth, and Greater Toronto twenty-first (pp. 171-172).

64. *Single and Multiple Housing Completions.* About nine out of every ten houses built in 1949 were single units in all the provinces except Quebec. In this province however, only one out of every three units was of a single house type. The preference for rental accommodation in metropolitan Montreal is mainly responsible for this (pp. 172-175).

65. *Rate of House Building and Manufacturing Investment.* On a per capita basis, manufacturing investment in 1949 was significantly larger in Ontario, Quebec, and British Columbia than in the rest of Canada. Data available point to the incidence of varying regional rates of industrial expansion accompanied by similar ranking in the rates of house building activity (pp. 175-182).

66. *Housing and Regional Economic Growth.* Close positive correlation is obtained by relating regional growth of housing stock to the increase of population and industrial employment. Less correspondence is indicated for growth of housing stock and changes in regional real income. Weighing the evidence it appears that an *increase* in real income by itself is not necessarily a strong enough factor to induce a corresponding expansion of the housing stock. Population growth and economic opportunities appear to be more important elements (pp. 182-186).

67. *Persons per Dwelling.* Reflecting the varying standards of living accommodation between regions, the smallest number of persons per dwelling at the end of 1949 was recorded for the Prairies and British Columbia, each with 3.95. The other regions followed in this order: Ontario, 4.14, Maritimes, 4.70, and Quebec, 5.07. Three of the regions showed a continuing reduction in the average number of persons per dwelling over the last three decades. British Columbia and Ontario experienced a reversal in trend during the war and post-war periods due to heavy movement of population into their regions (pp. 188-190).

68. *Families Without Homes of Their Own.* In 1949, for every thousand persons there were 36 families in Canada without homes of their own, about the same as the rate in 1948. The regional distribution in the latter year was as follows: Maritimes, 44 families, Ontario, 41, Quebec, 38, British Columbia, 28, and Prairies, 24. The regional standard of living accommodation as reflected in the number of families without homes of their own improved between 1947 and 1948, for the Maritimes, 2 per cent, British Columbia, 3 per cent, and Prairies, 9 per cent. The situation deteriorated in Ontario by 11 per cent, and in Quebec by 15 per cent (pp. 191-192).

69. *Regional Summary for Prairies.* This region together with British Columbia recorded the smallest number of persons per dwelling. Families without homes of their own in relation to the people living in the Prairies were also less numerous than in any other part of the country. This was mainly due to the loss of population in the depressed 'thirties and the war years. This trend was only reversed in the post-war period. Coupled with the high volume of residential construction in the post-war period, most of the accumulated backlog for new housing in this region has been met. Subsequent levels of house building activity will depend greatly on further inter-regional movement of population, as well as on a slow improvement of the standard of living accommodation. A special factor is the resources development boom, particularly oil and gas, presently under way in Alberta, which has added new stimulus to community and housing development in some urban centres (pp. 192-193).

70. *Regional Summary for British Columbia.* This province, which recorded about the same number of persons per dwelling as the Prairies, had the second smallest number of families without homes of their own. The rate of house building in the post-war period, high as it was, failed to take care of the significant influx of population into this region. Pressure on the housing market in

this province, particularly in the larger urban centres, continued strong at the end of 1949, but in many communities in the interior the backlog of demand appeared to have been substantially met (p. 193).

71. *Regional Summary for Ontario.* Ontario had the third lowest number of persons per dwelling, but the fourth lowest number of families without homes of their own. House building, which concentrated in the main on building for owner occupancy, reached a new peak in 1949. Large as the volume of post-war home building had been in this province, housing supply in many parts of the province had by no means caught up with demand by the end of 1949 (p. 193).

72. *Regional Summary for Maritimes.* The number of persons per dwelling in this region was larger than in the three regions mentioned above but was smaller than in Quebec. However, the Maritimes had the largest number of families without homes of their own per thousand population, indicating a great deal of doubling up. With size of population changing only little, housing pressure in the Maritimes, while still strong, has been less continuous than in most other regions. Nevertheless, shortages dating back to the depressed 'thirties and the war years were great enough to induce a level of house building in the immediate post-war period higher than anything previously known. Housing construction in this region, while not likely to decline to the low levels of the pre-war years, would probably continue at lower levels than the peak volume reached in the immediate post-war period (p. 194).

73. *Regional Summary for Quebec.* This province had the highest rate of persons per dwelling in Canada, mainly as a result of the large size of families. Families without homes of their own per thousand population were comparatively less numerous than in either Ontario or the Maritimes. Nevertheless, the housing shortage in this province and particularly in Greater Montreal has been great in the post-war period. In 1949 the volume of house building reached a new peak, and at this rate supply was likely to catch up fairly quickly with much of the persistent backlog of effective housing demand unless special new demands developed as a result of industrial mobilization (p. 194).

74. *Implications of Regional Housing Analysis.* Available evidence indicates that at the end of 1949 housing demand as well as housing supply in the various provinces differed greatly. The situation is likely to continue, and will be reflected in an uneven growth of the housing stock in the various parts of the country. This appraisal suggests that in framing a national housing program

cognizance should be taken of the varying requirements of different regions and localities in Canada, and measures adopted accordingly (p. 194).

Housing and Population

75. *Population and the Stock of Dwellings.* At the end of 1949 Canada's population of 13.4 million (i.e. including Newfoundland) lived in some 3.1 million houses, an average of 4.4 persons per dwelling. The present Canadian standard of living accommodation, which is among the highest in the world, has been the result of gradual improvement over many decades. On the basis of persons per dwelling Canadians were 25 per cent better off in 1949 than their grandparents some 70 years ago (pp. 196-197).

76. *Variations in the Rate of Improvement.* The improvement has occurred unevenly over the decades. It was accelerated in prosperous periods such as the 'twenties but slowed down when economic conditions were depressed, as in the 'thirties, or when the economy was experiencing the stress of military emergencies, such as World Wars I and II. By 1949 the ratio of dwellings per thousand population was 234, just slightly above the previous peak of 1941. This compares with a ratio of 216 for 1921 (p. 197).

77. *Families and Housing Stock.* At the end of 1949 the number of families was 3,153,00, about the same number as the total housing stock in existence at that time, 3,125,000. However, only 2,681,000 dwellings were occupied by families, the remainder being occupied by non-family household groups or vacant. There were some 473,000 families who shared housing accommodation with other families or non-family household groups, or who lived in rooming houses, hotels, trailers and institutions (p. 199).

78. *Similarity of Trends of Net Family Formation and Dwellings Completed.* In the pre-war period the number of dwellings completed corresponded very closely to the net figures for formation of families, that is, new families formed minus existing families dissolved. Both series show 1929 as the pre-war peak and 1932-1933 as the low point in the 'thirties. For 1937 and 1938 dwelling completion data indicate a temporary decline while net family formation remained unchanged, interrupting for one year the upward trend that had begun in 1933 and that continued in 1939. In the war and immediate post-war periods the trends of these two series diverged somewhat although some of the basic similarity still remained (p. 200).

79. *Variations in the Amplitudes of Changes.* While there are quite broad similarities in the trend of the net family formation and

dwellings completed series, variations of the amplitudes of changes are much more marked. For most of the pre-war years more houses were built than new families were formed. However, from 1939 to 1948 with the exception of 1947 dwellings constructed remained behind new families formed. By 1949 the housing program was in full swing and exceeded net family formation by a margin of 18 per cent. Available data support in some measure the contention that the housing shortage faced in the post-war period was to a major extent war-engendered, and to a lesser extent caused by the depressed economic conditions of the 'thirties (pp. 200-201).

80. *Reasons for Variations.* In the main two reasons account for the imbalance between housing and families in the war and immediate post-war periods: (*a*) families were formed at between two and three times the pre-war rate, and (*b*) dwelling completions, which in spite of war-time scarcities were moderately higher during the war than in the 'thirties and rose to new absolute peaks in the post-war period, were inadequate up to 1948 to cope with new families formed in Canada during these years, with an improvement recorded in 1949, the first time in a decade (pp. 202-203).

81. *Families without Homes of Their Own.* In 1949 six out of every seven families in Canada occupied separate dwellings while the seventh family shared a home with other families or non-family household groups or lived in other than standard dwelling units. The high rate of family formation during and after the war was mainly responsible for this (p. 203).

82. *Changes in the Standard of Living Accommodation.* Comparing post-war with pre-war, the standard of housing accommodation of the Canadian people is: (*a*) better in terms of persons per dwelling, (*b*) worse in terms of families without homes of their own, and (*c*) worse in terms of quality of the housing stock, because not all of the undermaintenance occurring during the war years has been made good and pressing post-war requirements for shelter have made it impossible to replace the many slum and sub-standard dwellings which come into existence with the passing of time (p. 204).

83. *Voluntary and Involuntary Doubling Up.* About two out of three doubled-up families were voluntarily sharing housing accommodation with other families, and only one out of three described their status in the post-war period as involuntary doubling-up. On this basis there were some 160,000 families in the market for a new house. In addition, there were at the end of 1949 many non-family groups of persons whose relatively high

incomes enabled them to compete for the occupancy of dwelling units becoming available. The demands of these two groups, however, will remain effective only as long as the favourable employment and income conditions of 1949 continue. If economic activity should decline and employment and income prospects become quite uncertain, a shift from "involuntary" to "voluntary" doubling-up is quite likely (pp. 204-206).

84. *Effective Housing Demand by New Families Formed.* Canadian experience over the last three decades indicates that over a period of time seven-eighths of all families formed acquire separate housing accommodation. On this basis net new families formed in 1949 numbering 77,000 represent an ultimate demand for 67,000 dwellings. At the 1949 rate of net family formation, housing completions and prevailing levels of employment and real income, it would take about eleven years to provide with homes of their own the 160,000 families in the housing market for a separate unit at the end of 1949 (pp. 206-207).

85. *Net Family Formation Adjusted for Changes in the Birth Rate.* Such data reflect housing demand even more closely than the series of net family formation unadjusted for changes in the birth rate. One reason for this is that the arrival of a first child brings the need for separate living accommodation forcibly to the attention of its parents. The desirability of separate living accommodation increases with the number of children (pp. 207-208).

86. *Filtering Process.* Until the introduction of national housing legislation designed to provide new housing accommodation for persons in income groups which had until then been unable to obtain satisfactory shelter, it was solely by means of the filtering process that some families in the middle income group and most families in the low income group could obtain dwellings of their own. The "filtering process" is a process by which the purchase of a new home results in a chain of moves with each succeeding move causing property of lesser value to be made available to those families who cannot afford new housing accommodation. A sample survey in 1947 indicated that the provision of three newly built homes resulted in not more than one additional dwelling becoming available to those who had to depend on existing housing to meet their needs. A similar survey repeated in 1949 revealed little change. These surveys suggest that in periods of high demand relative to housing supply, as in the immediate post-war years, the filtering process cannot be counted upon to provide a significant number of additional dwellings vacated as a result of a large increase in the volume of newly built homes (pp. 208-214).

87. *Reasons for Changing Housing Accommodation.* The most common reasons for moving from an existing living place to a new home as given in the 1949 survey were as follows: crowded accommodation, 37 per cent; living with relatives, 16 per cent; wanting a better place to live, 18 per cent; forced to vacate, and transferred out of town, each 9 per cent; substandard and slum housing, 5 per cent; family living apart, 1 per cent; and miscellaneous reasons, including too expensive a place to live in, house to be demolished, too far from work, 5 per cent (p. 212).

88. *What the Nation Spends on Housing.* Canadians spent a smaller proportion of their income on housing in the post-war period than they did before the war. The ratio of rental payments to personal disposable income was 12.6 per cent in 1929, 14.2 per cent in 1939 and 7.5 per cent in both 1948 and 1949. Without attaching too much importance to the exact ratios because of the approximate character of the estimates, these aggregate data supported by other sample surveys indicate a distinct change in the spending pattern of Canadians in the post-war period, with less being spent on housing and more being spent on other consumer goods and services than was customary before the war (pp. 216-217).

89. *Reasons for Spending Proportionately Less on Housing.* Two important reasons are: (*a*) Out of 3.1 million dwelling units, 1.3 million were rented at the end of 1949. The overwhelming majority of these were subject to rent control. The average rent in 1949 was only 19 per cent higher than in 1939, but per capita disposable income had increased by 140 per cent. (*b*) With construction costs more than twice as high in 1949 as before the war and with smaller price increases recorded for other consumer commodities and services, the choice of whether to spend more on housing or on other goods and services was often decided in favour of the latter (pp. 217-220).

90. *Prospects for Spending Proportionately More on Housing.* The trend in succeeding years is likely to be towards a higher ratio of rent to income than has been observed for the immediate post-war period, but even as a higher plateau is reached this ratio is likely to fluctuate. In the final analysis the ratio of housing expenditures to income is a matter of the consumer's choice influenced by personal and economic considerations. Among the latter the most important is the conviction that the purchaser of a new house or the tenant of a new apartment is getting proper value for his money (p. 220).

91. *What Individual Families Spend on Housing—Operating Costs.* A sample survey suggests that before the war tenant

families spent 20 per cent of living expenditures on shelter costs. Those living in their own homes spent 19.3 per cent. These ratios have declined considerably in the post-war period. Also, the gap between shelter costs of tenant and of owner-occupied housing, which was hardly in existence before the war, appears to have widened somewhat in the post-war period (p. 221).

92. *What Individual Families Spend on Housing—Capital Costs and Personal Characteristics.* A survey of 14,953 house purchases for owner occupancy under the National Housing Act of 1944 indicates that in 1949 the average purchaser was 34 years of age, had a wife and one child, an annual income of some $3,400 or better than $275 a month. He built a five-room house whose cost was *estimated* at $8,500. More often than not his *final* cost would be higher, exceeding $9,000. The house purchaser was likely to be an employee on salary, but he could easily be a worker depending for his income on hourly wages, or a self-employed person in a profession or running his own business. On the whole he was most likely to belong to the middle income group. But frequently he was a man in the low income brackets who, by stretching his family budget, made it possible for his family and himself to live in a house of their own (pp. 222-229).

93. *Equity Requirement of House Purchasers.* Another sample survey of house purchases under the National Housing Act of 1944 suggests that the 1949 owner-purchaser made cash down payments of 26 per cent including personal borrowings and veterans' re-establishment credits of 2 per cent, and obtained the remaining 74 per cent through mortgages, 69 per cent on a first mortgage and 5 per cent on a second mortgage (p. 232).

94. *Second Mortgages Bridge Gap between First Mortgage and Equities Available.* The majority of the families, 56 per cent of the total, were able to purchase a house with a first mortgage, but 44 per cent had to resort to second mortgage financing. Most families, 88 per cent of the total, were able to produce the minimum down payment required without recourse to personal borrowing. Of the remaining 12 per cent, 8 per cent obtained personal loans while the other 4 per cent made use of veterans' re-establishment credits (p. 232).

95. *Personal Savings Used as Down Payment in Relation to Income.* The average ratio of personal savings used as a down payment was 61 per cent of income of house purchasers. The ratio varied from over 100 per cent for families earning less than $1,800 to 49 per cent for families earning $5,000 and over. At the 1949 rate of savings it would take about seven years for the average

Canadian family to accumulate sufficient savings to make the down payment required for the purchase of a moderately priced home. Available data are in some measure indicative of the difficulties faced by families with moderate incomes to accumulate sufficient personal savings to make the cash down payment required in 1949 to purchase a home (pp. 232-236).

96. *House Purchases Widespread.* The above two surveys lead to the conclusion that even under the provisions and the financing practices that existed in 1949, home ownership in Canada was not the privilege of any special class or profession but open to the great majority of Canadian families who were willing and able to devote an appropriate proportion of their incomes to shelter costs. The surveys also indicate that purchasing homes for some families involved a strain on the family budget and that equity requirements may prevent a large number of potential home owners from entering the market (pp. 227, 236).

Housing and the National Economy

97. *House Building Capacity in the Past.* In 1949 houses built numbered 91,000 exceeding by 41 per cent the pre-war peak of 1929, when 65,000 units were completed. On a per thousand population basis more dwellings were built in 1949, 6.8 units, than in 1929, 6.4 units. Expenditures for new residential construction and major improvements and alterations on a per capita basis in constant dollars, which amounted to $22 in 1929, rose to $27 in 1949. These data suggest that Canadians were *building* somewhat more houses per capita in the post-war period than at the pre-war peak, but at the same time were *spending* substantially more money for them (pp. 238-240).

98. *Comparison with Consumer Expenditures and the Nation's Output.* Expenditures in constant dollars on new residential construction rose 62 per cent from 1929 to 1949, but consumer expenditures in constant dollars increased 78 per cent. This means that expenditures by the consumer in 1949 on the things he ate, used, and enjoyed, were higher in relation to expenditures on new housing than they were in 1929. The nation's total output in constant dollars increased 84 per cent in the same period (pp. 240-242).

99. *Comparison with Business Construction.* New residential construction including major improvements and alterations, as measured in constant dollars, rose 59 per cent from 1929 to 1949, while business construction on the same basis decreased 10 per

cent. The evidence contradicts the belief, frequently held, that the volume of housing construction in the post-war period suffered greatly as a result of the competitive demand of business construction of various types (p. 242).

100. *House Building Activity in 1949 on the Basis of 1929 Performance.* In 1929 new residential construction comprised on a volume basis 4 per cent of total output of the nation. In 1949 the proportion was down to 3.5 per cent. Had the nation been willing to return to the living pattern of 1929 and had it been prepared to devote the same proportion of its output in 1949 to new house building, this would have involved a total of 104,000 units, or 13,000 more than were actually built. However, since there were other competing calls for Canada's resources, of which increases in the volume of consumer expenditures were the most significant, those additional 13,000 units could not have been built unless other sectors of the economy had been cut (pp. 242-243).

101. *House Building Capacity in 1960.* If the 1949 rate of increase in output of the nation should continue over the next decade, the country should be able to turn out about 25 per cent more goods and services annually, resulting in a gross national product of over $20 billion in 1949 prices. At such a rate of output, house-building capacity would involve a minimum of 100,000 units if the proportion of resources devoted to housing were to continue on the trend of the last two decades, or it might involve between 115,000 and 130,000 units if the same proportion of resources as was devoted in 1949 or 1929 were used for house building purposes (pp. 243-245).

102. *Problem of Effective Demand.* While it is quite likely that the Canadian economy will have sufficient resources to build between 100,000 and 130,000 units in 1960 and a continuously increasing number thereafter, there is no assurance that this number of houses will actually be built. Whether or not this number of houses will in fact be built, will depend on whether effective demand for such a number of houses can be maintained over a long period of time by some combination of private initiative and public assistance. If this demand is not forthcoming some of the resources available for new residential construction will either have to be used for other purposes or will remain idle (pp. 245-246).

103. *Residential Construction and Total Construction—By Type of Enterprise.* New residential construction including major improvements and alterations comprised 34 per cent of total new construction in Canada in 1949. Other types of new construction were distributed as follows: business enterprises other than public

utilities, 22 per cent, public utilities, 19 per cent, direct Government construction (excluding housing), 18 per cent, and institutions, 7 per cent (p. 248).

104. *Residential Construction and Total Construction—By Type of Construction.* In the post-war period one-quarter of total construction consisted of engineering construction, the remaining three-quarters comprised building construction, almost equally divided between house building and other building, mainly industrial, commercial, institutional and public (p. 250).

105. *Residential Construction and Investment in Durable Physical Assets.* One of the most variable segments in economic activity is expenditures on durable physical assets, that is, outlay on new construction, major improvements and alterations of all types, and purchases of new machinery and equipment. New residential construction, itself subject to notable changes in volume, contributes significantly to fluctuations of investment since it currently makes up close to one-quarter of the total (pp. 250-251).

106. *Residential Construction and Gross National Expenditure.* In 1949 new residential construction and major improvements comprised 4.7 per cent and residential repair and maintenance 1.1 per cent of total expenditures on all goods and services, as measured by gross national expenditure at market prices. However, since residential construction, particularly new activity, fluctuates more than almost any non-investment component of economic activity, the above proportions have varied correspondingly over time. In 1929, for example, *new* residential construction made up 4.1 per cent of gross national expenditure. It declined to 2.2 per cent in 1933 and rose to 3.3 and 4.8 per cent in 1939 and 1949 respectively (pp. 251-254).

107. *Direct Employment Effect of Housing Expenditures.* In 1949 the average dwelling provided about 2,300 man-hours of on-site and 3,100 man-hours of off-site employment, a total of 5,400 man-hours. This is the equivalent of a year's work for about two and one-half persons. The total housing program in 1949 provided work for 110,000 men in the construction industry and 128,000 persons in the industries producing and distributing building materials, a total of about 235,000 (pp. 255-258).

108. *Proportion of Total Employment Provided by House Building.* In 1949 one out of every twenty-one Canadian workingmen was engaged in building a house or providing the materials and services required to complete a house (p. 258).

109. *Proportion of Total Wages and Salaries Provided by House Building.* One dollar out of every fourteen paid out in Canada in

1949 for wages and salaries was earned by people employed in the housing program (pp. 258-260).

110. *Secondary Employment and Income Effects.* As those working on building houses spend their incomes for the things they eat, use and enjoy, additional employment and income are created in consumer goods and service industries. As these industries in turn are active, new investment is encouraged and more business investment and residential construction may follow. However, such secondary and further induced employment and income effects will depend on the extent to which the resources of the country, human and natural, are already employed. Secondary and related effects will be much greater when there is unused capacity in terms of unemployed workers and idle plants than would be the case in times of high levels of employment and income and full use of resources (pp. 260-261).

111. *Volume of House Building and Future Prosperity.* In Canada the Federal Government has repeatedly stated that one of its primary objectives is the maintenance of the high levels of production, income and employment achieved during the war years, through the introduction of measures which would aim at stabilizing the Canadian economy. Stability was to be achieved for the various sectors that contribute to total economic activity and have their source in the sales made into the export market, in rising levels of consumption, in private investment for the expansion of productive facilities, and in public investment for improving the productiveness of Canadian natural resources and the undertaking of useful public investment projects. Investment policies designed to reduce fluctuations in the flow of capital goods will of necessity include measures in the housing field. Not only does residential investment comprise a significant portion of total investment, but it has an immediate effect on increasing the standard of living of the population. Further, a large continuing housing program could make a contribution to the stabilization of employment and income far beyond its influence on the construction industry and the industries that supply materials and services for housing. In essence, a housing program continuing at high levels can be of considerable economic and social importance for an industrially advanced country like Canada. It appears that barring an emergency the question of tomorrow will not be: "Can Canadians afford *to build* 100,000 or more houses a year?" but rather "Can Canadians afford *not to build* that number of houses each year?" (pp. 262-263).

Part II

CONCEPT AND ANALYSIS

Section One

CONCEPT AND METHOD OF MEASUREMENT

Purpose of Measuring Changes in Residential Capital and Residential Real Estate

Each year new houses are built. Existing houses are destroyed, demolished or damaged. Other houses are improved, altered, repaired and maintained. Land is cleared, sub-divided and serviced to provide the sites required for the expansion of Canada's housing supply. This process uses up natural resources including lumber, metals, clay and stone. It involves substantial human effort by a variety of professions, trades, skills and crafts, and means jobs and incomes to many thousands of Canadians.

Measurement of the effort involved and its impact on the economy is important for three reasons: (*a*) It indicates the progress made in expanding and improving the housing stock of the country and thus reflects changes in the standard of living. (*b*) It provides quantitative information on the resources, both human and natural, used up in this process and thus indicates the effect which the volume of residential construction and related efforts have had on total economic activity. (*c*) It brings out the importance of the real estate industry, the total investment in land and structures, and emphasizes the stake that modern society has in preserving and developing the wealth that results from its labour.

As historical records show, fluctuations in the annual volume of residential investment have been substantial and have been associated with correspondingly violent changes in the employment and income of the working population, since a large sector in one way or another depends for its livelihood on a continuing high level of new and maintenance construction. Residential construction is an important element of total construction in Canada—over one-third in 1949—but it represents only a small portion of the sum total of all goods and services produced in the country in a given period—about six per cent of the gross national product in 1949. However, because of its volatility residential construction significantly affects levels of employment and income.

To meet some of the needs indicated above, and in particular to deal with the supply of and demand for housing, this report provides for the period 1921 to 1949 estimates of (*a*) the number of

new dwellings constructed annually and those available, occupied and vacant at the end of each year, and the number of families and non-family households occupying dwellings; (*b*) residential gross capital formation and residential capital consumption, that is, the additions to and subtractions from residential capital occurring each year, and the value of total residential construction activity, new construction, major improvements and alterations, and repairs and maintenance, in both current and constant dollar terms; and (*c*) the value of residential real estate in existence in Canada at the end of each year, including the value of structures, the installed non-movable equipment and land, separately for real estate in non-farm and farm areas. (*d*) To round out the analysis, selected data are also provided on the financing of the housing program, its regional composition and its importance for the Canadian economy, together with information on real estate activity in the form of changes of ownership of existing real estate. To extend the perspective for appraising housing growth, background data for the period 1867 to 1921 are also given in summary form.

Before proceeding with the analysis of the factual material which commences in Section 2, understanding of the concepts and definitions used in this report and their tie-in with measurement of total economic activity, as reflected in the national accounts, is desirable.

Concepts of Residential Capital and Residential Real Estate

Residential real estate is the current value of residential dwellings[1] in existence at a given time, including the value of installed non-movable equipment and the value of land on which these dwellings stand. Like other types of capital, the main characteristic of residential real estate is that it will render a productive service in the future. The service consists of the use of a dwelling for which a tenant pays a rent to the landlord. In the case of owner occupancy, the home owner combines the role of the landlord and consumer and thereby has no money payments to make for the services he would have to purchase from another entrepreneur if he did not own his home.

In business or accounting practice, the acquisition costs of residential real estate are charged to capital account, usually without much differentiation between land costs, construction costs, and the cost of installed immovable equipment. Periodic depreci-

[1]For definition of dwelling see p. 34.

ation allowances are made to take account of the loss in value resulting from the passing of time or from obsolescence. If this business concept of capital expenditures is to be used for the purpose of measuring economic activity in a given period insofar as it affects additions to or deductions from the nation's housing stock, it is useful to separate residential real estate into two components: one that represents the value of the asset resulting from the use of goods produced and services rendered, and the other that involves only the transfer of an existing asset from one use to another or from one ownership to another.

The first component, called in this report, *residential capital*, includes: (*a*) the value of construction work undertaken involving the building of the dwelling, including a garage or other buildings supplementary to a residence such as a toolshed, (*b*) the value of land improvements such as grading and landscaping, but excluding capital expenditures for municipal services such as water mains and sewage disposal, and (*c*) supplementary house building costs which include the value of installed non-movable equipment such as an incinerator and service costs associated with residential construction work such as architectural and legal fees.

The second component consists of the *value of land used for residential purposes*, excluding the improvements to the land which usually accompany new residential construction and which are included in residential capital.

The separation of land improvements from the value of land may appear artificial. But it has the advantage for purposes of economic analysis of separating a transaction which involves the flow of goods and services (land improvements) from one which involves no production of goods and at best may involve only a small amount of services (transfer of land through sale, gift or inheritance). By combining costs of land improvements with costs of construction and supplementary house building costs a component is obtained which reflects the quantities of human and natural resources used in the production process, and makes possible measurement of the employment and income effects of such activity.

Since one of the purposes of this report is to measure the volume of human and natural resources required to bring about changes in the housing stock and the resulting effect upon economic activity, the case for a concept of "residential capital" excluding the value of land insofar as it involves a transfer of assets only is indicated. This is the concept of residential capital used in this report.

Types of Measurement

The quantities of residential real estate and residential capital in existence at a given time are usually expressed in monetary terms, the common basis for evaluating assets of all kinds. But residential capital can also be expressed in terms of physical units. The most commonly accepted unit and the one adopted in this report is the dwelling. A *dwelling* is a structurally separate set of self-contained living premises regularly used for the purpose of human habitation. Accordingly, a duplex would be classed as two dwellings, an apartment building with 20 apartments as 20 dwellings, and a store with a flat in the back as one dwelling.

There are other physical units of measurement. Of these, two are occasionally used. One is broader, the other narrower, than the concept of a dwelling: (*a*) a residential building, which refers to separate structures used partly or wholly for residential purposes irrespective of the number of dwellings it contains; and (*b*) a residential room which may cover any part of a dwelling depending on standards and usage.

Measuring residential capital in terms of dwellings has the advantage of using a common denominator which provides a measurement of changes in the *volume* of housing stock over time. It is also a useful method for an analysis of housing supply in relation to housing demand or need. These concepts are frequently expressed in terms of requirements for separate housing accommodation by families and non-family household groups. However, the number of dwellings is not alone sufficient to measure changes in the housing stock because this approach does not adequately take account of changes in quality and the economic usefulness of the asset.[1] The last mentioned two variants can be better measured by expressing changes in residential capital in monetary terms reflecting current prices. Where changes in volume are required, an approximation of these can be achieved by expressing value changes in constant dollars, adjusting current dollar series by means of price indices. This report provides estimates of residential capital and of changes in residential capital in terms of the number of dwellings and the value of these dwellings expressed in both current and constant dollars.

To measure the stock of residential assets at a given time and any changes that may occur from time to time, it is necessary to

[1]For this reason the number of available dwellings at a given time is sometimes referred to as the "physical supply of housing" to distinguish this term from "housing stock". Such a classification would conform to the usage of confining the term "stock" to the *value* of residential capital at a given point of time.

select a point of time and a time interval. In this report stock is related to quantities in existence at the end of each year and changes of stock are expressed in terms of increases and decreases that occur during the year. Stock at the end of one year plus the net changes during the following year equals stock at the end of the following year.

Classification of Housing Stock

Housing stock can be classified in many ways. In this report the following distinctions are made: (*a*) type of structure, depending on whether a dwelling is a newly constructed unit in a new structure or whether it is created by the conversion of an existing structure; (*b*) type of dwelling, separating single dwellings from multiple units; (*c*) type of occupancy, covering vacant and occupied dwellings with the latter sub-divided into owned and rented units; (*d*) type of area of location, including dwellings in urban, rural non-farm and farm areas, provinces and major urban centres,[1] and (*e*) type of life expectancy, distinguishing permanent and temporary dwellings, the latter particularly of the type built during the war years and designed to remain in use for a considerably shorter time than traditionally built units.[2]

Changes Affecting Housing Stock

The types of changes which affect the stock of available dwellings, residential capital and residential real estate, are summarized in tabular form in Schedule A.

Available Dwellings. To begin with, the stock at the end of the year consists of the number of available dwellings (item 5) some of which are owned (item 1) while others are rented (item 2) and still others are vacant (item 4). During the following year changes in the stock take place, in the first instance by additions to the stock through new dwellings completed in new structures, both single (item 6) and multiple (item 7) and through new dwellings created

[1]The basic definitions are those employed in the Census of 1941. "Urban" covers all incorporated municipalities, "farm" covers units with land of one acre or more and having produced agricultural products in the previous year to the value of $50 or more, "rural non-farm" includes all remaining localities, villages and hamlets. The total of urban and rural non-farm is called "non-farm." In addition, a definition of "urban" is employed which includes the Census definition of urban *and* rural areas forming part of larger metropolitan centres. Where this expanded definition of "urban" is used, it is specifically indicated (see, for example, p. 390). This broader definition of urban is the one presently being used in the housing bulletins published by the Dominion Bureau of Statistics.

[2]For other classifications in use, see *Mortgage Lending in Canada, 1947*, Central Mortgage and Housing Corporation, Ottawa, 1948, p. 55.

by the conversion of existing structures (item 9) resulting in a gross increase in available dwellings (item 10) during the year. Some of this gross increase is offset by gross decreases in available dwellings (item 14), which in years of exceedingly low levels of building activity may exceed gross increase. Such deductions from the housing stock during the year consist of destroyed dwellings (item 11), demolished dwellings (item 12) and abandoned dwellings (item 13), the latter mainly in rural non-farm and farm areas. The net changes in the housing stock that occur during the year (item 17) are then the result of two different flows of work, the gross increase in available dwellings minus the gross decrease.

Residential Capital. To turn from unit measurement to a valuation of housing stock and the flows that affect its level, residential capital (item 18) represents the value of the number of available dwellings in existence at the end of a year (item 5) including the value of residential land improvements, installed non-movable equipment and service costs associated with new dwelling construction valued in the *average price* of this year.

Additions to residential capital during the year take the form of *gross residential capital formation* (item 25) which breaks down into two components: (*a*) additions through construction (item 21) consisting of the value of new residential construction work carried out (item 19)[1] and the value of major improvements and alterations to existing dwellings (item 20),[2] and (*b*) supplementary house building costs (item 24) which are made up of the value of installed non-movable equipment such as elevators and incinerators (item 22)[3] and the value of service costs associated with new dwelling construction, which include the architectural, legal and financial fees (item 23) usually charged to capital expenditures.[4]

[1]This item reflects the value of work on new housing construction including land improvements associated with new residential construction work undertaken during the calendar year, and is distinct from the value of houses completed during the same year. A house which is one-third built in year one and two-thirds in year two is counted as completed in year two, but the actual work carried out is allotted one-third to year one and two-thirds to year two.

[2]This item covers structural changes to existing housing designed to increase or maintain the utility of the residential property, e.g. the addition of a porch, remodelling of a bathroom, or replacement of a roof after a fire.

[3]Movable equipment items such as a stove or a refrigerator, which are usually classed as consumer durable goods, are excluded.

[4]Some concepts of gross residential capital formation are more inclusive than the one employed above in that they may also include the value of repair and maintenance work on residential structures undertaken annually. If such a broader concept is used it will be necessary in order to arrive at residential net capital formation to have an offsetting item for repair and maintenance in capital consumption. For a more detailed discussion of the meaning of capital and capital formation see *Public Investment and Capital Formation, a Study of Public Investment Outlay in Canada, 1926-1941*, Dominion-Provincial Conference on Reconstruction, Ottawa, 1945, and *Investment and Inflation, with Special Reference to the Immediate Post-War Period, Canada, 1945-1948*, Department of Trade and Commerce, Ottawa, 1949.

SCHEDULE A

Types of Flows Affecting Stock of Available Dwellings, Residential Capital and Residential Real Estate

Item	Available Dwellings	Residential Capital	Residential Real Estate
Stock—at End of Year[1]	I. *Available Dwellings* 1. Owned dwellings 2. Rented dwellings 3. Occupied dwellings (Items 1+2) 4. Vacant dwellings 5. Available dwellings (Items 3+4)	V. *Residential Capital* 18. Value of available dwellings (Item 5) including residential land improvements, installed non-movable equipment and service costs associated with new dwelling construction	IX. *Residential Real Estate* 33. Residential capital (Item 18) 34. Value of land used for residential purposes 35. Residential real estate (Items 33+34)
Additions to Stock —during Year	II. *Gross Increase in Available Dwellings* 6. New dwellings completed in new structures—single units 7. New dwellings completed in new structures — multiple units. 8. Total new dwellings completed in new structures (Items 6+7) 9. New dwellings created through conversion of existing structures—multiple units 10. Gross increase in available dwellings (Items 8+9)	VI. *Gross Residential Capital Formation* 19. Value of residential construction work carried out[2] 20. Value of major improvements and alterations to existing dwellings[3] 21. Additions through construction (Items 19+20) 22. Value of installed non-movable equipment[4] 23. Value of service costs associated with new dwelling construction[5] 24. Supplementary house building costs (Items 22+23) 25. Gross residential capital formation (Items 21+24)	X. *Gross Additions to Residential Real Estate* 36. Gross residential capital formation (Item 25) 37. Value of land put in use for residential purposes 38. Gross additions to residential real estate (Items 36+37)
Deductions from Stock—during Year	III. *Gross Decrease in Available Dwellings* 11. Destroyed dwellings 12. Demolished dwellings 13. Abandoned dwellings 14. Gross decrease in available dwellings (Items 11+12+13)	VII. *Residential Capital Consumption* 26. Value of destroyed dwellings (Item 11) 27. Value of damages to existing dwellings 28. Depreciation of residential capital[6] (Item 18) 29. Residential capital consumption (Items 26+27+28)	XI. *Gross Deductions from Residential Real Estate* 39. Residential capital consumption (Item 29) 40. Value of land removed from use for residential purposes[7] 41. Gross deductions from residential real estate (Items 39+40)
Net Changes of Stock — during Year[1]	IV. *Net Changes in Available Dwellings* 15. Gross increase in available dwellings (Item 10) 16. Gross decrease in available dwellings (Item 14) 17. Net changes in available dwellings (Item 15−16)	VIII. *Net Residential Capital Formation* 30. Gross residential capital formation (Item 25) 31. Residential capital consumption (Item 29) 32. Net residential capital formation (Item 30−31)	XII. *Net Changes in Residential Real Estate* 42. Gross additions to residential real estate (Item 38) 43. Gross deductions from residential real estate (Item 41) 44. Net changes in residential real estate (Item 42−43)

[1]Stock at the end of one year (Item 5 or 18 or 35) plus the net changes during the following year (Item 17 or 32 or 44) equals stock at the end of the following year.

[2]This item covers that portion of the work on dwellings completed which is carried out in the year of completion, plus that portion of the work on dwellings started in that year but completed in a succeeding period. [7]Land improvements associated with new residential construction work are included in this item.

[3]This item includes work done to repair major damages to existing dwellings (Item 27).

[4]This item includes such installed immovable equipment as elevators and incinerators, but excludes movable equipment such as refrigerators and stoves.

[5]This item covers such service costs as architectural, legal and financial fees.

[6]This item covers wear and tear and obsolescence of available dwellings (Item 5) resulting in final demolition or abandonment (Items 12 and 13).

[7]This item covers land removed permanently from residential use or removed temporarily until the land is re-occupied by a new dwelling (included in Item 37).

The offsetting item to gross residential capital formation is *residential capital consumption* (item 29) which consists of the value of destroyed dwellings (item 26), the value of damages to existing dwellings (item 27) and depreciation of residential capital (item 28). Destruction of and damages to residential structures are due to accidental causes resulting from unforeseen events, such as fire, storms, flood and earthquake. The risk involved is of a kind that may be taken care of through insurance and/or accounting reserves. Depreciation is an allowance for wear and tear and obsolescence of available dwellings (item 5) resulting in final demolition or abandonment (items 12 and 13). Wear and tear reflects the physical deterioration of residential capital resulting from the exposure to the elements and the use of the property. Obsolescence of residential capital reflects a reduction in value resulting from such things as decline in the neighbourhood, changes in consumer tastes, shifts of industry and depletion of resources (e.g. resulting in ghost mining towns or abandoned farms). Both wear and tear and obsolescence will result in a reduction of the returns from the property as the length of the remaining life of the dwelling and the value of its annual service is reduced. These two factors are taken care of in the form of depreciation, which is a device accepted in modern business and taxation practice of charging the capital cost of an asset against the annual income over its useful life. Applied to the field of national income accounting, depreciation reflects, broadly speaking, the cost of durable assets (residential dwellings) used up in a given period (reflected in a decline in the value of the dwelling).

In this report depreciation is applied only to residential structures including installed non-movable equipment but excluding land and land improvements. This is not to say that land used for residential purposes may not diminish in value as the district in which the site is located deteriorates. But against this decline in value of the land is to be set the increase in the value of the land that accrues from the development of new residential areas. In the absence of adequate community planning and zoning safeguards, and with continued growth of urban areas, these two forces are at work in opposite directions, and, for the country as a whole, will cancel each other out to some degree. Under Canadian income tax regulations depreciation is not allowed on land and land improvements.

Gross residential capital formation minus residential capital consumption yields *net residential capital formation* (item 32), an important measurement since it reflects, after eliminating the effects of price fluctuations, changes in *real* capital.

Residential Real Estate. As indicated earlier, the concept of residential real estate (item 35) is used in this report as a broader concept than residential capital in that it includes also the value of land used for residential purposes (item 34). Gross additions to residential real estate (item 38) take place in the form of gross residential capital formation added to the value of land put in use for residential purposes (item 37). Gross deductions from residential real estate (item 41), on the other hand, are the result of residential capital consumption and of land removed from use for residential purposes as shown in item 40. This item covers land removed permanently from residential use or removed temporarily until the land is re-occupied by a new dwelling (included in item 37). Net results of these additions to and deductions from residential real estate that go on during the year are then called net changes in residential real estate (item 44). Added to the stock of residential real estate at the end of one year, the sum represents the stock of residential real estate at the end of the following year.

Valuation of Housing Stock and Flows Affecting It

Residential real estate and residential capital can be valued in past, present or future prices depending on the purpose of valuing these assets.

Past prices are expressed in terms of original cost, that is, what it cost to create the asset in the first instance, or in terms of acquisition cost, that is, the price paid for the asset when purchased. Valuation of assets in past prices is a useful concept if the main purpose is to safeguard the original money sum invested.

Valuation in *current* prices can take the form of current replacement cost, that is, the price paid currently for the reproduction of the asset; of current market price, that is, what it would cost to purchase an equivalent existing asset; or the form of capitalization of returns valuation, which method attempts to estimate future net returns and discount them to the present at the going rate of interest.[1] The main usefulness of valuing assets at current prices lies in the fact that the results can be related to and compared with other economic quantities whether they take the form of stock—total capital—or flows—national product or national expenditures.

Valuation in *future* prices necessitates estimating ultimate replacement costs, since this approach aims at maintaining real capital by attempting to estimate what it would cost to create or

[1]But for the fact that the residential real estate market is an imperfect market, the above methods of valuation in current prices would yield the same result.

acquire an equivalent asset when the original has disappeared or its economic usefulness has been sufficiently diminished so that replacement is indicated.

These various methods of valuation and their advantages and disadvantages for the purpose at hand, are discussed in more detail in connection with the preparation of the estimates (see pp. 142 ff). Here it may suffice to say that the valuation method adopted in this report is the *current replacement cost* concept. New houses constructed during the year are valued at what it cost to construct them and existing houses are valued at what it would cost to build them currently, minus an allowance for the loss in value due to the passing of time and economic usefulness. This latter allowance takes the form of depreciation which is charged in terms of a percentage of the current replacement cost. Major improvements and alterations, like new construction, are valued in terms of current construction costs. Since land costs are taken as a function of total value of residential assets for reasons discussed later (see pp. 421-422), land is valued in a way similar to residential structures except that no allowance is made for the depreciation of land (see pp. 431-432).

Supplementary Concepts

Two supplementary concepts are needed. One is a measurement which will indicate housing demand or housing need in units corresponding to those used in measuring housing supply. The other is a unit to indicate the kind of economic flows which use the same natural and human resources as new residential construction so as to make it possible to arrive at a homogeneous total of a given sector of industrial activity. To meet these requirements, some explanation is given below of what constitutes a family or a non-family household. Such groups represent elements of housing *demand* if they have sufficient resources to make their demand effective, or of housing *need* if they have not sufficient resources (see pp. 196 ff). Reference is also made to residential repairs and maintenance construction, which, added to new residential construction and major alterations and improvements to residential structures, yields total residential construction.

The term *family* is used here in the same sense as in the Census, that is, a natural family covering both the husband-wife and parent-child relationship.

A *non-family household* is an individual or combination of individuals not related in the above manner but occupying a

separate dwelling, e.g. a bachelor occupying an apartment, or a brother and sister or two friends living in a house.

Residential repair and maintenance is the amount of work performed for the physical upkeep of the property, that is, maintenance and repair work to the structure, grounds and installed non-movable equipment. In this report maintenance and repair is confined to construction and related work done, for example, by plumbers, electricians, painters, and the materials used in this process, including the value of repair construction by the owner of the property himself and his immediate family. Excluded are maintenance services required for the operation of the property, such as cleaning and janitor service.

Total residential construction is the aggregate of new construction, major improvements and alterations and repair and maintenance work. This quantity reflects the output by all persons engaged in residential construction and covers the work of and salaries paid to construction workers, the cost of materials including transportation costs, overhead and profits of contractors and builders and an allowance for the labour of the "owner" builder and unpaid labour of the owner's family or other assistance. This total differs from residential gross capital formation in that it excludes cost of installed equipment and service costs but includes repair and maintenance expenditures to existing dwellings and residential land.

Tie-in with National Accounts

The concept and definitions used in this report follow quite closely the pattern of national income accounting as developed in Canada and other countries, with one important distinction. Estimates of depreciation are usually made to conform to taxation and business practice prevailing in the countries concerned. This means that depreciation charges for most segments are computed on the basis of minimum life expectancy and original or acquisition cost.[1] In this study, however, estimated *actual* life expectancy of residential real estate and *current* replacement costs are used to compute depreciation. The estimate of the life expectancy of the average Canadian house is based on a survey of informed real estate opinions, tested by data on the actual life span of the average

[1]The present method—as of mid-1950—employed in the Canadian national accounts of estimating depreciation of housing comes closer to actual life expectancy and a current cost concept than can be achieved by employing taxation and business practice which uses a minimum life expectancy and original or acquisition costs as a basis for valuation (see pp. 425-426). The method used in the Canadian national accounts consists of applying a fixed proportion to gross rentals which are considered to be indicative of the market price of the asset (see p. 426).

Canadian house, as indicated by Census data going back to 1871 (see p. 427). The approach is somewhat similar to that used in Canada by the Dominion Bureau of Statistics in estimating depreciation of farm machinery and equipment,[1] and in the United States by the Department of Agriculture in estimating depreciation of farm buildings, machinery and equipment, which estimates are incorporated in the national income estimates prepared by the Department of Commerce.[2]

Bearing the above-mentioned conceptual difference in mind, gross residential capital formation and residential capital consumption fit easily into the framework of the Canadian national accounts presently in use. The tie-in of gross residential capital formation and residential capital consumption with gross national expenditure and gross national product at market prices and the net national income at factor cost is shown in summary form in Schedule B.

Gross national expenditure at market prices (item 5) is made up of four major components: (*a*) personal expenditures on consumer goods and services (item 1), (*b*) gross home investment (item 2), (*c*) government expenditures on goods and services, excluding transfer payments to the private sector of the economy (item 3), and (*d*) net foreign balance, that is, exports of goods and services minus imports of goods and services (item 4). Two of these components include segments of gross residential capital formation. Private expenditures on new housing and major improvements and alterations to existing housing are included in gross home investment (item 2(*a*)) and public expenditures of the same kind[3] under government expenditures on goods and services (item 3(*a*)). Items 2(*a*) and 3(*a*) as shown in Schedule B equal item 25 of Schedule A.

[1]*Quarterly Bulletin of Agricultural Statistics*, Dominion Bureau of Statistics, Ottawa, April-June, 1944, Vol. 37, No. 1, p. 26, and *National Income, A Study Prepared for the Commission on Dominion-Provincial Relations*, Ottawa, 1939, p. 50.

[2]*Income Parity for Agriculture, Part II—Expenses of Agricultural Production, Section 3, Purchases, Depreciation and Value of Farm Automobiles, Motortrucks, Tractors, and Other Farm Machinery, 1910-1939*, United States Department of Agriculture, Washington, 1940, *Income Parity for Agriculture, Part II—Expenses of Agricultural Production, Section 5, Expenditures for and Depreciation of Permanent Improvements on Farms, 1910-1940*, United States Department of Agriculture, Washington, 1941, and *National Income, Supplement to Survey of Current Business*, United States Department of Commerce, Washington, July, 1947.

[3]These expenditures cover only direct government house building, such as Federal projects under the Veterans' Land Act, 1942 and housing projects for married service personnel by the Department of National Defence, and Federal-municipal projects including veterans' projects through Central Mortgage and Housing Corporation, formerly Wartime Housing, and emergency shelter. Government financing of house building, which is carried out for private account, is included under private expenditures for housing (see Section 4).

Net national income at factor cost (item 8) is arrived at by subtracting from gross national expenditure (equal to gross national product) at market prices, depreciation allowances and similar business costs (item 6) and indirect taxes less subsidies (item 7). Total depreciation and similar business costs (item 6(*c*)) are made up of residential capital consumption (item 6(*a*)) and other depreciation allowances and similar business costs (item 6(*b*)). Residential capital consumption shown in item 6(*a*) of Schedule B is conceptually the same as item 29 in Schedule A.

Some of the cost items which go into gross residential capital formation are included in some of the other components shown in Schedule B. For example, a portion of the basic and building materials which go into gross residential capital formation are imported and would therefore be included under imports of goods and services (item 4(*b*)) and indirect taxes levied on basic and building materials are included in item 7.

Since the national accounts aim at measuring total economic activity in the different forms in which it takes place, the tie-in of gross residential capital formation and residential capital consumption with the national accounts makes it possible to make comparative observations of the relationship of a part to the whole, or among the different parts of the whole. Thus it is possible to estimate what portion of the resources of the country are devoted to housing as against other purposes, how important housing is as a factor in the maintenance of employment and income, and to what extent real residential capital is maintained as compared with other types of real capital. Such comparative observations grow in importance as they become more numerous over a longer period of time. They portray not only the effect of variations in the different flows upon total economic activity—for example, high levels of investment and exports being associated with prosperity and a low volume of investment and exports being identified with a depression —but also changes in the standard of living. For example, when net residential capital formation is a minus quantity, this means there are fewer houses available and/or the quality of the housing stock is reduced at the end of the year as compared with the end of the preceding year. A study of the economic flows is thus one of the basic means of interpreting economic behaviour (for a brief appraisal see Section 8).

SCHEDULE B

Gross Residential Capital Formation and Residential Capital Consumption, Relation to Gross National Expenditure and Gross National Product at Market Prices and Net National Income at Factor Cost as Per Canadian National Accounts

Item No.	*Component*
1.	Personal expenditures on consumer goods and services[1]
2.	Gross home investment (*a*) Housing[2] (*b*) Business and institutional investment[3] (*c*) Total private investment in durable physical assets (Items 2(a) + 2(b)) (*d*) Change in inventories (*e*) Total gross home investment (Items 2(c) + 2(d))
3.	Government expenditures on goods and services (*a*) Housing[2] (*b*) Other government expenditures on goods and services[4] (*c*) Total government expenditures on goods and services (Items 3(a) + 3(b))[5]
4.	Net foreign balance (*a*) Exports of goods and services (*b*) Imports of goods and services (*c*) Net foreign balance (Item 4(a) − 4(b))
5.	Gross national expenditure at market prices (Items 1 + 2(e) + 3(c) + 4(c))[6]
6.	Depreciation allowances and similar business costs (*a*) Residential capital consumption[7] (*b*) Other depreciation allowances and similar business costs (*c*) Total depreciation allowances and similar business costs (Items 6(a) + 6(b))
7.	Indirect taxes less subsidies[8]
8.	Net national income at factor cost (Item 5 − Items 6(c) + 7)[9]

[1]Repair and maintenance expenditures to privately owned housing are included in this item.

[2]Items 2(*a*) and 3(*a*) equal gross residential capital formation shown in Item 25 of Schedule A.

[3]This item is called "plant and equipment" in the Canadian national accounts.

[4]This item includes other government expenditures on capital goods such as public buildings, airports, roads and irrigation schemes and on current consumption of goods and services, such as salaries of the public service and purchases of fuel and stationery.

[5]This item excludes government transfer payments to the private sector of the economy.

[6]Gross national expenditure at market prices equals gross national product at market prices, which in turn is comprised of net national income at factor cost, depreciation allowances and similar business costs and indirect taxes less subsidies.

[7]Item 6(*a*), which corresponds to Item 29 of Schedule A as estimated in this report, is based on the replacement cost concept, while Item 6(*b*) as estimated in the National Accounts is based substantially on income tax and business practice. The two items are therefore not strictly comparable.

[8]This item includes indirect taxes charged to basic and building materials going into gross residential capital formation.

[9]In actual practice, in arriving at national income from national expenditure, account would have to be taken of a statistical error usually involved in balancing the accounts.

SECTION TWO

HOUSING STOCK, COMPOSITION AND CHANGES

HOW MANY houses are there in Canada? How old are they? Where are they situated? How many of these dwellings are vacant and how many are occupied? How many homes are owned by the people living in them and how many are rented? Has there been a tendency towards more home ownership or towards more rental housing in Canada? How many houses have been built annually in Canada over the last three decades? What are the annual and seasonal fluctuations of house building? How many homes have been destroyed, demolished or abandoned? Taking account of new building, demolitions, destruction and abandonment, what are the annual net additions to Canada's housing stock? How many of the new units are single homes, converted structures or temporary dwellings, and where does the major part of house building take place? How do Canada's housing accomplishments compare with those of other countries, particularly the United Kingdom and the United States?

With the preparation of a set of new series of housing estimates comparable with the more comprehensive data currently collected on housing progress in Canada[1] it is now possible to answer these questions and to provide a perspective for an appraisal of current and future housing achievements.[2]

SIZE AND AGE OF HOUSING STOCK

At the end of December 1949, there were 3,125,000 dwelling units in Canada. This figure excludes Newfoundland, Yukon and the Northwest Territories. Allowing for the housing stock in these regions brings the total up to about 3.2 million homes. The number of houses available at present is about four times as great as it was seventy years ago (see pp. 477 ff.) and reflects a 64 per cent increase in the housing stock since 1921 (see Table 1). This increase has been more rapid than the growth of population in the same period, contributing to a gradual and continuing improvement in the

[1]See *Housing in Canada*, quarterly report of Central Mortgage and Housing Corporation, Ottawa, *Housing Statistics*, periodic publication by the Dominion Bureau of Statistics, Ottawa, covering the period 1945-1947, and *Housing Bulletin*, monthly publication by the Dominion Bureau of Statistics, Ottawa, beginning with January, 1948.

[2]For detailed tables which form the basis of some of the summary data shown in this section, see Tables 67 to 71 in Section 9.

TABLE 1

TOTAL AND OCCUPIED HOUSING STOCK, CANADA, 1921-1949

Year and Period	Total Housing Stock 000	Vacant Dwellings 000	Total Occupied Dwellings 000	Owner-Occupied Dwellings 000	Owner-Occupied Dwellings as Proportion of Total Occupied Dwellings per cent
1921	1,908.8	52.1	1,856.7	1,249.7	67.3
1922	1,945.9	54.1	1,891.8	1,262.7	66.7
1923	1,984.0	94.3	1,889.7	1,253.4	66.3
1924	2,017.8	108.0	1,909.8	1,256.6	65.8
1925	2,056.9	103.7	1,953.2	1,271.9	65.1
1926	2,106.1	98.0	2,008.1	1,294.4	64.5
1927	2,156.7	98.0	2,058.7	1,312.8	63.8
1928	2,213.5	93.5	2,120.0	1,338.1	63.1
1929	2,271.2	91.6	2,179.6	1,361.0	62.4
1930	2,317.6	90.6	2,227.0	1,376.2	61.8
Average for Decade	2,097.8	88.4	2,009.5	1,297.7	64.6
1931	2,357.5	105.3	2,252.2	1,379.4	61.2
1932	2,379.0	140.6	2,238.4	1,363.2	60.9
1933	2,395.4	143.9	2,251.5	1,361.0	60.4
1934	2,417.2	118.0	2,299.2	1,377.8	59.9
1935	2,443.8	101.3	2,342.5	1,392.1	59.4
1936	2,476.1	97.7	2,378.4	1,402.4	59.0
1937	2,516.6	85.0	2,431.6	1,423.1	58.5
1938	2,553.6	81.9	2,471.7	1,436.7	58.1
1939	2,597.8	80.8	2,517.0	1,452.7	57.7
1940	2,643.4	63.7	2,579.7	1,477.3	57.3
Average for Decade	2,478.0	101.8	2,376.2	1,406.6	59.2
1941	2,692.9	63.0	2,629.9	1,493.7	56.8
1942	2,733.2	60.6	2,672.6	1,508.7	56.5
1943	2,763.2	59.8	2,703.4	1,523.9	56.4
1944	2,799.0	59.6	2,739.4	1,546.9	56.5
1945	2,840.2	59.8	2,780.4	1,574.4	56.6
1946	2,899.2	60.1	2,839.1	1,613.6	56.8
1947	2,969.9	62.8	2,907.1	1,661.1	57.1
1948	3,042.4	64.0	2,978.4	1,711.4	57.5
1949	3,124.5	65.3	3,059.2	1,767.3	57.8
Average for Period	2,873.8	61.7	2,812.2	1,600.1	56.9
Average 1921-1949	2,469.7	84.7	2,385.1	1,429.1	59.9

standard of living accommodation in Canada (see pp. 196-197). The large number of houses built in the post-war period (see below) constitutes a substantial addition to the housing stock.

At the end of 1949, 320,000 dwellings were less than 4 years old, 231,000 were between 4 and 9 years, and 391,000 dwellings were between 10 and 19 years. Houses of less than 20 years of age reflect construction activity in the 'thirties and the 'forties. Houses in this category comprise about 30 per cent of the total housing

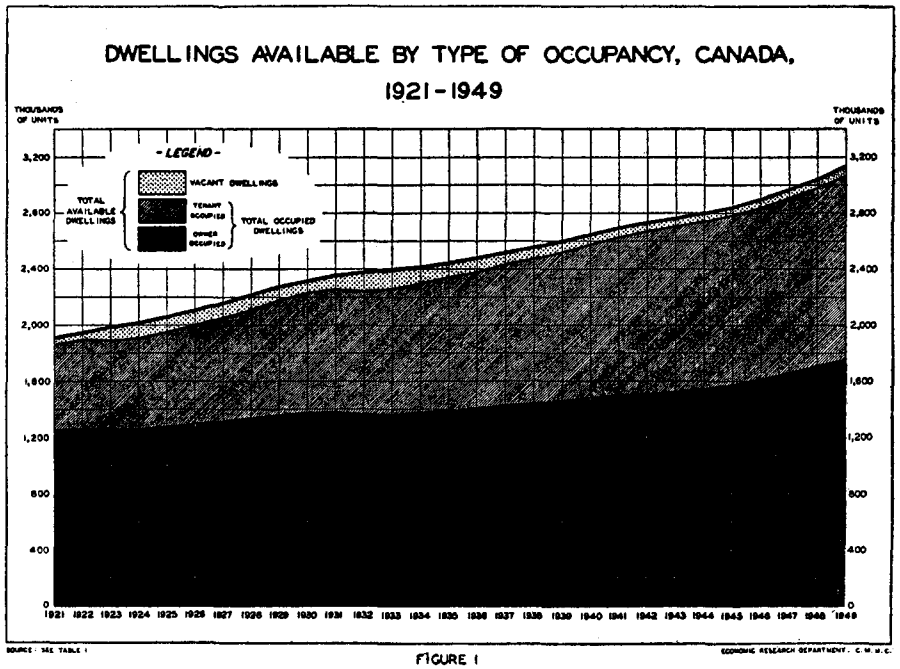


FIGURE 1

stock, about the same proportion as dwellings 20 to 39 years old, which reflect house building in the second and third decades of the century (see Figure 1).

Roughly three-fifths of the housing stock is less than 40 years of age, one-fifth between 40 and 60 years, and the remaining one-fifth over 60 years of age. Life expectancy for the *average* Canadian house has been estimated at 60 years for a farm home and 75 years for a well-built city home (see p. 427). The data on the age distribution of the housing stock indicate that about 400,000 houses in Canada are in the over-age class (see Table 2). Some of these homes, solidly built and improved to include modern conveniences, provide satisfactory living accommodation, but many

of the dwellings described as slum and substandard homes[1] are to be found in this group of over-age homes. This large total suggests that there is room for a comprehensive replacement and rebuilding program once the great pressure on the housing market evident in the first five years of the post-war period has subsided and a better balance between housing demand and supply has been achieved (see Section 7).

TABLE 2

AGE DISTRIBUTION OF HOUSING STOCK, CANADA, 1949

Age in Years	Number 000	Per cent
Less than 4	320	10.2
4 - 9	231	7.4
10 - 19	391	12.5
20 - 29	491	15.7
30 - 39	468	15.0
40 - 49	476	15.2
50 - 59	200	6.4
60 - 69	150	4.8
Over 69	398	12.8
Total	3,125	100.0

The average age of Canadian houses at the end of 1949 was 33 years. The average age of the farm home was higher, 39 years, followed by urban houses with an average age of 31 years and rural non-farm dwellings with an average age of 25 years (see Table 3). The high average age for farm homes is mainly due to the very small replacement rate and the fact that many of the farm homes are to be found in the oldest settled parts of the country. Rural non-farm homes are of lower average age than dwellings in urban centres. This is at first sight surprising since the replacement rate is highest in large cities and towns. The explanation is to be found in the peculiarities of the area described as rural non-farm. The regions and localities covered by this description are small industrial and residential non-incorporated communities surrounding metropolitan centres and other cities

[1]In 1944 a minimum replacement program of substandard and slum dwellings was put at 175,000 dwelling units (*Housing and Community Planning*, Final Report of the Sub-committee, Advisory Committee on Reconstruction, King's Printer, Ottawa, 1944, p. 140).

and towns, non-incorporated villages in farming and lumbering sections of the country, fishing and mining communities and settlements in areas undergoing exploration and new development such as most of the northern parts of Canada. They include housing construction of newly established communities including many of quite recent origin, e.g. the community of Chalk River in Ontario built around the atomic energy project, and the pulp and paper town of Marathon in Ontario sponsored by industrial

TABLE 3

AVERAGE AGE OF HOUSING STOCK, BY AREA, CANADA, 1921-1949
(Years)

Year	Urban	Rural Non-Farm	Farm	All Areas
1921	22.0	22.0	18.0	20.5
1922	22.3	22.1	18.8	21.4
1923	22.6	22.2	19.6	21.9
1924	23.0	22.5	20.4	22.4
1925	23.3	22.7	21.2	22.9
1926	23.4	22.8	22.0	23.4
1927	23.5	22.9	22.7	23.7
1928	23.5	23.1	23.4	24.0
1929	23.5	23.2	24.1	24.3
1930	23.7	23.3	24.9	24.5
1931	24.0	23.4	25.6	24.9
1932	24.6	23.8	26.4	25.3
1933	25.3	24.3	27.2	25.9
1934	26.0	24.6	28.0	26.6
1935	26.6	24.8	28.8	27.3
1936	27.2	24.8	29.5	27.8
1937	27.7	24.6	30.1	28.3
1938	28.2	24.6	30.8	28.7
1939	28.7	24.4	31.4	29.2
1940	29.1	24.3	32.1	29.6
1941	29.5	24.2	32.8	29.9
1942	29.9	24.4	33.6	30.3
1943	30.4	24.8	34.4	30.7
1944	30.8	25.1	35.2	31.2
1945	31.2	25.4	36.0	31.7
1946	31.3	25.5	36.7	32.1
1947	31.3	25.4	37.4	32.3
1948	31.3	25.4	38.1	32.4
1949	31.3	25.3	38.8	32.5

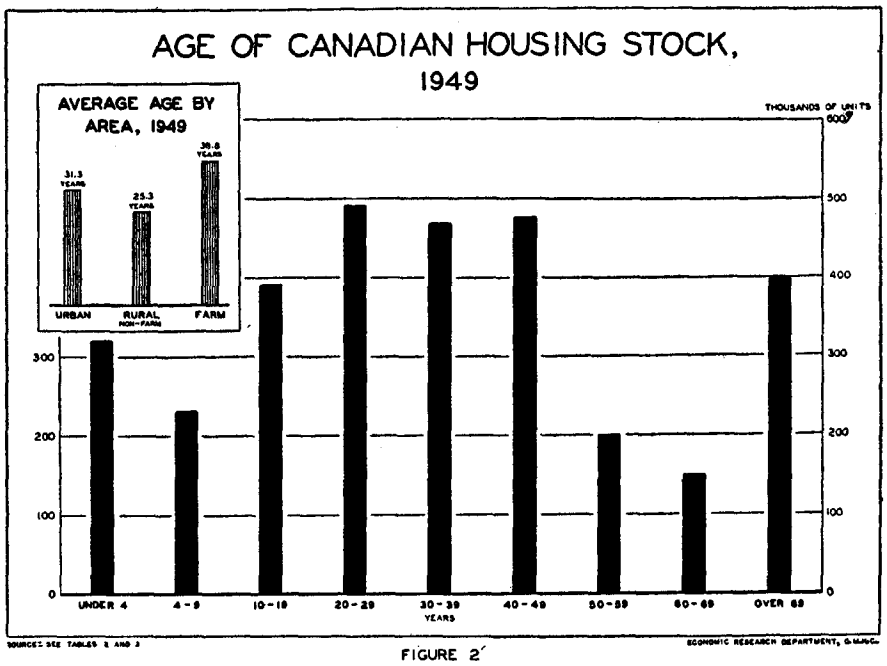


FIGURE 2

enterprise. They also include dwellings built in the northern areas where because of weather conditions the life expectancy of the average house would be shorter than the life expectancy of homes in the more moderate climate of the southern parts of Canada.

Canada's housing stock has been growing older year by year, chiefly because replacement has not kept pace with the aging of existing homes (see also p. 63). For example, the average age of a house in Canada was 21 years in 1921 as compared with 33 years in 1949. This means that in about three decades Canada's housing stock has aged about 50 per cent. In some measure this aging process reflects deterioration in the quality of living accommodation. This factor should be borne in mind in any considerations whether the Canadian standard of housing accommodation is higher today than it was at any preceding period. This subject is examined in greater detail in Section 7 (see pp. 195 ff.).

Location of Housing Stock

It has been pointed out above that location is a factor in the age of the Canadian housing stock. To assess the importance of age distribution of the housing stock some quantitative information is desirable on the number of houses situated in the various

regions. The subject is explored in greater detail in Section 6. Here it may suffice to say that of the 3.1 million occupied dwellings in existence at the end of 1949, the majority, 1.7 million, were situated in urban areas over 600,000 in rural non-farm areas, and 700,000 on farms. Also, the Maritimes, Quebec and Ontario, where the largest number of older residential buildings are situated, comprise the major portion of the housing stock, as indicated in Table 4.

Occupancy of Housing Stock

Vacancy Rate. The pressure on the housing market at the end of 1949 is reflected in a very low vacancy rate: about 65,000 houses or 2 per cent of the housing stock[1] (see Table 1). This rate is notably below what is considered a minimum rate to assure flexibility of the housing stock[2] and the rate that prevailed in the

TABLE 4

Location of Occupied Housing Stock, Canada, 1949

Area and Region	Number 000	Per cent
Area		
Urban	1,710	55.9
Rural Non-Farm	646	21.1
Total Non-Farm	2,356	77.0
Farm	703	23.0
Total	3,059	100.0
Region		
Maritimes	271	8.9
Quebec	777	25.4
Ontario	1,080	35.3
Prairies	645	21.1
British Columbia	286	9.3
Canada	3,059	100.0

[1]The post-war housing situation was particularly tight in the major Canadian cities where vacancy rates of less than 1 per cent were quite common, representing in fact mainly dwellings unoccupied during change of ownership or tenants, or vacant while the dwelling was being repaired or improved. For all dwellings in non-farm areas, vacant units at the end of 1949 were estimated at 38,000, or about 1½ per cent of the total housing stock of 2.4 million.

[2]An average vacancy rate of 4 per cent covering a range from 2 to 6 per cent depending on economic conditions in each particular area was considered a desirable vacancy rate to provide flexibility necessary to meet Canadian housing requirements in ordinary times. (*Housing and Community Planning*, p. 141.)

pre-war period. The low vacancy rate of 2 per cent prevailed during most of the war and post-war years. It provides additional evidence of the tight housing situation prevailing in Canada in the last decade. This ratio of 2 per cent is about half what the average vacancy rate was in the 'twenties and the 'thirties.

For the whole period under consideration the average vacancy rate was about 3½ per cent. This suggests that not until the 1949 national vacancy rate of 2 per cent is raised to somewhere between 3 and 4 per cent as a result of increased housing supply overtaking demand will some of the most pressing tightness of the post-war housing situation subside. It should be remembered, however, that a vacancy rate of 3 to 4 per cent could be the result of two different sets of circumstances and would not necessarily mean that the housing situation in Canada is entirely satisfactory.

One way of achieving a higher vacancy rate than prevailed in 1949 would be by raising the level of residential construction until it overtakes demand. Alternatively, a high vacancy rate might be accompanied by low levels of residential construction if, as a result of low incomes and high unemployment, effective demand for new housing fell considerably below the rate of population growth and family formation (see Section 7), so that even small additions to the housing stock were not taken up fully. In fact, past experience shows that high vacancy rates prevailed in times of declining levels of employment and income and a low volume of residential construction as was the case in 1924 and 1933 (see Table 1). Against this, in times of high economic activity vacancy rates were low because many families who had been sharing housing accommodation with other families or non-family household groups were in a position to afford housing accommodation of their own. However, even in a period of prosperity such as prevailed in 1928 and 1929 the vacancy rate was approximately 4 per cent. In the pre-war years reviewed here vacancy rates were higher than during most war years and the immediate post-war period, suggesting that a country like Canada, in which occupational mobility is an important element in economic development, requires greater flexibility in the use of the housing stock than it has had in the last decade.

Owner and Tenant Occupancy. At the end of 1949 close to three-fifths of the occupied houses were inhabited by their owners, the remaining two-fifths were leased to tenants (see Figure 2). Three decades earlier the corresponding proportions were two-thirds and one-third, indicating that rental housing has been increasing at a more rapid rate than ownership occupancy (see

also pp. 65-69). This trend, observable for the period 1921 to 1943 from the data in Table 1, is a reflection of the growing urbanization and industrialization of Canada's economy.

Urbanization in the first place has meant greater concentration of population in metropolitan centres where the desire to obtain accommodation close to the place of work, the inability of large sectors of the working population to afford housing of their own in suburban areas, and the growing scarcity of serviced land within city boundaries contributed to a trend towards more rental housing. Also, industrialization has made mobility of the labour force an economic necessity. Mobility in turn has meant greater need for rental accommodation which could be leased or vacated as employment and business opportunities required.

A special situation has prevailed since the early war years when rental control with the setting of rental ceilings made the building of rental accommodation less attractive and most residential construction was for owner occupancy. Another factor in the war period was the sale for owner occupancy of many single homes which had been taken over by lending institutions in the 'thirties following default in payments by owners of the property.

As a result of these various forces the proportion of the housing stock occupied by home owners rose from 56.4 per cent in 1943 to 57.8 per cent in 1949. While this overall change has been relatively small—1.4 per cent of the occupied housing stock involves about 43,000 units—it should be remembered that it represents a reversal of a long term trend that goes back beyond 1921. This trend towards more rental housing, apparent until 1943, has been a companion development of the rapid growth of Canada as an industrialized nation[1] and may reassert itself when the special conditions arising out of the war have lost their force.

Net Annual Changes in Occupancy. In this connection it is of interest to examine how the annual net increase of houses ties in with changes in the occupancy status of the housing supply. Net increase of dwellings in any given period—in this report a year—is the total number of dwellings built minus the dwellings destroyed, demolished and abandoned in the same period. Each year the housing stock is increased by the net addition of dwellings. At the same time the composition of occupancy of the housing stock changes.

[1]For a summary of Canada's growth as an industrialized nation see *Encouragement to Industrial Expansion in Canada, Operation of Special Depreciation Provisions, November 10, 1944—March 31, 1949*, Department of Reconstruction and Supply, Ottawa, 1948, Chapters I and IV.

Some homes are either *added to* or *taken from* each of the three groups of dwellings: owner-occupied, rented or vacant. To take a simple case: in 1949 net addition of dwellings was 82,100. In the same year 55,900 units were newly occupied by their owners, 24,900 were occupied by tenants and 1,300 were added to the number of vacant dwellings (see Table 5). This is not to say that *all* the 55,900 units newly occupied by home owners were new houses built in 1949. In fact, many of the *new* houses completed in 1949 would be included in the 55,900 mentioned above, but the latter figure would also include some houses built in a previous period that had been either vacant or occupied by a tenant.

Bearing this consideration in mind, it becomes apparent how it was possible that in a year like 1934, 30,900 dwellings were added to the total number of rented homes while the total net additions to the housing stock numbered only 21,800. What happened in 1934 was that 25,900 houses that had been vacant in 1933 were occupied again, making it possible not only to put to use more rental accommodation than was obtained through new construction, but also to add 16,800 units to the total number of owner-occupied dwellings.[1]

In the whole period under review it is estimated that there are only three years, 1923, 1932 and 1933, in which new purchases of homes by owner-occupiers were exceeded by sales of houses by owner-occupiers.

House prices had risen considerably in the first three years following the end of World War I, with a break in prices following in the fourth year. A short but sharp post-war recession which reached its lowest point in 1921[2] made it impossible for many families to continue paying the high carrying charges of their properties and forced sales increased in number. In 1923, although the net addition to the housing stock involved 38,100 new homes, 40,200 units—the largest number in any one year for the last three decades—became vacant, 7,200 were added to those occupied by tenants, while owner-occupied houses were reduced by 9,300 units.

Another reduction in owner occupancy occurred in 1932 and 1933. In these two years the depression which held the whole North American continent in its grip was at its worst. In 1932 net additions to the housing stock involved 21,500 units, but 35,300

[1]16,800 owner-occupied dwellings plus 30,900 tenant-occupied dwellings minus 25,900 dwellings formerly vacant equal 21,800 net increase of dwellings.

[2]*Sequence and Timing of Economic Events in the Last War and Post-War Period, 1914-23*, report by B. H. Higgins to Advisory Committee on Reconstruction, Ottawa, 1943, Chapter 5.

dwellings became vacant—a number exceeded only by 1923—2,400 dwellings were newly occupied by tenants, while the owner-occupied housing stock was reduced by 16,200 units. As far as

TABLE 5

NET ANNUAL CHANGE IN OCCUPANCY OF DWELLINGS, CANADA, 1922-1949
(Thousands of Units)

Year and Period	Owner-Occupied Dwellings	Tenant-Occupied Dwellings	Vacant Dwellings	Annual Net Increase of Dwellings
1922	13.0	22.1	2.0	37.1
1923	− 9.3	7.2	40.2	38.1
1924	3.2	16.9	13.7	33.8
1925	15.3	28.1	− 4.3	39.1
1926	22.5	32.4	− 5.7	49.2
1927	18.4	32.2	.0	50.6
1928	25.3	36.0	− 4.5	56.8
1929	22.9	36.7	− 1.9	57.7
1930	15.2	32.2	− 1.0	46.4
Average for Period	14.1	27.1	4.3	45.4
1931	3.2	22.0	14.7	39.9
1932	−16.2	2.4	35.3	21.5
1933	− 2.2	15.3	3.3	16.4
1934	16.8	30.9	−25.9	21.8
1935	14.3	29.0	−16.7	26.6
1936	10.3	25.6	− 3.6	32.3
1937	20.7	32.5	−12.7	40.5
1938	13.6	26.5	− 3.1	37.0
1939	16.0	29.3	− 1.1	44.2
1940	24.6	38.1	−17.1	45.6
Average for Decade	10.1	25.2	− 2.7	32.6
1941	16.4	33.8	− .7	49.5
1942	15.0	27.7	− 2.4	40.3
1943	15.2	15.6	− .8	30.0
1944	23.0	13.0	− .2	35.8
1945	27.5	13.5	.2	41.2
1946	39.2	19.5	.3	59.0
1947	47.5	20.5	2.7	70.7
1948	50.3	21.0	1.2	72.5
1949	55.9	24.9	1.3	82.1
Average for Period	32.2	21.1	.2	53.5
Average 1922-1949	18.3	24.5	.6	43.4

the housing market was concerned, the worst was about over in 1933, when a much smaller number, 3,300 units, was added to the number of vacant dwellings, but net additions to the housing stock reached their lowest point over the last three decades, 16,400 units.

No negative quantities are indicated for changes in tenant-occupied housing. However, the annual variation of additions to rented accommodation is great, ranging from a low of 7,200 in 1923 and 2,400 in 1932 to a high of 36,700 in 1929 and 38,100 in 1940. Because of the tendency towards greater home ownership during World War II and the years that followed, the number of dwellings

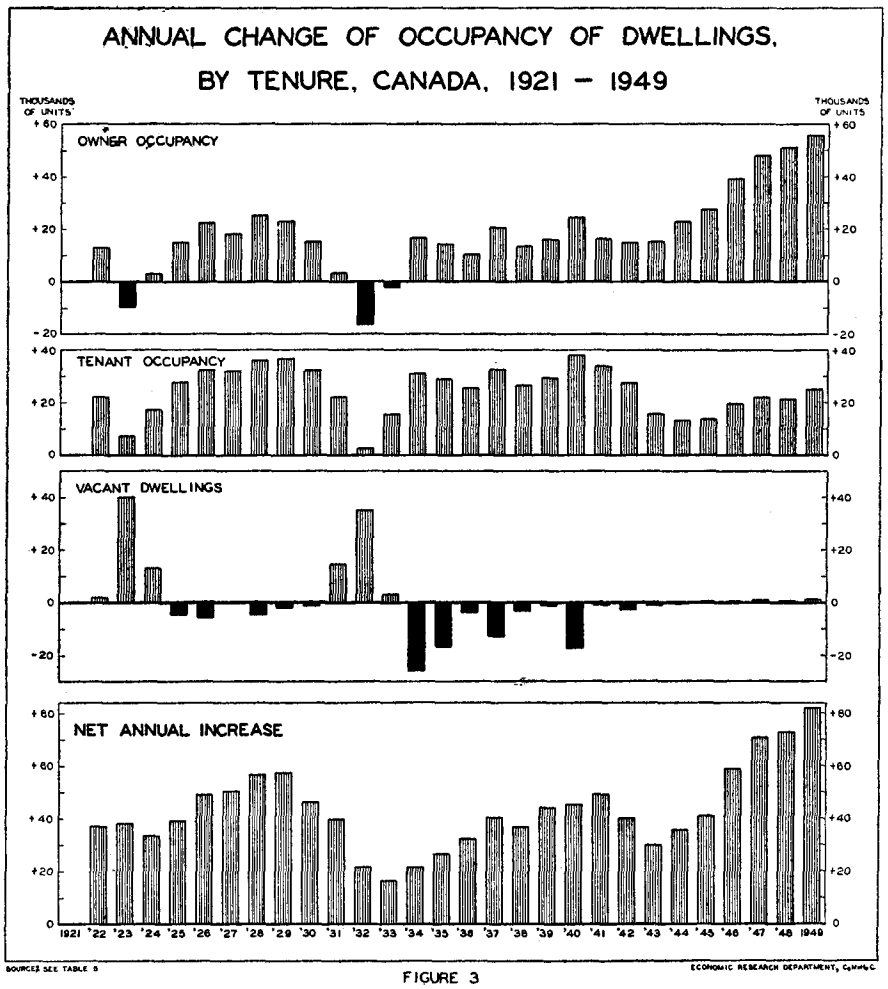


FIGURE 3

added to the tenant-occupied housing stock in 1949 was 24,900,[1] about three-fifths the number in 1929 and 1940 (see Table 5).

Looking at changes in the status of occupancy of the housing stock in broad terms of variations over decades, the 'forties show the greatest increase in home ownership, adding about 32,000 units per year as compared with an annual rise of 14,000 for the 'twenties and 10,000 for the 'thirties. On the other hand, rental accommodation increased annually by about 27,000 and 25,000 respectively in the 'twenties and 'thirties with the level reduced to 21,000 units per year in the 'forties. As for vacant dwellings, decade changes have been very small but significant variations have occurred from year to year (see Figure 3).

Gross Increase of Dwellings

It has been suggested earlier that in the 29-year period from 1921 to 1949 the Canadian housing stock increased by some 64 per cent. In view of the importance of new residential construction in contributing to economic activity (see Section 8), a subject needing further examination is: Has the increase in the housing stock taken place at a more or less even rate or have substantial fluctuations occurred? As the evidence assembled in Table 6 shows, housing completions have varied substantially from year to year and have thus contributed to instability in the construction industry, whose volume of activity has in the past fluctuated more than that of almost any other major industry.

In 1949 completions of dwelling units of all types in Canada, excluding Yukon and the Northwest Territories, numbered 91,000 the largest number of houses ever erected in any one year.[2] At this rate one new house was completed in Canada every six minutes. Housing completions in 1946, 1947 and 1948, with 67,200, 79,200 and 81,200 units respectively, while less than the 1949 peak, still exceeded any pre-war housing accomplishments in Canada.

The largest number of houses built in any one year before the war was in 1929 when 64,700 units were completed.[3] Housing completions fluctuated enormously during the period 1921 to

[1]This figure is probably on the high side for reasons given on page 399.

[2]Including Yukon, the Northwest Territories and Newfoundland, housing completions numbered 91,700 in 1949. A series for housing completions including Newfoundland, Yukon and the Northwest Territories is shown in Table 6, but since other comparable data are available for nine provinces only the analysis that follows is confined to Canada excluding Newfoundland, Yukon and the Northwest Territories.

[3]For an examination of whether the housing achievements in 1949 were the largest in Canada's history in terms of population or resources devoted to housing construction, see Section 8.

TABLE 6

DWELLINGS COMPLETED, DESTROYED, DEMOLISHED AND ABANDONED, CANADA, 1921-1949

Year and Period	Total Dwellings Completed in Canada, including Newfoundland, Yukon and Northwest Territories	Canada, excluding Newfoundland, Yukon and Northwest Territories			
		Total Dwellings Completed	Destroyed, Demolished and Abandoned Dwellings	Net Increase of Dwellings	Destroyed, Demolished and Abandoned Dwellings as a Proportion of Completed Dwellings
	000	000	000	000	Per cent
1921	34.3	34.1	4.4	29.7	12.9
1922	42.5	42.3	5.2	37.1	12.3
1923	43.6	43.4	5.3	38.1	12.2
1924	38.9	38.7	4.9	33.8	12.7
1925	45.0	44.7	5.6	39.1	12.5
1926	55.5	55.2	6.0	49.2	10.9
1927	57.1	56.8	6.2	50.6	10.9
1928	63.2	62.9	6.1	56.8	9.7
1929	65.1	64.7	7.0	57.7	10.8
1930	53.4	53.0	6.6	46.4	12.5
Average for Decade	49.9	49.6	5.7	43.9	11.5
1931	48.3	47.8	7.9	39.9	16.5
1932	28.9	28.1	6.6	21.5	23.5
1933	22.9	21.9	5.5	16.4	25.1
1934	28.7	27.7	5.9	21.8	21.3
1935	33.9	32.9	6.3	26.6	19.1
1936	40.1	39.3	7.0	32.3	17.8
1937	49.3	48.6	8.1	40.5	16.7
1938	44.8	44.0	7.0	37.0	15.9
1939	52.5	51.7	7.5	44.2	14.5
1940	53.2	52.5	6.9	45.6	13.1
Average for Decade	40.3	39.5	6.9	32.6	17.5
1941	57.7	56.8	7.3	49.5	12.9
1942	48.2	47.2	6.9	40.3	14.6
1943	38.1	36.8	6.8	30.0	18.5
1944	44.2	42.8	7.0	35.8	16.4
1945	49.8	48.5	7.3	41.2	15.1
1946	67.9	67.2	8.2	59.0	12.2
1947	79.8	79.2	8.5	70.7	10.7
1948	81.9	81.2	8.7	72.5	10.7
1949	91.7	91.0	8.9	82.1	9.8
Average for Period	62.1	61.2	7.7	53.5	12.6
Average 1921-1949	50.4	49.7	6.7	43.0	13.5

1949. For example, dwelling completions dropped by two-thirds in the short space of four years, from 64,700 units in 1929 to 21,900 units in 1933, a decline at an annual average rate of 17 per cent. This is the largest protracted drop of house-building activity over the last three decades.

In large measure declining and increasing levels of housing completions in the pre-war period varied with the rate of population increase and family formation (see Section 7) and the volume of economic activity and levels of income and employment (see Table 93 in Section 13). This situation was different during World War II when shortages of materials and labour made some curtailment of residential construction activity necessary. But even though housing completions during the war years averaged only about 47,000 units annually, they exceeded by 20 per cent annual average completions in the 'thirties, which numbered close to 40,000 units.

It will be noted from Table 6 that more houses were built when materials and labour were scarce—during the war years—than at a time when materials and labour were plentiful but remained unused[1]—in the 'thirties. One important explanation for this is the fact that effective housing demand in the war years—and for that matter in the post-war years—was bolstered by high levels of employment and income, while in the 'thirties low levels of income and a large volume of unemployment cut heavily into effective housing demand and made increased doubling up of families an economic necessity.

The above observations on the changing volume of new housing supply in Canada where the larger number of houses are built as a result of private initiative (see Section 4) indicate that changing levels of housing demand have a more important impact on the actual housing supply than the competing demands on Canadian construction resources which come from different sectors of the economy, e.g. military construction during World War II and industrial and commercial construction during the post-World War II period (see p. 242).

The reasons for these variations are numerous. They are dealt with as the analysis proceeds in Sections 2-8 and in Section 13. In the main the reasons can be summed up under the following headings: (*a*) population (size, geographical distribution, marital status, child population), (*b*) income and assets (size, distribution,

[1]The number of unemployed in 1933 was put at about 650,000 (*Canada: 1867-1939*, Final Report of the Royal Commission on Dominion-Provincial Relations, Ottawa, 1940, Book I, p. 148). In addition to this number there were many thousands of people working only part-time who were listed as employed but who were in effect "under-employed."

willingness and ability to spend on shelter), (*c*) governments (financial assistance, direct house building, subsidies, guarantees), (*d*) quantity and quality of housing stock (construction standards, state of upkeep, occupancy status, replacement rate, emergencies like war, floods, earthquake), (*e*) house building methods (on contract, speculative builder, owner builder), (*f*) costs and prices (materials, labour, profits, margins between prices of existing residential real estate and newly-built houses) and (*g*) economic outlook (employment and income prospects, future rental levels and profitability of residential investment).[1]

Seasonal Pattern of House Building

In addition to annual fluctuations in the volume of house building, significant seasonal variations also occur. A much more pronounced seasonal pattern is shown in houses started than

[1]Reasons for the instability of house-building activity the world over have thus been summarized: "Owing to the extreme durability of houses, demand for new houses depends largely on changes in population in particular localities, and on changes in the amounts families are prepared to spend on housing; and only to a small extent on replacements and maintenance. Contrast with this the nature of demand in the consumption goods industries, where replacement is constantly necessary, so that changes in total demand arising, for instance, from changes in population or from income are but a small proportion of total demand. Even with durable commodities, most have to be replaced within five to ten years, so that there will always be a reasonably high basic replacement demand on which the relevant industries can rely.

"But in the case of houses, the average life, particularly when allowance is made for the 'filtering-down' of houses from higher to lower income groups, is probably at least fifty years, if not more. In any case, both replacement and maintenance can easily be advanced or postponed over a fairly wide range of years, and tend in fact to be concentrated in periods when housing activity is booming for other reasons. For the housing industry, replacement demand is not only almost negligibly small, but is also unreliable.

"Changes in population and in amounts spent on housing, which therefore primarily determine the demand for activity in the housing industry, are inevitably erratic. A sudden inflow of immigrants, the shift of production from one location to another (e.g., the 'shift to the South' in England), the influence of depressions in reducing incomes and inducing families to share houses, the influence of wars and depressions in affecting the number of marriages and births, all these are changes which can occur suddenly and can quickly send the demand for housing activity to boom heights or slump depths.

"These factors are accentuated by other factors affecting decisions to build houses. A long-term commitment is involved for the purchaser, and he will be highly influenced by the state of his feelings about the future. In a period of high employment and rising income he is likely to be extremely favourable towards long-term commitments; in a period of falling incomes he is likely to be extremely unfavourable. Finally, there is the great and growing importance in the industry of the speculative builder. The high degree of standardisation of the service provided by housing, and the unfamiliarity of most people with the business and legal negotiations connected with housebuilding, make this an ideal field for the speculators. As soon as they anticipate a boom in the demand for housing, they step in and order the construction of large numbers of houses. A public demand which might have been spread over several years is concentrated by speculation into a much smaller period, costs tend to rise and the boom is eventually choked off, leaving the housing market substantially oversupplied." (*Housing and Employment*, International Labour Office, Geneva, 1948, Chapters III, IV and V, and *Instability of Employment in the Construction Industries*, Report II, Building, Civil Engineering and Public Works Committee, International Labour Office, Geneva, 1948.

completed because a start represents outdoor work entirely whereas the operations associated with the final completion of a house may be largely carried on indoors. Data on the number of new permanent housing units started in urban, rural non-farm and farm areas in Canada for 1948 and 1949 are assembled in Table 7.

The number of houses started is characteristically lowest during the first quarter, rises during the second quarter to a distinct peak in May or June, continues at a reduced but still high level through the third quarter of the year, and falls off during the last quarter. Completions have a less pronounced seasonal variation and accordingly the seasonal variation of house-building *activity*, as opposed to *starts*, is not as wide as data on houses started alone would indicate.[1]

To establish a more definite pattern of seasonal change, particularly as influenced by geographical factors, comprehensive data of the sort available for 1948 and 1949 would be required for a longer period. Such statistics are not available for years prior to 1948.[2] Available data suggest that the seasonal pattern of house building is more pronounced in farm areas than in rural non-farm areas, and more pronounced in rural non-farm areas than in urban areas (see Table 7).

One point of particular interest in seasonal data on house building is the bulking of completions towards the end of the year. Builders in Canada will usually try to complete as many houses as possible before the winter sets in because of the difficulties involved in undertaking winter construction and the increase in building costs associated with it. If weather conditions are particularly favourable in the last quarter many units will be completed which under less favourable weather conditions might not have been completed until the following year. On the other hand, if housing demand is particularly strong and builders have many orders on hand, some of them will try to start as many new homes as they can in the fall of the year and will endeavour to reach the "closed in" stage before the cold weather, which makes outdoor operations difficult and expensive, sets in. Once houses are beyond the

[1]This is illustrated by the following percentage distribution of starts (I) and completions (II) and the value of new residential construction work put in place (III) in 1949:

	I	II	III
First quarter	9	20	19
Second quarter	36	25	22
Third quarter	31	27	29
Fourth quarter	24	28	30
Year	100	100	100

[2]For a summary of available monthly data bearing on housing, see Section 10.

TABLE 7

DWELLINGS IN NEW STRUCTURES STARTED, BY AREA, CANADA, 1948 AND 1949

Month	Urban		Rural Non-Farm		Farm		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1948								
January	1,217	2.1	397	1.5	62	1.2	1,676	1.9
February	1,376	2.4	449	1.6	70	1.4	1,895	2.1
March	2,259	3.9	737	2.7	114	2.3	3,110	3.4
1st Quarter	4,852	8.4	1,583	5.8	246	4.9	6,681	7.4
April	5,416	9.4	2,563	9.4	286	5.7	8,265	9.2
May	5,703	9.9	4,259	15.5	1,467	29.1	11,429	12.7
June	8,743	15.1	3,913	14.3	756	15.1	13,412	14.9
2nd Quarter	19,862	34.4	10,735	39.2	2,509	49.9	33,106	36.8
July	6,033	10.4	3,103	11.3	545	10.8	9,681	10.7
August	6,862	11.9	3,528	12.9	620	12.3	11,010	12.2
September	6,829	11.8	3,377	12.3	435	8.6	10,641	11.8
3rd Quarter	19,724	34.1	10,008	36.5	1,600	31.7	31,332	34.7
October	5,424	9.4	1,869	6.8	139	2.8	7,432	8.2
November	5,018	8.7	2,357	8.6	420	8.3	7,795	8.6
December	2,889	5.0	839	3.1	120	2.4	3,848	4.3
4th Quarter	13,331	23.1	5,065	18.5	679	13.5	19,075	21.1
Year	57,769	100.0	27,391	100.0	5,034	100.0	90,194	100.0
1949								
January	1,827	3.2	1,127	4.0	112	2.3	3,066	3.4
February	1,156	2.1	541	1.9	48	1.0	1,745	1.9
March	2,608	4.6	977	3.5	—	—	3,585	4.0
1st Quarter	5,591	9.9	2,645	9.4	160	3.3	8,396	9.3
April	5,490	9.7	2,802	9.9	174	3.6	8,466	9.5
May	6,293	11.1	5,033	17.8	1,483	31.0	12,809	14.3
June	7,115	12.6	2,796	9.9	617	12.9	10,528	11.8
2nd Quarter	18,898	33.4	10,631	37.6	2,274	47.5	31,803	35.6
July	5,119	9.1	3,238	11.5	729	15.2	9,086	10.2
August	4,967	8.8	2,616	9.3	959	20.0	8,542	9.5
September	6,683	11.8	3,301	11.6	51	1.1	10,035	11.2
3rd Quarter	16,769	29.7	9,155	32.4	1,739	36.3	27,663	30.9
October	5,616	10.0	2,990	10.6	358	7.5	8,964	10.0
November	5,751	10.2	2,514	8.9	169	3.5	8,434	9.4
December	3,856	6.8	305	1.1	88	1.9	4,249	4.8
4th Quarter	15,223	27.0	5,809	20.6	615	12.9	21,647	24.2
Year	56,481	100.0	28,240	100.0	4,788	100.0	89,509	100.0

"closed in" stage, interior work can proceed during the winter months. Builders who would shift the emphasis of their operations from finishing houses to new starts in the fall of the year would, if they were unable to expand their labour force, postpone the completion of some of the dwellings which were under construction in the fall months.

Small changes in *annual* completion data may therefore not necessarily reflect significant changes in the volume of construction, but more favourable weather conditions in one year and less favourable weather conditions in the next year. This observation brings out the importance of taking account of both start and completion data, in considering the pattern of house building activity and of placing greater reliance on monthly data, where available, than on annual data. Data on houses started, completed and under construction during the year and carry-over at the end of the year give a complete picture of the stages of construction which a house-building program involves each year. Table 8, for example, assembles these data for dwellings built in new structures, that is, excluding conversions, for the years 1947-1949.

TABLE 8

STAGES OF CONSTRUCTION FOR DWELLINGS IN NEW STRUCTURES, CANADA, 1947-1949

Item No.	Item	Number of Units 000			Per cent Change	
		1947	1948	1949	1947-1948	1948-1949
1	Carry-over at Beginning of Year	40.2	42.2	56.4	+ 5.0	+33.6
2	Starts During Year	74.3	90.2	89.5	+21.4	− .8
3	Under Construction During Year (Items 1+2)	114.4	132.4	146.0	+15.7	+10.3
4	Completions During Year	72.2	76.1	87.5	+ 5.4	+15.0
5	Carry-over at End of Year (Items 3-4)	42.2	56.4	58.5	+33.6	+ 3.7

DWELLINGS DESTROYED, DEMOLISHED AND ABANDONED

Substantial fluctuations in the volume of residential construction are the result of many factors, among which the durability of houses, making the replacement of individual dwelling

units necessary only at long intervals, is important. The average life expectancy of a Canadian house in non-farm areas has been estimated at 75 years. Such an average life expectancy takes account of the fact that a poorly built wooden home may have to be replaced at the age of 50, while a well-built brick home might still be in use when it is over 100 years old. Not all withdrawals[1] from the housing stock result in replacement.

There are three ways in which the physical supply of housing is reduced in terms of numbers: (1) destruction of a house by natural events, (2) demolition, and (3) abandonment. The latter two are the result of man-made decisions. Many a destroyed and demolished house will be replaced, unless the site becomes more valuable for other than residential uses, e.g. commercial, industrial or community uses. Abandonment will rarely result in replacement. It takes place mainly in rural areas and small communities, such as drought areas and ghost mining towns, as a result of these areas losing the economic basis which attracted settlement in the first instance (see Schedule A in Section 1).

In the past destruction and demolition have been relatively minor causes of new house building. From 1921 to 1949 dwellings destroyed and demolished varied between 4,000 and 9,000 units annually.[2] In the 'twenties the annual average was about 6,000, rising slightly in the 'thirties and 'forties to 7,000 and 8,000 respectively. Over the whole period destroyed and demolished dwellings were 14 per cent of total dwellings completed, indicating that in a rapidly expanding country only a small proportion of new housing construction is the result of replacing torn down or destroyed residential buildings. In fact, other factors such as population growth, mobility and levels of income and assets available for home purchases, are the more important factors in housing demand affecting the level of new residential construction activity. These aspects are discussed in Section 7.

Net Increase of Dwellings

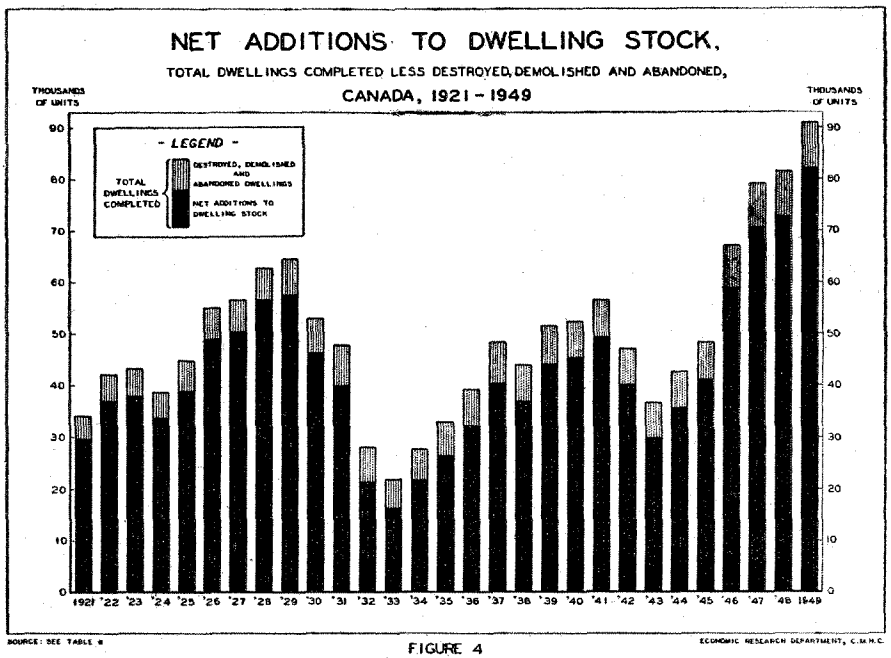
With the number of new dwellings completed varying substantially from year to year, while dwellings destroyed, demolished and abandoned vary little, the net additions to the housing stock are largely influenced by the volume of new housing construction. The net increase of new dwellings was lowest in 1933, only 16,000 units, and largest in 1949, 82,000 units, or more than five times

[1]For an appraisal of the effect of wear and tear on the housing stock, see discussion on residential capital consumption in Section 3.

[2]The above figures include a small number of abandoned dwellings.

as many homes as were added at the low point of the depression in the 'thirties. Corresponding with large variations in the number of new houses built, the ratio of destroyed, demolished and abandoned dwellings to new completions varies correspondingly, from 25 per cent in 1933 to about 10 per cent in 1928 and 1949 (see Table 6). In every year of the period under review, gross additions have by far exceeded the number of dwellings destroyed, demolished and abandoned. However, in certain years new construction and major improvements and alterations of existing houses have been insufficient to make up the reduction in the quality of the housing stock as a result of the wear and tear to which residential capital is continuously exposed (see p. 94).

As long as the number of destroyed, demolished and abandoned dwellings comprises only a small proportion of total new houses built and varies only slightly from year to year, measurement of housing progress can be conducted almost equally as well in terms of gross, i.e. total of dwelling completions, as in terms of net, i.e. new additions to the housing stock (see Figure 4). Gross additions are the measurement currently in use in Canada. But if at some later time the replacement aspect of a housing program should



SOURCE: SEE TABLE 6 FIGURE 4 ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

assume larger proportions it will be desirable to supplement measurement in gross terms by an analysis of the net changes in the housing stock and annual net additions to it.

Dwelling Completions by Type and Location

Single and Multiple Dwellings. Three out of four dwellings built in Canada in 1949 were single units, reflecting the preference of Canadians for self-contained detached homes and the effects of government measures encouraging home ownership (see pp. 480 ff). This proportion is considerably higher than the proportion prevailing in the 'twenties and the 'thirties, when one-half to seven-tenths of all homes were built as single units (see Table 9). The high 1949 ratio reflects in part the greater construction program for home ownership and the decline in rental house building which usually takes the form of building of multiple units, e.g. duplexes, triplexes, row houses and apartment buildings. The reasons for the high proportion of homes built for ownership during the later war years and the immediate post-war period have been discussed previously (see pp. 51-52).

The estimates of the division of total completions into single and multiple units are subject to a number of qualifications referred to in Section 12 which emphasizes the approximate character of the data. Bearing this in mind the student interested in economic fluctuations will be rewarded by examining the variations between the patterns of single and multiple house building.

The volume of single units constructed reflects in large measure the decisions by individual householders to build or purchase[1] new homes. The volume of multiple unit construction reflects in large part decisions of entrepreneurs, that is, prospective landlords of newly built rental accommodation. These two groups which in the past have been mainly responsible for the volume of new house building[2] are guided by different sets of considerations in making their investment decisions.[3]

The entrepreneur building or purchasing new rental accommodation is guided solely by economic considerations, mainly the returns he expects from his investment. If present conditions

[1]Such homes are frequently built by speculative builders who erect the house in anticipation of a profitable sale to private householders (see pp. 67-68).

[2]Other special groups include houses provided by institutions, cooperatives and governments.

[3]The builder of a duplex who occupies one unit himself and rents the other unit is a combination of the two groups mentioned above. This type of house building is particularly frequent in the Province of Quebec. The major motive in purchasing a duplex in preference to a single unit is the desire of an owner with sufficient equity to have a tenant share in the repayment of the mortgage and the operating costs of the property.

and the economic outlook are favourable, demand for additional rental accommodation in given localities apparent, prevailing rentals high enough to allow the amortization of the initial capital

TABLE 9

DWELLINGS COMPLETED, BY TYPE OF STRUCTURE, CANADA, 1921-1949

Year and Period	Total Dwellings Completed 000	Per cent of Total Dwellings Completed			
		Non-farm	Single Dwellings	Conversions	Temporary Dwellings
1921	34.1	87.4	71.6	5.3	—
1922	42.3	87.7	68.8	4.7	—
1923	43.4	88.0	66.4	4.3	—
1924	38.7	88.4	61.2	8.5	—
1925	44.7	88.8	59.3	6.0	—
1926	55.2	89.3	56.5	5.1	—
1927	56.8	89.6	52.3	7.6	—
1928	62.9	90.0	49.3	6.2	—
1929	64.7	90.4	46.4	5.6	—
1930	53.0	90.0	46.8	5.2	—
Average for Decade	49.6	89.0	57.9	5.8	—
1931	47.8	89.1	50.2	4.4	—
1932	28.1	88.3	51.6	4.3	—
1933	21.9	87.7	53.9	4.1	—
1934	27.7	87.0	54.5	4.3	—
1935	32.9	86.9	53.5	3.3	—
1936	39.3	87.0	52.7	3.3	—
1937	48.6	87.0	51.4	3.5	—
1938	44.0	87.0	49.5	5.9	—
1939	51.7	88.2	51.6	5.6	—
1940	52.5	89.3	45.0	6.7	—
Average for Decade	39.4	87.7	51.4	4.5	—
1941	56.8	90.8	51.6	6.3	3.0
1942	47.2	90.9	56.1	9.3	16.1
1943	36.8	90.8	67.7	11.1	17.1
1944	42.8	91.8	67.0	14.7	2.8
1945	48.5	92.5	68.9	12.4	2.3
1946	67.2	93.9	76.5	10.3	6.8
1947	79.2	94.8	74.2	8.9	5.3
1948	81.2	95.0	76.1	6.3	1.8
1949	91.0	94.3	75.2	3.8	—
Average for Period	61.2	92.8	68.2	9.2	6.2
Average 1921-1949	49.7	89.7	58.8	6.4	1.9

cost within reasonable time, residential land and means of financing obtainable, and construction resources plentiful, entrepreneurs may be willing to embark on rental housing construction in the expectation of making a profitable investment. If the combination of the above mentioned factors is less favourable some entrepreneurs who were considering residential investment may not proceed with their projects. As the number of these entrepreneurs abstaining from residential investment increases, a lower volume of privately owned rental housing will be built and significant fluctuations in the volume of residential construction for rent may occur.

Another important factor influencing the pattern of fluctuations of rental house building is the long term trend towards a greater proportion of residential accommodation associated with the requirements of industrial growth (see pp. 175-182).

Decisions by prospective individual owner-occupants to build or purchase a new home are based partly on economic considerations, partly on personal circumstances. Economic considerations include the present income of and assets held by the prospective home purchaser and his immediate family, his employment and income prospects, his ability to acquire a new home of the kind and in the location required at a price he can afford to pay, and the possibilities that exist to arrange for the financing of the outstanding balance of the purchase price. In addition, personal considerations will enter. They will include such aspects as the size of the family, the arrival of the first child or additional children, the type, size, quality and location of existing housing accommodation, the desire for a home as good as that of the next man in the neighbourhood or the man in the same or perhaps somewhat higher income bracket, and similar factors which frequently induce families to strain their budget—sometimes beyond their means—to acquire new living accommodation.

The speculative builder also plays an important role in providing housing for owner occupancy. This type of builder differs from the entrepreneur building rental housing for purposes of continuing operation in that his main interest is in building houses and selling them as soon as possible, then building again and selling again as long as there is sufficient effective demand to sell these newly built homes at a profit. As long as demand is strong, the speculative builder will be encouraged to build more and more units for sale. At times the speculative builder may build too many houses at prices which the majority of the population wanting new homes cannot afford to pay. When such over-

building at high prices occurs, the speculative builder will withdraw from house building, on occasion gradually, but more often suddenly, endeavour to find buyers for his unsold houses, and then wait until demand becomes sufficiently strong again to embark on another series of housing projects for sale to prospective owner-occupiers. When economic conditions are unfavourable he may even wait several months or years and enter the market only when it is quite evident that there is demand for houses at prices which will bring him a profit. As a result of over-building in boom periods and under-building in times of depressed economic conditions, this type of practice would tend in the long run to intensify fluctuations in the number of houses built for owner occupancy.

Because of the different considerations behind the investment decisions of individual householders and of businessmen, fluctuations in the volume of houses built for owner occupancy do not necessarily correspond, in either direction or amplitude, with those in the volume of housing built for rental purposes. This is illustrated by the estimates of the number of single and multiple units built in Canada in the pre-war period (see Figure 5 and Table 68 in Section 9).

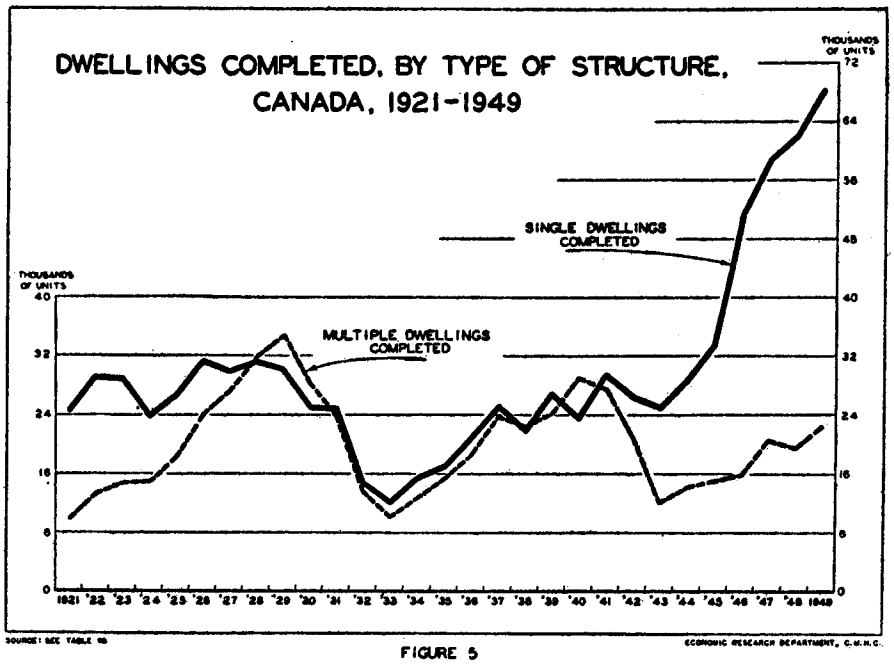


FIGURE 5

The pre-war peaks of single unit completions occurred in 1926 and 1928 with 31,000 dwellings built in each of these two years. There was a moderate drop of 3 per cent in single housing completions in 1929. However, a more significant increase of 9 per cent in multiple unit completions from 1928 to 1929, was responsible for a peak of *total* housing completions being reached in 1929.

In the 1924 recession completions of single dwellings declined by 18 per cent from 1923, but multiple unit completions showed a small increase of 3 per cent.

In the 1938 recession completions of single dwelling units again declined notably, 13 per cent, against a much smaller drop for multiple dwellings, 6 per cent.

The above annual changes might suggest that the volume of housing for owner occupancy fluctuates more substantially than the volume of houses built for rental purposes, but this is not fully borne out by volume changes over longer periods of time. Looking at the broad swings of the volume of residential construction, building for rental purposes, as reflected by the volume of multiple dwelling completions, shows for certain parts of the pre-war period wider fluctuations than building for ownership, as reflected by the volume of single dwelling completions. For example the estimates indicate that completions of multiple units declined by 71 per cent from 1929 (the high point) to the 1933 low, while single unit completions declined at a somewhat lesser rate, 62 per cent, from the high point in 1928 (about equal to 1926) to the low point in 1933. In the recovery phase of the latter half of the 'thirties, single completions rose less rapidly than multiple unit completions, 126 and 148 per cent respectively from 1933 to 1939.

Possible reasons for the difference in amplitude found over the wider swing from the late 'twenties to the early 'thirties include the fact that individual householders and businessmen are affected by different degrees of optimism and pessimism about future prospects, and by the personal element which enters into the decisions of the individual family man to build or buy a new home, but which is absent when an entrepreneur makes up his mind to embark on a rental housing project.

The variations described above of the volume of owned and tenant occupied housing are sufficiently large and the reasons leading to these variations sufficiently distinct to suggest that grave errors of over-simplification could be committed if intensive housing analysis were confined to an appraisal of aggregates only.

New and Converted Structures. Most new dwellings are built in new structures. However, some of the older and large buildings which provide more space than required by their occupiers, or which have previously been devoted to other uses are on occasion rebuilt or converted into multiple housing projects. Such converted dwellings, which add new living accommodation to Canada's housing stock, increase the number of dwellings completed without increasing the number of structures or buildings in existence in the country. However, since the purpose of this report is to measure increases in self-contained living accommodation and not the number of buildings in existence, measurement of new dwellings created through conversion of existing buildings is needed before a complete picture of the changes in the housing stock can be obtained.

In the pre-war period conversions contributed between 3 and 8 per cent of total housing completions. During the war and immediate post-war period, when numerous urgent demands on scarce resources made it desirable to proceed with as many conversions as possible—since they use fewer man-hours of work than homes in new structures—the ratio rose to from 6 to 15 per cent. This increase in the volume of new homes through conversions resulted from a variety of public measures referred to in Section 4. By 1949, as the number of older buildings available for conversion became smaller and the pressure on scarce materials and labour subsided somewhat, the number of conversions declined correspondingly. In that year new units created through conversion numbered 3,400, or 4 per cent of total completions.

Permanent and Temporary Dwellings. Conservation measures during the war and immediate post-war period were mainly responsible for the building of a number of temporary houses which at their peak in 1942 numbered 7,600 units, or 17 per cent of total completions (see Table 9). During the war period a total of 17,900 temporary dwellings were built and financed by the Federal Government, mainly for war workers. After the war a small number of temporary dwellings were constructed mainly as municipal shelter projects financed with Federal assistance and as conversions of army barracks (see Section 4). However, this government-sponsored temporary housing program came to an end in 1948.

Non-Farm and Farm Completions. Of the 91,000 dwellings completed in 1949, only 5,000 units, or 6 per cent, were farm homes. Fluctuations in the volume of farm housing construction have been smaller than for non-farm homes. However, the fact that they

have fluctuated less has had little effect on the total volume of construction activity for two reasons. First, the number of farm homes built in the last three decades has been small. Secondly, a great deal of local materials and labour is used in farm house building which accordingly has relatively small effects on general construction activity.

The small volume of farm home building in Canada is in large part the result of the movement to the cities and the low priority which farmers have been inclined to give in the past to expenditures on home improvements in relation to labour-saving and revenue-creating expenditures, e.g. the purchase of agricultural machinery and the construction and improvement of barns. In fact, most of the farm houses built in the period under review were occasioned by settlement on new farm land or the rebuilding of destroyed farm homes, mainly necessitated by fires and floods. Small change in the number of people living on farms is a contributory factor for the moderate rate of house building (see Section 6).

The need for an adequate farm improvement and replacement program has been stressed repeatedly.[1] People living on farms comprise about one-quarter of Canada's population. But farm house-building has taken place only at a rate of about 5 per cent of the total housing program in the post-war period. These estimates support the claim that comparatively little effort has been devoted so far to improving farm housing standards in Canada.[2]

Housing Accomplishments in Canada, the United Kingdom and the United States

International comparisons of housing achievements are difficult because of the differences in housing standards, and the lack of strictly comparable data. For the United Kingdom comparable data are available in terms of housing completions excluding conversions for the period 1921 to 1949. For the United States a continuous series for the period 1921 to 1949 is available only for new permanent housing starts in non-farm areas, that is, excluding conversions, temporary dwellings and permanent dwellings in farm areas. No completion data comparable to those available for the United Kingdom and Canada are in existence for the United States for the whole period under review, although some spot estimates are available for a few years of the war and immediate post-war period.

[1]See for example *Housing and Community Planning*, Chapter 10.

[2]For a summary of provisions to aid farm house building and improvement, see pp. 480-481, 487, 489-491.

To obtain an indication of changes in the volume of house building for Canada, the United Kingdom and the United States on a basis as closely comparable as possible the following series are used. For a comparison of Canada with the United Kingdom a series of total housing completions excluding conversions. For a comparison of Canada with the United States a series of new permanent non-farm completions in Canada with new permanent non-farm starts in the United States (see Table 10). For the pre-war period the trend of house building is not likely to be distorted significantly by comparison of start and completion figures. The situation is somewhat different for some of the war and post-war years because the period required to complete a house was lengthened considerably as a result of scarcities in building labour and materials (see pp. 404-405). These data, which are used primarily for an appraisal of trends, are supplemented by a comparison of non-farm houses started in Canada, excluding conversions and temporary dwellings, with the corresponding United States series, and of per-thousand population housing data for all three countries for the period 1945 to 1949 (see Table 11).

On a per capita basis, Canada built more houses in the post-war period than either the United States or the United Kingdom. In 1948, houses were completed in Canada at the rate of 6.3 per thousand population, as against 5.9 per thousand population in the United Kingdom. In 1949, however, the band widened notably, mainly because the United Kingdom had to curtail her level of house-building activity in the light of her needs to conserve foreign exchange, while in Canada the housing program proceeded unabated. Comparable figures for 1949 to those shown for 1948 are Canada, 6.9 and United Kingdom, 4.

New permanent non-farm housing units in 1948 were started in Canada at the rate of 9.2 per thousand non-farm population, a considerably higher rate than that in the United States which was 7.9. In 1949, the volume of house building in the United States increased rapidly, reaching in fact the highest level recorded in the country's history. Still, as the data in Table 11 indicate, the Canadian rate of house building in non-farm areas continued to be somewhat higher than that of the United States.[1]

Over the whole period, 1921-1949, per capita housing achievements in Canada were above those of the United Kingdom, and about equalled accomplishments in the United States. Total new housing completions in Canada took place at the rate of 4.4 per thousand population over the years 1921 to 1949, as against 4.0 per thousand in the United Kingdom. New permanent non-

[1]In 1950, however, the situation was reversed, with the United States leading.

TABLE 10

HOUSING CONSTRUCTION IN CANADA, UNITED KINGDOM AND UNITED STATES, 1921-1949
(Thousands of Dwellings)

Year and Period	Total Including Temporary Housing but Excluding Conversions		Non-Farm Permanent Housing	
	Canada Dwellings Completed	United Kingdom Dwellings Completed	Canada Dwellings Completed	United States Dwellings Started
1921	32.3	102.2	28.0	449
1922	40.3	95.5	35.1	716
1923	41.5	90.8	36.3	871
1924	35.4	131.2	30.9	893
1925	42.0	174.2	37.0	937
1926	52.4	222.3	46.5	849
1927	52.5	254.9	46.6	810
1928	59.0	198.8	52.7	753
1929	61.1	209.6	54.9	509
1930	50.2	202.7	44.9	330
Average for Decade	46.7	168.2	41.3	712
1931	45.7	210.1	40.5	254
1932	26.9	218.1	23.6	134
1933	21.0	275.3	18.3	93
1934	26.5	336.7	22.9	126
1935	31.8	350.5	27.5	221
1936	38.0	365.1	32.9	319
1937	46.9	362.2	40.6	336
1938	41.4	355.0	35.7	406
1939	48.8	255.5	42.7	515
1940	49.0	95.1	43.4	603
Average for Decade	37.6	282.4	32.8	301
1941	53.2	23.3	46.3	706
1942	42.8	12.9	30.9	356
1943	32.7	9.5	23.0	191
1944	36.5	8.1	31.4	142
1945	42.6	12.3	39.0	209
1946	60.6	138.3	56.5	671
1947	72.2	186.1	68.1	849
1948	76.1	246.0	72.0	931
1949	87.5	197.7	82.3	1,019
Average for Period	56.0	92.7	49.9	564
Average 1921-1949	46.5	184.1	41.1	524

TABLE 11

POPULATION AND HOUSING CONSTRUCTION,
CANADA, UNITED KINGDOM AND UNITED STATES, 1945-1949

Year	Population[1] 000,000			Dwellings Completed				Dwellings Started			
				Total		Per 1,000 Population		Non-Farm[4]		Per 1,000 Non-Farm Population	
	Canada[2]	United Kingdom	United States	Canada[3] 000	United Kingdom[3] 000	Canada	United Kingdom	Canada[2] 000	United States 000	Canada	United States
1945	12.1	49.1	139.6	48.5	89.2	4.0	1.8	—[5]	—[5]	—[5]	—[5]
1946	12.3	49.2	141.2	67.2	213.3	5.5	4.2	—[5]	—[5]	—[5]	—[5]
1947	12.6[6]	49.4	144.0[7]	79.2	245.1	6.3	5.0	70.3	853.4	7.7	7.4
1948	12.9[6]	49.9	146.6[7]	81.2	291.6	6.3	5.9	85.4	931.3	9.2	7.9
1949	13.2[6]	50.4	149.2[7]	91.0	219.5	6.9	4.0	84.7	1,019.0	8.7	8.5

[1]Mid-year figures.
[2]Excluding Newfoundland, Yukon and Northwest Territories.
[3]Includes substantially war-damaged houses repaired, conversions and adaptations, and new accommodation in service camps.
[4]Covers dwellings in new structures and excludes conversions and temporary units.
[5]Comparable data not available for Canada.
[6]Non-farm population in Canada in millions: 1947—9.1; 1948—9.3; and 1949—9.7.
[7]Non-farm population in the United States in millions: 1947—116; 1948—118; and 1949—120.

farm houses built averaged about 4.4 per thousand non-farm population in both Canada and the United States during the period.

Variations in the fluctuations of house building among the three countries are noteworthy. In 1949, Canada was building more houses than in any previous year. Completions were about 43 per cent higher than in 1929, the pre-war peak year, and 79 per cent higher than in 1939. In the United States, houses built in 1949 exceeded the pre-war peak of 1925 by 9 per cent and were double the 1939 level. Completions in the United Kingdom, on the other hand, were about 46 per cent below the pre-war peak year of 1936, and 23 per cent less than in 1939. There are, however, special reasons why the United Kingdom could not expand its post-war house building program as rapidly as Canada and the United States. Among the reasons were the need for a large residential repair program to make good the damage caused by war destruction, the necessity of rebuilding many destroyed and demolished industrial plants and utilities, and foreign exchange difficulties which limited the ability of the United Kingdom to acquire scarce building materials from abroad.

During the pre-war period, fluctuations in building were more extreme in the United States than in either Canada or the United Kingdom. Non-farm buildings started in the United States declined by 90 per cent from a peak of 937,000 in 1925 to a low of 93,000 in 1933. In Canada house building fell off by 66 per cent, from a peak of 61,000 non-farm completions in 1929 to 21,000 in 1933. In the United Kingdom, there was a corresponding decline of only 20 per cent from 255,000 completions in 1927 to 203,000 completions in 1930.[1] And from this low in 1930, house building in the United Kingdom recovered to reach an all-time peak of 365,000 completions in 1936. In the United States and Canada, house building in the 'thirties never reached the peak levels of the 'twenties.

The remarkable aspects of the house-building pattern in the United Kingdom are the particularly small volume of residential construction in the early 'twenties and the record achievements in the second half of the 'thirties, when house building on the North American Continent was considerably below the achievements a decade earlier (see Table 10). Government financial and other assistance based on many years of experience contributed to the success of the housing program in the United Kingdom in

[1]As Table 10 shows, the number of dwellings completed in 1928 was at about the same level as in 1930.

the 'thirties, while early experiments with public aid to housing in Canada and the United States commencing in the first half of the 'thirties were interrupted by the outbreak of the war in 1939, before significant results could be achieved. Further, relatively more favourable employment and income conditions prevailed in the United Kingdom throughout most of the 'thirties than was the case on the North American Continent. This relatively favourable economic climate, in no small measure influenced by improved terms of trade with Canada and the United States, provided an added stimulus to private house building in the United Kingdom. In the two North American countries, however, it was not until the late 'thirties and during the first and second war years that levels of employment and income improved sufficiently to increase notably housing demand and associated with it the volume of house-building activity. But then, exigencies of the war emergency made it impossible to release sufficient resources to meet this growing demand. Thus a backlog of housing demand was building up, waiting for the war to end when the major portion of the resources of these two countries could again be devoted to meet peacetime needs of the civilian population.

In summary, Canada and the United States were in a position to expand their house-building programs more rapidly in the post-war period than the United Kingdom, because the after-effects of World War II fell more heavily on the United Kingdom than on the United States or Canada. Over the past three decades, fluctuations of residential construction in all three countries were substantial, with Canada and the United States following a similar but the United Kingdom a different pattern. In two of the three decades, the 'twenties and the 'forties, the two North American countries made more rapid progress in improving standards of housing than the United Kingdom. In the 'thirties, however, the situation was reversed, with the United Kingdom in the front of housing advance.

SECTION THREE

INVESTMENT IN RESIDENTIAL REAL ESTATE

HOUSING STOCK, its composition and changes have been appraised in terms of dwelling units in Section 2. It is the purpose of this section to translate these quantities into dollar terms and to examine additional aspects which are brought out most aptly in a monetary analysis, e.g. the effect of volume changes on the price of residential real estate, the value of residential land in addition to that of residential and supplementary buildings, and the effect of variations in the quality of the housing stock resulting on the one hand from improvements, alterations, repair and maintenance, and on the other hand from the wear and tear of residential capital which occurs with the passing of time. In particular this section is designed to examine estimates of residential capital formation, residential capital consumption, net residential capital formation and total residential construction work carried out, in both current and constant dollars. The relationship of these quantities to total investment and general economic activity in Canada is discussed in Section 8.

RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE

Residential real estate in existence in Canada had an estimated value of about $15.3 billion at the end of 1949, about equal to Canada's funded debt which as of March 31, 1949 was put at $15.6 billion.[1] The above valuation of total residential real estate in Canada includes an allowance for Newfoundland, Yukon and the Northwest Territories. Residential real estate in Canada exclusive of Newfoundland, Yukon and the Northwest Territories is estimated at $15 billion, of which $13.5 billion represented residential capital, i.e. the value of homes including installed equipment and supplementary buildings such as garages, and $1.5 billion the value of land used for residential purposes (see Table 12).

Between 1921 and 1949 the value of residential real estate in Canada increased from $5.3 billion to $15 billion, of which 56 per cent represents an increase in volume and 127 per cent, increases

[1] *Appendix to the Budget 1949-1950*, House of Commons Debates, March 22, 1949, p. 41.

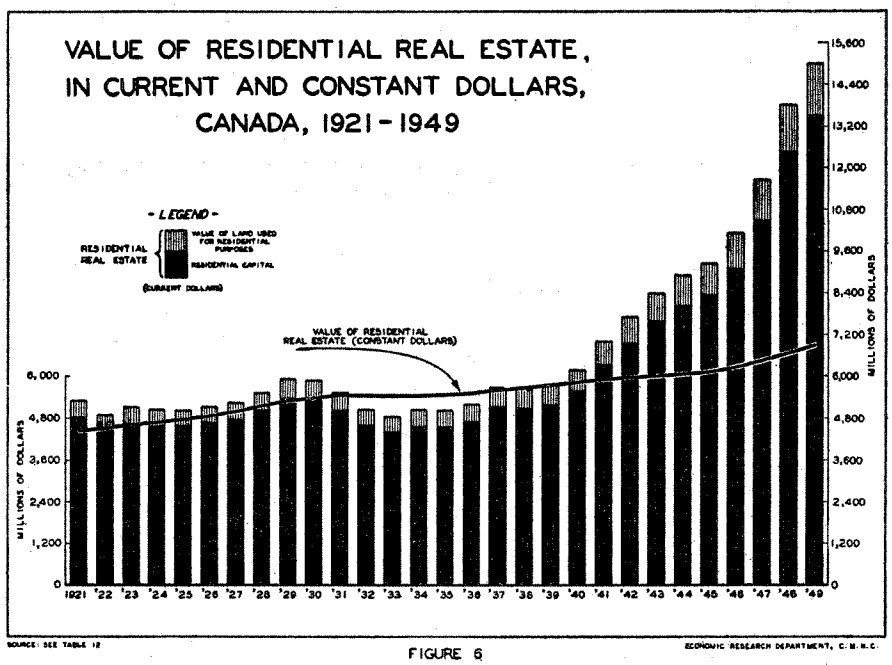
TABLE 12

VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, CANADA, 1921-1949

(Millions of Dollars)

Year and Period	Current Dollars			Constant Dollars		
	Residential Capital	Land Used for Residential Purposes	Residential Real Estate	Residential Capital	Land Used for Residential Purposes	Residential Real Estate
1921	4,831	468	5,299	4,035	391	4,426
1922	4,455	432	4,887	4,114	400	4,514
1923	4,668	455	5,123	4,193	410	4,603
1924	4,610	452	5,062	4,252	417	4,669
1925	4,594	452	5,046	4,336	426	4,762
1926	4,660	458	5,118	4,450	437	4,887
1927	4,777	470	5,247	4,563	449	5,012
1928	5,030	494	5,524	4,692	461	5,153
1929	5,397	530	5,927	4,817	473	5,290
1930	5,336	526	5,862	4,904	482	5,386
Average for Decade	4,836	474	5,310	4,436	435	4,870
1931	5,025	497	5,522	4,969	490	5,459
1932	4,594	459	5,053	4,966	495	5,461
1933	4,399	445	4,844	4,943	499	5,442
1934	4,564	466	5,030	4,941	505	5,446
1935	4,550	469	5,019	4,956	511	5,467
1936	4,716	490	5,206	4,996	519	5,515
1937	5,134	536	5,670	5,057	528	5,585
1938	5,065	531	5,596	5,105	536	5,641
1939	5,177	546	5,723	5,177	546	5,723
1940	5,588	591	6,179	5,248	556	5,804
Average for Decade	4,881	503	5,384	5,036	519	5,554
1941	6,333	673	7,006	5,337	567	5,904
1942	6,956	744	7,700	5,391	576	5,967
1943	7,572	818	8,390	5,412	584	5,996
1944	8,032	876	8,908	5,449	594	6,043
1945	8,335	916	9,251	5,512	605	6,117
1946	9,123	1,007	10,130	5,640	622	6,262
1947	10,483	1,160	11,643	5,812	642	6,454
1948	12,424	1,368	13,792	6,003	662	6,665
1949	13,512	1,487	14,999	6,228	684	6,912
Average for Period	9,197	1,005	10,203	5,643	615	6,258
Average 1921-1949	6,204	649	6,854	5,017	520	5,537

in price (see Figure 6). This increase in volume is in line with the increase in the number of dwellings in existence which has been estimated at 64 per cent (see p. 44).[1]



SOURCE: SEE TABLE 12 FIGURE 6 ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

Residential Real Estate in Use and Not in Use

Almost all residential real estate was *continuously* in use in the post-war period, except for some property located in outlying districts and some substandard or high-priced residences in urban locations. For 1949 it is estimated that of the total value of residential real estate in Canada[2] of $15 billion, $14.7 billion worth of real estate was in use and some $255 million, or less than 2 per cent, was not in use (see Table 13). This figure of less than 2 per cent includes units which were unoccupied not because there was no demand for them but because they were under repair or because some time has to elapse between the moving out of one occupant and the moving in of another. The latter type of vacancy occurs

[1]Difference between the two figures on volume changes should be noted: (1) the value data cover also buildings supplementary to housing, residential equipment installed and land used for residential purposes not reflected in the dwelling series; (2) the value data take account in some measure of changes in quality not feasible in a measure of the number of dwellings built; (3) estimating techniques differ somewhat (see pp. 431 ff.).

[2]Excluding Newfoundland, Yukon and the Northwest Territories.

even though there is no discontinuity of the lease of a unit or undue delay in the sale of the property.

In estimating vacancies it is difficult to distinguish statistically between property unused because of lack of demand and property temporarily unused while changing occupants. If the difference between these two types of vacancy could have been expressed

TABLE 13

VALUE OF RESIDENTIAL REAL ESTATE IN USE AND AVAILABLE, CANADA, SELECTED YEARS, 1929-1949

Year	Residential Real Estate in Current Dollars			
	In Use $ Million	Not in Use $ Million	Available $ Million	Not in Use as a Proportion of Available Per cent
1929	5,690	237	5,927	4.0
1933	4,553	291	4,844	6.0
1939	5,546	177	5,723	3.1
1948	13,543	249	13,792	1.8
1949	14,744	255	14,999	1.7

statistically for 1949 the resulting figures would probably have shown hardly any residential real estate not in use because of lack of demand. Most of the units that were listed as vacant represented the minimum requirements of flexibility in the use of the housing stock. If this type of vacancy is considered as one of the characteristics of residential real estate in use, existing housing accommodation was utilized as fully as possible in 1949.[1]

Somewhat exceptional conditions contributed to full use of residential real estate in 1949. In 1929 and 1939, when the value of unused residential real estate was estimated at 4 and 3 per cent respectively of total residential real estate, it included a number of properties which could have been used but which were in a price or rental bracket beyond the means of those in the market for separate living accommodation. In 1933 the proportion, 6 per cent, was twice as high as in 1939 and more than three times as high as in 1949. In 1933 of the total value of residential real

[1]The situation is somewhat analogous to the employment situation in 1949, when of a total labour force of 5.1 million, 5 million were working during the year and some 140,000 persons, or about 2½ per cent of the labour force, were listed as "unemployed," including those on vacation or moving from one job to another, and a small core of unemployables.

estate of $4.8 billion, $291 million worth of residential property, representing 144,000 units, was unoccupied. At the same time the number of families sharing housing accommodation with other families or living in rooms, institutions or trailers reached 274,000, the highest figure of either the 'twenties or the 'thirties (see pp. 203-204).

The explanation for a situation in which there are more families than ever without homes of their own and more houses than ever without occupants is simply that even the low rentals of leased accommodation and low acquisition costs of homes for owner occupancy prevailing in the 'thirties were still too high for a large segment of the population.

It is not surprising that such a situation should have prevailed in 1933 when economic activity reached the lowest levels in the memory of the generation then of working age. What is particularly noteworthy is that a similar situation though different in degree appeared to exist in 1929, the peak year of economic activity in the inter-war period. It is estimated that in this year residential real estate not in use involved $237 million, or 4 per cent of a total of $5.9 billion.[1] This value of unused residential real estate represented 92,000 vacant units. In the same year there were 212,000 families without homes of their own, many of whom were looking for separate places to live but could not find them at prices which they could afford to pay. If the vacancy rate of about 2 per cent prevailing in 1949 is assumed to represent the irreducible minimum requirements for reasons of flexibility of the housing stock and its occupants, some 50,000 dwellings are likely to have been on the housing market at the end of 1929 because they could not be sold or rented at prices demanded.

In relation to total housing stock, 50,000 unsold houses and unrented apartments is a small number. But mainly concentrated in two dozen major cities, the number must have appeared sufficiently large to speculative builders and large scale operators of rental properties to discourage house-building activity in the following year. In fact, the volume of house building dropped sharply, from 65,000 completions in 1929 to 53,000 completions in 1930, or by almost 20 per cent in the course of one year. However, with each decline in incomes demand for

[1]It is quite possible that the above valuation of the housing stock not in use in 1929 understates considerably the *actual* value. The estimating method used was to assume that the average value of existing houses would equal the average value of vacant houses. This may not necessarily have been true in 1929 when a significant number of dwellings of above average quality remained vacant because they could not be sold or rented at the high prices asked.

new houses and apartments dropped further so that fewer dwellings were built in the next year, and so on until a low point was reached in 1933 when only 22,000 new units were completed and unoccupied houses numbered 144,000 units, valued at some $300 million and representing the largest quantity of unused residential real estate in Canada's history. At the same time, many of the people continuing to occupy their homes found themselves unable to keep up their mortgage payments, defaults were numerous and the number of forced sales mounted.[1] In the case of rented premises landlords were forced to reduce rentals[2] to keep their premises occupied and frequently were unable to obtain sufficient income from rentals to avoid losses in their operations.[3]

This discussion of residential real estate in use and not in use points to an important aspect of economic analysis. Capital including residential real estate is created to serve a purpose. If capital is not used either in full or in part it will mean a loss to society and to the individuals concerned who in the first instance have created the assets in anticipation that there is need for them and that they will be used. Of course, individuals may err and create at times too much physical capital of a particular kind representing surplus either in national, regional or local terms. In such a case some of the capital will remain idle until demand for its use increases. But at other times what appears to be over-expansion of capital in physical terms may only be a reflection of the discrepancy between the prices of goods and services which this increased capital can provide and the prices which those demanding these goods and services can afford to pay. In such a case the main problem may not be how to reduce capital already created but how to make the most effective use of it by bringing buyers and sellers together at some common ground.

Applying this reasoning to the housing field, the problem of the 'twenties and the 'thirties was not necessarily one of over-supply of housing but the inability of the country in times of both prosperity and depression to provide housing for a sector of the population whose levels of income remained consistently below current levels of prices charged for housing accommodation.[4]

[1]This tendency is reflected in the movement of a large number of dwellings from owner occupancy to a rental or vacancy status (see p. 53).

[2]Changes in the rental level are reflected in the national rental index shown on p. 462.

[3]This experience continued throughout the 'thirties. An examination of the records of thirteen real estate companies operating residential properties in 1939 indicates that as a group these companies were losing money (see *Housing in Canada, January, 1950*, p. 93).

[4]For an appraisal of rental-income relationships of tenants in large Canadian cities, see *Housing and Community Planning*, pp. 107 ff.

Value of Total Dwelling Completions

Dwellings completed in 1949 were estimated to involve the creation of new housing valued at $709 million. This estimate covers all dwelling completions in that year, including units started in 1948. It excludes the work performed on units started in 1949 but not completed in that year (see Schedule A in Section 1).

The estimate of new residential construction work carried out in 1949 involved $716 million. This is slightly greater, 1 per cent, than the estimated value of completions. The difference is

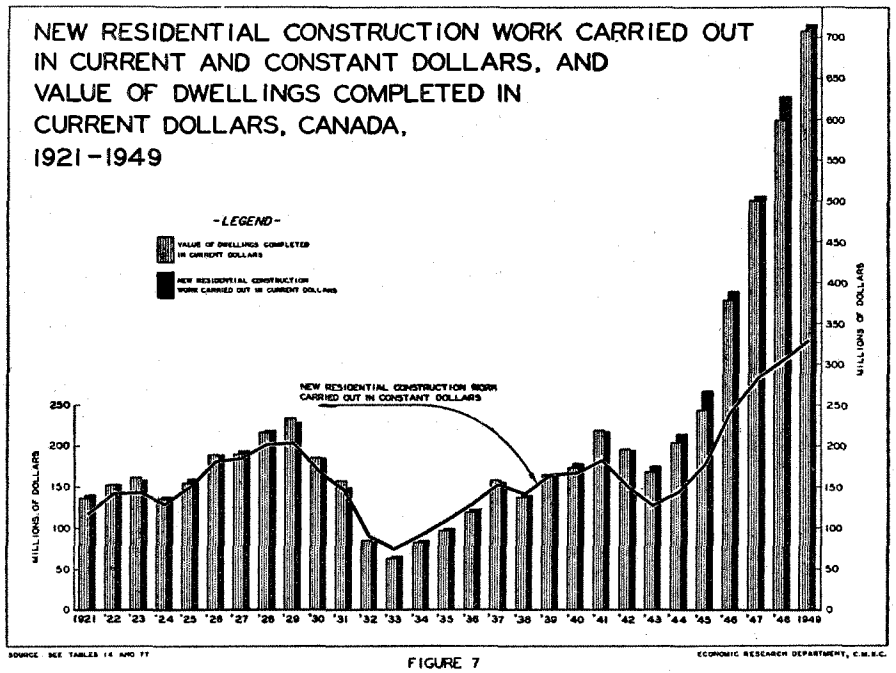


FIGURE 7

explained by the fact that in 1949 starts of new homes were more numerous than completions (see Tables 8 and 14). As Figure 7 shows, for most years the value of dwelling completions and value of new construction work carried out has varied little except for the late 'twenties and the immediate post-war period. In 1928-1929 and 1948-1949 the number of starts exceeded completions and contributed to an increasing volume of residential construction activity not fully reflected in a completion series whether expressed in terms of units or in terms of dollars. Over the period under review, the value of dwelling completions fluctuated more sub-

TABLE 14

VALUE OF DWELLINGS COMPLETED AND RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, CANADA, 1921-1949

(Millions of Dollars)

Year and Period	New Construction, Major Improvements and Alteration Work Carried Out in Canada, Including Newfoundland, Yukon and Northwest Territories	Canada, Excluding Newfoundland, Yukon and Northwest Territories					
		Value of Dwellings Completed	Construction Work Carried Out				
			New Construction	Major Improvements and Alterations	New Construction and Major Improvements and Alterations	Repair and Maintenance	Total Residential Construction Work Carried Out
1921	160.6	136.8	140.8	19.3	160.1	46.4	206.5
1922	174.2	153.6	153.8	19.9	173.7	44.3	218.0
1923	180.2	161.6	159.1	20.6	179.7	53.1	232.8
1924	157.9	136.0	138.9	18.5	157.4	52.1	209.5
1925	181.1	155.5	159.9	20.3	180.2	47.7	227.9
1926	212.6	190.2	189.5	22.2	211.7	49.3	261.0
1927	217.3	191.3	194.0	22.4	216.4	50.1	266.5
1928	236.4	217.6	217.7	17.8	235.5	54.0	289.5
1929	248.2	233.8	229.1	17.9	247.0	56.4	303.4
1930	205.0	186.2	185.0	18.8	203.8	52.1	255.9
Average for Decade	197.3	176.3	176.8	19.8	196.6	50.6	247.1
1931	169.0	157.6	150.2	17.4	167.6	45.6	213.2
1932	97.9	84.6	82.6	12.9	95.5	40.0	135.5
1933	80.0	63.4	65.2	10.9	76.1	39.6	115.7
1934	101.5	82.7	84.7	12.9	97.6	44.1	141.7
1935	116.6	97.8	99.8	13.8	113.6	45.8	159.4
1936	141.4	119.9	122.9	16.0	138.9	50.1	189.0
1937	177.7	158.7	156.4	18.9	175.3	54.8	230.1

TABLE 14

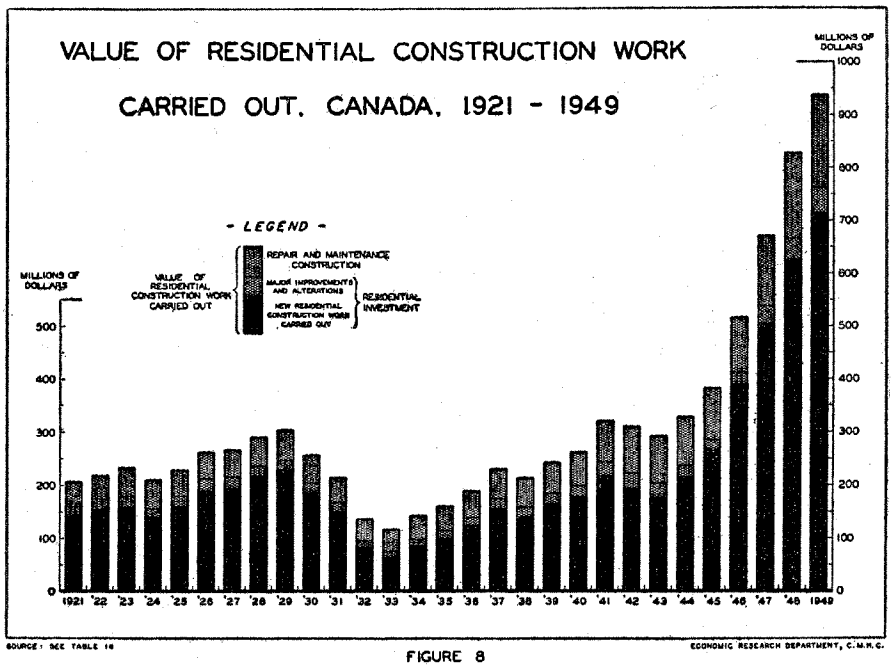
VALUE OF DWELLINGS COMPLETED AND RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, CANADA, 1921-1949, *Continued*

(Millions of Dollars)

Year and Period	New Construction, Major Improvements and Alteration Work Carried Out in Canada, Including Newfoundland, Yukon and Northwest Territories	Canada, Excluding Newfoundland, Yukon and Northwest Territories					
		Value of Dwellings Completed	Construction Work Carried Out				
			New Construction	Major Improvements and Alterations	New Construction and Major Improvements and Alterations	Repair and Maintenance	Total Residential Construction Work Carried Out
1938	161.2	137.8	140.9	17.6	158.5	53.2	211.7
1939	187.6	166.0	165.8	19.3	185.1	56.6	241.7
1940	201.9	176.4	178.8	20.5	199.3	63.0	262.3
Average for Decade	143.5	124.5	124.7	16.0	140.8	49.3	190.0
1941	246.9	219.5	218.2	25.3	243.5	76.7	320.2
1942	227.9	197.2	195.0	28.3	223.3	86.7	310.0
1943	209.6	170.2	176.1	27.6	203.7	87.6	291.3
1944	243.2	205.7	214.5	22.1	236.6	91.8	328.4
1945	292.2	244.7	268.7	16.9	285.6	96.3	381.9
1946	415.7	378.6	390.2	21.8	412.0	105.3	517.3
1947	544.6	501.1	506.1	33.6	539.7	130.8	670.5
1948	672.1	599.2	628.7	39.0	667.7	161.9	829.6
1949	767.8	709.0	715.6	46.9	762.5	175.3	937.8
Average for Period	402.2	358.4	368.1	29.1	397.2	112.5	509.7
Average 1921-1949	242.3	214.9	218.2	21.3	239.5	69.4	308.9

stantially than the number of units constructed because changes in volume were also accompanied by changes in house building costs (see pp. 101-103 and 400).

Looking at broad decade changes, the value of housing completions in the 'twenties was about one and two-fifths times that of the 'thirties. Compared with the 'forties the 'twenties are less



SOURCE: SEE TABLE 16 ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

FIGURE 8

impressive, representing only half of the value of completions. What this meant in changes in volume is indicated in the subsequent discussion of gross residential capital formation in constant dollars (see pp. 91-92).

Value of Dwelling Completions by Location and Type of Structure

Location. In 1949 about 65 per cent of the value of all housing completions involved activity in urban areas, 32 per cent in rural non-farm areas and about 3 per cent in farm areas. In 1929, another year of peak residential construction work, a larger portion of the home building effort was concentrated in urban areas, 72 per cent, and on farms, 4 per cent, and less was done in rural non-farm areas, 24 per cent (see Table 15). The higher post-war ratio of non-farm

rural dwelling completions is suggestive of the increased importance of house building outside large cities and towns. One important reason for this is that land suitable for residential purposes within large urban centres is becoming scarce, inducing greater house-building activity at the outskirts of cities and towns. This tendency in turn contributes to a gradual expansion of city boundaries frequently by creating in the first instance a *de facto* situation followed later by annexation of suburban communities and adjacent land.

Single and Multiple Construction. In 1949 the value of multiple housing completions comprised a smaller proportion of the total value of completions than at any preceding period except 1948. The ratio was 20 per cent in 1949 as compared with 49 per cent in 1929, 42 per cent in 1933 and 44 per cent in 1939 (see Table 15). The significance of this trend has been examined previously (see pp. 51-52). Here the importance of considering dollar measurements of housing completions in conjunction with the number of units involved deserves some emphasis. Construction of multiple units requires fewer man-hours and fewer materials than building an equivalent number of single units.[1] If the composition of the housing program changes considerably, with a greater shift towards multiple construction, it is feasible that the *number* of completion series might show a small increase, while the *value* of completion series after adjustment for possible price changes might show a small decrease. Because of this effect which changes in the composition of a housing program may have on the volume of residential construction work carried out adequate analysis requires that dwelling unit data should be appraised in conjunction with value data.[2]

New and Converted Structures. Dwellings created through conversion require in turn fewer man-hours and fewer materials than homes built in new structures.[3] As a result new dwellings completed through conversion of existing buildings involved less than 2 per cent of the total value of completions in 1949 (see Table 15), while the proportion in terms of dwelling units completed was twice as high, 3.8 per cent (see Table 9). What has been said above concerning the composition of the housing program in an appraisal of the extent of the housing effort involved, applies also to new homes created through conversion.

[1] *Manpower and Material Requirements for a Housing Program in Canada*, Department of Reconstruction and Supply, Ottawa, 1946, pp. 46, 98, 99, 112 and 113.

[2] For an example of the different results obtained in a historical comparison by using one or the other series, see pp. 77-79.

[3] *Manpower and Material Requirements*, pp. 46, 130 and 131.

TABLE 15

VALUE OF DWELLINGS COMPLETED, BY LOCATION AND TYPE OF STRUCTURE, CANADA, SELECTED YEARS, 1929-1949

Item	1929		1933		1939		1948		1949	
	Amount $ Mill	Per cent	Amount $ Mill	Per cent	Amount $ Mill	Per cent	Amount $ Mill	Per cent	Amount $ Mill	Per cent
Urban Dwellings	168.8	72.2	33.7	53.1	77.2	46.5	387.2	64.6	463.9	65.4
Rural Non-Farm Dwellings	54.6	23.4	26.1	41.2	79.4	47.8	197.4	33.0	226.1	31.9
Total Non-Farm Dwellings	223.4	95.6	59.8	94.3	156.6	94.3	584.6	97.6	690.1	97.3
Farm Dwellings	10.4	4.4	3.6	5.7	9.4	5.7	14.6	2.4	18.9	2.7
Total Dwellings	233.8	100.0	63.4	100.0	166.0	100.0	599.2	100.0	709.0	100.0
Single Dwellings	119.0	50.9	36.6	57.7	93.0	56.0	493.8	82.4	570.7	80.5
Multiple Dwellings	114.8	49.1	26.8	42.3	73.0	44.0	105.4	17.6	138.3	19.5
Total Dwellings	233.8	100.0	63.4	100.0	166.0	100.0	599.2	100.0	709.0	100.0
Dwellings in New Structures	228.4	97.7	62.3	98.3	162.2	97.7	585.4	97.7	699.4	98.6
Dwellings in Converted Structures	5.4	2.3	1.1	1.7	3.8	2.3	13.8	2.3	9.6	1.4
Total Dwellings	233.8	100.0	63.4	100.0	166.0	100.0	599.2	100.0	709.0	100.0
Permanent Dwellings	233.8	100.0	63.4	100.0	166.0	100.0	596.5	99.6	709.0	100.0
Temporary Dwellings	——	——	——	——	——	——	2.7[1]	.4[1]	——	——
Total Dwellings	233.8	100.0	63.4	100.0	166.0	100.0	599.2	100.0	709.0	100.0

[1]Construction work carried out.

Permanent and Temporary Dwellings. The emphasis in Canada on solving the housing problem is placed on building new permanent homes, the construction of temporary dwellings being regarded merely as a matter of expediency in the immediate post-war period. This is reflected by the fact that in 1948 less than one-half of one per cent of the value of all dwelling completions was for non-permanent housing accommodation and in 1949 temporary building was negligible (see Table 15).

Residential Construction Work Carried Out

The value of new residential construction work carried out and the value of major improvements and alterations on existing residential property carried out in Canada including Newfoundland, Yukon and the Northwest Territories in 1949 amounted to $768 million. Excluding Newfoundland, Yukon and the Northwest Territories the work put in place was estimated at $763 million (see Table 14). Repair and maintenance work on residential structures was estimated at $175 million. Total residential construction work in Canada excluding Newfoundland, Yukon and the Northwest Territories in 1949 was therefore some $938 million, and including Newfoundland, Yukon and the Northwest Territories was close to the $950 million mark. This is two-thirds higher than the value of Canada's wheat crop in 1949, which brought 367 million bushels valued at $567 million, or more than twice the domestic consumption of motor vehicles of all kinds, which was put at $426 million for 1949.[1]

The appraisal that follows is confined to residential construction work put in place in Canada, excluding Newfoundland, Yukon and the Northwest Territories. As Figure 8 illustrates, new residential construction work showed the greatest fluctuations, followed by major improvements and alterations of existing buildings, with the smallest fluctuations indicated for repair and maintenance expenditures on existing housing. Because of the longevity of houses, replacement of dwellings is not required for many years. Often houses are used with a minimum of upkeep to accommodate two or three generations. It is therefore possible to postpone new construction for replacement purposes over long periods of time. Major improvements and alterations which may be necessary during the life of a house can also be postponed, although frequently not for as long a period as replacement if

[1]This estimate reflects the domestic disappearance of motorcars, trucks, buses and other types of automotive equipment. Apparent domestic disappearance is the resultant of domestic production plus imports minus exports.

premature deterioration of a house is to be avoided. Some repair and maintenance work, such as the repair of a leaky roof, is absolutely necessary if the property is not to suffer structurally. Other maintenance outlay, e.g. the inside painting and re-decorating, can also be postponed for lengthy periods, although this may result in under-maintenance of the property and its consequent deterioration in quality and reduction of value.

New residential construction work declined by almost three-quarters from 1929 to 1933, major improvements and alterations by two-fifths and repair and maintenance work by less than one-third. From 1933 to 1939 new residential construction work increased one and a half times, major improvements and alterations by about four-fifths, and repair and maintenance construction by about one-half (for a further appraisal of fluctuations in the volume of residential construction, see Section 13).

Gross Residential Capital Formation

Gross residential capital formation has been defined to include (*a*) additions through construction consisting of the value of new residential construction work carried out and the value of major improvements and alterations to existing dwellings, and (*b*) supplementary house-building costs which are made up of the value of installed non-movable equipment and the value of service costs associated with new dwelling construction usually charged to capital expenditures. Item (*a*) comprises the bulk of gross capital formation, while item (*b*) contributes only a small proportion. In 1949 residential construction work put in place comprised 98 per cent of gross residential capital formation. Gross residential capital formation is the most comprehensive measurement of total additions to residential capital, which in turn is the value of the housing stock (excluding land) at a given time.

In 1949 gross residential capital formation amounted to $778 million or about 6 per cent of the residential capital in existence at the end of that year. The 91,000 houses completed in 1949 represent about 3 per cent of the total number of dwellings in existence. The explanation for the different results lies in the fact that residential capital formation reflects the value of *new* houses built annually, while residential capital is a valuation of houses of different *kinds* and *ages* at a given time. The value of the average existing home will be considerably lower than the

average cost of a newly built house.[1] Variations in age and quality are not reflected in a measurement in terms of dwelling units.[2]

Gross residential capital formation varied substantially from year to year in the 29-year period under review. It has been suggested earlier that in terms of dwelling units the volume of house building declined 66 per cent from the pre-war peak of 1929, to 1933, the low point of the 'thirties. Gross residential capital formation in current dollars declined 69 per cent in the same period. If allowance is made for price changes that occurred during these four years, gross residential capital formation in constant dollars declined somewhat less, 61 per cent, indicating that the decline in the physical volume of house-building activity was accompanied also by a price decline of 8 per cent. A change in the ratios of the types of new houses built and a comparatively smaller decline in major improvements and alterations than in new residential construction account in the main for the different rates of decline registered by the two *volume* indicators mentioned above.

Corresponding increases for the recovery period beginning in 1933 until the outbreak of the war in 1939 were 136 per cent for dwelling completions and 144 per cent and 117 per cent respectively for gross residential capital formation in current and constant dollars. This upturn, which was briefly interrupted during World War II, continued in the post-war period. In 1949 gross residential capital formation in constant dollars proceeded at a rate 117 per cent higher than in 1922, the corresponding year after World War I, 59 per cent higher than in 1929[3], the pre-war peak, 310 per cent higher than in 1933, the low point of the inter-war period, 89 per cent higher than in 1939, the year World War II began, and 84 per cent higher than in 1945, the year when hostilities ended. These data indicate an unsurpassed level of residential construction activity for 1949.

The relation of this volume to Canada's rapid expansion of population and tremendous industrial growth over the last few decades is examined in Section 8. This examination, which points to different conclusions than the one reached above, is necessary if the broad decade changes that have occurred in the lifetime of the present generation are to be seen in their proper perspective.

[1]It is estimated that in 1949, for example, the average cost of a new dwelling unit, including installed equipment, service costs and land, was about $8,500 and the average value of an existing home was $4,800 (see p. 98).

[2]For similar appraisals in terms of net capital formation and net additions to the housing stock, see p. 95.

[3]The reasons for the difference between the increase indicated above and the much smaller increase recorded in terms of dwelling completions are given on p. 239.

Estimates of the volume of gross residential capital formation as distinct from its current dollar value indicate that activity in the 'forties was only moderately above the 'twenties, 29 per cent, although notably above the 'thirties, 62 per cent. What appeared as significant increases in the current dollar value of gross residential capital formation in the 'forties over the pre-war period turns out to be in major part due to rapid price increases (see p. 101). And when account is taken of changes in the productive capacity and increase in population, the accomplishments of the 'forties are even less impressive (see pp. 238 ff.).

Residential Capital Consumption

Residential capital consumption is the item offsetting gross residential capital formation. It has been defined to include the value of destroyed and damaged dwellings and an allowance for wear and tear and obsolescence of residential capital, taken care of in the form of depreciation. In essence residential capital consumption reflects residential capital used up in all ways. It is an important quantity, for in conjunction with gross residential capital formation it enables the analyst to come as close as is practicable with tools available to measuring *real* changes in the quality and volume of residential capital.

In 1949 residential capital consumption was estimated at $316 million. Of this total only a small fraction, $7 million, was represented by the value of destroyed and damaged dwellings. The major part, $309 million, consisted of wear and tear and obsolescence. This item varied only slightly from year to year over the period under review, increasing gradually as the housing stock expanded and grew older. The other two items, destruction and damages, reflect mainly acts of Providence and vary somewhat more, depending mainly on the incidence and effect of fire, water, storms, etc. The weight of this component, however, is so small as to hardly affect the total. The impact of all factors has caused residential capital consumption to undergo much smaller fluctuations than gross residential capital formation (see Table 16).

Over the period 1921 to 1949 residential capital consumption rose 217 per cent in current dollars and 69 per cent in constant dollars. After eliminating the impact of price changes, residential capital consumption increased by an annual rate of about 2½ per cent. Although gross residential capital formation fluctuated more substantially over the 29-year period, its 1949 *volume* was 167 per cent greater than it had been in 1921, an average increase of nearly 6 per cent per annum.

TABLE 16

GROSS AND NET RESIDENTIAL CAPITAL FORMATION, CANADA
1921-1949
(Millions of Dollars)

Year and Period	Current Dollars			Constant Dollars		
	Gross Residential Capital Formation	Residential Capital Con-sumption	Net Residential Capital Formation	Gross Residential Capital Formation	Residential Capital Con-sumption	Net Residential Capital Formation
1921	163.3	99.7	63.6	137.7	83.0	54.7
1922	177.3	92.6	84.7	164.9	85.4	79.5
1923	183.5	97.6	85.9	165.8	87.4	78.4
1924	160.8	96.9	63.9	148.9	89.2	59.7
1925	184.2	96.4	87.8	174.0	90.9	83.1
1926	216.5	97.4	119.1	207.1	93.0	114.1
1927	221.4	100.1	121.3	211.6	95.6	116.0
1928	241.3	103.1	138.2	225.1	96.3	128.8
1929	253.3	112.5	140.8	225.7	100.6	125.1
1930	208.9	112.2	96.7	191.1	103.4	87.7
Average for Decade	201.0	100.8	100.2	185.2	92.5	92.7
1931	171.6	106.4	65.2	169.0	105.8	63.2
1932	97.7	99.4	– 1.7	104.7	107.7	– 3.0
1933	77.8	97.1	– 19.3	87.2	109.4	– 22.2
1934	99.8	99.9	– 0.1	108.1	108.2	– 0.1
1935	116.3	102.0	14.3	126.8	111.2	15.6
1936	142.2	105.9	36.3	150.8	112.1	38.7
1937	179.5	115.7	63.8	177.1	113.8	63.3
1938	162.3	115.1	47.2	163.5	115.9	47.6
1939	189.5	118.1	71.4	189.5	118.1	71.4
1940	204.2	127.9	76.3	191.9	120.1	71.8
Average for Decade	144.1	108.8	35.3	146.9	112.2	34.6
1941	249.2	145.6	103.6	210.2	122.4	87.8
1942	228.0	160.9	67.1	177.4	124.1	53.3
1943	207.5	180.4	27.1	149.2	127.9	21.3
1944	241.1	190.1	51.0	164.7	127.9	36.8
1945	291.3	200.3	91.0	194.2	131.2	63.0
1946	420.1	216.6	203.5	261.2	132.9	128.3
1947	550.2	246.7	303.5	304.6	132.2	172.3
1948	680.9	292.3	388.6	327.6	136.4	191.2
1949	778.1	315.8	462.3	357.8	140.3	217.5
Average for Period	405.1	216.5	188.6	238.6	130.6	108.0
Average 1921-1949	244.7	139.5	105.2	188.6	111.1	77.5

Longevity of residential real estate is reflected in the proportion which residential capital consumption represents of gross residential capital formation in times of high volume of house-building activity. In 1949, for example, residential capital consumption in constant dollars comprised 39 per cent of gross residential capital formation and in 1929, another year of high level of house-building activity, 45 per cent. This means that because houses may be usable for anywhere from 50 years to over 100 years (see p. 427), something like two-fifths of new work in times of a high level of building activity is needed to make good the reduction in residential capital while the other three-fifths add to the housing stock. In times of little residential construction activity the volume of new work may be insufficient to compensate for the deterioration of the housing stock which occurs with the passing of time (see Table 16).

Net Residential Capital Formation

Net residential capital formation is a measurement of the net effect of two opposing forces at work. It is arrived at by subtracting residential capital consumption from gross residential capital formation.

Over the last three decades net residential capital formation has been a positive item in all years except three. This means that with but few exceptions Canada has added to the housing stock each year, although the rate at which these additions have taken place has varied significantly (see Figure 9). The three years in which net residential capital formation was negative were 1932, 1933 and 1934. In this period not enough was spent on new house building and improvements and alterations to existing housing stock to make up for the deterioration in the quality of the housing stock that occurred at the same time. In 1933 negative net residential capital formation, or "residential disinvestment," measured in constant dollars, amounted to $22 million, about one-quarter of the volume of gross residential capital formation in that year. This occurrence in the early 'thirties emphasizes the great fluctuations in gross residential capital formation. It should be remembered that in times of high housing demand gross residential capital formation may be as much as 2½ times as great as residential capital consumption, while in times of little housing demand it may comprise not more than three-quarters of the volume of residential capital consumption.

Net residential capital formation in 1949 was about $462 million. At that rate it would take about 29 years to double residential capital in existence at the end of this year.[1]

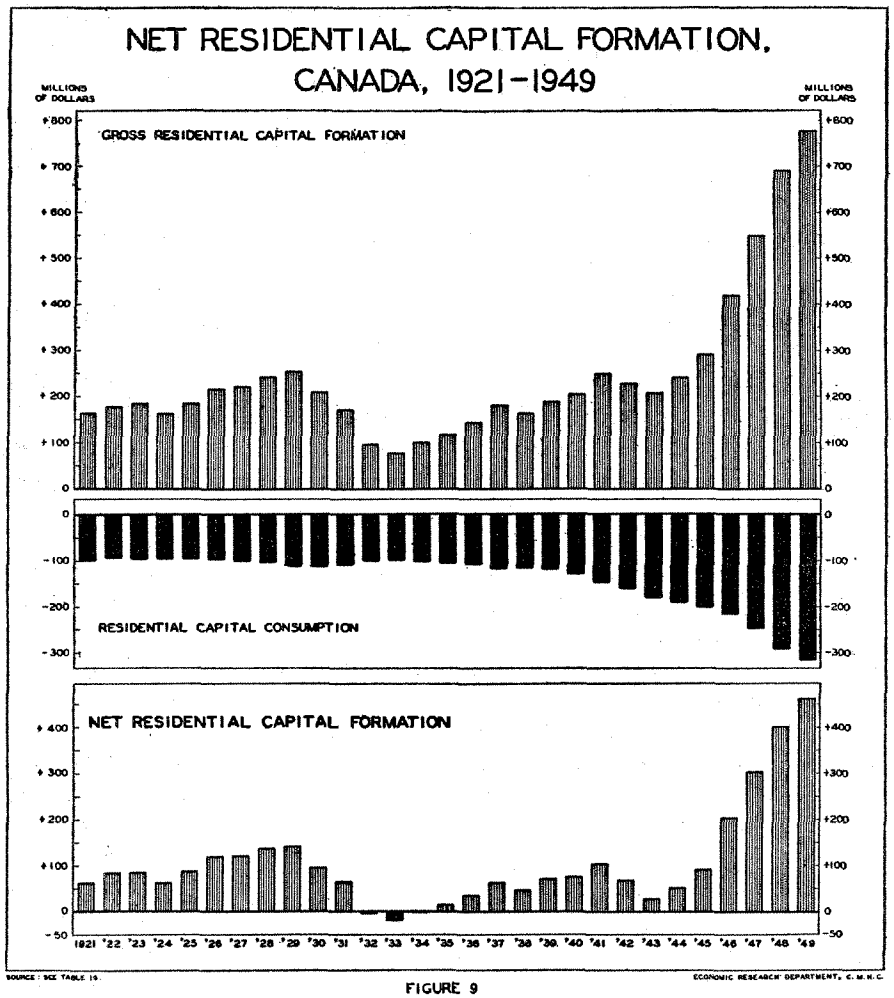


FIGURE 9

Looking at broad decade changes of net residential capital formation in constant dollars, the average for the 'twenties compared favourably with the 'thirties and the 'forties. The annual average of $93 million in the 'twenties was almost three times the amount of the average of the 'thirties, $35 million, and

[1]In terms of net additions of dwellings to housing stock it would take some 38 years to double the 3,125,000 houses in existence at the end of 1949.

close to the $108 million average for the 'forties, which include the highest housing peaks in 1947, 1948 and 1949, for the period under review (see Table 16).[1] These figures point up vividly the tremendous housing effort that must have gone into expanding Canada's housing supply in the 'twenties, when Canada's population and productivity were about one-third smaller than they are today (see pp. 244-245). The end result of the varying rates of net residential capital formation was to increase the quantity of residential capital over the last three decades at an average rate of 2 per cent per annum.

Gross and Net Additions to and Deductions from Residential Real Estate

Gross additions to residential real estate cover gross residential capital formation and the value of residential land put in use for housing purposes. In 1949 a total of $829 million worth of property was added to residential real estate. Over the whole period under review additions to residential real estate varied in similar fashion to changes in the volume of gross residential capital formation (see Table 17).

Deductions from residential real estate are the sum of residential capital consumption and the value of land withdrawn from residential use. However, since land does not wear out[2] like structures and equipment, deductions from residential real estate are a slightly smaller proportion of gross additions to residential real estate than residential capital consumption to gross residential capital formation. As a result, in only one year do net additions to residential real estate—that is, gross additions to residential real estate minus deductions from residential real estate—show a negative figure. This was in 1933, when residential real estate of $5.5 billion (in constant 1939 dollar terms) was reduced slightly in *volume* terms by $18 million. Disinvestment in residential real estate in this year was about 20 per cent of gross additions to residential real estate in constant dollars, as compared with about 25 per cent, the ratio of negative net residential capital formation to gross residential capital formation. In all other years over the last three decades net additions to residential real estate were positive. In 1949 they were running at $510 million in current dollars, or 62 per cent of total gross additions to residential real estate.

[1]In interpreting these figures it should be remembered that the number of dwellings in existence in the 'forties was greater than the number in the 'twenties. More houses subject to deterioration would be reflected in higher residential capital consumption.

[2]It may become unusable for certain purposes and may lose in value, though, for a number of reasons (see p. 430).

TABLE 17

GROSS AND NET ADDITIONS TO RESIDENTIAL REAL ESTATE, CANADA, 1921-1949
(Millions of Dollars)

Year and Period	Current Dollars			Constant Dollars		
	Gross Additions to Residential Real Estate	Deductions from Residential Real Estate	Net Changes in Residential Real Estate	Gross Additions to Residential Real Estate	Deductions from Residential Real Estate	Net Changes in Residential Real Estate
1921	173.3	100.6	72.7	146.1	83.7	62.4
1922	188.1	93.6	94.5	174.9	86.3	88.6
1923	194.7	98.6	96.1	175.8	88.3	87.5
1924	170.2	97.9	72.3	157.7	90.1	67.6
1925	195.1	97.4	97.7	184.2	91.9	92.3
1926	229.3	98.5	130.8	219.3	94.1	125.2
1927	234.2	101.2	133.0	223.9	96.7	127.2
1928	255.4	104.4	151.0	238.4	97.5	140.9
1929	268.1	113.9	154.2	239.0	101.9	137.1
1930	220.8	113.5	107.3	202.0	104.6	97.4
Average for Decade	212.9	102.0	111.0	196.1	93.5	102.6
1931	181.5	107.7	73.8	178.7	107.1	71.6
1932	103.1	100.4	2.7	110.5	108.8	1.7
1933	82.1	97.9	− 15.8	92.1	110.3	− 18.2
1934	105.4	100.7	4.7	114.2	109.1	5.1
1935	122.9	102.9	20.0	134.0	112.2	21.8
1936	150.4	106.9	43.5	159.4	113.1	46.3
1937	189.8	116.8	73.0	187.3	114.9	72.4
1938	171.3	116.0	55.3	172.7	116.8	55.9
1939	200.4	119.2	81.2	200.4	119.2	81.2
1940	215.7	128.8	86.9	202.7	121.0	81.7
Average for Decade	152.3	109.7	42.5	155.2	113.2	41.9
1941	263.7	146.8	116.9	222.5	123.4	99.1
1942	241.1	162.1	79.0	187.6	125.0	62.6
1943	219.9	181.7	38.2	158.1	128.8	29.3
1944	256.0	191.5	64.5	175.0	128.8	46.2
1945	310.5	201.9	108.6	206.9	132.2	74.7
1946	448.6	218.6	230.0	278.9	134.1	144.8
1947	587.7	249.2	338.5	325.4	133.5	191.9
1948	725.0	295.5	429.5	349.1	137.8	211.3
1949	829.4	319.1	510.3	381.6	141.7	239.9
Average for Period	431.3	218.5	212.8	253.9	131.7	122.2
Average 1921-1949	259.8	140.8	119.0	200.0	112.1	87.9

Price of Residential Real Estate

The final price of *individual* properties is largely determined by the number of active sellers and buyers and the comparative bargaining position of the two groups. Only a limited number of transactions would take place at one time. In using the sales price of individual properties to value *all* properties the underlying assumption is made that prices of all existing property are reflected in prices of properties changing ownership.[1] The method used in valuing residential real estate in this report is to use prices of *newly built* homes to arrive at the value of all residential real estate in existence. Account is taken of variations in the composition, quality and age of existing real estate by making an allowance for wear and tear and obsolescence. The valuation method used here yields the replacement value of residential real estate, that is, the money that would theoretically have to be spent should all residential real estate have to be re-created in one particular year. In practice, however, because of the limited resources available in a country, this would not be possible. The series on the value of all residential real estate shown in Table 18 should therefore be considered as a reflection of the *replacement value* of residential real estate under the supply and demand conditions prevailing at different periods rather than an attempt to represent the sum total of the *actual sales* value of all properties.

Bearing the above considerations in mind, the value of the average dwelling in existence, including the land on which it was situated, was estimated to be $4,800 in 1949. This price compares with $8,500 for the average newly constructed house in that year, including an allowance for supplementary house-building costs and land.

The average value of existing residential property in 1949 reflects the large number of new homes added to the housing stock

[1]In using sales prices of individual properties in a given period, say one year, as a basis for valuing total residential real estate, two approaches or a combination of both are possible: (1) sales prices of newly built homes, (2) sales prices of existing residential properties, and (3) a weighted average of (1) and (2). However, since comprehensive information is available at present only on sales prices of newly built homes, method (1) is used in this study. Quite apart from the difficulties in obtaining adequate statistics for method (2), this method should be used if the data obtained for property sold in one year were representative in type and quality of total residential real estate in existence in that year. By way of illustration, data available for two counties on sales prices of newly built houses and of existing residential real estate demonstrate the differences that exist between the two different sets of prices of property. During 1947-1948 the sales price of a residential property with new structures in Carleton County averaged $8,000 as compared with an average of about $5,000 for existing residential real estate (Table 30, p. 154). For a further discussion of the difficulties involved in measuring value and price changes of residential real estate and the methods of estimation employed in this report, see pp. 431-432.

TABLE 18

AVERAGE VALUE OF EXISTING DWELLINGS, INCLUDING LAND, AND PRICE INDICES OF RESIDENTIAL REAL ESTATE, CANADA, 1921-1949

Year and Period	Residential Real Estate Current Value $ Mill	Housing Stock Number of Dwellings 000	Average Value of Existing Dwellings Including Land $	Indices of Additions to Residential Real Estate[1]		Index of Price of Residential Real Estate
				Valued in Current Dollars	Valued in Constant Dollars	
1921	5,299	1,909	2,776	86.5	72.9	118.6
1922	4,887	1,946	2,511	93.9	87.3	107.5
1923	5,123	1,984	2,582	97.2	87.7	110.7
1924	5,062	2,018	2,508	84.9	78.7	107.9
1925	5,046	2,057	2,453	97.4	91.9	105.9
1926	5,118	2,106	2,430	114.4	109.4	104.6
1927	5,247	2,157	2,433	116.9	111.7	104.6
1928	5,524	2,213	2,496	127.4	119.0	107.1
1929	5,927	2,271	2,610	133.8	119.3	112.2
1930	5,862	2,318	2,529	110.2	100.8	109.3
Average for Decade	5,309	2,098	2,531	106.3	97.9	108.6
1931	5,522	2,357	2,343	90.6	89.2	101.6
1932	5,053	2,379	2,124	51.4	55.1	93.3
1933	4,844	2,395	2,023	41.0	46.0	89.1
1934	5,030	2,417	2,081	52.6	57.0	92.3
1935	5,019	2,444	2,054	61.3	66.9	91.7
1936	5,206	2,476	2,103	75.0	79.5	94.4
1937	5,670	2,517	2,253	94.7	93.5	101.3
1938	5,596	2,554	2,191	85.5	86.2	99.2
1939	5,723	2,598	2,203	100.0	100.0	100.0
1940	6,179	2,643	2,338	107.6	101.1	106.4
Average for Decade	5,384	2,478	2,173	76.0	77.4	98.1
1941	7,006	2,693	2,602	131.6	111.0	118.5
1942	7,700	2,733	2,817	120.3	93.6	128.5
1943	8,390	2,763	3,037	109.7	78.9	139.1
1944	8,908	2,799	3,182	127.7	87.3	146.3
1945	9,251	2,840	3,257	154.9	103.2	150.1
1946	10,130	2,899	3,494	223.9	139.2	160.8
1947	11,643	2,970	3,920	293.3	162.4	180.6
1948	13,792	3,042	4,534	361.8	174.2	207.7
1949	14,999	3,125	4,800	414.9	190.4	217.9
Average for Period	10,201	2,874	3,550	215.4	126.7	170.1
Average 1921-1949	6,853	2,470	2,775	129.7	99.8	130.0

[1]Base of index: 1939 = 100

in the post-war period and the strong demand for housing accommodation of all kinds both old and new. Demand for accommodation bolstered by a high rate of family formation and a high birth rate, and aided by the favourable income conditions and asset holdings of a large number of people in the country, contributed to rising prices (see Section 7).

The situation was different in the 'thirties, when fewer families were formed, fewer children were born, and employment and income conditions and prospects were on the whole unfavourable. As a result, demand for additional living accommodation was reduced and prices of residential real estate declined during those years.

When World War II commenced the average home was valued at $2,200, less than one-half of the level it was to reach in 1949. More surprising than this large increase from 1939 to 1949 is the small change in the average value of residential real estate from 1933, the low point of the 'thirties, to 1937, the high point of the recovery phase. In 1933, when the number of houses built was less than half the number in 1937, the price of the average existing house, as reflected by its replacement value, was $2,000, while four years later it was up to only $2,300, or 11 per cent. Similarly the price decline shown by this series was comparatively moderate from 1929, the peak of the late 'twenties, to 1933, 22 per cent. Also, the average value of residential real estate in 1929 in spite of favourable demand conditions was still below 1921 when, because of the strong inflationary tendencies following World War I[1] residential real estate reached higher values than in the prosperous years of the late 'twenties (see Table 18).

In the inter-war period variations of the average value of existing residential real estate were less substantial than fluctuations in the volume of new house building. This is explained by the fact that the value series of existing residential real estate reflects replacement value of the property and is therefore largely determined by the price at which new residential real estate has been added to the existing stock. This price in turn is to a great extent governed by the level of construction costs, and the latter did not fluctuate significantly from year to year during the 'twenties and 'thirties[2] although they seem to have risen to greater heights—and subsequently fallen—in the periods that followed World War I and World War II.[3]

[1]*Report of the Royal Commission on Prices*, Ottawa, 1949, Vol. II, pp. 13-14.

[2]For a discussion of some of the rigidities affecting construction costs, see *Housing and Community Planning*, p. 231.

[3]*Manpower and Material Requirements*, p. 33.

It should be remembered that in estimating the replacement value of existing residential real estate no account is taken of the many forced sales and other sacrifice sales of residential real estate that were particularly numerous in the 'thirties. In fact, many sales of property in the 'thirties were concluded at a price below the replacement value. Insofar as this was the case the value series shown in Table 18 would understate the effect of such sacrifice sales on the value of residential real estate.

The price index of residential real estate shown in Table 18 indicates a decline of about 21 per cent from 1929 to 1933, but an index of actual sales of identical properties if it were available might show declines possibly up to twice the drop of the residential real estate price index which, as pointed out, substantially reflects new house building costs (see below).

The latter index registered comparatively little change over the pre-war period but showed more rapid increases in the war and post-war years. By 1949 the index of cost of new houses was 118 per cent above 1939. In other words, it cost more than twice as much to buy a new home in 1949 as it did before the war. More than half of this increase occurred in the first four years following the end of World War II, as price and wage controls introduced during the war were gradually relaxed and then lifted. The average annual increase in these four years was 11 per cent. A little less than one-half of the increase had occurred during six years of war when in spite of controls building costs were slowly edging upwards. Prices in this period rose at a rate of 8 per cent per year.

While no comparable series is available on the sales prices of existing real estate, some evidence on the subject has been forthcoming from a sample investigation conducted by the Dominion Mortgage and Investments Association.[1] This evidence supports the view that there are some variations in the behaviour of sales prices of existing and new residential properties which at times may be quite significant.[2] In their investigations the Dominion Mortgage and Investments Association took an identical group of houses sold at different time intervals.

One group of 134 single homes which were situated in various cities across the country was sold in 1925-1929 and re-

[1]Data by courtesy of Dominion Mortgage and Investments Association, Toronto.

[2]For some qualitative observations on sales prices of existing residential real estate and of newly built homes and changes in the direction of the former in 1949 without a corresponding change in direction of the latter, see survey conducted by the Canadian Association of Real Estate Boards in June, 1949 and summarized under the title, "Real Estate Sales on the Way Down," in the *Financial Post*, Toronto, August 13, 1949, p. 1.

sold in the 'thirties. Over this period prices of these properties declined 30 to 41 per cent, depending on the locality, an average of 37 per cent for all municipalities canvassed. The corresponding decline of construction costs of new housing was 8 per cent, to which should be added about 10 per cent depreciation of the existing property, so that the replacement cost of existing property would be roughly 18 per cent lower in the 'thirties than in the late 'twenties.

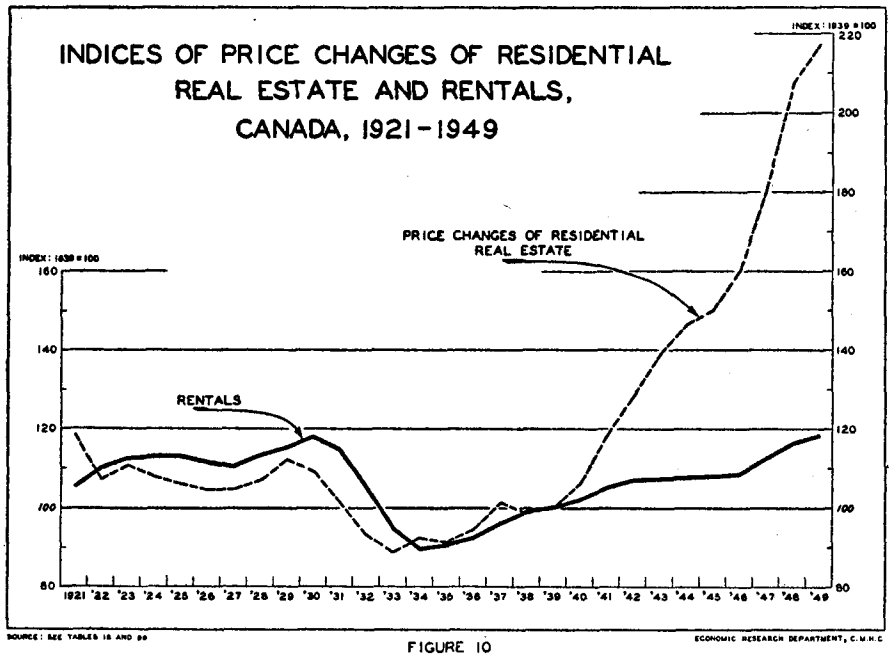


FIGURE 10

Another group of 83 single houses which were all sold between 1935 and 1939 was re-sold in 1945 at prices 40 to 65 per cent higher, with an average of 51 per cent. Corresponding increases of new house building costs are 54 per cent less about 10 per cent for depreciation, or an increase in replacement costs of about 44 per cent.

The band between the two sets of price data increased considerably in 1946. The Dominion Mortgage and Investments Association survey, based on a smaller sample, suggests a jump in prices of existing real estate between 1945 and 1946, of something

like 15 to 30 per cent[1], while the house-building index, adjusted for depreciation, reflects only a 7 per cent increase for these two years. It should be remembered that in 1946 most prices of materials were still affected by controls carried over from the war period and would therefore contribute to holding down increases in building costs. On the other hand, the sales price of existing residential property was not under control and prices rose rapidly as strong and persistent demand resulted in the largest number of transactions on record (see p. 143).

In some measure the variations of the two price indicators described above can be explained by differences in the characteristics of the real estate market. When demand is strong and insufficient new house building is taking place, the price of existing residential real estate will be driven up rapidly and the number of transfers will mount quickly, as was the case in 1946. High prices of existing real estate will be a spur to new house building and the latter may rise rapidly to take advantage of favourable market conditions. This was the experience, for example, in 1947, 1948 and 1949 when the number of houses built reached new heights while the number of transfers of existing real estate declined from the immediate post-war peak of 1946 (see p. 143). However, as has been stressed earlier, much of the increase in the volume of house building was for owner occupancy. As Figure 10 shows, indices of prices of new residential real estate and rentals of existing property were much further apart in the post-war period than in any other previous period. For 1949 the rental index was only 19 per cent above 1939, while house-building costs were more than twice what they had been before the war.[2]

While there is much to be desired in the availability of tools to measure effectively the value and price variations of residential real estate, sufficient data are available to arrive at three tentative conclusions:

(1) In times of rising levels of economic activity, income and employment, accompanied by increasing demand for housing, the price of existing residential real estate will also be rising, with

[1]In the Toronto area 1945 and 1946 prices were 55 and 66 per cent respectively higher than sales prices of corresponding properties in the 'thirties. In the Winnipeg area corresponding percentages were 40 and 54 per cent, in other Prairie cities 36 and 54 per cent, and in the Vancouver area 65 and 94 per cent.

[2]There were, however, some compensating features in the 1949 rental situation, such as the freeing from rent control of newly built housing accommodation and legally vacated premises, and a substantial reduction in the rate of vacancies of existing leased properties. Some indication of what the latter meant in terms of incomes of landlords is illustrated by the survey of the records of thirteen real estate companies, (*Housing in Canada, January, 1950*, pp. 93 and 94).

prices of choice property in good locations rising more rapidly than prices of ordinary property. In fact, some existing property may sell for more than its current replacement value simply because it is available. This situation would be somewhat similar to the post-World War II situation in which "almost new" cars were sold at higher prices than the official list price of new cars. But such a situation may not last too long as an increasing volume of new residential construction will bring new property to the market at prices which will be competing with the premium price being paid for existing property. As new additions become more plentiful and choice existing property finds owners who intend to retain their homes for a number of years, the price of existing property may level off or turn downward while the price of newly built homes may still be moving upward.[1]

(2) Following a decline in the price of existing property and after new residential construction has increased sufficiently to meet most of the current and backlog demand, the volume of house building will decline accordingly,[2] accompanied—if there are no compensating types of other construction—by some decline in construction costs. On the downward swing in the volume of residential real estate transfers and new house building, prices of existing property may decline more rapidly and reach lower levels than construction costs of new homes. There are several factors contributing to this, but the main reason seems to be that new residential construction has usually been forthcoming on the North American continent only if there was sufficient effective demand for the houses that were being built. Existing homes, however, may at times have to be sold at whatever prices can be obtained, e.g. forced sales through default of mortgages or liquidation of an estate. In periods of declining employment and income, forced sales will be more numerous than in prosperous times, contributing significantly to the lowering of the *average*

[1]Another factor which in Canada in the post-war period tended to encourage new house building more than change in ownership of existing properties was the provisions of the National Housing Act, 1944, which made it possible to acquire newly built homes with a much lower down payment than was possible in acquiring existing properties on which mortgages through private channels only were obtainable. The average cash down payment for 6,749 houses sold in 1948 under the integrated scheme of the National Housing Act, 1944, was $1,723, or 25 per cent of the purchase price amounting to $6,955. Institutional mortgages on existing properties of a similar sales price—assuming that it was identical with the value put on the property by lending institutions—would be 60 per cent, or $4,173. The purchaser of this property would therefore be in need of a down payment of $2,782, or two-thirds greater than the amount needed by the purchaser of a newly built house acquired under the provisions of the National Housing Act.

[2]This appraisal refers to fluctuations in private housing demand.

price at which existing properties are sold. In prosperous periods forced sales of real estate are reduced to a trickle (see p. 146).

(3) On the whole—and this is subject to further testing—sales prices of existing residential real estate are likely to undergo greater fluctuations than prices of newly built homes. Sales prices of existing residential property are likely to turn downward before house-building costs reach their peak, and are also likely to turn upward somewhat earlier than costs of newly built homes. In turn, the volume of new residential construction is likely to vary more substantially than the volume of sales of existing real estate. The main reason for this is that sales of residential properties in depressed periods will include a large number of forced or sacrifice sales which would keep the total number of transactions from reaching an extremely low level (see Section 5).

Section Four

FINANCING THE HOUSING PROGRAM

THE NUMBER of houses built and the amount expended to get these houses built have been discussed in the preceding two sections. The next question is: Where does the money come from to build these houses? Related to this are two other questions: Who takes the initiative to get the houses built in the first instance, and in whom is ownership finally vested? To answer these questions this section provides information on the volume and value of house building initiated and financed by various private sectors of the economy and resulting from a series of public measures. The section also includes a brief review of housing legislation in Canada and its quantitative impact on the volume of residential construction in the period under review with the supporting evidence assembled in Appendix B.

Decisions to Initiate House Building

Initiation of housing projects may come from private groups or from public bodies. In Canada, almost all publicly initiated housing is built on contract by private builders. Privately initiated housing will be undertaken either for rent or for owner occupancy. The building of such dwellings will proceed with the final owner of the completed house either acting as owner-builder or having the building erected on contract. Or it will proceed with the initiator of the project intending to sell the completed house. Such entrepreneurs are usually described as "speculative builders" or "developers," since they are not interested in continuing possession of the property but in re-sale at a profit. The effect which such practice—a significant factor in the volume of house building in prosperous times—has on fluctuations of residential construction is described on pp. 67-68.

Sources of Financing of House Building

Whoever makes the decision to build houses has also to decide how he will finance the building of the house. He may either finance the house fully from his own resources or he may borrow a varying proportion of the final price and invest only the difference between the amount borrowed and the price paid. This difference will then be his equity in the property.

In most cases when the initiator of a housing project borrows money he will obtain the loan on the security of the property in the form of a mortgage. In Canada such loans are usually obtained from private lending institutions, such as life and fire insurance companies, loan and trust companies and fraternal societies, including mutual benefit societies and pension fund associations. Other sources are credit unions, private individuals, institutions and businesses whose prime function is other than mortgage lending, and governments under the various types of housing legislation in operation.

On occasion—and these occasions will be more numerous when equity capital is scarce—the initiator of a housing project may have insufficient resources to bridge entirely the gap between his prospective costs and the funds he is able to obtain in the form of a first mortgage (and possibly a second mortgage). In such cases the gap is frequently bridged by personal borrowing from family, employers, banks, co-operatives, etc.

The distinction between initiation of a housing project and the source of financing of the project is significant in any attempt to delineate the private and public spheres in house building. Most houses in Canada are privately initiated and only a small number are built directly for government account. Even in such cases the building is done almost entirely by private builders. But among the privately initiated housing projects there are many that are built with public financial assistance. It is therefore desirable to distinguish between house building with and without public assistance. The former in turn falls into two categories, publicly initiated or direct Government house building and privately initiated housing built with public financial assistance (see Schedule C).

The importance of this distinction is obvious. In the field of direct house building the decision to build rests with the public authority. In the field of privately initiated house building with public financial assistance the decision to proceed rests with private individuals or corporate bodies. If little or no private house building initiative is forthcoming, even attractive financial provisions made by governments will at best produce only a small number of additional housing units. It is therefore only through direct public house building that a *floor* can be put under a housing program. In other words, by this means the building of a *minimum* number of houses in Canada each year can be assured.

Financial provisions made by governments, on the other hand, serve only to encourage privately initiated house building. Such

SCHEDULE C

SOURCE OF INITIATION AND FINANCING OF HOUSE BUILDING

Item No.	Source of Initiation and Financing of House Building
	Houses Built with Public Assistance
1	Publicly Initiated, Fully Publicly Financed[1]
2	Privately Initiated, Public Financial Assistance
3	Total Houses Built with Public Assistance (Items 1+2)
	Houses Built without Public Assistance
4	Privately Initiated, Fully Privately Financed
5	Privately Initiated With and Without Public Financial Assistance (Items 2+4)
6	Houses Built With and Without Public Assistance (Items 3+4 or Items 1+5)

[1]Frequently desbribed as direct Government house building.

provisions cannot therefore be used to ensure that a minimum number of houses will be built annually. However, by making the financial provisions attractive for the majority of Canadian families and in line with their ability to pay, there appears to be wide scope for many years to come for encouraging a level of privately initiated house building far beyond the minimum number of houses built directly for government account.

In addition, as long as the favourable economic conditions of the post-war period continue, there will always be a significant volume of demand for houses which are entirely privately initiated *and* financed. As the data examined below show, privately initiated and financed housing built in the post-war period was more important in reaching the peak levels of residential construction than publicly assisted house building. While the growth of the country evident in the post-war period continues, the overwhelming importance of privately initiated and financed house building is likely to be the outstanding feature of Canada's success in the housing field. However, should economic conditions deteriorate and prospects for the future become more uncertain, a reduction in privately initiated and financed house building is almost certain to take place. Accompanying this the clamour for increases in the volume of publicly assisted house building, particularly of the low rental and moderately priced type, may become much stronger than has been evident in the immediate post-war period.

The problem of the immediate post-war period was not lack of effective demand but rather how far an already over-extended building industry could go in turning out more and more houses to meet the urgent public clamour for them. However, the appraisal in Sections 7 and 8 indicates that the problem of the future may not be whether Canada has the resources to continue building a larger number of houses each year, but whether there will be sufficient initiative forthcoming and whether methods of financing will be adequate. The ability to pay of those who require housing may differ significantly in the future from that of those who have been buying new homes or renting new apartments in the first few years following the ending of World War II.

Houses Built With and Without Public Assistance

In 1949 two out of every five houses (38 per cent) started were built with some type of public assistance (see Figure 11). A variety of measures contributed to this proportion, the highest on record, ranging from veterans' housing built directly on Federal Government account to houses built by loans extended to apartment-builders and owner-builders under the National Housing Act, 1944 (for summary see pp. 480 ff.). In 1948, when the total number of starts was 95,000 units, slightly above the 93,000 units started in 1949, the Federal Government contributed to the building of 31 per cent of the total.

In appraising the significance of this changing contribution it should be remembered that continuing government operations on a substantial scale in the housing field date back only to the middle of the 'thirties and were interrupted to a large extent during the six-year period of World War II. As indicated on p. 123, publicly assisted house building before the war contributed between 1 and 12 per cent of the total. In the post-war period that proportion was several times larger. The public attitude towards the Government's role in the housing field in the post-war period, a role which culminated in a peak contribution in 1949, varied from comments that not enough was being done to observations that the means employed were unsatisfactory.[1] Those who supported the measures taken held that as much as possible was being done within the limits imposed by constitutional considerations and in line with the resources available in the country.[2]

[1] *Investment and Inflation*, pp. 189 ff.

[2] "Meeting Canada's Housing Needs", by Rt. Hon. C. D. Howe, *Public Affairs*, October, 1947, Halifax, pp. 217-221.

Houses Built by Private and Public Initiative

Not all the houses built with public assistance were publicly initiated. In fact, the majority were privately initiated but were built with government financial aid of various kinds. This included loans under the National Housing Act, 1944, Veterans' Land Act, 1942, and the Canadian Farm Loan Act, 1927; government guarantees under the National Housing Act, 1944, and Farm Improvement Loans Act, 1944; and tax concessions under the Income War Tax Act, e.g., special depreciation provisions. The remaining units were built directly for Government account and included houses built under the Veterans' Land Act, 1942, the veterans' rental housing scheme of Central Mortgage and Housing Corporation, the armed services married quarters program of the Department of National Defence, employees' quarters built by other government departments, and emergency shelter operations. Of the total number of dwellings started with public assistance in 1949, 22 per cent were publicly initiated and 78 per cent privately initiated.

Of *all* house building undertaken in 1949, privately initiated dwellings comprised 92 per cent of total starts. This represents a slight increase over 1948 when, out of a total of 95,000 starts, 89 per cent were privately initiated. The important point apparent from these data is the fact that, under the economic conditions and the legislative provisions that existed in 1949, the floor under house building as presented by the number of Government initiated dwellings fully financed from public sources was a little less than 10 per cent of the total program. If the decline in the volume of house building which occurred from 1929 to 1933 were repeated—an unlikely development as long as Government measures continue to encourage house building in Canada on a broad scale—privately initiated residential construction could decline to one-third of its peak volume. Adding this proportion to a government-initiated housing program of a minimum equal to not less than 10 per cent of the peak suggests that under a combination of a great many unfavourable circumstances the number of houses built in Canada could decline to less than one-half of the total number built in prosperous years. However, because of the changing attitude of both private individuals and governments towards the contribution each should make to the continuing improvement of housing standards of Canadians, there are good prospects that a substantial and protracted decline in house building such as was experienced in the early 'thirties could

be avoided over the next decade. The effectiveness of both private initiative and Government assistance will determine the extent to which severe fluctuations in the volume of house-building activity can be avoided in the light of the changing requirements of the Canadian economy.

Houses Built With and Without Financial Assistance From Lending Institutions

Lending institutions in Canada, which lend money on the security of residential real estate as part of their continuing business operations, cover life and fire insurance companies, trust and loan companies, and fraternal societies, including mutual benefit societies and pension fund associations. Banks are by statute precluded from mortgage lending except in special circumstances.[1] Credit unions, which are co-operatives lending money for new house building, are included in Table 19 in the non-institutional sector.

In 1949 the number of houses built with loans from lending institutions as enumerated above (i.e. excluding banks and credit unions) numbered 40,800 or 44 per cent of all dwellings started. The proportion is notably higher than the corresponding ratio in 1948, when 33,900 units were built with mortgage funds obtained from lending institutions, involving 36 per cent of total starts. This increase in the ratio indicates greater reliance on institutional financing, in no small measure encouraged by a larger volume of joint loans under the National Housing Act, 1944 (see Table 19).

A much smaller proportion of the total housing program than indicated above is financed by conventional loans by lending institutions, that is, loans excluding joint financing under the National Housing Act. In 1948 the proportion was 19 per cent of all starts, and in 1949, 23 per cent.[2]

Government, Lending Institutions and Other Sources of House Financing

Government and lending institutions represent the major source of financing the housing program. In 1949 these two sectors contributed 57 per cent to all houses started. In 1948 the proportion was just about one-half (see Table 19). The data

[1]See *Mortgage Lending in Canada, 1947*, p. 13.

[2]For a more detailed summary of lending on the security of real estate by lending institutions, see *ibid., 1949*, pp. 21-26 and 66-79.

TABLE 19

DWELLINGS STARTED, BY SOURCE OF INITIATION AND FINANCING, CANADA, 1947-1949

Item	1947		1948		1949	
	Number	Per cent	Number	Per cent	Number	Per cent
House building with Public Assistance	24,251	29.8	29,576	31.0	35,158	37.8
House building without Public Assistance	57,153	70.2	65,764	69.0	57,773	62.2
Total	81,404	100.0	95,340	100.0	92,931	100.0
House building by Public Initiative	10,885	13.4	10,681	11.2	7,945	8.5
House building by Private Initiative	70,519	86.6	84,659	88.8	84,986	91.5
Total	81,404	100.0	95,340	100.0	92,931	1.000
House building with Financial Assistance by Lending Institutions	25,098	30.8	33,938	35.6	40,808	43.9
House building by Other Methods of Financing	56,306	69.2	61,402	64.4	52,123	56.1
Total	81,404	100.0	95,340	100.0	92,931	100.0
House building with Financial Assistance by Lending Institutions excluding Operations Jointly with Government	14,424	17.7	18,496[1]	19.4	21,476[1]	23.1
House building by Other Methods of Financing	66,980	82.3	76,844	80.6	71,455	76.9
Total	81,404	100.0	95,340	100.0	92,931	100.0
House building with Financial Assistance by Lending Institutions and with Public Assistance	38,675	47.5	46,566	48.8	53,188	57.2
House building by Other Methods of Financing	42,729	52.5	48,774	51.2	39,743	42.8
Total	81,404	100.0	95,340	100.0	92,931	100.0

[1]Covers conventional mortgage lending and includes loans guaranteed under the Rental Insurance Plan provided under the National Housing Act, 1944 as amended in 1948.

indicate that approximately one-half of Canada's housing program in times of high levels of economic activity such as prevailed in the post-war period is financed independently of Government schemes or institutional lending facilities. There are four principal sources of financing in addition to the two mentioned above, and these contributed 43 per cent to all housing starts undertaken in 1949: financed wholly by owners 21 per cent, loans from credit unions 7 per cent, loans from individuals 8 per cent, and loans from

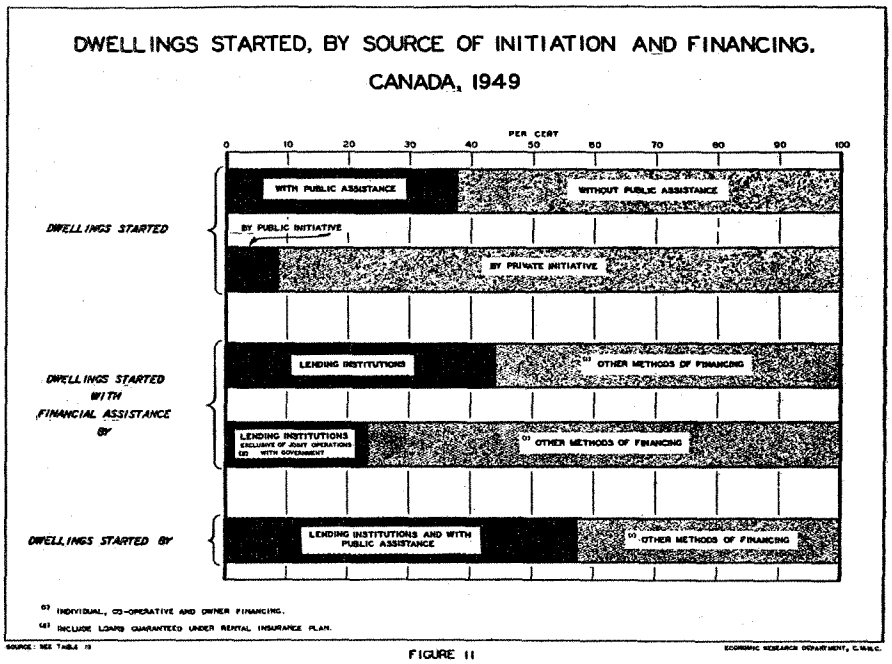


FIGURE 11

miscellaneous sources 6 per cent (see Table 19). The notable feature of this distribution is the weight of fully owner-financed house building in this group.[1] Many of these homes, however, would be of moderate price and would include farmers' houses, fishermen's dwellings, log cabins inhabited by hunters, trappers and lumberjacks, frequently built by the occupants themselves or with some hired help. The proportion of fully owner-financed house building would be much smaller if it were confined to the number of dwellings of standard quality and design in urban areas.

[1]As a more detailed analysis shows, the importance of wholly owner-financed house building has been declining in recent years. *Mortgage Lending in Canada, 1949*, p. 25.

Where Does the Money Come From?

In building houses large amounts of money are spent. Where does the money come from? To answer this question relevant data are assembled in Table 20 and more detailed statistics will be found in Table 85 in Section 10. The approximate character of the estimates is emphasized on page 480. To give an overall picture, the data cover all expenditures made for new housing, including costs of construction and installed equipment, service costs associated with house building, and the cost of land.

TABLE 20

Expenditures on New Housing,[1] by Source of Funds, Canada, 1949

Source of Funds	Amount $ Mill	Per cent
Disbursements by Governments	136.4	17.4
Loans from Lending Institutions	170.2	21.8
Loans from Other Sources	55.5	7.1
Owners' Equity	420.4	53.7
Total	782.5	100.0

[1]Includes supplementary building costs and cost of land.

Table 20 brings out the important point that about one-half, 54 per cent, of all the money spent on new housing in Canada in 1949 represented the savings of the owners. The other 46 per cent consisted of direct government disbursements, 17 per cent, borrowing from lending institutions, 22 per cent, and borrowing from other sources, 7 per cent. Without attaching too great importance to the exact percentage distribution, because estimates of this sort are approximate, available information points to the substantial stake which Canadians have in building homes.

Owners' equity in residential real estate in 1949, estimated at over $420 million, represents two-fifths of personal savings as defined in the National Accounts amounting to about $1 billion. It should be remembered, however, that not all personal savings flowing into investment in residential real estate in 1949 consisted of savings actually made in that year. A great proportion of the funds used in 1949 date back to personal savings made in previous years and held in liquid form, or represent returns from the liquidation of assets held by prospective home purchasers. But the figures suggest that in times of favourable economic conditions such as prevailed in the post World War II period a significant

proportion of personal savings finds its way, in one way or another, into homes for Canadians.

Who Owns Houses in Canada?

In view of the great emphasis on private ownership of housing in Canada, it is not surprising that out of a total of 3.1 million dwellings in existence in this country at the end of 1949 only about 41,000, or 1.3 per cent, were publicly owned and the remainder

TABLE 21

Housing Stock by Type of Ownership and Occupancy, Canada, 1949

Item	Number 000	Per cent
Privately Owned	3,084	98.7
Publicly Owned	41	1.3
Total Housing Stock	3,125	100.0
Owner Occupied		
Non-farm	1,191	67.4
Farm	576	32.6
Sub-total	1,767	100.0
Rented		
Non-farm	1,165	90.1
Farm	127	9.9
Sub-total	1,292	100.0
Total Occupied		
Non-farm	2,356	77.0
Farm	703	23.0
Total Occupied Dwellings	3,059	100.0

were in the hands of private individuals, corporations and institutions (see Table 21).

Publicly owned dwellings included war workers' and veterans' rental housing, houses occupied by government employees, and emergency shelter units. Small as the proportion of publicly owned housing was at the end of 1949, efforts to reduce the number of houses under direct control of the Federal Government were under way, mainly through sale of war workers' and veterans' housing to the occupants of these dwellings. There were, on the other hand, measures under consideration which would increase

the number of houses owned and operated under joint Federal, provincial and municipal projects.[1]

Reference to owner- and tenant-occupied dwellings has been made previously in Section 2. It will be recalled that landlords control about 1.3 million, or 41 per cent of the total number of dwellings in existence in Canada at the end of 1949 (see Table 21). At first glance this suggests that in Canada home owner occupancy is more prevalent than tenancy, but if account is taken of the 473,000 families without separate housing accommodation of their own living in rented quarters, (see Section 7), the owner-occupied and tenant households were about equal in number at the end of 1949. The prevalence of tenant households is more pronounced if the appraisal is confined to non-farm areas. As Table 21 shows, the 2.4 million dwellings in non-farm areas were about equally divided between houses occupied by their owners and houses owned by landlords renting these premises. However, the number of tenant families in non-farm areas was much greater than 1.17 million, because most of the 473,000 families without separate housing accommodation lived in cities, towns and villages. Available evidence indicates that tenant households in non-farm areas were about 1.6 million in 1949, exceeding by about one-third the number of homes occupied by their owners.

Review of Housing Legislation in Canada

The basic philosophy behind housing legislation in Canada contained two central ideas: (1) that it should be possible through Government assistance to get houses built that would otherwise not have been built, thereby improving the standard of living of the Canadian people, and (2) that the building of a number of houses in *addition* to the number that would be built without public assistance would involve expenditures which in turn would provide jobs and incomes for Canadians, thereby—if measures were propitiously timed—contributing to economic stability in the country. The second consideration came to the fore particularly in periods of high unemployment and low incomes, such as followed for a brief period the ending of World War I, and prevailed during most of the 'thirties. The importance which the Canadian Government attached to this factor is indicated by the inclusion of the phrase "creating needed employment" in the preamble to the National Housing Act, 1938.

[1]*Annual Report, 1949*, Central Mortgage and Housing Corporation, Ottawa, 1950, pp. 11, 25 and 26.

Federal Government housing measures as they developed over the last several decades have had several characteristics in common. Legislation developed *gradually*, with provisions being expanded, revised and modified in each succeeding stage to take account of changing economic and social conditions and of experience gained in the administration of preceding housing acts. Emphasis was placed in almost all housing legislation on the *residual* character of Government measures in the direct housing field. The primary objective was to leave existing financing and house-building methods as undisturbed as possible and to confine assistance to marginal cases which would not have led to the building of new homes without Government encouragement. The emphasis on the residual nature of the Federal Government's housing activity was also evident in its relation to provincial and municipal governments. Housing matters in peace-time have been considered as falling primarily within provincial jurisdiction, the Canadian Government being willing to participate in the development and to share in the costs of joint Federal provincial (and municipal) housing projects.[1]

The first attempt of the Federal Government to aid housing construction occurred in 1919 when under the War Measures Act loans to provincial governments were authorized, enabling the latter in turn to make loans for new house-building purposes to municipalities which were willing to participate financially in these projects to the extent of 25 per cent. Inter-governmental housing loans without participation of the major lender in the supervision of the projects did not prove a very successful method of encouraging new house building, and the program was discontinued after 1923. The next piece of legislation, the Canadian Farm Loan Act of 1927, was primarily concerned with providing long term mortgage credits for farmers. The facilities of the Act were in some instances used for farm house building, but this was incidental to the main purpose of the legislation.

It was not until 1935 that the Federal Government attempted to cope with the housing problem in a continuing fashion, with the passing of the Dominion Housing Act in that year. The Act offered financial assistance to those building homes for owner occupancy and for rent on credit terms more favourable than

[1]Some of the basic considerations behind this attitude of the Federal Government have been elaborated in an article entitled, "Meeting Canada's Housing Needs", by the Rt. Hon. C. D. Howe, *Public Affairs*, October 1947, pp. 217-221, and in a number of Government statements in Parliament (see in particular statements by the Minister of Reconstruction and Supply in the House of Commons on September 21 and October 31, 1949, *House of Commons Debates*, pp. 118 ff. and pp. 1294 ff.).

could be obtained from other sources. The provisions helped and additional houses were built, but not enough people with low incomes were assisted in finding suitable accommodation.

As supplementary encouragement to increase the volume of residential construction, the Home Improvement Loans Guarantee Act of 1937 followed, providing for Government-guaranteed loans to individuals endeavouring to improve, alter or repair their homes. This provision proved popular and expired only when all funds voted for the purpose were used up in 1940.

To expand the facilities of the Dominion Housing Act, the National Housing Act of 1938 was passed. This Act not only increased the coverage of mortgage lending, but also made what appeared to be the first attempt to cope with the housing problem of families with low incomes. This purpose, it was hoped, could be achieved by the creation of limited dividend corporations and municipal housing authorities which could obtain loans on particularly favourable terms for limited-dividend or non-profit housing projects. The outbreak of World War II in 1939, however, prevented the use of these provisions.

Under the emergency of total war, financial considerations became secondary and many thousands of low rental housing units were built for war workers and their families by a Crown company called "Wartime Housing Limited." Other housing schemes initiated during the war period included measures for housing of veterans wanting to settle in rural areas, as provided for by the Veterans' Land Act, 1942, and two plans which tried to make the most effective use of existing large dwellings. These schemes included the Home Extension Plan of 1942 and the Home Conversion Plan of 1943. The former provided for loans to owners desirous of subdividing existing houses into multiple unit projects, and the latter provided for similar conversions made directly by the Government.

As the end of World War II was approaching, Parliament, looking forward to the post-war period, passed the Farm Improvement Loans Act, 1944, the National Housing Act, 1944 and the Central Mortgage and Housing Corporation Act, 1945. The last provided for a Crown company to administer several of the housing provisions for the Government. The Farm Improvement Loans Act provided guarantees for intermediate and short term credit for farm development and some of these facilities were also used for housing purposes. The National Housing Act and subsequent amendments were all designed to provide more housing for both ownership and rental at prices which the majority of

Canadian families could afford.[1] Some of its new features included: the Integrated Housing Plan, which limited the rise in sales prices of new homes built under these provisions; the Rental Insurance Plan, which made it attractive to prospective builders to build rental accommodation in spite of high building costs and the uncertainties of the future; the refusal of the Corporation to let lending values of houses go up significantly in order not to contribute to additional increases in building costs. Further, the war workers' low rental housing program appeared under a new name—the Veterans' Rental Housing Program—with four- to five-roomed houses renting generally at monthly rentals from $34.50 to $37.50. Many of the war workers and veterans wanted to buy their homes and this was also made possible. Finally, the Emergency Shelter Program was instituted to provide temporary housing for those in most urgent need.

As building material shortages appeared in the post-war period, a building material priority program was brought into being, designed to channel materials where they were most urgently required, and particularly to make them available for house building.[2] Finally, in 1947 fiscal incentives were added by providing accelerated depreciation for capital expenditures made on rental housing.[3] In the same year a new housing program to provide quarters for married service personnel was initiated.

In 1948 and 1949 two programs specifically designed to meet the housing problems faced in the immediate post-war period were coming to an end. At the end of 1948, with the emphasis being placed on permanent house building, the construction of temporary quarters provided under the Emergency Shelter plan was discontinued. In 1949 the veterans' rental housing program developed during the year was announced to be the last in the series, with most projects under way or agreed upon to be completed in 1950. Federal-provincial joint projects for veterans and civilians alike were to take the place of the veterans' rental housing program, which had been under sole Federal jurisdiction but in which municipalities had participated.

Statutory provisions for joint Federal-provincial housing projects were made by adding Section 35 to the National Housing Act, 1944. This legislation included the Federal Government's first acceptance of a measure of *continuing* responsibility for

[1]For quantitative evidence, see Section 7.

[2]This program provided building material priorities for 106,896 dwellings during the period of operation from August 23, 1945 to March 31, 1950 (see *Housing in Canada, April, 1950*, p. 52).

[3]Special depreciation privileges were approved for 3,431 dwellings from June, 1947 to December, 1949 (see *ibid., January, 1950*, p. 55).

housing need,[1] a matter which had been the subject of controversy for some thirty years.

The phrase "housing need" is used here in the sense of housing requirements of families who want new homes but cannot afford to purchase or rent adequate accommodation because their low incomes do not enable them to meet the market prices charged for shelter of a reasonable standard. The distinction between housing need and housing demand is elaborated further in Section 7. But in view of the fact that the legislation enacted in 1949 represents a turning point in Canadian housing history it may be desirable here to examine briefly why for many years the principle of accepting some measure of *continuing* public responsibility for housing need did not find official recognition in Canada and what brought about the change in the attitude towards housing need which led to the passing of Section 35 of the National Housing Act, 1944, on December 10, 1949.

Up until the outbreak of World War II there was widespread misgiving about recognizing public responsibility for housing need which would lead to Government-built, owned, managed and subsidized low rental housing projects.

Many social workers, health authorities, sociologists and reformers had believed for a long time that Government should take such responsibility, but their arguments had not proven very convincing. The difficulty with housing need was that its determining criteria were quite unlike those of housing demand with which the general public was more familiar. Housing demand was determined by economic criteria, mainly the relationship of incomes to prices, the accumulation of personal savings, and mobility and growth requirements of the country. Housing demand manifested itself in the operations of the real estate market. But housing need required demonstration, based on criteria of health, welfare, moral and ethical standards that were hard to establish, difficult to agree upon, and varied so much over time and for different regions and localities that attempts to delineate housing need gave an unscientific and unconvincing

[1] *Ad hoc* responsibility for certain types of *direct* Government rental house building at lower than economic rentals had been accepted previously, e.g. the war workers' housing program during 1941-1945 and the veterans' housing program during 1945-1949. Also, *continuing* financial assistance had been provided ever since the passing of the Dominion Housing Act in 1935. But the new principle established by Section 35 of the revised National Housing Act, 1944, was the willingness, under certain conditions, to participate with provincial governments on a continuing basis in publicly owned rental housing projects, with accommodation to be leased at less than economic rentals and with the difference being made up by contributions to a rental reduction fund. Thus a measure of continuing responsibility jointly with other governments was accepted to meet the housing needs of families whose incomes did not permit them to pay economic rentals.

impression. This made it easy to pass over estimates of housing need and requests to do something about it as the unreal dreams or the wishful thinking of a small group of professional complainers.

This critical attitude towards a concept of housing need was shared equally for many years by the majority of the Canadian people and their governments. This negative attitude was fortified by another factor.

The lines between housing demand and housing need were not clearly drawn and varied greatly over time.[1] To give an example: A young couple with sufficient income were looking for a place of their own. Their requirements represented housing demand. But the husband lost his job, and they had to stay on in their rented room. They still wanted a home of their own, but now they could not afford it. Overnight, then, housing demand was replaced by housing need. But then the young couple moved into their parents' home and they liked it so much there that they decided that they did not want a place of their own even if they could afford it. Thus, in this case, even the housing need disappeared.

But during the 'forties the attitude towards accepting a measure of continuing public responsibility for housing need changed perceptibly, leading in the first instance to several *ad hoc* arrangements in the war years, e.g. the war workers' housing program, and in the post-war years, e.g. the veterans' rental housing program, to be followed by the establishment of provisions for a continuing program on a Federal-provincial basis. There were several factors contributing to this development.

First, the fact that Canada experienced the greatest housing shortage in her history during World War II and the immediate post-war period.

Secondly, a clearer understanding that housing need and housing demand were entirely different matters. Housing demand had fluctuated greatly during the inter-war period, as economic activity also fluctuated substantially (see pp. 58-59). The question of fortifying housing demand in the future and avoiding some of the substantial fluctuations of house building were important economic factors leading to consideration of housing need, which if met through public housing measures could add to the stability of the construction industry.[2]

[1]For a comprehensive discussion of definitions and extent of housing demand and housing need, see "Frontiers of Housing Research," Panels III and IV, published in *Land Economics*, University of Wisconsin, Madison, February, 1949, pp. 103-132.

[2]Emphasis on this point is indicated by the following statement: "When new housing legislation and programs are discussed, you hear much about the social aspects of housing needs, and emphasis being placed on the improvement of the housing standards

Thirdly, the concept of a minimum standard of living for Canadian families was gradually finding wide acceptance among large sectors of the working population. And as countries which for many years had been known as the outstanding proponents of the free enterprise system, such as the United Kingdom and the United States, recognized the principle of housing need and designed public housing schemes, Canadian thinking could not help but be influenced by such developments abroad.[1] When the veterans' rental housing program, which produced the largest volume of publicly financed low rental housing in Canada in the post-war years, was coming to an end in 1949, a gradual and flexible approach to solving Canada's long term housing problem was needed. As elaborated further, it had to be designed in such a way as to take account of the varying regional and local needs.

To lay a basis for a program along these lines, Section 35 of the National Housing Act, 1944, provided in the main for three types of Federal and provincial (and municipal) housing projects. First, arrangements could be made for the assembly of land and services, thereby providing suitable residential sites for private builders and public housing developments. Secondly, moderately priced houses could be built for sale to home owners; and, thirdly, new accommodation on a rental basis could be provided where this appeared to be most desirable. Rentals to be charged could either be economic rentals or sub-economic rentals. In the latter case the difference was to be made up by operating subsidies in the form of contributions to a rental reduction fund.

Generally speaking, the provinces together with the municipalities would be responsible for the acquisition of land and provision of services. The Federal Government would be responsible for the planning, design and construction of projects. Where it was considered desirable joint management or development of projects could be arranged. The costs of development or profits or losses resulting from operations would be shared—75 per cent by the Federal Government and 25 per cent by the provinces. It would be up to provincial governments to make

of the Canadian people. These are certainly basic considerations behind the development of a national housing program in Canada, but there are also important economic considerations. The need of the present is houses to meet the shortage. The need of the future may well be not only to improve housing conditions but also to help maintain a volume of construction commensurate to the requirements of our economy at that time." ("Developments in Canada's Housing Program," by D. B. Mansur, President of Central Mortgage and Housing Corporation, *Proceedings of the Thirty-Second Annual General Meeting*, Canadian Construction Association, January, 1950, p. 35.)

[1]O. J. Firestone, "Housing Need and Housing Demand, Economic Considerations Arising out of Public Recognition of the Principle of Housing Need," *Journal of the Royal Architectural Institute of Canada*, June, 1950, pp. 183-190.

any arrangements they considered appropriate towards having municipalities contribute to their share, but apart from such arrangements provision was made to protect the financial position of municipalities in that they were to receive payment in lieu of taxes for joint residential projects on the basis of normal assessment and tax rates for comparable property.[1]

A summary of references and purposes of major housing legislative provisions in Canada for the period 1918 to 1949 will be found in Schedule B at the close of this section. By the end of 1949 many of the earlier provisions had been superseded. Government assistance in the field of housing at the end of 1949 can be summarized[2] briefly under three headings.[3]

1. *Direct* Government house building including the Veterans' Rental Housing Program of Central Mortgage and Housing Corporation, presently coming to an end and to be replaced by joint Federal-provincial projects under Section 35 of the National Housing Act, 1944, as revised, and the Armed Services Married Quarters Program of the Department of National Defence.

2. *Loans* for house building including the Canadian Farm Loan Act of 1927, the Veterans' Land Act of 1942, and the National Housing Act of 1944.

3. *Guarantees* under the Home Extension and the Rental Insurance provisions of the National Housing Act, 1944, and under the Farm Improvement Loans Act of 1944.

Impact of Housing Legislation on House Building

One way of measuring the effectiveness of housing legislation is to determine to what extent it was used in building houses and what contribution houses built under these provisions made to the total housing program in Canada (see Figure 12).

In 1936, the first full year of operations under the Dominion Housing Act, 1935, 3 per cent of all houses built in Canada were completed with Government assistance. This 3 per cent figure includes a small number of units built under the Canadian Farm Loan Act, 1927 but excludes a few dwellings erected by the Federal Government for its own employees. From this modest beginning

[1]Statement by the Hon. Robert H. Winters, *House of Commons Debates*, November 15, 1949, pp. 1767 ff.

[2]For a more detailed review of the type and extent of housing operations as administered by Central Mortgage and Housing Corporation in the post-war period, see *Annual Reports* of the Corporation for the years 1946 to 1949.

[3]In addition, a building material priority system was in operation which came to an end on March 31, 1950, and special depreciation provisions which elapsed on December 31, 1949 (for further information see *Housing in Canada, January, 1950*).

the number of dwellings built under the various Government housing schemes increased to 12 per cent of total completions in 1939, reached a war peak of 22 per cent in 1942 and a wartime low of 9 per cent in 1944. A post-war peak was reached in 1949 when 39 per cent of total dwellings completed were built with one or another type of Federal Government assistance (see Figure 12).

During the 15 years of continuing operations of the Canadian Government in the housing field, that is from 1935 to 1949, a total of 155,000 dwellings[1] were built with public assistance. This is an annual average of 19 per cent of the 820,000 dwellings built in Canada over that period (see Table 22). In other words, the effect of housing legislation over the period of its operations has been that every fifth house in Canada was built with some form of Government financial assistance or represented part of a Government-sponsored and owned low or moderate rental housing project.

New dwellings are generally occupied by an average of about four persons per unit. Some 600,000 people in Canada appear to have benefited by the housing measures introduced by the Federal Government since 1935.

To get these 155,000 dwellings built in the 15-year period under review a total of $870 million was spent. This sum was made up as follows: expenditures by Federal Government on housing, $326 million, expenditures by private persons on housing with Federal loan assistance, $512 million, and expenditures by private persons on housing with Federal guarantee assistance, $32 million (see Table 23). This is more than twice as much as was usually involved in a peacetime Federal Government budget before World War II.

The gradual development and the increasing effectiveness of the Federal Government's housing measures are indicated by expenditure figures. In 1941, the first year of house building directly for Government account, expenditures for war workers' homes involved construction outlay of $11 million. In 1949, after nine years of experience in building low rental housing, $70 million was spent on new residential construction, in the main on veterans' rental housing projects and quarters for married service personnel. Similarly, housing loans started on a modest scale but rose rapidly in the post-war period. In 1936, the first full year of operations under continuing housing legislation, residential construction expenditures encouraged by Federal loans involved only

[1]These data cover all types of public housing assistance referred to on pp. 117-119 except for aid provided through building material priorities and special depreciation provisions.

about $5 million. By 1949 that amount had risen about forty times, involving a total of $185 million. Government guarantees, which had been used sparingly in the early part of their operations and which in no year had encouraged residential construction expenditures of more than $2 million, were finally brought into

TABLE 22

DWELLINGS COMPLETED, WITH AND WITHOUT PUBLIC ASSISTANCE, CANADA, 1921-1949

(Thousands of Units)

Year	With Public Assistance[1]	Without Public Assistance	Total
1921	1.4	32.7	34.1
1922	1.4	40.9	42.3
1923	1.8	41.6	43.4
1924	—	38.7	38.7
1925	—	44.7	44.7
1926	—	55.2	55.2
1927	—	56.8	56.8
1928	—	62.9	62.9
1929	—	64.7	64.7
1930	—	53.0	53.0
1931	—	47.8	47.8
1932	—	28.1	28.1
1933	—	21.9	21.9
1934	—	27.7	27.7
1935	.5	32.4	32.9
1936	1.2	38.1	39.3
1937	2.4	46.2	48.6
1938	3.3	40.7	44.0
1939	6.3	45.4	51.7
1940	7.0	45.5	52.5
1941	6.6	50.2	56.8
1942	10.3	36.9	47.2
1943	7.8	29.0	36.8
1944	3.8	39.0	42.8
1945	5.6	42.9	48.5
1946	20.0	47.2	67.2
1947	21.0	58.3	79.3
1948	23.3	57.9	81.2
1949	35.8	55.2	91.0

[1]For the period 1927-1934 a small number of dwellings financed under the Canadian Farm Loan Act, 1927, and for the period 1921 to 1945 a small number of dwellings for government employees, e.g. lighthouse keeper, are included in the series of housing completions without public assistance. Totals from both sources would for most years be less than 100 units.

their own with the adoption of the Rental Insurance Plan in 1948. Following the introduction of this new scheme, house-building expenditures encouraged by guarantees rose to $5 million in 1948 and $19 million in 1949.[1]

It should be remembered that houses built with Government loans and Government guarantees represent privately initiated

TABLE 23

EXPENDITURES ON NEW HOUSING CONSTRUCTION BY FEDERAL GOVERNMENT, PRIVATE PERSONS WITH FEDERAL GOVERNMENT LOAN AND GUARANTEE ASSISTANCE, AND WITHOUT FEDERAL GOVERNMENT ASSISTANCE, CANADA, 1935-1949

($ Million)

Year	Direct Federal Government	Federal Government Loan Assistance	Federal Government Guarantee Assistance	Federal Government Assistance of All Kinds	Without Federal Government Assistance	Total
1935	—	.7	—	.7	99.1	99.8
1936	—	5.1	.1	5.2	117.7	122.9
1937	—	9.2	1.4	10.6	145.8	156.4
1938	—	13.2	1.4	14.6	126.3	140.9
1939	—	19.2	1.8	21.0	144.8	165.8
1940	—	21.9	1.3	23.2	155.6	178.8
1941	10.5	17.1	—	27.6	190.6	218.2
1942	30.0	9.6	—	39.6	155.4	195.0
1943	30.2	3.9	—	34.4	142.0	176.1
1944	11.9	4.6	—	16.5	198.0	214.5
1945	13.4	10.1	.6	24.1	244.6	268.7
1946	56.5	29.9	1.1	87.5	302.7	390.2
1947	36.0	82.0	1.2	119.2	386.9	506.1
1948	67.0	100.7	5.0	172.7	456.0	628.7
1949	70.3	184.5	18.6	273.4	442.2	715.6
Total	325.8	511.7	32.5	870.0	3,307.7	4,177.7

undertakings. These projects involved larger construction expenditures than outlay on housing directly by the Federal Government: $544 million against $326 million for the period 1935 to 1949. These data point to the greater emphasis which the Federal Government has put on the encouragement of private house building and the confining of its *direct* house building efforts

[1]A more detailed summary of housing legislative provisions and their impact on the volume of house building and construction expenditures is contained in Appendix B.

to a field previously described as residual. This would cover low rental homes for war workers, veterans and their families, emergency shelter, and accommodation for married service personnel and Government employees.

In conclusion it may be noted that the quantitative evidence of Government operations in the housing field lends weight to the observation about the gradual evolution and the residual character of housing legislation in Canada. A study of the legislative

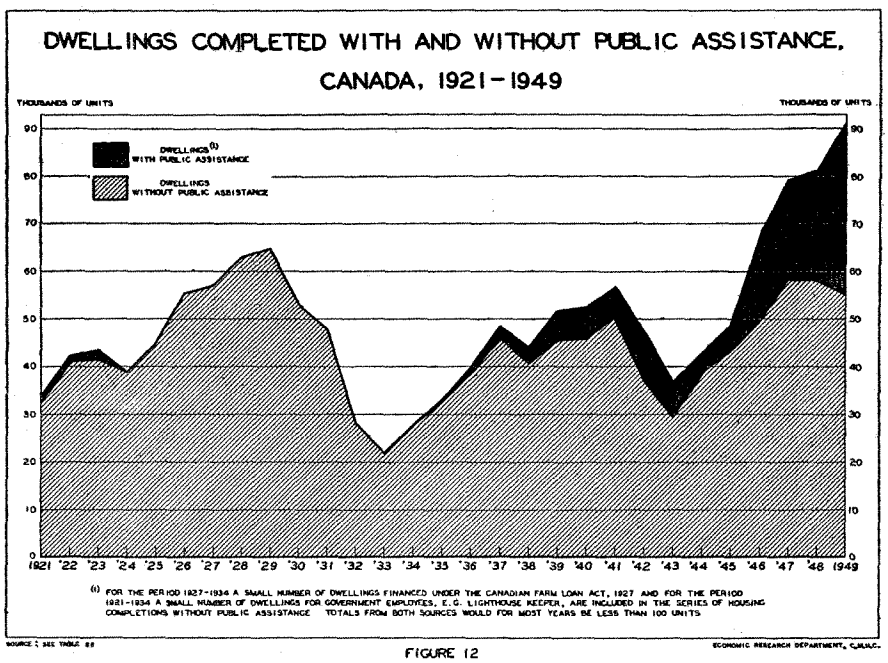


FIGURE 12

provisions as well as the regulations which accompanied them and the administrative practices adopted also leads to a similar conclusion.

Among the many lessons that can be learned from Canadian housing experience in the last several decades, one stands out: there is no magic and all-embracing formula for solving the housing problem in a country in which housing supply, demand and need vary between regions and within each region. No single scheme can take care of all the varying requirements, nor can one particular piece of legislation allow for all contingencies which may arise. This lesson is reflected in some of the basic thinking behind the amendments to the National Housing Act passed by Parliament

in 1949, which includes enabling legislation for Federal-provincial (and municipal) co-operation in the housing field. The revised legislation provides not for a formal program but rather for a series of programs adapted to the needs of citizens and the varying circumstances of the different municipalities and regions involved.

In essence, there is now enabling legislation on the Canadian statute books which provides an opportunity for the various governments in Canada to examine, explore and work out such arrangements as are most suitable to meet local housing requirements in accordance with Canada's constitutional framework.

SCHEDULE D

SUMMARY OF REFERENCES AND PURPOSES OF MAJOR HOUSING LEGISLATIVE PROVISIONS, CANADA, 1918-1949

Date	Reference	Legislative Authority	Purpose of Act or Order-in-Council
December 3, 1918	P.C. 2997	Order-in-Council under the War Measures Act.	"...to create better housing conditions for the residential population of the larger centres of Canada."
April 14, 1927	R.S.C., 1927 Chap. 66	Canadian Farm Loan Act.	"...for the purpose of establishing in Canada a system of long term mortgage credit for farmers."
July 3, 1934	24-25 George V Chap. 46	The Canadian Farm Loan Act Amendment Act, 1934	"...to amend the Canadian Farm Loan Act."
April 17, 1935	25-26 George V Chap. 16	The Canadian Farm Loan Act Amendment Act, 1935	"...to amend the Canadian Farm Loan Act."
July 5, 1935	25-26 George V Chap. 58	The Dominion Housing Act, 1935	"...to assist the construction of houses."
March 31, 1937	1 George VI, Chap. 11	The Home Improvement Loans Guarantee Act, 1937	"...to increase employment by encouraging the repair of rural and urban homes."
July 1, 1938	2 George VI, Chap. 49	National Housing Act, 1938	"...to assist in the construction of houses."
February 20, 1941	P.C. 1169	Order-in-Council under the Department of Munitions and Supply Act.	To establish priority regulations including the supply and distribution of construction materials.
February 24, 1941	P.C. 1286	Order-in-Council under the Department of Munitions and Supply Act.	"...to procure the incorporation of company under the name of Wartime Housing Limited with the intent and for the purpose of renting, purchasing, constructing or otherwise acquiring and providing and generally managing suitable living accommodation to persons engaged in the production of munitions of war and supplies, or on defence projects."

SCHEDULE D

SUMMARY OF REFERENCES AND PURPOSES OF MAJOR HOUSING LEGISLATIVE PROVISIONS, CANADA, 1918-1949, *Continued*

Date	Reference	Legislative Authority	Purpose of Act or Order-in-Council
August 1, 1942	6 George VI, Chap. 33	The Veterans' Land Act, 1942	"...to assist war veterans to settle upon the land."
August 18, 1942	P.C.7388	Order-in-Council under the Appropriation Act, No. 5 1942	"...for the purpose of financing the conversion of existing houses into multiple family houses."
April 1, 1943	P.C. 2641	Order-in-Council under the War Measures Act.	To authorize Minister of Finance to acquire large dwelling units in Ottawa area for conversion. This was the first of the Home Conversion Plan Orders.
August 15, 1944	8 George VI, Chap. 41	The Farm Improvement Loans Act, 1944	"...to encourage the provision of intermediate term and short term credit to farmers for the improvement and development of farms and for the improvement of living conditions thereon."
August 15, 1944	8 George VI, Chap. 46	The National Housing Act, 1944	"...to promote the construction of new houses, the repair and modernization of existing houses, the improvement of housing and living conditions, and the expansion of employment in the post war period."
December 19, 1944	P.C. 9439	Order-in-Council under the War Measures Act.	To establish the Emergency Shelter Regulations.
December 18, 1945	9-10 George VI, Chap. 15	The Central Mortgage and Housing Corporation Act, 1945	"...to incorporate the Central Mortgage and Housing Corporation."
December 18, 1945	9-10 George VI, Chap. 26	——	"...to amend the National Housing Act, 1944."
December 18, 1945	9-10 George VI, Chap. 34	——	"...to amend the Veterans' Land Act, 1942."

SCHEDULE D

SUMMARY OF REFERENCES AND PURPOSES OF MAJOR HOUSING LEGISLATIVE PROVISIONS, CANADA, 1918-1949, *Continued*

Date	Reference	Legislative Authority	Purpose of Act or Order-in-Council
April 23, 1946	P.C. 1609	Order-in-Council under the Emergency Transitional Powers Act, 1945	"...for the purposes of maintaining, controlling and regulating supplies and services, to vest in the Priorities officer certain powers respecting construction materials."
August 31, 1946	10 George VI, Chap. 61	——	"...to amend the National Housing Act, 1944."
August 31, 1946	10 George VI, Chap. 70	——	"...to amend the Veterans' Land Act, 1942."
March 25, 1947	P.C. 1095	Order-in-Council under the Income War Tax Act.	To provide accelerated depreciation on rental housing.
June 27, 1947	11 George VI, Chap. 34	——	"...to amend the Farm Improvement Loans Act, 1944."
June 27, 1947	11 George VI, Chap. 40	——	"...to amend the National Housing Act, 1944."
March 24, 1948	11-12 George VI, Chap. 9	——	"...to amend the Farm Improvement Loans Act, 1944."
June 30, 1948	11-12 George VI, Chap. 63	——	"...to amend the National Housing Act, 1944."
December 10, 1949	13 George VI, Chap. 30	——	"...to amend the National Housing Act, 1944."

SECTION FIVE

TRANSFERS OF EXISTING REAL ESTATE

TRANSFERS of existing real estate involve changes in the title to existing property consisting of land, its resources and improvements, structures of various kinds built on the land or underground and fixed installations which form an integral part of structures. Title to existing property may be held subject to the legal provisions in the different regions in Canada by persons, companies, institutions, other private or public legal entities and the Crown through governments (Federal and provincial). The holding of the title to existing property represents a claim to ownership, trust or possession of the fixed asset. Such a claim in order to be effective[1] in this country requires registration of the title to property in public records which are maintained in offices[2] organized along similar lines in the ten provinces and two regions (Yukon and Northwest Territories) which make up Canada.[3] While most of the principles of registering title to private property also apply to Crown property, there are some exceptions. For example, no land transfer tax is paid for property acquired by the Crown.

CLASSIFICATION OF REAL ESTATE TRANSFERS

When the title to property changes hands this transaction may take place with or without consideration passing from the holder to the recipient of the title to the property. If a consideration is involved the transaction represents a sale. If no consideration is involved the instrument embodying the change in the title to the property may be based on a court judgment, inheritance, trust or similar transaction. Frequently transactions which do not involve the passing of a consideration are clothed in the form of a nominal sale. For example, a husband may sell a piece of property to his wife for one dollar. While the instrument accompanying the

[1]The date of registration is an important factor in establishing the priority of opposing claims.

[2]Such offices are variously known as Registry Offices, Land Titles Offices and Land Registry Offices. There are also certain differences in some of their functions.

[3]Not every change in ownership or dominant control of private fixed property need involve a registration of transfer in title. If, for example, the holder or holders of shares of a limited company owning property would sell these to another person or group of persons, ownership or control over the property could be transferred without the transaction being registered as a real estate transfer.

change of the title will be a deed of sale or grant, the transaction in fact represents a gift.

It is therefore desirable to distinguish between (1) *actual* sales (see Item 5 in Schedule E) where consideration passes hands, and (2) *nominal* sales (Item 8) where the consideration is one dollar or a similar nominal amount (for a summary of the various classifications of transfers of real estate registered in Registry and Land Titles Offices in Canada, see Schedule E). Actual sales may in turn be (*a*) *voluntary* sales (Item 3) as a result of an agreement between vendor and purchaser, or (*b*) *forced* sales (Item 4) through unilateral action in enforcing a court judgment or a tax sale.[1] This distinction is of particular significance in a period of declining levels of employment and income when as a result of financial failures forced sales may comprise a significant portion of total sales. In prosperous times the overwhelming majority of sales are voluntary.

In any appraisal of the total considerations involved in real estate transactions the assumption is that the sale is a *bona fide* sale (Item 1), i.e. a case in which the sales price of the property reflects market values and/or the best judgment of both vendors and purchasers of the worth of the property. If total considerations were to include a number of *non-bona fide* sales (Item 2), i.e. cases where the sales amount claimed does not reflect the true consideration changing hands, this would introduce a bias which could not be measured without great difficulty. It must be remembered that in a *non-bona fide* sale both the vendor and the purchaser agree for reasons of their own to show a fictitious sales price which may either be below or above the true consideration paid. If the sales price given in the sales instrument is considerably below the true consideration, such a case may in fact come close to what has been described above as a nominal sale, although the intent of the transaction will differ.

In registering changes of titles to property, Registry Offices in Canada record the basic document underlying the change in title, e.g. grant, sales agreement, will, trust or tax deed, and court judgment. The documents accompanying the registration provide sufficient information to distinguish an actual sale from a nominal sale, and a voluntary sale from a forced sale. To ensure

[1]There are other transactions which combine the voluntary and forced sales features, e.g. the transfer of property through a quit claim deed. In such a case the property owner who is in default of a claim may relinquish his title to the property to the claimant to satisfy the claim. The forced feature of the transaction is the fact that the alternative to meeting the claim in the aforementioned method would be to face court action. The voluntary feature of the transaction is the agreement between the vendor and the vendee in transferring the property by means of a quit claim deed.

that the considerations given are true considerations of actual sales in what has been defined above as *bona fide* sales, some Registry Offices require the filing of an affidavit testifying that the consideration contained in the document is the true consideration. In instances in which the consideration for the sale of the property shown in the instrument is glaringly out of line with market values, some Registry Offices could, if they suspected evasion of land transfer tax, raise questions which might lead to changes in the consideration originally shown in the sales document. However, in actual practice such occurrences are not frequent.

From the point of view of statistical recordings of nominal sales it is desirable to distinguish between nominal sales *subject to transfer tax* (Item 6) and nominal sales *not subject to transfer tax* (Item 7). In Ontario a nominal sale with a mortgage outstanding is treated as an actual sale, with the transfer tax payable on the mortgage amount outstanding. Excepted from this ruling are transfers of property from husband to wife or by will from executor to devisees.

In addition to sales, transfers of property will take place without any consideration involved, whether actual or nominal, as in the case of a will or a trust deed. Such transactions are described as "other transfers" in Item 10 of Schedule E. If these are added to total sales (Item 9) total transfers (Item 11) are arrived at. Statistics on the number of transfers shown in Table 24 and subsequent tables relate to Item 11. The value figures reflect Items 5 *and* 6.

First Progress Report of Investigation

Information on real estate transactions and other data on encumbrances on fixed property, e.g. mortgages and liens, are available in great detail in the records of Registry and Land Titles Offices in Canada. If these records could be summarized on a current and continuing basis they would represent a comprehensive indicator of a special phase of business activity, particularly as the latter is reflected in sales of and new mortgages on existing property. No comprehensive attempt has ever been made in this country to bring together the material available in the various Registry Offices across Canada and analyse their meaning.[1]

[1]Some private endeavours to record real estate transactions on a property basis in particular localities or regions with varying degrees of coverage have been made in the past. See for example *Dun's Bulletin, Commercial and Legal Records*, Dun and Bradstreet of Canada, Ltd., periodic issues, and *Weekly Sales Report of Toronto Houses*, W. H. Bosley and Company Ltd., Toronto.

SCHEDULE E

CLASSIFICATION OF TRANSFERS OF REAL ESTATE
REGISTERED IN REGISTRY AND LAND TITLES OFFICES IN CANADA

Item	Type of Transfer of Real Estate
	Actual Sales
	Voluntary Sales[1]
1	Bona Fide Sales
2	Non-Bona Fide Sales
3	Total Voluntary Sales (Items 1+2)
4	Forced Sales[1]
5	Total Actual Sales (Items 3+4)
	Nominal Sales
6	Nominal Sales Subject to Transfer Tax[2]
7	Nominal Sales Not Subject to Transfer Tax
8	Total Nominal Sales (Items 6+7)
9	All Sales (Items 5+8)
	Transfers Without Consideration
10	Other Transfers
11	All Transfers (Items 9+10)

[1]For an example which combines features of both the voluntary and forced sale, see footnote 1 on page 133.

[2]In Ontario a transfer tax is payable for nominal sales where a mortgage is outstanding. Excepted from this ruling are transfers of property from husband to wife or by will from executors to devisees.

As the first step in this direction a canvass has been made to determine (*a*) what data are available and compiled in the various Registry and Land Titles Offices and/or provincial government departments, (*b*) what results can be obtained through experimental compilations of available data without change in reporting procedure, (*c*) what do some of the data collected mean, and (*d*) what information on property transactions could be obtained for analysis of the real estate market and what difficulties are involved in obtaining it. In essence the remainder of the chapter is a first progress report of the investigations made in the field so far. Some of the estimates shown are therefore not more than a first approximation to illustrate quantitatively the importance of the real estate industry. Corresponding with the preliminary character of available data, only tentative conclusions are feasible at present.

AVAILABILITY OF DATA

The availability of data on real estate transactions is discussed in some detail in Section 12. Here it may suffice to say that

information on the number of instruments involving real estate transfers and the amount of considerations of transactions is generally obtainable on a monthly basis from all Registry and Land Titles Offices in Canada. However, in only a few instances are actual compilations required by statute or made for reasons of administrative practice on an annual basis, still less on a monthly basis. The records available in Registry and Land Titles Offices are such as to make it difficult, if not impossible in many cases to distinguish between transfers of land with structures and transfers of land without structures, between residential property and non-residential property, and between non-farm property and farm property. However, such additional data can be obtained by supplementing information available in Registry Offices with other local information, mainly municipal records (see pp. 151 ff.).

Experimental Compilation of Data

This section brings together the summary results of three surveys with some of the detailed data shown in Section 10:

(1) Real estate transfers as registered in Registry Offices available for most of the provinces. The data secured include (*a*) the number of transfers of real estate and the value of actual real estate sales for the Province of Ontario and certain of its areas and cities for the period 1921-1949, with monthly data available for most of the years,[1] (*b*) similar data for the Province of British Columbia for the years 1948 and 1949, (*c*) the annual number of transfers of real estate for the Province of Quebec for the period 1922-1949, (*d*) the annual number of transfers of real estate for Manitoba for the years 1947 and 1948 and similar data on a monthly basis for 1949 for this and four other provinces, Prince Edward Island, Nova Scotia, New Brunswick and Alberta.[2]

(2) A cross-section analysis of the number and value of real estate transfers for one year from June, 1947 to May, 1948, by type of property, size of consideration and type of instrument underlying the transfer, for two registry divisions: Carleton in Ontario, with a population of 54,000, and Hull in Quebec, with a population of 47,000;

(3) A survey of capital expenditures for the purchase of existing assets, land, buildings, and machinery and equipment by

[1]For similar data on mortgages registered and discharged for the Province of Ontario and for Greater Toronto covering the period 1921 to 1949, see *Mortgage Lending in Canada, 1949*, pp. 16-18.

[2]Data on the number of real estate transfers are not available for Newfoundland and Saskatchewan for 1949 or earlier years.

industry for the different regions in Canada for the year 1947 (partial coverage).

These surveys, in conjunction with other information already published including data on institutional mortgages on existing property, frequently taken in conjunction with sales,[1] and on new house building, a significant portion of which is built for immediate resale,[2] assisted in arriving at a first approximation of total real estate transfers in Canada for the years 1947 to 1949 and an impression of the major importance of sales of residential real estate in these transactions.[3]

Real Estate Transactions in Canada

Total Transactions of All Types. About 450,000 transfers of real estate took place in Canada in 1949.[4] The majority of these transactions involved actual sales for considerations of approximately $1.7 billion (see Table 24). The remainder represented nominal sales and other types of transfer without considerations involved. Actual sales covered a wide variety of projects ranging from a building lot for $100 to a commercial building involving a consideration of over $1 million, from a $10,000 home to a $100,000 suburban estate, from a one-room wooden cottage on a lake to a several-section farm in the Prairie Provinces, from a manufacturing plant to a central electric station with all its fixed installations. By value about two-fifths of the transactions took place in Ontario, another quarter in Quebec, with the remainder, in the order of the amount of transactions involved, in the Prairies, British Columbia and the Maritimes (see also p. 148).

Real Estate Industry. Sales of fixed property to the extent of some $1.7 billion indicate that in 1949 on an average every man, woman and child in Canada was involved in real estate transactions to the extent of $126. The large volume of real estate business involved suggests that there has developed in Canada a service industry of major importance. Real estate brokers, land developers, agents, advertisers, surveyors, architects, estimators, lawyers, notaries, financial and trust institutions, all are participating in real estate transactions providing varying services which have become an integral part of the functioning of the real estate

[1]The Carleton survey indicates that about two-fifths of actual sales of built up non-farm property in this registry division were accompanied by mortgage registrations. The corresponding proportion for the Hull registry division was one-quarter (see p. 157).

[2]*Mortgage Lending in Canada, 1947, 1948* and *1949*.

[3]Another survey dealing with special aspects of real estate transfers in the post-war period is contained in a report entitled, *Disposal and Peacetime Use of Crown Plant Buildings*, Department of Reconstruction and Supply, Ottawa, 1948.

[4]Excluding Yukon and the Northwest Territories.

market on the North American continent. In fact, since only a fraction of the total sales price is paid for in cash by purchasers, a large portion of the $1.7 billion sales has to be financed from other sources, providing business opportunities for a large group of financial intermediaries. Sources of financing include lending by banks, life and fire insurance companies, trust companies, loan companies and fraternal societies including mutual benefit societies and pension fund associations, credit unions, persons and some business enterprises whose main line of activity is other than financing. Funds from these sources reach the real estate market either directly or through intermediaries, e.g. stock exchanges, brokers, agents, etc.[1]

TABLE 24

ESTIMATED NUMBER AND VALUE OF REAL ESTATE TRANSFERS, CANADA, 1947-1949

Region	1947		1948		1949	
	Number 000	Amount $ Mill	Number 000	Amount $ Mill	Number 000	Amount $ Mill
Maritimes[1]	37	114	41	123	35	103
Quebec	94	381	97	438	94	429
Ontario	151	528	153	592	156	674
Prairies	104	215	109	232	112	252
British Columbia	52	190	57	237	47	207
Canada[2]	438	1,428	457	1,622	444	1,665

[1]For purposes of comparability an allowance for Newfoundland is made in all three years.
[2]Excluding Yukon and the Northwest Territories.

If sales are taken as a basis, the real estate industry is involved in transactions which in 1949 were about equal to the value of the output of the construction industry for new construction and major improvements and alterations.[2] There is, however, some

[1]For a survey of new securities issued by type of purpose including the purchase of land and buildings, see *Investment and Inflation*, p. 149.

[2]A figure comparable to a first approximation of real estate sales is total new construction, including major improvements and alterations, by all groups in the country, excluding that done directly for the Federal and provincial governments, covering both expenditures directly by government departments and institutions and on housing. The resulting total is about $1.6 billion. Since the estimates of sales of real estate do not include an allowance for purchases of existing real estate acquired by the Crown (through Federal and provincial governments), the above comparison is more appropriate than a comparison with *total* new construction including all work done for Federal and provincial governments. If the latter expenditures are added, total new construction work carried out in 1949 has been estimated at $2.1 billion (see *Private and Public Investment in Canada, Outlook 1950*, Department of Trade and Commerce, Ottawa, 1950 p. 7).

overlapping in the real estate transfer data and new construction data since not infrequently buildings sold and therefore recorded in the real estate transfer series may have been built only recently and at least some of the construction work done would be included in the new construction series. A house completed in one year by a speculative builder and then sold to a home purchaser in the same year would be a case in point. In some instances such overlapping of construction and sales in the same year may be significant. In others it will not. For example, in the two intensive surveys in the registry divisions of Carleton and Hull newly constructed buildings made up 19 and 3 per cent respectively of the total value of real estate transfers recorded in these two areas in the course of one year (see Table 30).

While approximately similar in size in terms of sales, the real estate industry and the construction industry differ significantly in terms of the employment and income effect of expenditures involved. As indicated in Section 1, purchases of existing real estate involve transfer payments from one source to another in exchange for a claim to property. Only a small fraction of the considerations involved represents payment for services rendered by persons or institutions professionally engaged in contributing to the operations of the real estate market. In the case of the construction industry the major portion of its output is the result of purchases of goods (building materials) and services (labour and managerial enterprise). These expenditures, which have direct employment and income effects, are reflected in the final sales price of the product of the construction industry.

The construction industry in turn is vitally interested in the activity of the real estate industry. There is a great deal of interrelationship between the real estate and construction industries, with many persons catering to the needs of both industries. In order to expand the volume of real estate business, an increase in one or more of three factors must occur: (1) the volume of real estate, through construction and/or land development; (2) the rate of turnover; and (3) the value of real estate. The close interrelationship between the real estate and construction industries is indicated by the direct effect which the latter has on the volume of real estate and its less direct impact upon the other two factors. If demand for real estate of all kinds is strong and cannot be met by existing property, then new additions can only be brought about by the development and improvement of land and through new construction. Because of the inter-relationship of real estate and new construction activity, it could be assumed that both types of activity follow broadly similar movements in terms

of levels and direction of activity and prices. While available evidence suggests that this is true to some extent, there is also evidence to indicate notable dissimilarities. These are discussed later in this section.

Residential Real Estate Transfers. Since this report is concerned primarily with residential real estate, it is desirable to obtain an indication of the importance of annual sales of residential real estate as part of total real estate transactions. Insufficient evidence is available to make a firm estimate, but from the limited data available it appears that residential real estate sales bulk significantly in total transactions and may presently be something between one-half and two-thirds of all sales.[1] If this impression, obtained from available preliminary data, is confirmed by later investigations, it would suggest that housing is playing a more important part in total real estate transactions than new residential construction in total new construction (close to two-fifths in 1949). Two explanations for such a possible variation are: (1) the need for mobility[2] in a growing economy makes frequent exchange and sale of residential property necessary; this affects housing more than business property; (2) high prices of real estate in the post-war period and a persistent housing shortage have encouraged a more rapid turnover in residential property than has been the case in the pre-war period, or would likely be the case currently for business properties.

Taking between one-half and two-thirds of all real estate sales in 1949 to represent residential real estate transactions, this would involve amounts between $800 million and $1.1 billion. Relating current sales to the estimated value of all existing real estate, involving about $15 billion (see Section 3), this would suggest that the present annual rate of turnover is likely to be of the order of 5 to 7 per cent of the present value of the total housing stock in Canada.

[1]The survey in the Carleton and Hull registry divisions indicated that 62 per cent and 61 per cent respectively of the value of all sales involved residential property (see p. 154). Of $137 million in loans made in 1949 by five groups of lending institutions on existing non-farm property, $97 million, or 71 per cent, were for residential real estate and the remainder for other types of real estate (*Mortgage Lending in Canada, 1949*, p. 13).

[2]Evidence available from family allowance records maintained by the Department of Health and Welfare suggests that in 1947 of the 1,630,000 families (about 55 per cent of the total for Canada) in receipt of family allowances, over 300,000, or close to 20 per cent, changed their place of residence in the course of one year. Some of the families moved to another address in the same locality, others in the same province, while still others moved to another province or left the country. At the 1947 rate the average family seems to change its abode every five years (see *Inter- and Intra-Provincial Migration, January, 1947—February, 1949*, Central Mortgage and Housing Corporation, Economic Research Department, Bulletin No. 8, Ottawa, April 18, 1949).

There are some indications that in terms of *number* of transfers the ratio of residential to total real estate transactions is somewhat lower than the range in value indicated above, and that residential real estate transactions may be something of the order of 40 to 50 per cent of all transactions.[1] If allowance is made for the fact that transactions take place in terms of the number of properties and not in terms of dwelling units the upper boundary of 50 per cent appears to be a more reasonable approximation of the total number of dwelling units involved in the transfer of existing residential property. On this basis some 220,000 existing dwelling units are likely to have changed ownership in 1949. New units completed in the same year numbered 91,000. This means that for every new unit built, about two and one-half existing dwellings (whether owner- or tenant-occupied) changed ownership.[2]

At the present rate of transfers of existing residential property, the average Canadian house appears to be changing ownership every 14 years. Since the average life expectancy of a non-farm home is estimated at 75 years, this would mean that at the 1949 rate of turnover the average Canadian house changes hands more than five times during its life.

Fluctuations of Real Estate Transactions

Volume of Transactions in Ontario. Transfers of real estate fluctuated substantially in the 29-year period under review. In fact, as far as Ontario is concerned it was only when World War II was drawing to a close that a volume of real estate transactions was reached which equalled the volume of activity in the early 'twenties. For the years 1921-1923 real estate transfers numbered between 90,000 and 100,000. In the next twenty years real estate activity in this province proceeded at a much slower pace, reaching a low point in 1933-1934 of less than half the volume of 1921-1923. With the ensuing recovery in the latter part of the 'thirties real estate activity increased, but by the outbreak of the war in 1939 was still considerably below the level of activity in the 'twenties. Increased internal migration and reduced *new* construction activity for civilian purposes due to the mobilization of

[1]In the Carleton Registry Division actual sales of non-farm residential real estate comprised 43 per cent of the total number of non-farm sales of fixed property. In the Hull Registry Division the corresponding proportion was 46 per cent. Transactions involving the sale of building lots are included in the total figure of non-farm sales. This explains why housing, usually involving a lesser consideration per sale than non-residential real estate, makes up about one-half of the total *number* and between one-half and two-thirds of the total *value* of all transfers.

[2]As emphasized on page 139, some of the houses changing ownership would be dwellings only recently constructed.

TABLE 25

NUMBER AND VALUE OF TRANSFERS OF REAL ESTATE, ONTARIO AND QUEBEC, 1921-1949

Year	Ontario		Quebec
	Number of Real Estate Transfers Registered[1]	Value of Real Estate Transfers Registered[2] $000	Number of Real Estate Transfers Registered
1921	98,597	224,166	—[3]
1922	95,202	262,602	38,587
1923	91,688	245,416	33,122
1924	81,176	243,666	45,336
1925	79,645	227,407	43,982
1926	76,409	229,557	47,615
1927	78,568	267,990	48,962
1928	77,496	287,987	48,909
1929	76,177	297,473	48,286
1930	71,559	209,437	45,407
Average for Decade	82,652	249,570	44,467
1931	67,405	203,337	40,245
1932	51,555	118,748	36,903
1933	44,290	93,852	34,159
1934	45,757	93,040	34,029
1935	49,038	91,610	37,839
1936	54,905	117,396	37,086
1937	61,511	117,267	41,842
1938	63,401	116,480	46,564
1939	65,259	107,850	43,484
1940	69,325	119,864	49,115
Average for Decade	57,245	117,944	40,127
1941	80,766	157,934	54,609
1942	83,181	186,747	83,949
1943	87,489	201,708	62,623
1944	115,527	306,519	76,497
1945	132,533	376,694	88,901
1946	173,177	544,995	104,150
1947	151,005	528,276	94,249
1948	153,482	592,432	96,678
1949	156,283	674,352	94,068
Average for Period	125,938	396,629	83,970
Average 1921-1949	87,324	249,821	55,615

[1]Including nominal sales and real estate transfers without consideration.
[2]Excluding the value of real estate transfers enumerated in footnote 1 above.
[3]Not available. Figures on value of real estate transfers registered similar to those shown for Ontario are also not available.

resources for war contributed to a continuing increase in real estate activity from 1940 on, but it was only in 1944 that the number of real estate transactions exceeded the 100,000 mark, and this topped the high level of activity in the early 'twenties. A notable occurrence of the post-World War II period is the peak of transactions in 1946, involving 173,000 transfers registered, with a 13 per cent decline in the succeeding year (see Table 25). This peak was also encountered in Quebec. But the volume series in both provinces differ distinctly from the pattern of the value series of real estate transactions and the course of new construction activity (see below).

The above appraisal of the changing pattern of the real estate market is brought into even clearer focus if account is taken of the growth of the economy in making a comparison of real estate transfers over time. Relevant data on the number and value of real estate transfers and on population for Ontario as a whole, and for the Greater Toronto region serviced by the Registry Offices of Toronto and York and the Land Titles Office of Toronto are assembled in Table 26.

The population in Ontario and Greater Toronto has been increasing almost continuously since 1921, but real estate transfers, except for some recovery in the late 'twenties, were declining until the middle of the 'thirties. Although an upward trend of real estate transfers was resumed in the latter part of the 'thirties, real estate transactions per thousand population in 1941 were not much more than they had been in 1931, and were notably below 1921. In Ontario in 1946 the number of real estate transfers per thousand population was notably higher than in 1921, but the difference is considerably smaller than is indicated by a comparison of the absolute number of real estate transfers (see Table 26). The volume of real estate transfers declined in the years following 1946. By 1949 real estate transfers per thousand population in Ontario reached a level about similar to that achieved in 1921. It seems probable that eviction controls in the period following World War II held down the rate of sales of real estate by reducing the volume of ownership changes among the 1.3 million rental dwellings. The evidence available for Greater Toronto indicates that real estate business in some of the large metropolitan centres has not been keeping pace with population growth over the last three decades.

It has been suggested earlier that internal migration and the requirements for mobility in a rapidly growing economy would be important factors in determining the volume of real estate trans-

TABLE 26

NUMBER AND VALUE OF REAL ESTATE TRANSFERS AND POPULATION, ONTARIO AND GREATER TORONTO, SELECTED YEARS, 1921-1949

Year	Ontario					Greater Toronto				
	Population 000	Real Estate Transfers		Real Estate Transfers per 1,000 Population		Population 000	Real Estate Transfers		Real Estate Transfers per 1,000 Population	
		Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000		Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
1921	2,934	98,597	224,166	34	76	618	25,281	93,206	41	151
1931	3,432	67,405	203,337	20	59	826	16,246	83,427	20	101
1941	3,788	80,766	157,934	21	42	918	17,877	58,655	19	64
1946	4,101	173,177	544,995	42	133	991	36,085	204,441	36	206
1947	4,189	151,005	528,276	36	126	997	32,762	204,996	33	206
1948	4,297	153,482	592,432	36	138	1,019	35,724	241,065	35	237
1949	4,411	156,283	674,352	35	153	1,052	39,887	299,889	38	285

fers. The 1946 peak of the number of transactions is a case in point. The concentration of population in selected centres producing munitions and war equipment during six years of war was followed, with the arrival of peace, by a re-shuffling of the working population and their dependents, resulting in significant population movements of both war workers and returning veterans. Such movements frequently resulted in two real estate transactions for one family in one year: the sale of property in one locality and the purchase of one in another locality. In a period when reconversion from war to peace made only a limited amount of new construction possible, greater reliance had to be placed on purchases of existing real estate than on acquisition of newly built houses. This change in the means of obtaining shelter was made possible by the large volume of accumulated wartime savings and continuing high levels of employment and income.[1]

Volume of Transactions in Quebec. The fluctuations of the number of real estate transactions in the Province of Quebec follow broadly the pattern shown for Ontario, with one notable exception. Peak activity in the pre-war period is indicated in the early 'twenties for Ontario, in the later 'twenties for Quebec. This means that real estate transfers in Quebec followed much more closely the trend of new construction in Canada as a whole in the 'twenties than did real estate transfers in Ontario. In terms of housing units, for example, completions from 1926 to 1929 were 42 per cent higher than in the preceding four years, while in Quebec the number of real estate transfers was up 20 per cent in the same period. In Ontario, however, the reverse appeared to be the case, with real estate activity in the later 'twenties being 11 per cent lower in volume terms than in the early 'twenties. Two other less pronounced variations in Quebec not evident in the Ontario trend are breaks in the Quebec series in 1939 and 1943.

Important similarities between the Quebec and Ontario series are the turning point in 1927—as distinct from a 1929 peak for new residential construction—another turning point in 1933 (in Quebec the 1933 and 1934 figures are about the same)—this low point coincides with the trough of the new residential construction series—and the 1946 post-war peak, referred to earlier (see Table 25).

Comparison with Dwelling Completions. The Ontario and Quebec series, together with dwelling completions, are shown on an index basis in Figure 13. The data suggest three tentative

[1]*Investment and Inflation*, pp. 201 ff.

conclusions: (*a*) that fluctuations of real estate transfers in Ontario were more substantial than similar transactions in Quebec or new housing construction in Canada as a whole; (*b*) that in times of general rising economic activity, real estate transfers, in volume terms—not value, since the price factor might obscure the picture—are likely to turn sooner than new construction (e.g. 1927 and 1946 peak of real estate transfers as compared with 1929 and 1949 peak for new residential construction); and (*c*) that in times of declining economic activity, or in periods of slow economic

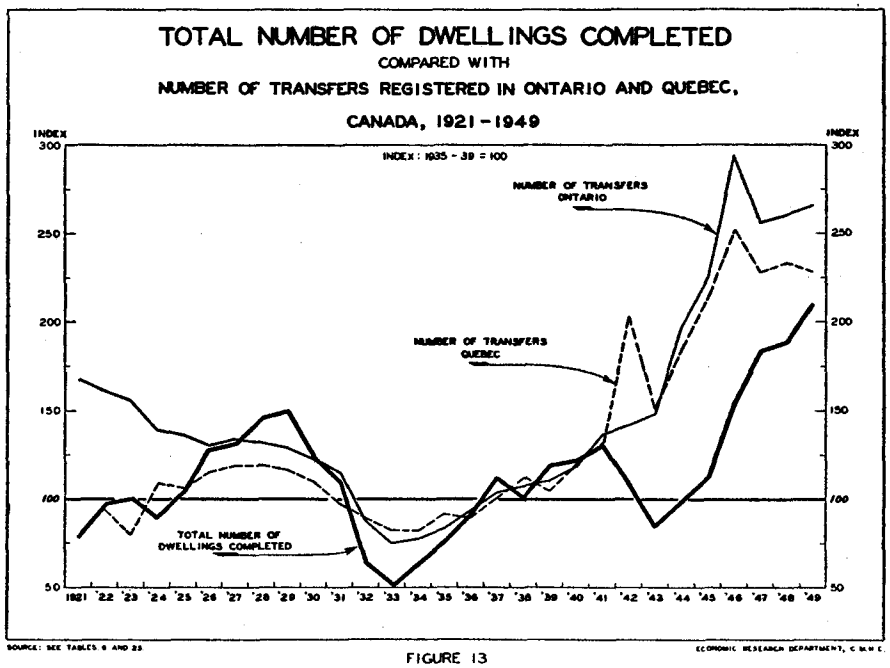


FIGURE 13

recovery, the volume of real estate transactions indicates not only business activity but also forced liquidation of real estate due to financial failures, and is therefore less likely to present a sensitive indicator than in periods of high economic activity, when the series reflects in the main voluntary business transactions between sellers and buyers.

Value of Transactions in Ontario. Fluctuations of the value of sales of real estate in Ontario differ significantly from the volume series on the number of real estate transfers registered, mainly for three reasons: (1) the latter series includes the number of nominal sales and transfers without considerations which, according to spot

checks, are likely to vary between 5 and 12 per cent of total transfers registered; no values for these are included in the former series;[1] (2) the *type* of real estate transaction is reflected in the value series but not in the volume series, e.g. in one year proportionately more high-priced business property and less low-priced residential property may be sold than in the next year; and (3) the changes in the price of real estate, indicative in large measure of the supply-demand situation of each period, are reflected only in the value series.

Bearing these differences in mind, the value of real estate series shows a peak of transactions in the inter-war period in 1928-1929, a 1933-1935 low, a moderate high in 1936-1938, and a slight decline in 1939 (see Table 25). In some measure the value series of real estate sales in Ontario shows for these years a closer relationship to the pattern of total new residential construction than is apparent from a comparison of the volume series.

Differences between the two series are apparent in the early 'twenties, the war and immediate post-war period. Three years elapse from the 1922 peak before the real estate series reaches its low point of the 'twenties in 1925, while the construction series reacts in a much more volatile manner with a high point in 1923 and a low point in 1924. This suggests a slowness of the real estate market in adjusting itself to changing economic conditions and demand for new property.

During the war real estate transactions continued in an upward direction and were not significantly affected by controls or limitations of resources, as was the case for new construction serving civilian purposes. In the post-war period the value of real estate transfers series shows a peak for 1946 similar to that shown by the number of real estate transfers series, a decline in 1947, but an amount in 1948 and 1949 exceeding in dollar terms the 1946 and any previous peak, mainly the result of substantial price increases in all types of real estate.

Seasonal Fluctuations. Real estate transactions follow a pattern of two peaks a year, one late in spring and the other late in fall, observable in related phases of activity, mortgage lending[2] and new residential construction work (see p. 60).

[1]As indicated on p. 134, there is one exception to this principle. In transactions where a nominal sale is consummated involving property with a mortgage outstanding and provided that this transaction does not cover a transfer of property from a husband to a wife or where land is passing by will from executor to devisees, a transfer tax is payable. The basis of determining the transfer tax is the mortgage amount outstanding. Such cases which in effect are a variant of a combination of nominal and actual sales are included in the value series of real estate transfers in Ontario.

[2]*Mortgage Lending in Canada, 1949*, p. 14.

The number of real estate transfers in the Greater Toronto area (covering records of the Toronto and York County Registry Offices and the Toronto Land Titles Offices), which follow closely the seasonal pattern of the value of real estate transfers for Ontario as a whole (see Tables 88 and 89 in Section 10), indicate low points for February and August and high points for May-June and October-November. A similar seasonal pattern appears also in other parts of the country, as monthly data on real estate transfers in several provinces indicate (see Table 90 in Section 10).

Totals of real estate transfers are an aggregate reflecting a variety of transactions including non-farm residential and non-residential property, building lots and farm property. Each of the segments seems to have a seasonal pattern of its own, as the data on the number of real estate transfers in the county of Carleton suggest (see Table 29). Perhaps the most noteworthy feature is the fact that peaks of building lot sales appear to precede peaks of other real estate transfers by about one month. Since the purchase of building lots precedes construction activity, such a series, if available on a broad enough coverage and for a sufficiently long period of time, might serve as a useful advance indicator of construction and real estate activity.

Regional Variations of Real Estate Transactions

Inter-Provincial Comparisons. In the provinces in which economic development has been most rapid in the post-war period, real estate transactions have been occurring at an accelerated rate. Ontario, Canada's most populous province, registered the largest amount of real estate activity, in terms of both volume and value of transactions. However, on a per thousand population basis, British Columbia has the record of the largest amount of real estate activity. In 1949 this province registered, per thousand population, real estate transfers involving 42 instruments with an average outlay of $186,000. Ontario followed with 35 and $153,000, and Quebec[1] with 24 and $110,000. This ranking is in line with other indicators of economic activity bearing on the real estate market, e.g. housing completions and new business construction (see Table 27).

[1]A special situation prevails in Quebec, and particularly Greater Montreal, where multiple housing projects are more numerous than in any other part of the country (see pp. 165-166). As a result, one transfer of residential real estate in Quebec may involve more housing than would likely be the case in any other province. To arrange for the change of ownership of the same number of units would, on the average, require fewer transactions in Quebec than in the rest of Canada.

Urban, Rural and Northern Areas. The fact that population growth and economic development have an important bearing on the level of real estate has been brought out above. A related question: Is this equally true for urban, rural and the more sparsely settled northern areas? Some light is thrown on this question by a classification of real estate transfers in Ontario by four types of area: (*a*) predominantly urban areas, that is, those with over 60 per cent urban population, (*b*) mixed urban and rural areas, that is, those with over 40 per cent urban population and including incorporated communities of less than 20,000 population

TABLE 27

PER THOUSAND POPULATION COMPARISON OF THE NUMBER AND VALUE OF REAL ESTATE TRANSFERS WITH DWELLINGS COMPLETED AND BUSINESS CONSTRUCTION, ONTARIO, QUEBEC AND BRITISH COLUMBIA, 1949

Item	Ontario	Quebec	British Columbia
Totals			
Population[1]—number—000	4,411	3,887	1,114
Number of Real Estate Transfers—000	156	94	47
Value of Real Estate Transfers—$ Mill	674	429	207
Dwellings Completed[2]—number—000	33	24	11
Business Construction[3]—$ Mill	320	168	85
Per 1,000 Population			
Number of Real Estate Transfers	35	24	42
Value of Real Estate Transfers—$000	153	110	186
Dwellings Completed[2]—number	7	6	10
Business Construction[3]—$000	73	43	77

[1]As of June, 1949.
[2]Including conversions.
[3]Covers primary, construction and manufacturing industries, public utilities, trade, finance, commercial and service groups.

(*c*) predominantly rural areas with less than 40 per cent urban population and including incorporated communities of less than 5,000 population, and (*d*) northern areas which cover all registry divisions north of a line running eastward from Georgian Bay to the Ottawa River and forming the southern boundary of Muskoka, Haliburton, Nipissing and Renfrew Counties.

Real estate transfers classified on this basis and related to the population residing in these areas in 1931 and 1941 are shown in summary form in Table 28. Similar data on a registry division basis for 1941 and the number and value of real estate transfers by

TABLE 28

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, BY TYPE OF AREA AND ON A PER THOUSAND POPULATION BASIS, ONTARIO, 1931 AND 1941

Type of Area	1931					1941				
	Population 000	Real Estate Transfers		Real Estate Transfers Per 1000 Population		Population 000	Real Estate Transfers		Real Estate Transfers Per 1000 Population	
		Number	Amount $000	Number	Amount $000		Number	Amount $000	Number	Amount $000
Predominantly Urban Areas	1,918	34,790	138,266	18	72	2,137	46,453	115,704	22	54
Mixed Urban-Rural Areas	735	13,722	22,125	19	30	772	16,020	22,616	21	29
Predominantly Rural Areas	313	6,089	9,337	19	30	309	6,268	7,624	20	25
Northern Areas	465	12,804	33,610	28	72	569	12,025	11,991	21	21
All Areas	3,432	67,405	203,337	20	59	3,788	80,766	157,934	21	42

type of area for the years 1928 to 1949 are shown in Tables 91 and 92 in Section 10. For both years, 1931 and 1941, the bulk of all real estate transactions took place in predominantly urban centres. In 1941, for example, more than half of all transactions and almost three-quarters of the considerations involved were made in predominantly urban centres. Among these Greater Toronto occupied a dominant place, contributing almost one-quarter to all transfers and close to two-fifths of the value of real estate transactions involved. The interesting point, however, is that on a per thousand population basis the other areas did almost as well as the predominantly urban sections. Real estate transfers per thousand population for predominantly urban areas numbered 22, only slightly higher than the corresponding figure for the mixed urban-rural and northern areas, each 21, and the predominantly rural areas, 20. The variation, of course, was greater on the basis of the value of the real estate business transacted. Reflecting the higher-priced property in larger cities and towns, the value of residential real estate sold per thousand population was $54,000 for the predominantly urban areas, against $29,000 for the mixed urban-rural areas, $25,000 for the predominantly rural areas, and $21,000 for the northern areas.

The 1941 situation, however, does not reflect fully conditions prevailing at other times in the period under review. For example, when development of Northern Ontario was much to the fore in the late 'twenties and at the turn of the decade before the impact of the depression was fully felt in Canada, real estate transfers in these areas were proportionately more frequent than in any other part of the province. To illustrate: the number of real estate transfers in 1931 was 28 per thousand population in the northern areas, 18 in the predominantly urban areas, and 19 each in the mixed urban-rural areas and the predominantly rural areas (see Table 28).

Real Estate Transactions by Type, Size and Transfer Instrument

Types of Real Estate Transfers. The largest volume of real estate transfers takes place in non-farm areas. Evidence available in the Registry Division of Carleton, with a 30 per cent farm population—this approximates the situation in Canada as a whole[1]

[1]The latest available comprehensive figure is that for the 1941 Decennial Census, which indicates that 29 per cent of the Canadian population (exclusive of the Yukon and Northwest Territories) live on farms. An estimate for 1949 puts Canada's farm population at 26 per cent of total population (see Table 38).

TABLE 29

ACTUAL SALES OF REAL ESTATE REGISTERED, BY TYPE OF PROPERTY, CARLETON AND HULL REGISTRY DIVISIONS, MONTHLY, 1947-1948
(Value Figures in Thousands of Dollars)

Registry Division and Month	Non-Farm								Farm		Total Real Estate	
	Residential Real Estate		Non-Residential Real Estate		Building Lots		Total Non-Farm					
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Carleton												
1947 - June	74	382	16	199	95	103	185	684	32	113	217	797
July	62	275	23	163	109	62	194	500	22	84	216	584
August	78	368	22	165	100	54	200	587	21	45	221	633
September	78	454	12	21	108	65	198	539	18	53	216	592
October	58	331	23	159	78	37	159	527	17	46	176	574
November	70	370	8	45	78	42	156	457	24	55	180	512
December	74	413	8	41	81	41	163	495	23	101	186	596
1948 - January	63	353	4	15	58	65	125	433	23	113	148	546
February	57	288	4	168	52	31	113	487	25	46	138	533
March	67	409	2	14	65	35	134	459	15	41	149	499
April	88	515	9	130	103	89	200	734	17	64	217	798
May	102	553	15	59	92	89	209	701	28	189	237	890
Total	871	4,710	146	1,181	1,019	713	2,036	6,604	265	949	2,301	7,553

TABLE 29

ACTUAL SALES OF REAL ESTATE REGISTERED, BY TYPE OF PROPERTY, CARLETON AND HULL REGISTRY DIVISIONS, MONTHLY, 1947-1948, *Continued*
(Value Figures in Thousands of Dollars)

Registry Division and Month	Non-Farm								Farm		Total Real Estate	
	Residential Real Estate		Non-Residential Real Estate		Building Lots		Total Non-Farm					
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Hull												
1947 - June	39	118	—	—	55	19	94	138	—	—	94	138
July	37	136	1	—	60	31	98	167	2	13	100	180
August	84	179	7	36	63	30	154	244	—	—	154	244
September	65	162	4	54	71	49	140	265	3	7	143	273
October	58	158	3	137	52	38	113	333	7	24	120	357
November	59	166	4	45	57	35	120	246	4	9	124	255
December	19	46	3	193	44	22	66	260	2	6	68	266
1948 - January	28	74	1	80	33	21	62	176	—	—	62	176
February	37	113	2	39	37	44	76	196	2	8	78	204
March	33	110	—	—	36	14	69	124	1	11	70	135
April	51	209	1	12	64	20	116	240	—	—	116	240
May	56	158	1	—	60	24	117	182	3	17	120	199
Total	566	1,629	27	596	632	346	1,225	2,570	24	96	1,249	2,666

—suggests that 12 per cent of the number and 13 per cent of the value of real estate transferred involved farm transactions. Among the different properties sold residential real estate bulks heavily in terms of value, 62 per cent in the Registry Division of Carleton, and 61 per cent in the Registry Division of Hull. The proportion is smaller in terms of the number of registrations because of the large number of sales of building lots with a low average sales price (see Table 29).

The Carleton and Hull registry surveys throw additional light on the question of whether new construction is an element of

TABLE 30

ACTUAL SALES OF REAL ESTATE REGISTERED, BY TYPE OF STRUCTURE, CARLETON AND HULL REGISTRY DIVISIONS, 1947-1948

Type of Structure	Carleton		Hull	
	Number	Amount $000	Number	Amount $000
Property with New Structures				
Residential	144	1,127	29	79
Non-Residential	34	325	—	—
Sub-total	178	1,452	29	79
Property with Existing Structures				
Residential	727	3,584	537	1,550
Non-Residential	112	856	27	596
Sub-total	839	4,439	564	2,146
Total Built-up Property	1,017	5,891	593	2,225
Vacant Land	1,019	713	632	346
Total Non-Farm	2,036	6,604	1,225	2,570
All Farm Property	265	949	24	96
Total Real Estate	2,301	7,553	1,249	2,666

immediate importance in real estate transfers. Of a total of 1,017 sales involving built-up non-farm property in Carleton, 178 transactions, or 18 per cent, consisted of property with new structures. In Hull the proportion was only 5 per cent (see Table 30). These figures reflect only sales of newly constructed buildings sold during the year. They would exclude transactions, quite numerous in both Registry Divisions, in which an owner would acquire a building lot and then build a structure on it. Further, the above figures do not reflect new construction going on which does not involve a sale, e.g. the erection of a structure on a lot in possession of the owner of the building being erected.

Size Distribution. Data available on the size distribution reflect the situation in medium and small urban and rural communities. They are not indicative of transactions in large metropolitan areas or heavy industrial centres, where large transactions involving millions of dollars occur concurrently with thousands of small transactions. Bearing this qualification in mind, the largest number of transfers involved considerations of less than $1,000, 43 per cent in Carleton and 55 per cent in Hull. But in

TABLE 31

ACTUAL SALES OF REAL ESTATE REGISTERED, BY SIZE OF TRANSACTION, CARLETON AND HULL REGISTRY DIVISIONS, 1947-1948

Amount of Sales Value $	Carleton		Hull	
	Number	Amount $000	Number	Amount $000
Less than 1,000	999	371	687	250
1,000 to 2,999	495	871	312	529
3,000 to 4,999	242	908	124	448
5,000 to 9,999	419	3,002	97	637
10,000 to 14,999	97	1,125	10	111
15,000 to 24,999	33	580	11	214
25,000 to 49,999	12	402	5	163
50,000 and over	4	295	3	314
Total	2,301	7,553	1,249	2,666

value terms these transactions comprise only a small fraction of the total, 5 per cent in Carleton and 9 per cent in Hull. The reason for this is the large number of sales of building lots, small summer cottages, shack homes and small business counters on the fringe of urban settlements. On the whole, the number of transfers declines as the amount of the consideration increases (see Table 31). Sales prices of non-residential property are highest, followed by residential property, farm property,[1] and building lots (see Table 32).[2]

[1]In the registry division of Hull, which is predominantly urban (only 4 per cent farm population), the average sales price of a farm is higher than that of residential property. The inclusion of truck gardens would tend to increase the average value per farm, while the inclusion of a large number of shack homes at the outskirts of the city would contribute to the lowering of the average sales price of residential real estate.

[2]To assure comparability between the number and value of sales, all nominal sales have been excluded from the compilation of the number of deeds registered in Carleton and Hull except in Table 33. In this respect the figures on the number of transactions differ from those shown in the provincial surveys.

TABLE 32

NUMBER AND AVERAGE SALES PRICE OF REAL ESTATE SOLD, BY TYPE OF PROPERTY, CARLETON AND HULL REGISTRY DIVISIONS, 1947-1948

Type of Property	Carleton		Hull	
	Number	Average Sales Price $	Number	Average Sales Price $
Non-Farm				
Residential				
Real Estate	871	5,408	566	2,878
Other Real Estate	146	8,086	27	22,069
Building Lots	1,019	700	632	547
Sub-total	2,036	3,244	1,225	2,098
Farm				
All Types	265	3,583	24	4,000
Total	2,301	3,283	1,249	2,135

TYPE OF INSTRUMENT ACCOMPANYING TRANSFER OF REAL ESTATE

For statistical reasons total transfers are most conveniently grouped into actual sales on the one hand and nominal sales and other transfers without considerations on the other hand. The convenience of this classification is that the data on the number of transfers registered reflect all real estate transactions while the value series covers only considerations involved in actual sales. The prevalence of nominal sales and other transfers without consideration in total transactions varies not only for different times but also for different areas. Spot checks indicated that in the Toronto Registry Office district nominal sales and other transfers without consideration varied from 5 per cent of total registrations in 1926 to 12 per cent in 1948. As between different regions the Carleton Registry Office survey of 1947-1948 brings out a ratio of 12 per cent for nominal sales and other transfers without consideration as against 7 per cent for the Hull registry district (see Table 33).

In times of high levels of economic activity like 1947 and 1948 forced sales comprise only a small proportion of real estate transactions. In Carleton, for example, forced sales comprised only 12 transactions, or one half of one per cent, of a total of 2,301 actual sales.

The type of financing of real estate transfers also varies for various types of transactions and for different localities. For example, actual real estate sales of all types were accompanied by mortgages to the extent of 27 per cent in Carleton, and to the extent of 19 per cent in Hull. But if the comparison is confined to transactions of built-up non-farm property—i.e. excluding building lots and farm sales—which require larger financial outlays, the incidence of mortgages accompanying sales is much greater, 37 per cent in Carleton and 26 per cent in Hull (see Table 33).

TABLE 33

TYPE OF INSTRUMENT ACCOMPANYING TRANSFERS OF REAL ESTATE REGISTERED, CARLETON AND HULL REGISTRY DIVISIONS, 1947-1948

Type of Instrument	Carleton		Hull	
	Number	Amount $000	Number	Amount $000
All Transactions				
Actual Sales				
Accompanied by Mortgages[1]	614[2]	2,778	240[3]	565
Not Accompanied by Mortgages	1,687	4,776	1,009	2,101
Total Actual Sales	2,301[4]	7,553	1,249	2,666
Nominal Sales and Other Transfers	326	—[5]	94	—[5]
All Transfers	2,627	7,553[6]	1,343	2,666[6]
Transactions of Built-up Non-Farm Property Only				
Actual Sales				
Accompanied by Mortgages[1]	381	2,323	152	497
Not Accompanied by Mortgages	636	3,568	441	1,728
Total Actual Sales	1,017	5,891	593	2,225
Nominal Sales and Other Transfers	113	—[5]	26	—[5]
All Transfers	1,130	5,891[6]	619	2,225[6]

[1]Includes a small number of agreements for sale.

[2]In the same year 658 mortgages not accompanied by sales were registered. Total mortgages registered were 1,308, a slightly larger figure than the sum of sales accompanied by mortgages and mortgages not accompanied by sales, totalling 1,272. The reason for the discrepancy is that the total of 1,308 includes a small number of second mortgages.

[3]In the same year 341 mortgages not accompanied by sales were registered.

[4]Includes 12 tax sales in Carleton Registry Division, involving a consideration of $663. Corresponding data are not available for Hull Registry Division.

[5]Value not given.

[6]Excluding value of transfers involving nominal sales and other transactions without consideration.

The importance of sales as occasions for new mortgages is illustrated by the fact that this type of mortgage may represent as much as one-half of total mortgages registered in one year. For example, of the total mortgages registered in Carleton in 1947-1948 numbering 1,308,[1] 614 or 47 per cent were occasioned by the sale of existing property. The remaining mortgages were either associated with new construction or taken on the security of existing real estate to be used for purposes other than financing the sale of the property. Corresponding figures for Hull to those shown above for Carleton are: 240 or 41 per cent of a total of 581 mortgages.[2]

Continuing Collection of Data for Analysis of Real Estate Market

Within the limitation set by information readily available in Registry Offices the data that can most appropriately be obtained —provided that satisfactory arrangements for the collection of the information can be made—would be the number of real estate transfers separating actual sales from nominal sales and other transactions without consideration, and the number and value of voluntary and forced sales by month and registry division.

More difficult to obtain because it would require a more detailed study of the instruments and other records available in the Registry Offices, but still obtainable, are a breakdown of the property by type: non-farm and farm, residential, non-residential and building lots; by size of consideration and by type of instrument of transaction excluding those instruments mentioned in the previous paragraph and including the distinction between sales accompanied or not accompanied by mortgages.

Still more difficult, and for this reason perhaps not practical for continuing collection, is the distinction between sales of real estate including new structures, and those with existing structures or without structures. To obtain these data for Carleton and Hull it was necessary to obtain additional information from civic records, particularly from the assessment roll.

Various shortcuts are possible in the collection of the data on the functioning of the real estate market. Of these the application of sampling technique both as between different Registry Offices and the number of real estate transactions to be examined is the most promising. In this connection it may be of interest to note

[1]See footnote 2 in Table 33.

[2]For an appraisal of the type and conditions of mortgage lending in the registry divisions of Carleton and Hull, see *Mortgage Lending in Canada, 1948*, pp. 18-20.

that the periodic estimates of employment and unemployment in Canada prepared by the Dominion Bureau of Statistics are based on a scientifically selected sample involving—as of mid-1950—interviews with approximately 25,000 households covering about 1 per cent of the population of Canada (excluding the remote and sparsely populated northern areas). Compared with a universe of about 14 million (Canadian population in 1950), some 500,000 real estate transactions represent a considerably smaller though not necessarily easier field to cover by sampling technique.

In conclusion, housing provides the largest second-hand commodity market that exists. In fact, this market is on occasion several times larger than the market for newly built houses. Supply and demand conditions and price levels of existing real estate may at times precede and at other times follow similar conditions in the new housing field. But there exists such a close relationship between the market for new housing and the market for second-hand housing that an adequate understanding of the former requires deeper insight into the latter. As the preliminary appraisal in this chapter attempts to bring out, only a beginning has been made for systematic study of the existing real estate market in Canada. Further development remains a task for the future.

SECTION SIX

HOUSING IN REGIONS AND LOCALITIES

LOCATION of a house in a community or region is conditioned by housing demand in the particular locality or area. Choice of the community or region in which to live in turn is largely determined by economic opportunities and personal preferences of each family or household group. One of the basic difficulties of matching supply (housing stock) with demand (requirements of occupiers) is that the location of a house is fixed while the occupier is mobile. He can change his place of residence almost at will, and most people are likely to do so several times in their lifetime.

Mobility of the population is great in a country like Canada, whose economy is growing rapidly.[1] Mobility of the population requires that homes be available where people live and work or want to live and work To build houses in a locality from which people are moving and not in another locality to which people are going would mean creating a housing surplus in one place and doing little to overcome a growing housing shortage in another. In fact, the total number of houses built in the two localities may equal the number of families and non-family households desiring and being able to afford separate living accommodation, and there may still be a housing shortage in one of the two localities, while there are vacant units in the other locality because of inadequate demand. This illustration serves to emphasize how the use of aggregates might over-simplify the housing problem faced in a country as a whole. While the aggregate approach has its advantages in stating a problem and aiding in the formulation of policies of a national character, the administration of such policies and the execution of a national housing program make it necessary to go much farther. In particular the immediate and long term requirements of various regions and localities have to be assessed and action taken in the light of the needs of each of the regions and localities, which are likely to vary greatly.

[1]Comprehensive data on inter-provincial migration on an annual basis are not available, but data on movements of families in receipt of family allowances as recorded by the Department of National Health and Welfare suggest that families moving from one province to another, after allowing for those families not in receipt of family allowances, are likely to have exceeded 50,000 in 1949. This means that probably more than 200,000 people moved from one province to another in that year, quite apart from the many families who moved from one locality to another within each province.

It is the purpose of this section to appraise in summary form some of the relevant historical regional and local housing data. In particular an answer is being sought to three questions: (1) What share of the total national housing program have the various regions and localities obtained over the last few decades? (2) Has the increase in the housing stock been in line with population growth and industrial expansion? (3) Which of the regions enjoys the highest standards of living accommodation in terms of persons per dwelling, and where are families without homes concentrated?

Housing Stock by Region

At the end of 1949 one-third of all houses were situated in Ontario, one-quarter in Quebec, one-fifth in the Prairies, and one-tenth each in the coastal areas on the Atlantic and the Pacific, the Maritime provinces and British Columbia (see Table 34 and Figure 14). The present distribution is the result of a shift of house building from east to west over the last several decades, following the opening up and economic development of the Prairie Provinces and British Columbia (see p. 479). In 1881, for example, houses in these areas comprised but 3 per cent of the housing stock, but in 1949 that proportion had increased tenfold (see Appendix A). The growth of British Columbia's occupied housing stock has been particularly marked. Over the last three decades this region recorded a growth of 131 per cent in its stock of occupied dwellings, as compared with 66 per cent for the country as a whole. For the same period the occupied housing

TABLE 34

Number of Occupied Dwellings, by Region, Canada, Selected Years,[1] 1921-1949
(Thousands of Units)

Region	1921	1931	1941	1948	1949
Maritimes	198	206	237	267	271
Quebec	417	536	651	756	777
Ontario	670	792	916	1,051	1,080
Prairies	429	515	570	628	645
British Columbia	124	178	223	276	286
Canada	1,838	2,227	2,597	2,978	3,059

[1]Data for 1921, 1931 and 1941 represent mid-year figures, while data for 1948 and 1949 represent year end figures.

stock in Quebec and Ontario, the two most industrialized provinces and generally considered the two most prosperous regions in Canada, rose by only 86 and 61 per cent respectively. In the Prairie Provinces and the Maritimes the increases were 50 and 37 per cent respectively.[1] These regional variations in the growth

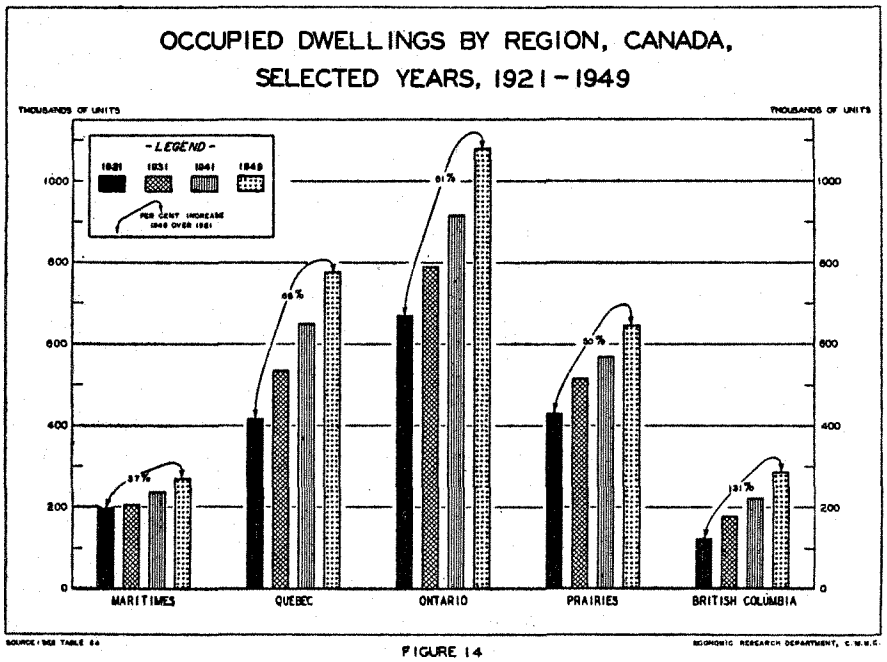


FIGURE 14

of the housing stock, taken in conjunction with the evidence assembled below on population increase, industrial expansion and rise in income for the different regions, indicate that early economic development and inflow of population give a strong initial impetus to the expansion of the housing stock. This impetus in fact may surpass in relative terms anything that old and more settled communities are likely to experience even if the rate of industrial expansion is accelerated significantly, as it was in Quebec and Ontario in the last decade. This is an important factor. It points to the role which population growth and movement play in determining the size of the housing stock and its location. It suggests that a community may in the first instance concentrate on the development of primary industries and the meeting of

[1]In these two regions the increase in the housing stock in the immediate post-war period was much greater than is apparent from the changes in the housing stock over the last three decades (see pp. 168 and 169).

immediate shelter needs by building more units. At this stage there will be little competition from construction for secondary industries, commercial enterprises or institutions. After the most urgent requirements in terms of shelter have been met, increasing wealth will be reflected in industrial, commercial and institutional expansion, and the aim for a higher standard of living of the community may find its expression to a larger extent in the quality of housing rather than in the simple increase in the number of units, with little regard to more amenities and increased facilities (see p. 237).

Housing Completions by Region

In 1949 for every house built in the Maritimes two were built in British Columbia, three in the Prairies, four in Quebec, and six in Ontario.

Maritimes. The war and immediate post-war period saw a higher level of house-building activity in the Maritimes[1] than has

TABLE 35

Average Annual Number of Dwellings Completed, by Region, Canada, 1921-1949
(Thousands of Units)

Region	1921-31	1931-41	1941-46	1947	1948	1949
Maritimes	1	3	4	7	5	5
Quebec	15	12	14	18	21	24
Ontario	16	14	18	26	29	33
Prairies	11	6	7	18	15	18
British Columbia	7	5	7	10	11	11
Canada	50	40	50	79	81	91

ever been known in the history of this region (see Table 35 and p. 194). The post-war level of house-building activity in particular is contrary to the development of the last several decades. While in the earlier years the Maritimes enjoyed a favourable economic position in regard to world trade because of the abundance of primary products, fish, forests, iron ore and coal, Canada's growing industrialization resulted in a westward movement of population and more rapid economic expansion in areas other than

[1]The above analysis refers to Prince Edward Island, Nova Scotia and New Brunswick. For reference to house building in Newfoundland see pp. 44 and 77.

the Maritime provinces. With population increasing rather slowly, 26 per cent between 1921 and 1949, as compared with the national average of 52 per cent (see Table 36), and a comparatively large housing stock dating back to an earlier period of more rapid growth, few new dwellings were added in the 'twenties and the 'thirties. Completions averaged about 1,000 units and 3,000 units per year respectively in these two decades. In the immediate

TABLE 36

POPULATION BY PROVINCE, CANADA, SELECTED YEARS, 1921-1949[1]

Province	1921 000	1931 000	1941 000	1948 000	1949 000	Change 1921-1949 Per cent
Prince Edward Island	89	88	95	93	94	5.6
Nova Scotia	523	513	578	645	645	23.3
New Brunswick	388	408	457	511	525	35.6
Maritimes	1,000	1,009	1,130	1,249	1,264	26.4
Quebec	2,361	2,874	3,332	3,848	3,943	67.2
Ontario	2,934	3,432	3,788	4,371	4,479	52.9
Manitoba	610	700	730	765	791	29.8
Saskatchewan	757	922	896	863	864	14.3
Alberta	588	732	792	864	886	50.9
Prairies	1,955	2,354	2,422	2,492	2,541	30.1
British Columbia	525	694	818	1,107	1,134	116.2
Canada	8,775	10,363	11,490	13,067	13,361	52.3

[1]All data as of census dates except 1948 and 1949 which are estimated as of Dec. 31.

post-war years, however, after a period of adjustment, industrialization of the Maritimes was revived in some measure. Employment and income were at comparatively high levels, making it possible for many families to spend more on housing. In fact, real income had risen in the post-war period in this region more rapidly than that of the more industrialized regions such as Ontario, Quebec and British Columbia. As a result the volume of house-building rose notably and was running at an annual rate of 5,000 units in 1948 and 1949.

Quebec. While the Maritimes have been losing many of their native sons and daughters, Quebec has kept most of hers. With the third highest birth rate of any province in Canada—exceeded only by New Brunswick and Prince Edward Island—Quebec during the last three decades experienced a particularly rapid population growth of 67 per cent between 1921 and 1949. This places Quebec second only to British Columbia, 116 per cent, and notably above the national average of 52 per cent (see Table 36). Extensive mineral, forest and water resources contributed to the development of many processing industries in Quebec dependent on markets far beyond Canada's boundaries. But accompanying this development there also grew up a diverse group of industries producing advanced manufactured commodities in the textile, leather, chemical and machinery and equipment fields, catering in a large degree to national, regional and local needs, and depending to a smaller extent on foreign orders. Quebec's agriculture also contributed significantly to prosperity in the province, yielding dairy products and livestock in excess of regional needs and looking to markets abroad as well as to other parts of Canada to absorb the surplus. Many of Quebec's communities are heavily dependent on a single industry or a narrow range of industries, and the labour force has proven to be less mobile than in some other regions.[1]

This combination of rapid population and industrial growth with a moderate degree of population movement out of the province has meant persistent pressure on the housing market in many of Quebec's cities and towns. Among these Montreal, Quebec's metropolis and Canada's most populous city and greatest commercial centre, developed a housing pattern of its own. In this city great emphasis is placed on rental accommodation in the form of apartment buildings and duplexes[2] (see p. 175). Among the reasons for the prevalence of rental housing accommodation in Montreal are personal preferences to live in a central location, the relatively high local tax rates which encourage multiple unit

[1]This refers more to the movement from the Province of Quebec to other parts of the country rather than to movements within the province, where in the last decade migration from rural to urban areas has been quite marked, a reversal of the trend of the preceding decade. By 1949, internal migration on the whole had slowed down somewhat, as many families who had been uprooted during the war and immediate post-war years found continuing employment and housing accommodation in the community of their choice.

[2]It should be noted that the philosophy of the purchaser of a duplex is largely a combination of that of an owner-occupier and a landlord. The individual with sufficient cash for a down payment aims not only at owning his home but also at having a tenant who will share in the operating cost of the building and in particular contribute to the carrying charges of the mortgage on the house.

projects, and concentration of a large number of families in low income brackets who cannot afford to live in a single-family type of house, since on the whole in terms of both acquisition and operating costs this is a more expensive type of residence than an apartment or a flat. This pattern is distinct from that of most other cities and towns in the province, where home ownership is more prevalent. Because of the size of Montreal, housing completion figures in the Province of Quebec as a whole are heavily weighted by building activity in its largest metropolitan city. In 1949 completions in Greater Montreal comprised 62 per cent of total completions in the Province of Quebec. What has been said earlier about the considerations that influence decisions to build rental accommodation (see pp. 65-69) is particularly applicable to Montreal, where in 1949 multiple units built comprised 79 per cent of total completions as against 15 per cent for Toronto, Canada's second largest city. It is therefore not surprising to find that the volume of house building of all types in Quebec in the immediate post-war period did not materially exceed the number of units built in the 'twenties. In this decade total housing completions in Quebec averaged 15,000 units per year, as compared with 12,000 per year in the 'thirties, and 16,000 per year in the 'forties, including 21,000 and 24,000 units respectively in 1948 and 1949 (see Table 35). In fact, as the succeeding analysis attempts to bring out, Quebec's housing program has been relatively slow in getting under way in the post-war period, and it was only by 1948 that it had reached high gear; it continued at a high level in 1949.

Ontario. More diversified industrially than Quebec, and relying more on national markets than any other region in Canada, is the Province of Ontario, Canada's most populous and most industrialized province. Within the province the regional economy, which influences the pattern of housing demand, has two distinct aspects.

The northern part, depending on mining and forest operations, relies heavily on exports for its levels of employment and income, which in turn determine to a large extent the amount of money people can and are willing to spend on housing. Since this regional economy is affected by fluctuations in exports, the latter have almost immediate repercussions on housing demand in these areas. In prosperous times of buoyant markets, experienced intermittently over the last several decades, development has been rapid, many communities have sprung up, and small settlements grew into sizable towns. The rewards for intensive

development of natural resources attracted many people, and new homes were built to accommodate them.

The southern part of the province is the most densely populated and prosperous area in Canada. Its agriculture, processing and manufacturing industries are highly diversified, and their output is sold on a nation-wide market. One of the most important industries required for rapid industrial expansion, the basic steel industry and the metal products fabricating plants, is concentrated in this area, which thus contains a major segment of Canada's capacity in this field.

Ontario is Canada's most urbanized region, including within its boundaries over 50 cities and towns ranging in size from 5,000 to over one million. This is more than one-third of all cities and towns in this size group in Canada. A comparatively large inflow of migrants, both from abroad and from other parts of the country, coupled with a high degree of mobility of the working population and a spirit of venturesomeness, are the main factors that have influenced the house-building pattern in the province. In the post-war period housing completions, which included a large proportion of houses built for home ownership, were at notably higher levels than in the years preceding World War II. Units built in the 'twenties averaged 16,000 per year, in the 'thirties 14,000, and in the 'forties 22,000, reaching 29,000 and 33,000 dwelling completions in 1948 and 1949.

Prairie Provinces. The Prairie Provinces present an entirely different picture. This region is basically agricultural, and the regional economy is dependent on a single industry to a greater extent than in any other area in Canada, perhaps with the exception of Prince Edward Island. As a result of this concentration on agriculture the level of prosperity in the Prairie region has in the past been dependent on two major factors: climatic conditions, which governed output, and the adequacy of export markets for grains and livestock. During the war years, however, there was a considerable shift from wheat to more diversified types of farming, with special emphasis on feed grains, beef cattle, hogs and poultry. In the post-war period there has been a partial reversal of this trend, even though output of some feed grains and specialty groups remains substantially high. The most remarkable development, however, of the post-war period has been an intensified effort to diversify the Prairie economy. In their initial phases these efforts have met with some success. The development of mineral resources in the northern areas and some southern parts, and extensive discoveries of petroleum and natural

gas in Alberta, have given added stimulus to the development of processing and more advanced manufacturing industries. Growth in secondary industries and in commerce has been particularly marked in Winnipeg, the Prairies' most industrialized centre.

As the result of these developments a heavy movement of population out of the region to the more industrialized areas, particularly Ontario and British Columbia, which had begun during the depression and continued through the war years, was reversed. Alberta in particular has been experiencing considerable gains from migration in the post-war period, with Manitoba experiencing smaller gains and Saskatchewan reducing the rate at which it had been losing population.

The result of these divergent trends has been that the population of the Prairie Provinces has grown more slowly over the last few decades than that of the rest of the country. In fact, except for the Maritimes, the Prairie Provinces have recorded the smallest gain in population, 30 per cent, from 1921 to 1949 (see Table 36).

This pattern of economic development and population growth has left its imprint on the housing stock, its changes and composition over the period under review. In the 'twenties, when economic conditions in the Prairies were relatively favourable, an average of 11,000 units was built per year. In the 'thirties, when this region was more severely hit by the depression than any other part of Canada, annual housing completions averaged 6,000 units, rising to 10,000 in the 'forties. However, this latter figure includes both the very low levels of house building during the time when a large exodus of the population to war industrial centres occurred, and the high level of house-building activity in the post-war period, when 15,000 and 18,000 units respectively were built in 1948 and 1949. In fact, 18,000 units were also completed in 1947 and this achievement equalled the number of houses built in the Province of Quebec that year. This is notable if it is considered that the Prairie Provinces have only two-thirds of Quebec's population and fewer of their people live in urban centres of any significance. In no small measure the post-war housing boom in the Prairies was due to an unsurpassed level of prosperity in this region both during World War II and in the first few years following its conclusion. In fact, real income in this region in the post-war period rose more rapidly than in any other region in Canada (see p. 185).

British Columbia. Of the different regions which make up Canada, British Columbia has had the most phenomenal growth over the last three decades. In 1921 it was sixth in size of popu-

lation, but its rapid rate of growth, accelerated in the war years and continuing into the post-war period, has raised it to third place (next to Ontario and Quebec) among the provinces in population, overall production and manufacturing. Over half of the population is concentrated in the lower Fraser Valley, and most of it lives in Greater Vancouver, Canada's third largest city and second seaport. Almost one-fifth of the population lives in south-eastern Vancouver Island alone, in the vicinity of Victoria, with other major pockets of concentration in the agricultural Okanagan and the minerally rich Kootenay Valleys.

The economy of the province is largely based on a few natural resources available in abundance, in the main lumber, pulp and paper, salmon, base metals and apples. Most of these commodities depend on foreign markets for 75 to 90 per cent of their sales.

British Columbia's climate has been a great attraction to settlement in this region. In some measure the attraction of the climate is instrumental in reducing mobility of the working population, because many who have flocked to some of British Columbia's industrial centres in the war and post-war period will be loath to leave these areas if and when employment opportunities become less favourable than they used to be. This was particularly notable in the winter of 1949-1950 when unseasonal weather contributed to large-scale unemployment in that province.[1]

Taking account of the rapid growth in both industrialization and population, it is surprising to find that the volume of house building has for many years remained behind the rate of expansion in other fields. As the figures on dwellings per thousand population discussed below show, British Columbia is the only province to indicate a deterioration in the situation from 1941 to 1949 (see below). Housing completions in the 'twenties averaged 7,000 annually, as compared with 5,000 in the 'thirties, and 8,000 in the 'forties, with about 11,000 units being built in each of the two years 1948 and 1949 (see Table 35). As a result the pressure on the housing market in this province continued particularly strong throughout the post-war period.

Housing Completions Per Thousand Population by Province and Locality

Interprovincial comparisons of the different rates at which houses were built in the various parts of Canada are facilitated

[1]At the height of the unemployment situation, in the forepart of February, 1949, British Columbia, which comprises 8.5 per cent of Canada's population, recorded 18 per cent of total unemployment in the country as a whole, as indicated by the number of unplaced applicants reported to the Unemployment Insurance Commission.

by appraising house-building progress on a per thousand population basis.

Data available for the post-war period show that in 1949 Alberta led the other *provinces* with 11.1 new houses built for every thousand persons. British Columbia was second with 9.6 completions for every thousand inhabitants in 1949. In 1947 and 1948, however, British Columbia's per capita completions exceeded those of Alberta and were the highest in the country. Ontario was next in 1949 with 7.4 completions per thousand, followed by Manitoba 6.3, Quebec 6.2, Nova Scotia 5.2, Saskatchewan 4.2, New Brunswick 3.6, and Prince Edward Island 2.9. By *region*, completions on a per capita basis in 1949 were highest in British Columbia, followed by Ontario, the Prairies, Quebec, and the Maritimes (see Table 37).

TABLE 37

DWELLINGS COMPLETED PER THOUSAND POPULATION, BY PROVINCE, CANADA, 1948 AND 1949

Province	1948			1949		
	Population[1] 000	Dwellings Completed	Dwellings Completed per 1,000 Population	Population[1] 000	Dwellings Completed	Dwellings Completed per 1,000 Population
Prince Edward Island	93	252	2.7	94	269	2.9
Nova Scotia	635	2,904	4.6	645	3,365	5.2
New Brunswick	503	2,265	4.5	516	1,861	3.6
Maritimes	1,231	5,421	4.4	1,255	5,495	4.4
Quebec	3,792	21,259	5.6	3,887	23,907	6.2
Ontario	4,297	28,664	6.7	4,411	32,693	7.4
Manitoba	757	4,905	6.5	778	4,909	6.3
Saskatchewan	854	3,431	4.0	861	3,621	4.2
Alberta	846	6,473	7.7	871	9,650	11.1
Prairies	2,457	14,809	6.0	2,510	18,180	7.2
British Columbia	1,082	11,090	10.2	1,114	10,680	9.6
Canada	12,859	81,243	6.3	13,177	90,955	6.9

[1]Population as of June.

At first sight it may appear unusual to find that British Columbia was the leading province in 1947 and 1948 in terms of housing completions per thousand population and was second in 1949, while it has been stated previously that the level of activity in the 'forties was only moderately above the number of units built over the preceding two decades. The explanation for this appears to be that a large number of houses in relation to population have been built over the last several decades in British Columbia, which rate of building was not matched in other parts of the country. As a result larger *increases* in the volume of house building were required in the other provinces in the post-war period to approximate the already high rate of building activity in Canada's Pacific Coast province.

The claim is frequently made that most new house building in Canada is concentrated in a few large cities. This claim is supported by the observation that in 1949 the only dwelling completions of more than 1,000 were in 12 large cities (see Table 38). There is little doubt that in absolute terms the greatest number of houses are being built in the major urban centres. If the volume of activity, however, is related to the number of people who live in these communities, evidence available suggests that, proportionately speaking, in some years more houses are being built in smaller cities and towns than in large urban centres. This observation is borne out by data on dwelling units completed per thousand population on a locality basis for 1948 with the situation being reversed in 1949.

Among the 24 urban centres with population of 30,000 and over, three of the smaller cities were leading in 1949 in this order (ranking on a population basis in brackets): Calgary (12), Kitchener (17) and Edmonton (9). Canada's three most populous metropolitan cities, however, ranked considerably further down the list of house building per thousand population, with Montreal twelfth, Toronto twenty-first, and Vancouver tenth (see Table 38).[1] Among the reasons for a slower rate of house-building activity in the largest metropolitan centres in Canada are the greater degree of competition for the limited construction resources from construction projects other than residential, the shortage of serviced land and the rather high prices for land available within these cities, forcing many families to build on land outside the city boundaries.

[1]The ranking of cities on a population basis would vary somewhat from year to year. In 1948 for example, the three leading cities were Saskatoon, Edmonton and Kitchener while Montreal ranked eighteenth, Toronto twenty-second and Vancouver sixth.

If the twelve largest metropolitan centres are taken together, each excepting one exceeding in population the 100,000 mark, they recorded only 8.6 dwelling completions per thousand population in 1949.[1] Other major cities, also twelve in number, but decidedly smaller, varying in population size between 30,000 and somewhat above 100,000, indicate a distinctly higher completion rate, 14.2 dwellings per thousand population. Cities and towns of the 5,000 to 30,000 population size recorded in 1949 a slower rate of house building, 8.1 per thousand population.

While smaller urban centres represented a relatively less important field of house-building activity in 1949 than the major Canadian cities, this was mainly the result of a rapid rate of home building in smaller localities in preceding years. For example, total non-farm housing completions per thousand population in 1949 were 8.7, below the average for major cities which was 9.3. In 1948, however, non-farm completions were running at 8 per thousand population as against 7.7 for the 24 major cities. These data emphasize the fact that at certain periods small urban and rural communities may make important contributions to total house-building activity, a factor which should not be overlooked in formulating a national housing program.

Housing completions on farms on a per thousand population basis are considerably below those in non-farm areas: 1.5 as compared with 8.7 in 1949. The disproportionate concentration on house building in non-farm areas with much less effort devoted to farm house building has been stressed in Section 2 (see pp. 70-71).

Housing Completions, Single and Multiple, by Province and Locality

Classification of housing completions into single and multiple units provides a guide to the proportion of house building for owner occupancy as distinct from construction of rental accommodation. Data available for 1949 in national terms are discussed in more detail on page 65. Here it may be observed that about one out of every four dwelling units built was multiple while the other three were of a single unit type. Partial data available from

[1]The rate of house-building activity would also vary as between parts of metropolitan centres. In the main where most of the centrally located land of a city is built up, more and more new house building will take place on the outskirts of the community. In Greater Montreal, for example, dwelling completions in 1948 per thousand population numbered 6.4 units, in Montreal proper 5.3 and in the surrounding communities 9.7 units. For 1949, the corresponding figures were 9.8, 7.8, and 17.2 units per 1000 population respectively.

TABLE 38

POPULATION AND DWELLINGS COMPLETED, BY CITY AND AREA, CANADA, 1949

City and Area	Population[1]		Dwellings Completed			
	Number 000	Rank	Total[2] Number	Per 1,000 Population		Single as a Per cent of Total
				Number	Rank	
Metropolitan Centres						
Halifax	132	10	980	7.4	17	81.5
Hamilton	209	7	1,909	9.1	14	89.7
London	115	11	1,320	11.5	8	84.4
Montreal	1,458	1	14,722	10.1	12	20.9
Ottawa	254	6	1,005	4.0	23	69.6
Quebec	271	5	1,150	4.2	22	32.3
Saint John	90	14	361	4.0	24	36.0
Toronto	1,020	2	7,052	6.9	21	84.8
Vancouver	547	3	5,931	10.8	10	91.3
Victoria	106	13	1,173	11.1	9	82.0
Windsor	155	8	1,441	9.3	13	98.0
Winnipeg	322	4	3,298	10.2	11	81.2
Sub-total	4,679	—	40,342	8.6	—	60.3
Other Major Cities						
Brantford	37	22	499	13.5	6	88.4
Calgary	112	12	2,436	21.8	1	77.6
Edmonton	137	9	2,486	18.1	3	85.8
Fort William	34	23	402	11.8	7	90.3
Kingston	33	24	227	6.9	19	78.9
Kitchener	54	17	985	18.2	2	74.8
Regina	70	15	584	8.3	16	99.7
St. Catharines	37	21	592	16.0	4	90.5
Saskatoon	56	16	387	6.9	20	94.6
Sherbrooke	49	19	444	9.1	15	41.0
Sudbury	44	20	319	7.3	18	64.3
Three Rivers	50	18	707	14.1	5	10.9
Sub-total	713	—	10,068	14.2	—	76.4
Total Cities with Population 30,000 and Over	5,392	—	50,410	9.3	—	63.5
Cities and Towns with Population 5,000 to 30,000	1,475	—	11,916	8.1	—	88.3
Total Cities and Towns with Population over 5,000	6,867	—	62,326	9.1	—	68.2
Other Urban Centres with Population less than 5,000	—[3]	—	9,423	—[3]	—	83.6
Total Urban	—[3]	—	71,749[4]	—[3]	—	70.3
Rural Non-Farm	—[3]	—	14,021	—[3]	—	91.5
Total Non-Farm	9,861	—	85,770	8.7	—	73.7
Farm	3,500	—	5,185	1.5	—	100.0
All Areas	13,361	—	90,955	6.8	—	75.2

[1]As of December 31, 1949.
[2]Includes conversions.
[3]Not available.
[4]Including rural areas forming parts of metropolitan centres.

other sources[1] suggest that this ratio comes close to the ratio of rental units to dwellings built for owner occupancy. The percentages available for 1949 are: single units as a proportion of total completions, including conversions, 75 per cent, and units built for owner occupancy as a proportion of total completions, 68 per cent.[2] In all the provinces but Quebec single unit housing predominates, representing from 84 per cent to 98 per cent of completions in 1949.

TABLE 39

NUMBER OF DWELLINGS COMPLETED, SINGLE AND MULTIPLE TYPE, AND BUILT FOR OWNERSHIP, BY PROVINCE, CANADA, 1949

Province	Number of Dwellings Completed			Single Dwellings as Per cent of Total[1]	Dwellings Built for Ownership as Per cent of Total[1]
	Single	Multiple	Total		
Prince Edward Island	252	6	258	97.7	73.3
Nova Scotia	3,023	342	3,365	89.8	73.3
New Brunswick	1,560	301	1,861	83.8	58.0
Maritimes	4,835	649	5,484	88.2	68.1
Quebec	8,301	15,606	23,907	34.7	43.8
Ontario	29,146	3,558	32,704	89.1	77.0
Manitoba	4,203	706	4,909	85.6	59.3
Saskatchewan	3,201	420	3,621	88.4	69.1
Alberta	8,999	651	9,650	93.3	83.0
Prairies	16,403	1,777	18,180	90.2	73.8
British Columbia	9,737	943	10,680	91.2	84.2
Canada	68,422	22,533	90,955	75.2	68.0

[1]The difference between the two series is largely accounted for by single units built under the Veterans' Rental Housing Program by Central Mortgage and Housing Corporation. Close to 8,000 units were completed under this program in 1949.

The Province of Quebec stands by itself, with multiple housing construction exceeding single unit building. In this province only one out of every three units is of the single dwelling type. This ratio approximately reflects the units built for owner occupancy (see Table 39). As explained previously, the preference for rental accommodation in the metropolitan area of Montreal is mainly responsible for this.

[1]*Mortgage Lending in Canada, 1949*, p. 25.

[2]As Table 39 shows, the difference between the two percentage figures is much greater on a regional basis. However, in no small measure the difference is due to single rental units built under the Veterans' Rental Housing Program and half the number of duplexes which were counted as being built for ownership.

By and large the proportion of single to total housing units declines as urbanization becomes more pronounced. Practically all houses on farms and in rural non-farm areas, excluding sections forming parts of metropolitan centres, are single family houses. In cities and towns with population of 5,000 to 30,000 single family homes comprise about 88 per cent of the total. In the 24 major cities with population of 30,000 and over the proportion is notably lower, 64 per cent. In some cities the proportion is as low as 21 per cent for Greater Montreal and 32 per cent for Greater Quebec. For Greater Toronto, on the other hand the proportion is considerably higher, 85 per cent, and even more so for Greater Vancouver, 91 per cent (see Table 38). The desire for centrally located residences, considerations of lower capital and operating costs per unit in multiple projects and personal preferences are the main reasons for the prevalence of proportionately more multiple unit housing in some localities than in others.

Rate of House Building and Manufacturing Investment

Expansion of the Canadian manufacturing industry represented in the last decade the most important component of industrial growth. This is not to deny that significant developments have been going on and are to be expected in the future in the extractive fields, particularly in minerals, petroleum, gas and timber. But considering the stage in Canadian economic development, more intensive growth must rely to a large extent on the further processing of Canadian and imported raw materials and on the fabrication of finished products in the form of both capital and consumer goods.

Industrial expansion in its broadest terms, covering both primary and secondary industries, as has been stated earlier, is a contributory factor in encouraging house building. In the main there are two reasons for this. In the first instance industrial expansion in promising higher wages and better advancement opportunities may attract additional numbers of workers and business men. As new people move into the area pressure on the existing housing stock will increase and new houses will be built. Secondly, as the income of the majority of the population in an industrially expanding area rises, people will be able to spend more on housing. Families hitherto sharing housing accommodation for economic reasons may attempt to obtain living quarters of their own.

It is the purpose of the next few paragraphs to examine the rate of industrial expansion as reflected in manufacturing investment and the rate of house building in the post-war period in nine provinces and twelve metropolitan areas. This is followed by an examination of whether house building kept pace with regional economic growth over the last few decades.

Industrial expansion in nine provinces (that is, excluding Newfoundland) has taken place at varying rates. On the basis of 1949 manufacturing investment data the provinces can be divided into three groups (see Figure 15).

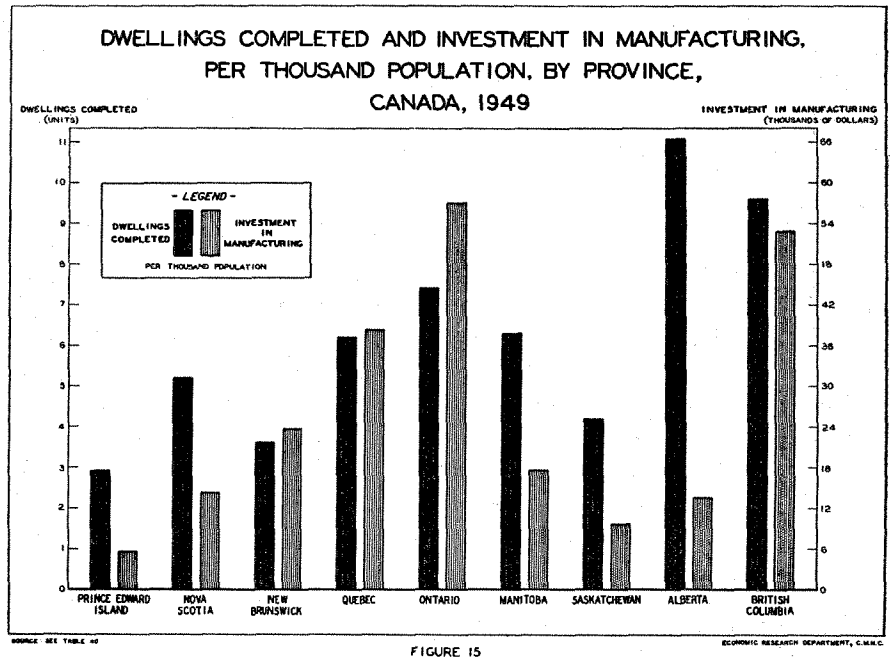


FIGURE 15

1. *Rapid Rate of Manufacturing Expansion.* This category includes Ontario, with $57,000 investment in manufacturing industries per thousand population, followed by British Columbia and Quebec, with $53,000 and $38,000 respectively. (In 1947 and 1948 Quebec was ahead of British Columbia as Table 40 indicates).

2. *Intermediate Rate of Manufacturing Expansion.* This group of provinces has been investing in manufacturing between about $15,000 and $25,000 per thousand population, and includes, in this order, New Brunswick, Manitoba, and Nova Scotia.

TABLE 40

DWELLINGS COMPLETED AND INVESTMENT IN MANUFACTURING PER THOUSAND POPULATION,[1] BY PROVINCE, CANADA, 1947-1949

Province	1947				1948				1949			
	Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population		Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population		Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population	
	No.	Rank	Am't. $	Rank	No.	Rank	Am't. $	Rank	No.	Rank	Am't. $	Rank
Prince Edward Island	2.2	9	5,383	9	2.7	9	3,516	9	2.9	9	5,555	9
Nova Scotia	4.5	8	11,354	7	4.6	6	23,920	5	5.2	6	14,264	6
New Brunswick	7.7	4	25,081	4	4.5	7	28,370	4	3.6	8	23,843	4
Quebec	4.6	7	47,303	2	5.6	5	46,028	2	6.2	5	38,307	3
Ontario	6.5	5	66,212	1	6.7	3	65,281	1	7.4	3	57,061	1
Manitoba	8.3	3	11,550	6	6.5	4	16,260	7	6.3	4	17,609	5
Saskatchewan	5.5	6	5,949	8	4.0	8	6,121	8	4.2	7	9,639	8
Alberta	8.7	2	12,994	5	7.7	2	20,609	6	11.1	1	13,548	7
British Columbia	9.6	1	39,922	3	10.2	1	42,493	3	9.6	2	52,873	2
Canada	6.3	—	42,903	—	6.3	—	43,999	—	6.9	—	39,118	—

[1]Population as of June.

3. *Slow Rate of Manufacturing Expansion.* The remaining three provinces are in this group, spending less than $15,000 per thousand population on manufacturing investment. They ranked in order of magnitude of capital outlay, Alberta, Saskatchewan, and Prince Edward Island (see Table 40).

It must be remembered that the above figures on investment relate to manufacturing industries only.[1] Other capital expenditures for industrial development, e.g. by primary industries and public utilities, which in some provinces may play proportionately a much greater role than manufacturing investment, are therefore excluded. This exclusion would, for example be particularly significant for a province like Alberta, where sizable capital expenditures were being made in the post-war period on oil and gas exploration and development.

The rate of manufacturing expansion in the various regions has some counterpart in the rate of house building in the same regions. On the basis of the housing achievements in 1949 it is possible to divide the nine provinces again into three groups.

1. *Rapid Rate of House Building.* This group involves between 7 and 11 houses built per thousand population and includes, in this order, Alberta, British Columbia, and Ontario. Both British Columbia and Ontario have been recorded as experiencing a rapid rate of manufacturing expansion. Alberta, which in terms of manufacturing investment has previously been classified as expanding at a slow rate, has in fact been expanding rapidly although the main emphasis of development has been in the primary industries, particularly oil and gas, with secondary development in manufacturing to follow later. In the main, then, the high rate of house building in these regions was accompanied also by a high rate of industrial expansion.

2. *Intermediate Rate of House Building.* There are three provinces in this group recording between 5 and 6 houses built per thousand population. They include Manitoba, Quebec, and Nova Scotia. Two of these provinces, Manitoba and Nova Scotia, have previously been classified as experiencing an intermediate rate of manufacturing expansion and one, Quebec, a rapid rate.

There appear to be good reasons why in 1949 the rate of house building in Quebec ranked lower than the rate of manufacturing investment. In this province the great dependence on rental

[1]For coverage of investment by manufacturing industries and for additional data on business investment by provinces, see *Private and Public Investment, Outlook 1950*, pp. 12, 18-28.

house building and the uncertainties of profitable investment in residential real estate commercially operated have been retarding factors. As a result the total number of units built in this province has remained in the post-war period at a relatively lower level than in most other areas. However, relaxation of rental controls and more favourable investment opportunities[1] contributed to a more rapid expansion of rental house building and with it to total house-building activity in 1949. But even a rapid expansion in 1949, as compared with previous years, was insufficient to bring the volume of new housing construction in Quebec up to the comparatively high level of some of the other provinces, which they had reached over a period of several years.

3. *Slow Rate of House Building.* There are three provinces in this group, Saskatchewan, New Brunswick and Prince Edward Island, with 4 or less dwellings built per thousand population. Two of these, Saskatchewan and Prince Edward Island, had previously been rated as expanding slowly industrially. New Brunswick, which had previously been described as experiencing an intermediate rate of industrial expansion in 1949, had in previous years (1947 and 1948) also experienced an intermediate rate of house building. But in 1949, with the most urgent housing demand met, the rate of house building slackened although manufacturing expansion remained at high levels.

The above appraisal is a rather crude and static interpretation of the rate of industrial expansion and of house building. It does not take account of many of the factors which will help to explain *why* people build factories and *why* they build homes. Further, any conclusion based on the situation as it exists in one particular year may be misleading. In some regions a high rate of manufacturing investment and house building may precede similar records achieved in other regions by several years. As comparable data available only for the period 1947 to 1949 show, the situation differs somewhat from year to year (see Table 40).

There are further variations within regions among the different communities. This is indicated by investment and housing completion data on a per thousand population basis in Canada's twelve metropolitan cities (see Table 41 and Figure 16). The contrast between industrialized and non-industrialized cities can be great. For example, Greater Victoria, in the main a government city, showed the second highest rate of dwelling completions per thousand population in 1949, while Greater Toronto, the city

[1]Particularly as a result of the rental insurance plan under the National Housing Act, 1944 (see p. 493).

with the fourth highest rate of manufacturing investment, ranked ninth, almost at the end of the list of house-building activity in the twelve metropolitan centres. In turn the rate of industrial growth will vary from year to year. For example, in 1949 Greater Toronto moved from second to fourth place, preceded by Hamilton, London and Windsor, with each of these three cities recording also a greater rate of house-building activity.

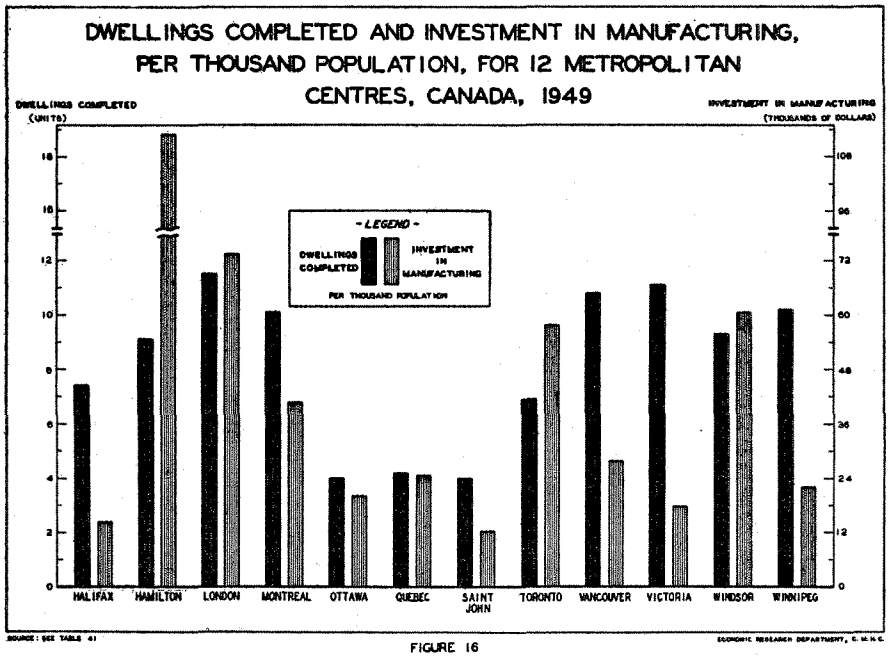


FIGURE 16

In the light of these variations it is difficult[1] to come to more definite conclusions until additional observations over a period of years can be accumulated and analyzed. All that can be deduced at present from the data available is that regional differences in the rate of industrial expansion as reflected in the growth of

[1]To give an example: A rapid rate of manufacturing investment would attract new workers and their families and thereby create new housing demand. But as building materials and construction workers are absorbed in carrying out a large volume of industrial and commercial construction, this would reduce the resources available for house building and thereby prevent rapid expansion of the volume of residential construction until either industrial and commercial construction are reduced or the resources of the construction industry and its efficiency are increased. One of the reasons for the rapid expansion of house building in the Prairies and the Maritimes in the immediate post-war period is the fact that in these two regions residential construction did not have to compete as much against industrial and commercial construction as in the other three more industrialized regions in Canada.

TABLE 41

DWELLINGS COMPLETED AND INVESTMENT IN MANUFACTURING, PER THOUSAND POPULATION, FOR 12 METROPOLITAN CENTRES, CANADA, 1947-1949

Metropolitan Centre	1947				1948				1949			
	Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population		Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population		Dwellings Completed per 1,000 Population		Investment in Manufacturing per 1,000 Population	
	No.	Rank	Am't $	Rank	No.	Rank	Am't $	Rank	No.	Rank	Am't $	Rank
Halifax	6.3	6	12,835	12	5.3	9	16,159	10	7.4	8	14,394	11
Hamilton	6.6	5	139,020	1	7.1	6	163,097	1	9.1	6	112,918	1
London	10.1	4	49,514	4	7.5	4	46,743	5	11.5	1	73,403	2
Montreal	5.2	9	56,400	3	6.4	7	54,305	4	10.1	5	40,672	5
Ottawa	4.8	10	28,452	7	7.3	5	33,604	6	4.0	11	20,078	9
Quebec	4.6	11	19,162	8	4.7	10	25,481	9	4.2	10	24,723	7
Saint John	5.5	7	17,082	11	3.5	12	14,058	11	4.0	12	12,222	12
Toronto	4.4	12	76,983	2	4.6	11	60,954	2	6.9	9	57,745	4
Vancouver	13.2	2	37,298	6	13.4	2	32,844	7	10.8	3	27,787	6
Victoria	14.6	1	18,146	9	14.2	1	10,689	12	11.1	2	17,924	10
Windsor	5.4	8	48,268	5	5.5	8	56,138	3	9.3	7	60,645	3
Winnipeg	11.9	3	17,926	10	9.9	3	26,075	8	10.2	4	22,049	8
Combined Twelve Metropolitan Centres	6.7	—	53,055	—	7.1	—	50,549	—	8.6	—	40,380	—

secondary industries appear to be accompanied by similar variations in the rate of house-building activity.[1]

Housing and Regional Economic Growth

Comparable data of the type used in the above appraisal are not available for the pre-war period. However, some more general information is available on the impact of house building on the national economy, and this is discussed in Section 8. There are some regional aspects of this point that deserve mention here. In particular the question is pertinent: Has house building kept pace with the economic growth of the various parts of Canada? In discussing housing completions on a regional basis, the impression has been given that this was substantially the case.

An examination of the evidence available is facilitated if the comparison of economic changes that have occurred is made for periods of somewhat comparable levels of activity. For this reason five sets of data are assembled for two years in which relatively full use was made of Canadian resources: 1929, the pre-war peak, and 1949, when employment and income reached their highest point in the course of the first four post-war years. The data used on a regional basis for these two years include: number of occupied dwellings, people residing, persons employed in eight major industries, tons of carloadings, and personal income in real terms (see Table 42).

Manufacturing expansion in the post-war period in Ontario, Quebec and British Columbia has previously been described as rapid. This expansion is in line with economic growth in these regions over the last several decades. In all three provinces industrial employment rose by between two-thirds and four-fifths between 1929 and 1949. This increase for the three provinces was more rapid than the increases in either population or the labour force, suggesting a change in the structure of the economies of these regions towards greater industrialization. In line with this development, transportation by rail of goods, many of which were processed and manufactured from Canadian raw materials, also rose notably, about one-half in Ontario, one-third in Quebec, and one-quarter in British Columbia.[2]

Regional economic growth and change in industrial structure

[1]For a discussion of variations in levels of national economic activity and the volume of house building, see pp. 251 ff.

[2]British Columbia being a coastal province, some of the increase in transportation of goods occurred by means of ocean shipping.

were associated with significant increases in personal income in real terms.[1]

Over the last two decades average personal income in *real* terms, i.e. after allowing for price increases that occurred over the last two decades, rose more rapidly in Ontario and Quebec, each 55 per cent, than in British Columbia, 35 per cent. But residents in all three provinces had considerably more money to spend in the post-war period than they had ever had before with per capita personal income amounting to $1,112, $803 and $1,025 respectively (see Table 42). Some of it went into the improvement and expansion of housing accommodation. It is therefore not surprising to find that in 1949 there were many more occupied houses in British Columbia (66 per cent), in Quebec (49 per cent) and in Ontario (39 per cent) than there had been in 1929. The fact that income increases in British Columbia were the smallest among the three provinces, while the housing stock increased more rapidly, suggests that population growth and movement is frequently a more important element in contributing to raising the volume of house building than increases in real income.[2]

Nova Scotia, New Brunswick and Manitoba have previously been referred to as experiencing an intermediate rate of post-war manufacturing expansion. This rate in Nova Scotia and New Brunswick is in line with the growth of industrial employment in the Maritimes. The latter was almost three-fifths higher in 1949 than it was two decades earlier, registering a somewhat more moderate increase than the rise in the three previously mentioned provinces, but still sizable. One-quarter more goods were moved by rail in the Maritimes in the post-war period than in the last pre-war peak of prosperity. And the average Maritimer was earning more money than ever before, 61 per cent more in fact than two decades earlier. While the increase in percentage terms of per capita income of the Maritimes was second only to the

[1]The data used in the text relate to per capita personal income *before* taxes. Little variation in regional *changes* from 1929 to 1949 is indicated if, instead of per capita personal income per capita *disposable* personal income, that is, *after* taxes, is used. However, in absolute terms changes over the period are more notable because tax rates in 1949 were higher than in 1929. Percentage increases of per capita real personal income for 1929 to 1949 are shown below, with per capita real disposable personal income shown in brackets: Maritimes 62 (57); Quebec 55 (48); Ontario 55 (46); Prairies 75 (69); British Columbia 30 (22); Canada 58 (50).

[2]The above analysis is a simplified sketch of some of the considerations involved. There are many other important regional factors that should be taken into account particularly net family formation and productivity changes. Appraisal of these factors in national terms will be found on pp. 199 ff. and 243 ff.

TABLE 42

OCCUPIED DWELLINGS, POPULATION,[1] INDUSTRIAL EMPLOYMENT, CAR LOADINGS AND PERSONAL INCOME PER CAPITA IN CONSTANT (1949) DOLLARS, CANADA, 1929 AND 1949

Region	1929				
	Occupied Dwellings 000	Population 000	Industrial Employment 000	Car Loadings Millions of Tons	Personal Income per Capita in Constant Dollars
Maritimes	205	1,007	88	10.7	394
Quebec	522	2,772	343	13.1	518
Ontario	777	3,334	517	24.3	718
Prairies	504	2,224	175	21.6	551
British Columbia	172	659	107	7.3	786
Canada	2,180	9,996	1,230	77.0	596

Region	1949				
	Occupied Dwellings 000	Population 000	Industrial Employment 000	Car Loadings Millions of Tons	Personal Income per Capita in Constant Dollars
Maritimes	271	1,255	139	13.7	636
Quebec	777	3,887	594	17.6	803
Ontario	1,080	4,411	867	37.2	1,112
Prairies	645	2,510	248	30.1	967
British Columbia	286	1,114	193	9.3	1,025
Canada	3,059	13,177	2,042	107.9	941

Region	Per cent Increase, 1929-1949				
	Occupied Dwellings	Population	Industrial Employment	Car Loadings	Personal Income per Capita in Constant Dollars
Maritimes	32	24	58	28	61
Quebec	49	40	73	34	55
Ontario	39	32	68	53	55
Prairies	28	29	42	39	75
British Columbia	66	69	80	27	30
Canada	40	32	66	40	58

[1]Population as of June.

Prairies, the absolute 1949 average of $636 was lower than that of any other region. On the whole, economic growth in the Maritimes was proceeding at an intermediate rate. The number of houses increased also at an intermediate rate, 32 per cent from 1929 to 1949. This is somewhat slower than in British Columbia, Quebec or Ontario, but more rapid than in the Prairie provinces.

A special situation has prevailed in Manitoba, Saskatchewan and Alberta. The economy of this region has been primarily dependent on agricultural production. Prosperity and economic growth of the Prairies is therefore inadequately reflected in the increase in the number of people working in secondary industries or in the number of carloadings. For it is not only the number of carloads of agricultural products that are shipped from the Prairies to other parts of the country and to other countries that is important but also the price farmers get for the products they sell. High agricultural prices prevailed throughout the post-war period, considerably above the level of the 'twenties.[1] Although there has been a more distinct change in economic development in the Prairies in the post-war period, as indicated earlier, the bulk of income in this region still comes from the sale of agricultural commodities. Post-war prosperity in the Prairies is reflected in per capita personal incomes, amounting to $967 and exceeding those of 1929 by 75 per cent in real terms, the largest rise recorded for any region in Canada. In absolute terms, per capita incomes in the Prairies were higher than those of Quebec in spite of the higher degree of industrialization of this province. A high level of agricultural prosperity and considerably stepped up rate of resources development, particularly in Alberta, was mainly responsible for this.

But in spite of the fact that incomes in real terms were notably higher in the post-war years than before the war, the number of houses had increased less rapidly, 28 per cent from 1929 to 1949. The rise is less than in any other region. Small increases of population over the whole period under review, accompanied by intermittent losses of population and the predominance of agricultural population, which customarily spends less on housing than urban dwellers, are two of the main reasons accounting for this development. Another special feature of the housing

[1]For example, the average price paid for No. 1 Northern wheat in store at Fort William (spot price) was $1.24 per bushel in the 1928-29 crop year and $1.24-$\frac{3}{8}$ in 1929-30. A roughly comparable figure for the 1948-49 crop year would be $2.05 (i.e., Wheat Board selling prices of $2.05 per bushel to U.K. contract and domestic users and an average of $2.23 on open market sales less approximately 5 cents per bushel storage charges on all three types of wheat transactions).

situation in the Prairies is associated with technological change. The significant increase in mechanization of farms in this region has made it unnecessary for a large number of people to continue living on farms. There has been a shift to more people living in urban communities both large and small, who either commute regularly to and from their place of work on farms or do seasonal work, living in temporary quarters while on the farm.

The main results of the preceding appraisal are brought together in Figure 17.[1] As the chart indicates, a close relationship is evident in the ranking of regions with respect to the rates of increase of occupied dwellings, population, and industrial employment. This correspondence supports the thesis that growth of the housing stock is associated closely with population growth and suggests also that population growth over the past twenty years has been accompanied by significant industrial development.

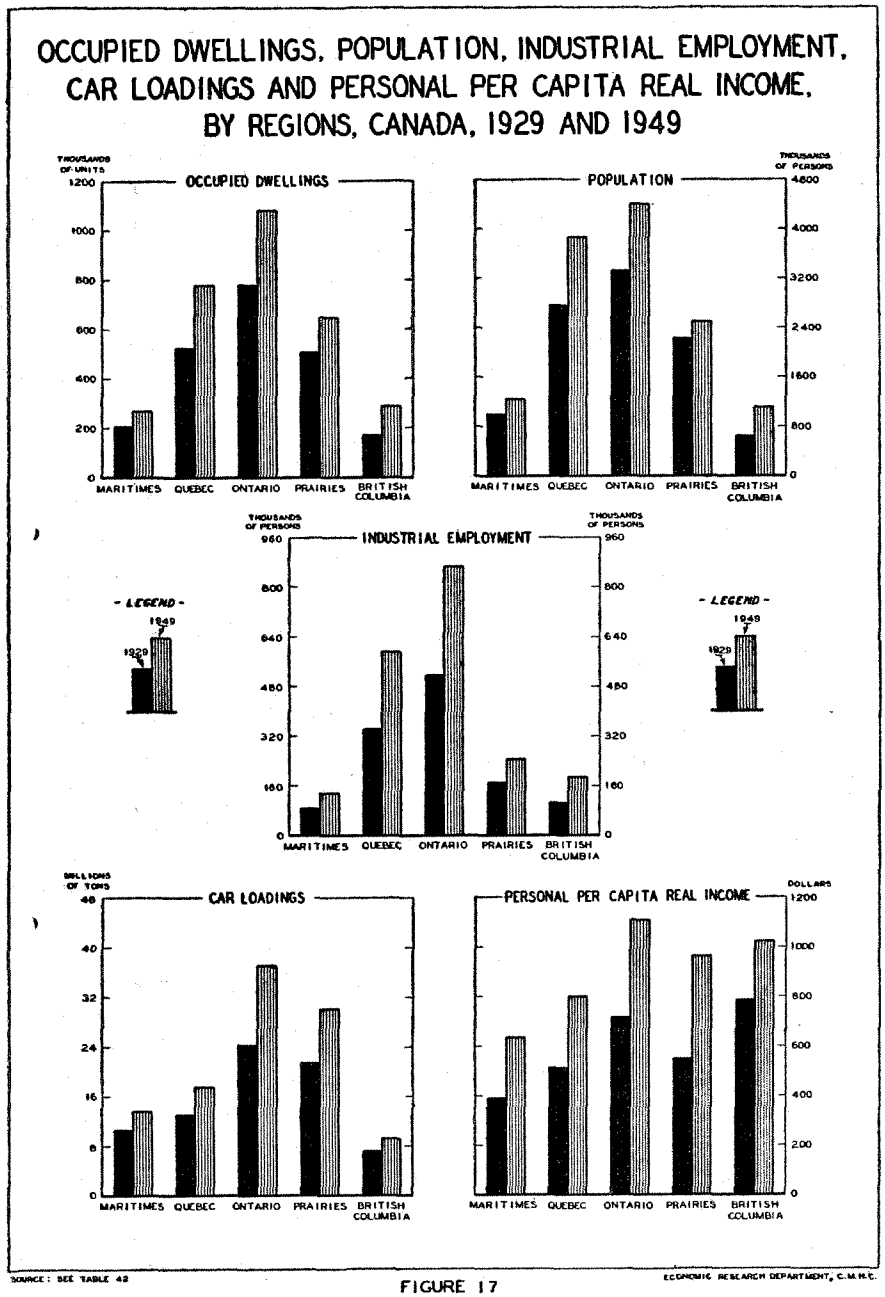
Much less correspondence is indicated between the regional rates of increase in occupied dwellings and in per capita real income over the two decades. This suggests that in regional terms an *increase* in real income by itself is not necessarily a strong enough factor to contribute to a large expansion of the housing stock.[2] More important are regional differences in the absolute level of income, and, as the analysis in Section 7 suggests, increases in income are not necessarily accompanied by corresponding rises in expenditures for shelter. The regional data available add evidence that this applies not only for the country as a whole but also for most of its parts.

Standard of Living Accommodation by Region and Area

Only some rough appraisal of variations in the standard of living accommodation by region and area is possible because of the limitations of the quantitative evidence available. Two sets of estimates have been prepared which throw light on the subject: (1) number of persons per dwelling, and (2) families without housing accommodation of their own. In interpreting these data a number of qualifications discussed in Section 7 should be borne in mind (see pp. 195 ff.).

[1]Regional car loadings data do not indicate any close relationship with changes in housing stock. Changes in the regional structure of transportation services might be one explanation for this.

[2]However, high absolute levels of income and a distribution of income which allows a maximum number of families to afford economic housing are important elements in determining effective housing demand.



SOURCE: SEE TABLE 42

ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

FIGURE 17

Persons per Dwelling

As a result of the various rates of population growth and of expansion of the housing stock which have been mentioned previously, the smallest number of persons per dwelling at the end of 1949 was recorded for the Prairie Provinces and British Columbia, each with 3.95 persons per dwelling, followed by Ontario with 4.14 and the Maritimes with 4.70. Quebec, with 5.07, showed the largest number of persons per dwelling of any province in Canada. The large size of families in most parts of this province was mainly responsible for this. In Greater Montreal, where the average size of family is smaller than in the rest of the province, the concentration of a large number of families in lower income brackets living more crowded together than families in higher income brackets is another factor.[1]

Three of the regions showed a continuing reduction in the average number of persons per dwelling over the last three decades. The situation was different for two regions, British Columbia and Ontario. The former province, which recorded 4.2 persons per dwelling in 1921, 3.9 in 1931, and 3.7 in 1941, experienced a reversal in trend when, as a result of rapid war and post-war influx of people, the ratio went back in 1949 to about the 1931 level of close to 4 persons per dwelling. For similar reasons the average number of persons per dwelling in Ontario in 1949 was the same as in 1941 (see Table 43). Since the long term trend in British Columbia and Ontario has been in the direction of a reduction in the number of persons per dwelling it is likely that should the relatively large post-war home building program continue for several more years the pre-war trend will reassert itself. Of course, decreasing levels of economic activity, accompanied by a falling off of real income and employment and the amount spent for housing, would likely slow down any development in this direction. This observation also applies to other parts of the country.

Over the last three decades the relative improvement of the housing stock as expressed in terms of persons per dwelling has been most marked in Quebec, where the number decreased from 5.7 persons per dwelling in 1921 to 5.1 persons per dwelling in 1949, and in the Prairie Provinces, where a decrease from 4.6 to close to 4 was recorded. Smaller decreases were experienced in Ontario, from 4.4 to 4.1; in the Maritimes, from 5.1 to 4.7; and in British Columbia, from 4.2 to close to 4 (see Table 43). How-

[1]For an appraisal of overcrowded conditions in Montreal and comparison with other major cities, see *Housing and Community Planning*, pp. 92-100.

ever, if the comparison is made over a longer period, say the approximately seven decades between 1881 and 1949, the greatest reduction in the number of persons per dwelling is recorded in the Maritimes, 24 per cent, followed by Ontario, 23 per cent, the Prairies, 22 per cent, Quebec, 20 per cent and British Columbia, 19 per cent.

TABLE 43

PERSONS PER DWELLING, BY REGION AND AREA, CANADA, SELECTED YEARS,[1] 1921-1949

Region and Area	1921	1931	1941	1948	1949
Region					
Maritimes	5.06	4.90	4.77	4.69	4.70
Quebec	5.66	5.36	5.12	5.10	5.07
Ontario	4.38	4.33	4.14	4.16	4.14
Prairies	4.56	4.57	4.25	3.98	3.95
British Columbia	4.23	3.90	3.67	3.98	3.95
Canada	4.77	4.65	4.42	4.39	4.37
Area					
Urban	4.74	4.60	4.38	—[2]	—[2]
Rural Non-Farm	4.95	4.77	4.24	—[2]	—[2]
Total Non-Farm	4.79	4.63	4.35	4.16	4.18
Farm	4.72	4.70	4.63	5.12	4.98

[1]Data for 1921, 1931 and 1941 represent mid-year figures, while data for 1948 and 1949 represent year end figures.
[2]Not available.

There are a number of different reasons for these variations. In Ontario rapid industrialization and generally more prosperous conditions than in the rest of the country were the main factors contributing to the improvement. In the Maritimes movement of population to other parts of the country or emigration outside the country meant leaving a smaller population in relation to the area's fixed assets, of which housing is an important part. In Quebec the rapid urbanization, mainly due to the extraordinary growth of the Greater Montreal area, has been a contributing factor, offset in part by the continuation of large families, mainly in the rural parts of the province, not paralleled in other parts of Canada. In the regions west of Ontario economic development in the last seven decades has been particularly rapid. The decrease in the number of persons per dwelling is a less adequate

reflection of the changes that have occurred in the standard of living accommodation in these regions than in the more settled areas east of the Prairies.

The location of houses in the various regions, whether they are situated in urban centres, rural communities or on farms, is another element that should be considered in appraising the standard of living accommodation for each province. For example, in a region where the population is predominantly rural as in the Prairie Provinces, the comparatively small volume of house building on farms would contribute to raising the number of persons occupying one dwelling unit. Further movement of population from rural to urban centres or out of certain provinces into other regions would contribute to a reduction of the number of persons per dwelling in the areas from which they moved. This in fact has been the situation in the Prairies, mainly as a result of population movement to British Columbia and Ontario during the war years.

Because of the importance which location of housing has as a factor in determining the standard of living accommodation, the preceding regional appraisal of persons per dwelling can be usefully supplemented by looking at the housing situation on an area basis, distinguishing between urban areas, non-farm and farm areas. Available data for selected years for the period 1921-1949 are shown in Table 43.

It has been stressed earlier that farm house building has been at comparatively low levels over the preceding three decades. Since farm population grew more rapidly than the number of farm homes built, the number of persons per farm dwelling is somewhat higher in 1949 than it had been in 1921, 5 as compared with 4.7. Some slight improvement appears to be indicated in purely statistical terms for the inter-war period, with a low point recorded in 1941. But in this year Canada's farm population had lost large numbers as a result of the movement to war production centres. The rural improvement indicated in 1941 was therefore more a reflection of the wartime shift of population than any basic change in the standard of farm living accommodation.

The number of persons per non-farm dwelling has decreased consistently over the last three decades, from 4.8 in 1921 to 4.2 in 1949. The most significant improvement appears to have occurred in the non-farm rural areas, which in 1921 recorded a larger number of persons per dwelling than urban areas. The situation however appears to have been reversed at the beginning of the 'forties, and may be continuing (for a discussion of the peculiarities of house building in non-farm rural areas, see pp. 47 ff.).

Families Without Homes of Their Own

Families without homes of their own comprise the number of families sharing living accommodation with other families or non-family household groups, or living in accommodation other than structurally separate units, e.g. rooming houses, institutions, etc. The extent to which this mode of living is voluntary or involuntary is discussed in detail in Section 7 (see pp. 204-206).

TABLE 44

NUMBER OF FAMILIES WITHOUT HOMES OF THEIR OWN, BY REGION, CANADA, 1947 AND 1948[1]

Region	1947		1948		Change 1947-1948 Per cent	Population 1948[2] 000	Families Without Homes Per 1000 Population in 1948
	No. 000	Per cent	No. 000	Per cent			
Maritimes	55	12.7	54	11.6	− 1.8	1,231	44
Quebec	125	28.6	144	31.2	+15.2	3,792	38
Ontario	158	36.5	175	38.0	+10.8	4,297	41
Prairies	65	15.0	59	12.7	− 9.2	2,457	24
British Columbia	31	7.2	30	6.5	− 3.2	1,082	28
Canada	434	100.0	462	100.0	+ 6.5	12,859	36

[1]At the end of 1949 families without homes of their own in Canada numbered 473,000 or 36 per thousand population. Data on regional distribution not available.
[2]As of June 1948.

Here it may suffice to point out that in 1947 the number of families without dwellings of their own was estimated at 434,000, and in 1948 at 462,000, an increase of 6 per cent. By the end of 1949 this number had increased by 2 per cent to 473,000[1] (see Table 44).

On a population basis this meant that in 1949 for every thousand persons there were 36 families in Canada without a housing unit of their own, about the same as in 1948. In that year on a regional basis relatively the largest number was estimated to live in the Maritimes, 44 families per thousand population. Ontario, with 41, was next in line, followed by Quebec with 38 and British

[1]In terms of families only the situation actually improved from 1948 to 1949 as total completions (91,000) less demolitions (9,000) exceeded net family formation (77,000) by 5,000. However the number of non-family households increased by some 15,000 during the year, resulting in an overall increase in the number of families without homes of their own of 11,000.

Columbia with 28. The Prairie Provinces, with 24, showed the smallest ratio of families without homes of their own to population. The large number of rural residents in the Prairie Provinces was mainly responsible for this. Doubling-up is much less frequent in rural than in urban areas.

Over the two years for which comparable records exist, the improvement in the regional standard of living accommodation as reflected in the number of families without homes of their own is indicated for the Maritimes (down 2 per cent), Prairie Provinces (down 9 per cent), and British Columbia (down 3 per cent). On the other hand the situation appears to have deteriorated in Ontario and Quebec (both up 11 per cent). In some measure these data provide an added explanation why house building in the two central provinces has been achieving considerable proportions in 1948 and 1949, these peaks being recorded somewhat later than those shown for the rest of the country.

Summary

Summarizing the evidence available, and bearing in mind its incompleteness, the following tentative conclusions about standards of living accommodation and the rate of house building are indicated for the various regions at the end of 1949.

1. *Prairie Provinces.* This region together with British Columbia records a smaller number of persons per dwelling than any other province. The number of families without homes of their own in relation to the people living in the Prairies is also lower than that of any other part of the country. In no small measure this situation is due to the large number of families living on farms and the loss of population in the depressed 'thirties and the war years. This trend was reversed only in the post-war period. In fact, had the Prairie Provinces not been losing so much of their population, many of whom moved to British Columbia over a period of fifteen years, it is likely that British Columbia would have shown the highest standard of living accommodation as measured by the crude data presently available. It should also be remembered that the proportion of persons living on farms is greater in the Prairies than in almost any other region in Canada. Farm homes frequently lack some of the amenities of urban homes. So on the basis of physical characteristics, housing standards would not compare as favourably with those of other regions as on a population basis.

Coupled with the high volume of residential construction in the post-war period, most of the accumulated backlog for new housing in this region has been met, and subsequent levels of house-building activity will depend greatly on further increases and inter-regional movement of population, as well as the slow improvement of the standard of living accommodation, reflected in both the quality of housing and the smaller degree of doubling up. A special factor is the resources development boom, particularly oil and gas, presently under way in Alberta, which has added new stimulus to community and housing developments in some urban centres.

2. *British Columbia.* This province, which records about the same number of persons per dwelling as the Prairies, has the second smallest number of families without homes of their own. In fact, this province had at the outbreak of the war the best record of any Canadian region in terms of persons per dwelling, but the steady influx of people both during the war and in the post-war period, exceeding considerably the influx of the preceding decade, was responsible for a greater degree of overcrowding than had been experienced previously. The number of housing completions, rapidly as they increased in the post-war period, failed to take care of the population increase. Pressure on the housing market in this province, particularly in the large urban centres, continued strong at the end of 1949 but in many communities in the interior the backlog of demand appeared to have been substantially met.

3. *Ontario.* This province ranked third among the regions in terms of persons per dwelling, but fourth in terms of families without homes of their own. It included cities like Toronto, Ottawa, and a number of smaller industrial centres where pressure on the housing market was particularly great throughout the post-war period and continued at the end of 1949. Further, high income levels throughout most parts of the province were an important factor contributing towards "undoubling." This means that many families who had been sharing living accommodation with other families were searching for living quarters of their own because they could now afford them. House building, which concentrated in the main on building for owner occupancy, has been reaching a new peak in 1949. As a result of constant pressure for new housing accommodation in this province supply was finally beginning to catch up with the demand accumulated over a long period of time. This process of catching up, however, appeared by no means accomplished by the end of 1949.

4. *Maritime Provinces.* This region ranked fourth in terms of persons per dwelling, ahead of Quebec, but had relatively the largest number of families without homes of their own, indicating a high degree of doubling up. With population changing only little housing pressure in the Maritimes, while still strong, has been less persistent than in most other regions in Canada. Nevertheless shortages dating back to the depressed 'thirties and the war years were great enough to induce a level of house building in the immediate post-war period higher than anything previously known. Record activity, however, appeared to be of limited duration. While housing construction was not likely to decline to the very low levels of the pre-war years, it would probably continue at lower levels than the peak volume reached in the immediate post-war period.

5. *Quebec.* This province had the highest rate of persons per dwelling in Canada, mainly as a result of large size of families. Families without homes of their own per thousand population were comparatively less frequent than in either Ontario or the Maritimes. Nevertheless, the housing shortage in this province has been great in the immediate post-war period, particularly in the industrial and transportation centres, which grew rapidly during the war. The housing problem of Montreal, which is currently more than half of Quebec's housing problem in terms of numbers of houses being built, incorporates so many distinctive features as to constitute almost a separate region. The number of new houses built in the immediate post-war period rose slowly at first in the province as a whole and in Montreal in particular. By 1949, however, the volume of house building reached a new peak. At this rate supply was likely to catch up fairly quickly with much of the persistent backlog of housing demand noted in this province unless special new demands developed as a result of industrial mobilization.

While regional data are available on only a few aspects of housing standards, levels of house building, and ability and willingness to spend on new housing accommodation (see also p. 240), what evidence is available suggests that at the end of 1949 housing demand as well as housing supply in the various provinces differed greatly. This situation is likely to continue and will be reflected in an uneven growth of the housing stock in the various parts of the country. The meaning of this appraisal for the framing and carrying out of a national housing program is clear: it points to the need to take cognizance of the different requirements of regions and localities in Canada that have distinctive features and to adopt measures contemplated accordingly.

SECTION SEVEN

HOUSING AND POPULATION

SINCE the first purpose of housing is to provide shelter from the elements for the population of a country, there is a definite relationship between the number of people and the number of houses they use. This relationship depends on many factors, among which the size and composition of the population, its industrial and cultural development, its tradition and philosophy of life, its income and prospects for the future, are important. Insufficient data are available to examine comprehensively all the various factors that account for the relationship between population and housing in Canada. However, sufficient information on the growth and composition of the Canadian population and the increase in the housing stock is available to shed light on the questions, (1) whether the Canadian standard of living accommodation has been improving; and if it has been improving over long periods of time, whether such an improvement has been evenly distributed over the years; and (2), whether an area of potential housing demand can be delineated in Canada. Some scattered information available on incomes and assets makes it possible to shed light also in a preliminary way on the question (3), what effect given levels of income and assets and a given distribution of income may have on the volume of new residential construction.

The *national* standard of living accommodation is reflected in such measurements as the number of persons per dwelling, net family formation and new dwellings added, families occupying separate dwellings and families without homes of their own. These series are examined in this section. They reflect changes in the national standard of living accommodation in a broad overall sort of way and do not take account of the housing problems of the individual family which, for example, may be in the market for larger, better or differently situated housing accommodation. Further, the quantitative approach even if comprehensive does not take full account of changes in the quality of the housing stock, an important element in an appraisal of variations in the national standard of living accommodation. However, the discussion on residential net capital formation in Section 3 deals with some aspects of the effect of changes in quality on the housing stock, and descriptive material on this subject will be found in a number of publications[1] so that the appraisal here can be confined to an

[1]See for example, *Housing and Community Planning*, Chapters 4-6.

examination of a few selected indicators which have hitherto been unavailable.

In an appraisal of the relationship between people and houses as it takes the form of housing need and housing demand, four groups of persons should be considered: (1) those who have a dwelling of their own and do not want to move; (2) those who have a dwelling of their own but want to move for a number of reasons, e.g. occupational mobility, increased size of the family, and improvement of the standard of living accommodation; (3) those who do not have a dwelling of their own but do not want one, e.g. voluntarily doubled-up families; and (4) those who do not have a dwelling of their own but who want a separate unit, e.g. a couple planning to get married, or a family currently sharing accommodation with another family.

Groups (1) and (3) will not exert pressure on the housing market. Groups (2) and (4) desire new housing accommodation and therefore may affect the housing market. To what extent the two last mentioned groups will affect the housing market will in turn depend on whether they are in an economic position to acquire or lease housing accommodation at prevailing prices or rents. It is therefore necessary, taking groups (2) and (4) as a whole, to divide them into group (*a*), those who can afford to purchase or rent separate living accommodation at prevailing prices or rents, and group (*b*), those who cannot afford to purchase or rent separate living accommodation at prevailing prices or rents. The housing requirements of group (*a*) represent effective demand for additional housing accommodation. The housing requirements of group (*b*) may represent a physical need for additional housing accommodation but this cannot be met at the level of incomes available to this group except through sub-economic housing publicly assisted or otherwise provided. It is important to bear in mind this distinction between housing demand and housing need in any appraisal of the relationship of population to housing on the North American Continent, where the supply of new housing depends largely on effective demand.[1]

Population and the Stock of Dwellings

At the end of 1949 Canada's population of 13.4 million lived in some 3.1 million houses, an average of 4.4 persons per dwelling.

[1]For a summary of publicly assisted housing in Canada, see Section 4, and for an attempt to delineate quantitatively housing demand and housing need for the four largest cities in Canada, see "Housing Need and Housing Demand," *Journal of the Royal Architectural Institute of Canada*, June, 1950, pp. 183-190.

The present Canadian standard of living accommodation, which is among the highest in the world, has been the result of gradual improvement over many decades. Over the last seventy years Canada's population has more than trebled, but the stock of housing increased more rapidly, so that currently there are four times as many dwellings in Canada as there were seventy years ago (see p. 478). This improvement is reflected in the changing ratio of persons per dwelling. In 1881 this ratio was 5.6, in 1949 it was 4.4. Or to put it differently, merely on the basis of population per dwelling Canadians were 25 per cent better off in 1949 than their grandparents some 70 years ago.

Decade changes indicate a continuous improvement in the standard of living accommodation, as expressed in terms of persons per dwelling. However, an examination of annual data available for the period 1921 to 1949 suggests that at times the situation improved more rapidly than at others, and in still other periods it deteriorated. Dwellings per thousand population in Canada numbered 216 in 1921. In each subsequent year until 1931 dwellings increased either as rapidly as population or more rapidly. As a result dwellings per thousand population were 226 in 1931, an improvement of 5 per cent in the relationship of population to dwellings over the decade. However, because of the low volume of house building during most of the 'thirties (see Section 2), the number of dwellings per thousand population decreased from 1931 to 1936 in spite of a declining rate of population increase. It was only in 1937 that the dwellings per thousand population ratio reached 227, slightly above the 1931 level. From 1937 on the number of dwellings increased more rapidly than population, with the result that by 1941 a ratio of 233 dwellings per thousand population was reached, an 8 per cent improvement over 1921 in the relationship of population to dwellings. In 1942 the ratio remained the same, but declined in 1943 and 1944 as the volume of housing construction was substantially reduced while population kept on climbing. From 1945 to 1949 new houses were constructed at an increasing rate but population also rose rapidly. And it was only in 1949 that the ratio of dwellings per thousand population reached 234 and thereby exceeded slightly the previous peak of 1941 (see Table 45)

While a comparison of ratios of population to housing stock suggests in a broad sort of way some of the basic improvement in the standard of living accommodation, it does so in an oversimplified manner. There are many other facets to an examination of the standard of living accommodation in a country besides the

number of dwellings available and the number of people who live in them. As suggested earlier one important factor is the quality of housing, another the relationship between the size of houses and the size of families. Both aspects have been examined in

TABLE 45

POPULATION AND STOCK OF DWELLINGS, CANADA, 1921-1949

Year and Period	Total Population[1] 000	Stock of Dwellings 000	Dwellings per 1000 Population
1921	8,852	1,909	216
1922	8,960	1,946	217
1923	9,076	1,984	219
1924	9,219	2,018	219
1925	9,374	2,057	219
1926	9,547	2,106	221
1927	9,740	2,157	221
1928	9,935	2,214	223
1929	10,120	2,271	224
1930	10,293	2,318	225
Average for Decade	9,512	2,098	221
1931	10,441	2,358	226
1932	10,568	2,379	225
1933	10,682	2,395	224
1934	10,787	2,417	224
1935	10,890	2,444	224
1936	10,989	2,476	225
1937	11,091	2,517	227
1938	11,203	2,554	228
1939	11,317	2,598	230
1940	11,438	2,643	231
Average for Decade	10,941	2,478	226
1941	11,572	2,693	233
1942	11,725	2,733	233
1943	11,884	2,763	232
1944	12,050	2,799	232
1945	12,226	2,840	233
1946	12,479	2,899	233
1947	12,750	2,970	233
1948	13,067	3,042	233
1949	13,361	3,125	234
Average for Period	12,346	2,874	233
Average 1921 - 1949	10,884	2,470	226

[1]As of December 31.

great detail in an earlier housing study[1] and do not require further elaboration here. However, evidence has become available on net family formation and non-family households which permits an analysis of the improvement of the standard of housing accommodation in terms of the occupants of housing units instead of in the broader terms of population. The advantage of this analysis is that it uses as the basic unit of physical requirements for housing accommodation a family or a non-family household occupying a separate dwelling. This approach more closely reflects reality.

Net Family Formation and Dwellings Completed

At the end of 1949 the number of families in Canada was estimated at 3,153,000, about the same number as the total housing stock in existence at that time, 3,125,000. However, not all these dwellings were available solely for families. Some 65,000 were vacant and an estimated 379,000 were occupied by non-family household groups.[2] There were then only 2,681,000 dwellings available for occupancy by families. As a result, some 473,000 Canadian families were without homes of their own at the end of 1949. These families were either sharing housing accommodation with other families or non-family household groups, or living in rooming houses, hotels, trailers, institutions, etc.

Various factors contributed to this situation in which one out of every seven Canadian families was without a home of its own at the end of 1949. In part this state of affairs reflected a voluntary situation, in part it was due to force of circumstances. To throw light on the situation changes in the number of families and houses are examined below.

The number of new families added rose rapidly during the 'twenties. This increase is reflected in net family formation which for most years in that period varied between 30,000 and 50,000 families. Net family formation is the total number of new families formed minus the number of existing families dissolved. The term family is used in the sense of the "natural" family, that is, a combination of two or more persons living together with a husband-wife relationship or parent-child relationship.

The rate of net family formation slowed down notably in the 'thirties, when unfavourable economic conditions reduced the marriage rate, and a substantial reduction in immigration cut down the flow of new arrivals from abroad. As a result net family formation varied for most of the years of the 'thirties

[1] *Housing and Community Planning*, pp. 92, 100 and 118.
[2] For example, a bachelor or two friends living in an apartment.

between 20,000 and 30,000 families. With the beginning of the war net family formation increased in the short space of one year from 54,000 in 1939 to 70,000 in 1940, as many military and delayed civilian marriages added to the regular flow of new families formed. Although the rate of net family formation declined somewhat in 1943 and 1944, with many thousands of Canadian servicemen overseas, net family formation even at the lowest point, 50,000 in 1944, still exceeded the pre-war peak of 48,000 reached in 1929. With the end of the war net family formation rose very rapidly, reaching a peak in 1946 of 108,000, when in addition to the return of servicemen from abroad a large number of war brides and their children joined their husbands and fathers in Canada. Most of these arrivals were concentrated in the short space of one year. With arrivals of war brides and their children reduced to a trickle in 1947, net family formation declined to 75,000. Immigration was being encouraged, however, and as this move got under way net family formation rose again in 1948 to 83,000. A decline in both marriages and immigration brought the number down to 77,000 in 1949.

The number of new dwellings completed followed with a remarkable closeness the pattern of net family formation in the pre-war period. Some of the more significant turning points of the volume of new residential construction series are about the same as those of the net family formation data: 1929 is the pre-war peak for both series, and 1932-1933 the low point of both series. Even in 1938, when dwelling completion data indicated a temporary decline, net family formation remained unchanged from the previous year, interrupting for one year the upward trend that began in 1933 and continued in 1939. In the war and immediate post-war periods the trends of these two series deviated somewhat although a basic similarity still remained. During the war period net family formation reached a high point in 1942 and a low point in 1944, while the turning points of the dwelling completion series were one year earlier. In the post-war period net family formation reached a peak in 1946, while dwelling completions rose continuously from 1945 to 1949 (see Table 46).

While there are quite broad similarities in the trend of both series, variations of the amplitudes of changes are much more marked. The latter distinction is of importance in any consideration whether a sufficient number of dwellings were added to the housing stock to take care of the new families formed. The annual proportion of new families formed to total families, and dwellings completed or added to the existing housing stock, is

shown for the years 1921-1949 in Table 46. In seventeen years of this 29-year period, mainly the 'twenties and the latter part of the 'thirties, dwellings completed increased proportionately more

TABLE 46

FAMILIES AND DWELLINGS, CANADA, 1921-1949

Year and Period	Total Families Number 000	Net Family Formation		Stock of Dwellings Number 000	Dwellings Completed		Net Addition to Dwellings	
		No. 000	Proportion of Total Families Per cent		No. 000	Proportion of Housing Stock Per cent	No. 000	Proportion of Housing Stock Per cent
1921	1,815	37	2.0	1,909	34	1.8	30	1.6
1922	1,835	20	1.1	1,946	42	2.2	37	1.9
1923	1,860	25	1.3	1,984	43	2.2	38	1.9
1924	1,889	29	1.5	2,018	39	1.9	34	1.7
1925	1,920	31	1.6	2,057	45	2.2	39	1.9
1926	1,958	38	1.9	2,106	55	2.6	49	2.3
1927	2,002	44	2.2	2,157	57	2.6	51	2.4
1928	2,049	47	2.3	2,214	63	2.8	57	2.6
1929	2,097	48	2.3	2,271	65	2.9	58	2.6
1930	2,136	39	1.8	2,318	53	2.3	46	2.0
Average for Decade	1,956	36	1.8	2,098	50	2.4	44	2.1
1931	2,165	29	1.3	2,358	48	2.0	40	1.7
1932	2,184	19	.9	2,379	28	1.2	21	.9
1933	2,204	20	.9	2,395	22	.9	16	.7
1934	2,232	28	1.3	2,417	28	1.2	22	.9
1935	2,262	30	1.3	2,444	33	1.4	27	1.1
1936	2,295	32	1.4	2,476	39	1.6	32	1.3
1937	2,333	39	1.7	2,517	49	1.9	40	1.6
1938	2,372	39	1.6	2,554	44	1.7	37	1.4
1939	2,426	54	2.2	2,598	52	2.0	44	1.7
1940	2,496	70	2.8	2,643	53	2.0	46	1.7
Average for Decade	2,297	36	1.6	2,478	40	1.6	32	1.3
1941	2,567	71	2.8	2,693	57	2.1	49	1.8
1942	2,642	76	2.9	2,733	47	1.7	40	1.5
1943	2,700	58	2.1	2,763	37	1.3	30	1.1
1944	2,750	50	1.8	2,799	43	1.5	36	1.3
1945	2,810	59	2.1	2,840	49	1.7	41	1.4
1946	2,917	108	3.7	2,899	67	2.3	59	2.0
1947	2,993	75	2.5	2,970	79	2.7	71	2.4
1948	3,076	83	2.7	3,042	81	2.7	73	2.4
1949	3,153	77	2.4	3,125	91	2.9	82	2.6
Average for Period	2,845	73	2.6	2,874	61	2.1	53	1.8
Aver. 1921–49	2,350	47	2.0	2,470	50	2.0	43	1.7

rapidly than families. Of the remaining twelve years there were ten in which proportionately more new families were formed than dwellings were built, while in two years, 1933 and 1948, the ratios were about the same. In terms of net additions to the housing stock, families rose more rapidly in seventeen years, mainly the 'thirties and 'forties, with net increases of dwellings taking place at a more rapid rate in eleven years and about the same rate in one year.

For most of the pre-war years more houses were built than new families were formed. However, the situation changed considerably when war broke out. From 1939 to 1948, with one exception, dwellings constructed remained behind new families formed. The one exception was 1947, when for the first time in nine years the expanded housing program caught up with net family formation. By 1949, however, the housing program was in full swing and exceeded net family formation by a substantial margin, 18 per cent.

In some measure these data support the contention that the major cause of the housing shortage faced in the post-war period was war-engendered and to a lesser extent due to the depressed economic conditions of the 'thirties. It is true that housing construction declined significantly during the 'thirties, but so did the number of new families formed. And on balance the Canadian economy as a whole at the end of the 'thirties had a standard of living accommodation in terms of families in relation to houses that compared favourably with any previous time in its history. This does not necessarily hold true in terms of the quality of housing. While comprehensive measurement of the quality of the housing stock is difficult, there is sufficient evidence to indicate that less was spent on the upkeep of existing housing stock in the 'thirties than in the 'twenties, contributing to some deterioration in quality and that as the result of inadequate replacements the Canadian housing stock has been growing older (see pp. 49 and 94).

There were in the main two reasons for the imbalance between housing and families in the war and immediate post-war periods: (1) families were formed at between two and three times the pre-war rate; this rapid increase, though occasioned by the war, would not have been possible in the same degree had it not been for the postponement of so many marriages in the preceding decade when economic conditions were on the whole unfavourable; (2) dwelling completions, which in spite of war-engendered scarcities were moderately higher during the war than in the 'thirties, and rose to

new absolute peaks in the post-war period, were inadequate on the whole up to 1948 to cope with the great number of new families formed in Canada during these years, with a notable improvement recorded for the first time in 1949.

Families Without Homes of Their Own

Housing need has previously been defined as being represented by the number of families who do not have but who wish to have separate housing accommodation and who are not able to acquire or lease a dwelling at prevailing prices or rents (see p. 196). There is a certain amount of arbitrariness involved in any definition of housing need. There are other definitions broader than the one suggested above, which, for example, may be expanded to include the number of families who live in separate substandard homes, but who for economic reasons cannot obtain minimum standard accommodation.

Since the purpose of these paragraphs is to illustrate the effects which varying rates of family formation and housing construction have in contributing to what is broadly called the "housing shortage," the method employed is to attempt measurement of the number of families without homes of their own. In presenting such a series no claim is made that this set of data is an exact measure of "overcrowding," "housing shortage," or "housing needs." However, available data throw interesting light in quantitative terms on the reason why in recent years pressure on the housing market has been so great and on the question of whether this pressure is likely to continue for a number of years to come.

The number of families without homes of their own is estimated by subtracting from the total number of families the number of occupied dwellings less those occupied by non-family households. Families without homes of their own numbered 473,000 in 1949, the largest number recorded in Canadian history (see Table 47). Or, to put it differently, by the end of 1949, six out of every seven families in Canada had homes of their own, while the seventh family shared a home with other families or non-family households, or lived in other than a standard dwelling unit, e.g. rooming house, hotel, etc. As suggested earlier the high rate of family formation after the war is mainly responsible for this. Not even peak levels of housing construction from 1947 to 1949 were enough to make noticeable inroads into this total. In 1949, however, the large volume of houses completed brought about an increase in

the housing stock of 82,000 while net family formation amounted to 77,000. This apparent gain was more than offset by an increase in the number of non-family households from 364,000 at the end of 1948 to 379,000 at the end of 1949. Thus the number of families without homes of their own continued to increase in 1949 and remained at 15 per cent of total families (see also pp. 191-192).

It is interesting to observe that in spite of the peak number of families without homes, there were fewer persons per dwelling in 1949 than in any previous year. The explanation for this is the increase in the number of families and the decline in their average size.

While there is a good deal of evidence to suggest that the conditions arising out of the war are the main reason for the housing problems of the post-war period, available data indicate that in terms of numbers families were not as well housed in the 'thirties as they were in the 'twenties. The average for the period 1921-1930 of families without homes of their own was 217,000; the average for the 'thirties was 258,000. However, since there were more families in Canada in the 'thirties than in the 'twenties, the relative position was changed only slightly. During the 'twenties families without homes averaged 11.1 per cent of total families, during the 'thirties, 11.2 per cent (see Table 47).

Summary of Changes in the Standard of Living Accommodation

Comparing post-war with pre-war, the standard of housing accommodation of the Canadian people is: (1) better in terms of persons per dwelling; (2) worse in terms of families without dwellings of their own; (3) worse in terms of quality of the housing stock because not all the under-maintenance occurring during the war years has been made good, and the pressing post-war requirements for shelter have made it impossible to replace the many slum and sub-standard dwellings which came into existence with the passing of time.

Measurement of Potential Housing Demand

It has been suggested earlier that the number of families without homes is not a measure of housing demand. There are many families who either share housing accommodation of their own volition for family reasons or are financially not in a position to rent housing accommodation of their own. A spot survey of cities of 30,000 and over in Canada in 1946 suggested that two out

TABLE 47

INDICATORS OF PRESSURE ON THE HOUSING MARKET, CANADA, 1921-1949

Year and Period	Families and Non-Family Households less Occupied Dwellings[1]		Families and Non-Family Households Less Stock of Dwellings 000	Net Family Formation Adjusted for Change in Birth Rate 000	Dwellings Completed Less Net Family Formation Adjusted for Change in Birth Rate 000
	Number 000	Proportion of Families Per cent			
1921	197	11	145	38	− 4
1922	190	10	136	18	24
1923	223	12	129	22	21
1924	239	13	131	30	8
1925	234	12	130	31	14
1926	224	11	126	36	19
1927	224	11	126	45	12
1928	217	11	123	48	15
1929	212	10	121	48	17
1930	211	10	120	40	12
Average for Decade	217	11	129	36	14
1931	222	10	116	28	20
1932	261	12	120	18	10
1933	274	12	130	17	5
1934	260	12	142	27	0
1935	253	11	151	30	3
1936	256	11	158	31	8
1937	248	11	163	39	10
1938	253	11	171	41	2
1939	269	11	188	54	− 2
1940	283	11	219	74	−21
Average for Decade	258	11	156	36	3
1941	310	12	247	74	−17
1942	334	13	274	80	−33
1943	354	13	294	61	−24
1944	360	13	300	50	− 7
1945	371	13	311	60	−11
1946	411	14	351	119	−52
1947	434	15	371	82	− 3
1948	462	15	398	80	1
1949	473	15	407	78	14
Average for Period	389	14	328	76	−15
Average 1921-1949	285	12	200	49	1

[1]Equals families without homes of their own.

of every three doubled up families were at that time "voluntarily" sharing housing accommodation with others, and only one out of three families described their status as involuntary doubling up.[1] If this rough proportion is applicable to families living doubled-up in 1949, when real income levels in relative terms were even more favourable than they had been in 1946, this would suggest that there were some 160,000 families in the market for a new house. However, in addition to this demand there were at the end of 1949 many non-family groups of persons whose relatively high incomes enabled them to compete for the occupancy of dwelling units becoming available. The demand of these two groups, however, will remain effective only as long as the favourable employment and income conditions of 1949 continue. If economic activity should decline and employment and income prospects become quite uncertain, a shift from "involuntary" to "voluntary" doubling up is quite likely.

In addition to the pressure exerted by already existing families on the housing market, each year adds new families which thereby increase housing demand. The question is, to what extent?

Net family formation increased from 75,000 in 1947 to 83,000 in 1948, falling to 77,000 in 1949. Not all of these families represent effective demand for an equivalent number of housing units because of voluntary doubling up and also because of doubling up occasioned by families being unable to afford a separate housing unit. To what extent then do these families represent housing demand in terms of dwelling units? The data for the period 1921-1949 indicate that the proportion of families without homes of their own to total families averaged 12 per cent and never exceeded 15 per cent. Indeed the proportion only reached this level in 1947 when, because of continuing physical supply limitations, the housing stock could not be increased as rapidly as the number of families was growing. On the basis of past experience over the last three decades a given number of families generates demand for about seven-eighths as many housing units.[2] Net family formation of 235,000 from 1947-1949 represents therefore an *ultimate* demand for some 200,000 dwellings.

[1] *Survey of Multiple Occupancy in Canadian Cities Over 30,000*, Preliminary report, Dominion Bureau of Statistics, Ottawa, October, 1946.

[2] It should be noted that it may take a number of years until most new families formed require separate housing accommodation. However, the majority is likely to do so within two years after marriage. A sample study of data available in the 1941 Census showed that 20 per cent of newly formed families (2 years) lived in their own houses, 53 per cent occupied separate rental units while the remaining 27 per cent shared housing accommodation, mostly with parents or in lodgings. (*Type of Tenure of Families with Heads Married Two Years or Less at 1941 Census, for Canada and Provinces, Rural and Urban*, Dominion Bureau of Statistics, Social Analysis Section, Ottawa, 1949).

Net additions to the housing stock during the same period numbered 226,000, indicating that some inroads were made in the backlog.[1] In 1949, when net family formation numbered 77,000 and the probable demand thereby generated represented about 67,000 units, the housing stock increased by a *net* figure of 82,000 units. At these 1949 rates of net family formation and house construction, it would take about 11 years to exhaust the 1949 backlog of 160,000 families in the housing market for a home of their own.

As suggested earlier, however, a decline in employment and income might reduce substantially the above number of families without homes who would be interested in and able to pay for separate housing accommodation. Under such conditions what appears to be a large backlog of effective housing demand might disappear rather rapidly. On the other hand, continuing high levels of employment and income, especially when accompanied by some alignment of construction costs with prices of most other commodities and services, would tend to increase the number of existing families looking for separate housing accommodation and add pressure to the housing market, in addition to the pressure exerted by new families coming into existence each year.

The analysis of housing demand so far has been in terms of population added and new families formed. Among many other refinements dealing with the sex, age composition and child population, another method has been suggested to bring the analysis still closer to reality. This method first applied on a comprehensive basis in the United States,[2] takes into account the increase in the number of children. There is little doubt that the arrival of a first child brings the need for separate living accommodation forcibly to the attention of its parents. The desirability of separate living accommodation increases with the number of children. The method employed adds to net family formation 25 per cent of the actual increase in the number of births, and subtracts from net family formation 25 per cent of the annual decrease in the number of births, whichever is appropriate for each year. This approach illustrates the effect which an increase in the number of births may have in adding to the pressure on the housing market and a decline in the number of births in reducing this pressure.

Two points deserve particular emphasis in a comparison of the series on net family formation adjusted for changes in the birth

[1]The situation is somewhat different if the requirements of both family and non-family households taken together are considered (see pp. 203-204).

[2]By Robinson Newcomb, while with the Council of Economic Advisors, Washington, D.C.

rate (shown in Table 47) with family formation unadjusted for changes in birth rate as per Table 46.

(1) The adjusted series points up the fact that pressure on the housing market was even lower in 1933 than is indicated by the net family formation series, which explains in part the exceptionally low level of new residential construction in that year.

(2) For the war period and for all years of the post-war period except 1948 the adjusted series suggests that pressure on the housing market was considerably greater than appears from a first glance at the net family formation series. This is added evidence why the post-war situation has been described as the greatest "housing shortage" in Canada's history. An increase in the number of births in 1947, followed by a decline in 1948, suggests that the housing pressure resulting from new families formed and children born might have been about the same in both years, while the net family formation series suggests that it was greater still in 1948 than in 1947. The adjusted series also indicates a much smaller decline in pressure from 1948 to 1949 than the unadjusted series.

The series showing dwellings completed, less net family formation, adjusted for changes in the birth rate gives additional emphasis to the impact of the increase in new families and children on the housing market (see Table 47). For the whole 29-year period under review, the total number of completions about equals net family formation adjusted for changes in the birth rate. However, dwellings built in every year from 1922 to 1938 exceeded new housing requirements engendered by new families formed and children born. Beginning with 1939 the situation was reversed until 1948, the negative series showing that the increase in housing requirements resulting from new families formed and a rise in the number of children born exceeded the number of dwellings built. Again, a turning point for the better is indicated for 1949.

The above appraisal suggests that there is a great deal of justification for considering in any discussion of housing demand or housing need not only the number of families without homes of their own and the number of new families formed, but also the impact of changes in the birth rate on family size and the resultant intensification or reduction of pressure for more housing.

Filtering Process

So far the discussion has centred on the pressure on the housing market by families without homes of their own, new families

formed and children born, and the impact of this pressure on the volume of new house building. But not all families seeking new housing accommodation will actually move into newly built homes or apartments. Many will move into existing homes vacated by other families either because of dissolution of the household or because the family moving out might have found more suitable housing accommodation. In fact, many of the newly built homes will be occupied by families who had dwelling units of their own previous to their moving. There will be many reasons for moving from an old to a new home. Among some of the more important reasons are: occupational mobility, larger homes required, improvement in the standard of living accommodation, and occupants forced to vacate.

When families living in units of their own move into newly built homes they will vacate their former dwellings. In most cases, except where the dwelling has been destroyed or is scheduled to be demolished, the unit vacated will be available for occupancy by another family or non-family household group. In turn, some of *these* families or non-family household groups might have vacated a dwelling, which again may be occupied by another person or group of persons looking for separate living accommodation. The question is: What chain of moves is likely to occur as the result of families moving into newly built homes, and what are the reasons behind these moves?

Unless new houses are subsidized, home ownership or rental cost of new homes will generally be higher than those of existing residences of a similar size, type and location.[1] Families in high or medium income brackets are most likely to move into newly built houses, usually single homes in suburban communities or apartment buildings in central locations. Properties vacated would more likely be of a lower quality or lesser operating cost. There are of course exceptions to this as in the case of a retiring couple selling their large home in a good neighbourhood and moving into a small apartment. But by and large the tendency will be to move from lower-priced property to the more expensive type.

As a low-priced property is vacated it may be occupied by a family with correspondingly low income, perhaps at the lower end of the middle income group. In turn this family may have vacated another dwelling which, because it could be leased at low rental, or because it could be purchased at a more moderate price, would be available to families in the lower income brackets.

[1]For discussion of an exception in terms of purchase price of existing property being higher than replacement value of the property, see p. 104.

This process, by which the purchase of a new home or the leasing of a new apartment results in a chain of moves, with each succeeding move in most cases involving property of lesser value, is known as the "Filtering Process." Until the introduction of national housing legislation[1] designed to provide new housing accommodation for persons in income groups which had until then been unable to obtain satisfactory shelter, it was solely by means of the filtering process that some families in the middle income group and most families in the low income group could obtain dwelling units of their own.

The paragraphs that follow are designed to provide some quantitative evidence of the extent of the filtering process in the post-war period. As the analysis following later in this chapter shows, new homes are being acquired by families whose incomes vary from less than $1,800 to more than $10,000 a year. The form the filtering process will take will vary, depending on what income group is involved. In selecting a sample to measure the filtering process it was considered desirable to select a certain income group instead of a random sample that might include families with widely varying incomes, not necessarily representative of the income distribution in the country.

The group selected comprised 500 families, most of which were earning between $1,800 and $2,400 annually, living in five major cities in Canada.[2] In 1947 the average income of these families was $2,100 per year, their average rent prior to their move about $30 per month, or 17 per cent of the monthly family income of $175.[3] The survey was conducted in summer, 1947 and 1949, covering in both years 500 families who had moved only recently into newly built veterans' houses erected under the Federal Government's Veterans' Housing scheme with municipal assistance.[4] On the whole the two groups of 500 families, whose heads formerly represented all ranks in the three armed services, comprise a younger group of people, usually with two or three children per family.[5]

[1]See Section 4.

[2]The cities include Montreal, Ottawa, Winnipeg, Calgary and Victoria.

[3]In 1949, average incomes were slightly higher.

[4]See pp. 484-485.

[5]The income bracket of $1,800 to $2,400, to which the sample of families selected above belongs, comprised the largest group of married income recipients subject to income tax. This is indicated by the following taxation statistics for 1947: Of a total of 1,232,000 married taxable persons, 144,000 or 12 per cent belong to the income group of less than $1,800, 500,000 or 41 per cent to the $1,800 to $2,400 group, 285,000 or 23 per cent to the $2,400 to $3,000 group, 161,000 or 13 per cent to the $3,000 to $4,000 group, and 142,000 or 11 per cent to the over $4,000 group. The definition of "married" in the taxation statistics includes almost every taxpayer who has one or more persons dependent on him or her. In this respect the definition is somewhat broader than the

When the 500 families surveyed in 1947 moved into their new homes they vacated 127 houses or apartments, or 25 per cent of the total number of newly built units occupied by them. The remaining 373 families had previously shared housing accommodation with relatives or other families or non-family household groups, or lived in boarding or rooming houses or in temporary quarters (see Table 48).

TABLE 48

NUMBER AND PER CENT OF FAMILIES OCCUPYING NEWLY BUILT DWELLINGS, CLASSIFIED BY TYPE OF ACCOMMODATION VACATED, FIVE CITIES SAMPLED, CANADA, 1947 AND 1949

Type of Accommodation Vacated	1947		1949	
	Number	Per cent	Number	Per cent
Self-Contained Dwellings				
Single Houses	55	11	87	17
Apartment or Other Multiple	72	14	43	9
Sub-total	127	25	130	26
Non-Self-Contained Dwellings				
Doubled up with Relatives	178	36	79	16
Multiple Occupancy in Boarding or Rooming House, or Emergency Shelter	195	39	291	58
Sub-total	373	75	370	74
Total	500	100	500	100

After the first move was completed none of these 127 separate units the families had left remained vacant for long: 119 units were occupied by other families after a short period of time, while 8 dwellings were removed from further occupancy for a number of reasons, including demolition, condemnation of property, required for other than residential purposes, or destroyed by fire.

The second move comprised 119 families who occupied the 119 dwellings vacated. The effect of this move was to vacate 35 units. Of these 2 were withdrawn from occupancy and the remaining 33 were occupied again.

The third move involved families moving into these units, and they in turn vacated 9 units. Of these one was removed from occupancy and the remaining 8 occupied again. As the fourth

term "family" used in this report. There is, however, an offsetting factor in that husbands and wives with no children, when both are earning taxable incomes in a bracket which makes them subject to income tax individually, are taxed as single. (Data obtained from *Taxation Statistics, 1949*, Department of National Revenue, King's Printer, Ottawa, 1949.)

move was completed only one unit was vacated and this one was also rented at short order (see Table 49).

The 1947 move of 500 families into newly built accommodation then provided 127 units vacated in the first move, and 45 units vacated in the three successive stages of moves. This means that for every three existing dwellings vacated due to families moving into newly built residences, only one additional unit was vacated by what has been described above as the filtering process. Or, if the first move and the three succeeding moves are lumped together, the provision of three newly built homes resulted in not more than one additional housing unit becoming available to those who had to depend on existing housing to meet their needs.

It might have been thought that because of the great housing pressure that existed in 1947 the situation would change by 1949 as a result of the increasing number of houses being built in 1948 and 1949. But a comparable survey conducted in 1949 showed little change in the effectiveness of the filtering process as a means of spreading housing accommodation more widely. The more recent survey indicated that only 130 dwellings were vacated in the first move by 500 families obtaining new quarters, just *three more* than in 1947. And when all successive moves are taken into account, the total number of units vacated in 1949 was 160, or *twelve* units *less* than in 1947.

Various reasons were given as to why the families sampled moved in the first instance and thus were responsible for a chain of moves which took place in four stages. In both years the most frequent reasons given were, crowded accommodation, 44 and 37 per cent, living with relatives, 21 and 16 per cent, wanting a better place to live, 12 and 18 per cent, and forced to vacate, 10 and 9 per cent. Other reasons included substandard and slum housing, family forced to live apart, transferred out of town, too expensive a place to live in, house to be demolished, too far from work, etc. (see Table 50).

In interpreting the findings of these surveys the limitations of the sample should be borne in mind. Account should also be taken of the fact that 1947 was a year of acute housing shortage, with almost all available accommodation, whatever its quality, being taken up almost as soon as it was vacated. While some improvement in the housing situation was achieved by 1949, demand still exceeded supply. Further, employment and income conditions throughout the post-war period up to and including 1949 were favourable, making it possible for large numbers of families to afford housing accommodation of their own. In spite

TABLE 49

NUMBER OF SELF-CONTAINED DWELLINGS VACATED AS A RESULT OF A CHAIN OF MOVES STARTED BY FAMILIES MOVING INTO NEWLY BUILT DWELLINGS, FIVE CITIES SAMPLED, CANADA, 1947 AND 1949

Move	Item	Number of Self-Contained Dwellings Vacated		Number of Self-Contained Dwellings Vacated Available for Reoccupancy		Number of-SelfContained Dwellings Not Available for Further Residential Use[1]	
		1947	1949	1947	1949	1947	1949
1	Previous Self-Contained Dwellings of 500 Families Moving into New Housing Accommodation	127	130	119	123	8	7
2	Previous Self-Contained Dwellings of Families Moving into Accommodation Vacated by Group 1 above	35	26	33	25	2	1
3	Previous Self-Contained Dwellings of Families Moving into Accommodation Vacated by Group 2 above	9	3	8	3	1	–
4	Previous Self-Contained Dwellings of Families Moving into Accommodation Vacated by Group 3 above	1	1	1	1	–	–
	Total	172	160	161	152	11	8

[1]Demolished, condemned, required for other than residential purposes, or destroyed by fire.

TABLE 50

PRINCIPAL REASONS FOR SEEKING NEW HOUSING ACCOMMODATION, FIVE CITIES SAMPLED, CANADA, 1947 AND 1949

Reason	1947		1949	
	Number	Per cent	Number	Per cent
Crowded Accommodation	219	44	186	37
Living with Relatives	105	21	79	16
Wanting a Better Place to Live	60	12	90	18
Forced to Vacate	49	10	47	9
Substandard and Slum Housing	29	6	24	5
Family Living apart	12	2	7	1
Transferred from out of Town	12	2	43	9
Other[1]	14	3	24	5
Total	500	100	500	100

[1]Includes such reasons as too expensive a place to live in, house to be demolished and too far from work.

of these qualifications the survey suggests that in periods of high demand relative to housing supply, such as the immediate post-war years, the filtering process cannot be counted upon to provide a significant number of *additional* dwellings vacated as a result of a large increase in the volume of newly built homes.

MEASUREMENT OF EFFECTIVE HOUSING DEMAND

Existing families without homes, new families being formed, and the arrival of children are a physical indication of the range of potential housing demand. Measurement of these quantities, however, does not answer the question: When and under what conditions is the desire for separate housing accommodation by a family (and a non-family household group, for that matter) translated into effective housing demand resulting in the purchase of a home or the leasing of new accommodation?

To throw light on this phase of the relationship between people and housing it is necessary to consider not only physical but also economic factors. The theme is no longer how many houses people require, but how many houses they can afford. More specifically, how much is the individual and the nation as a whole able and willing to spend on housing and how much housing will result from the spending at prevailing conditions of demand, supply and prices?

Measurement of anticipated effective housing demand in Canada—and in most other countries where such measurements

have been attempted in a systematic way—is in its infancy. Most of the endeavours have centred and continue to centre around establishing investment motivation and then measuring the impact of such motivation as reflected in actual realization. Some efforts have been made to establish house purchasing intentions under given economic conditions[1] but little is known so far about how purchasing intentions (and lease intentions) stand up under varying economic and personal conditions.

In Canada the first nation-wide appraisal of house building intentions was undertaken in an experimental manner in 1948, to obtain an indication of the volume of new residential construction likely to be forthcoming in 1949, and repeated in 1949 for the 1950 outlook. A great deal of development work remains to be done to test the usefulness and practicability of the technique and if workable to improve on it.[2] But the task ahead is not only to devise better and more effective ways of appraising house building and leasing intentions but also to learn more about the behaviour of effective housing demand under varying economic and personal conditions. It is the purpose of the remainder of this chapter to assemble some of the scanty information available on incomes and assets and by relating these factors to expenditures on housing to endeavour to establish some of the economic forces which contribute to making housing demand effective.

To simplify the analysis in view of the varying quality of data available and the complexity of the subject, the appraisal below deals separately with two aspects: (1) what does the nation as a whole spend on housing in various periods of its development and under differing economic conditions, and (2) what do individuals

[1]Surveys of consumer finances including house purchase intentions in the United States have been conducted in the post-war period jointly by the Board of Governors of the Federal Reserve System and the Survey Research Center of the Institute for Social Research of the University of Michigan. The results of the survey of consumer expenditures in 1948 and buying plans for 1949 are published in the *Federal Reserve Bulletin*, Board of Governors of the Federal Reserve System, Washington, issues for the months June-October, 1949.

[2]Forecasts of the volume of house building have been made between 1946 and 1950. For the first three years the forecast was based on information of supply of building materials and residential labour force, since housing demand was so strong as to absorb all materials and labour becoming available for this purpose. Towards the end of 1948, with most materials coming into more plentiful supply relative to demand and some easing of the labour situation, supply was no longer the sole determinant in effecting actual realization of the housing program although for some materials and in some centres supply was still the major element. The method used for 1949 and 1950 was to canvass house building intentions in some 130 cities and towns with population of 5,000 and over and to make special adjustments for the smaller areas to obtain a first approximation of the likely volume of new residential construction expenditures forthcoming from privately initiated house building. To this was added an estimate of contemplated housing expenditures by governments to obtain total housing outlay for the year ahead. The methods of estimation are described in *Private and Public Investment in Canada, Outlook 1950*, pp. 42-43.

with given incomes, asset holdings and family characteristics spend on housing? National income data throw light on the first question, and sample surveys of the economic position and behaviour of selected groups of families provide information on the second question.

What Does the Nation Spend on Housing?

Putting it in a simplified way, the income of a nation in a given period is reflected by the sum total of the goods and services the nation produces or creates. Most of the goods and services are used up or consumed in this period, but some are saved to be available for future use. Except for the portion saved, the nation spends its income in using up the goods and services produced or created.

Applying this to housing, the nation devotes a certain proportion of the goods and services produced to the building of new dwellings and the improvement, alteration, repair and maintenance of existing dwellings. One way of indicating what the nation spends on housing is to calculate the proportion of total output devoted to residential construction. This approach is used and the results examined in some detail in Section 8, which concerns itself with the broader implication of the role of housing expenditures in the Canadian economy.

Another way of examining what the nation spends on housing is to relate the income of all persons in Canada to the total rent they are paying to lease housing accommodation, or in the case of home ownership, to an amount equivalent to what they would have to pay if they were to lease housing accommodation. Preliminary data on rental payments, including imputed rent for owner-occupied dwellings, consumer expenditures and personal disposable income, as currently used in the Canadian national accounts, are assembled in Table 51.

A glance at the data brings out one important fact. Canadians spent a smaller proportion of their incomes on housing in the post-war period than they did before the war. The ratio of rent to personal disposable income (that is, income after direct taxes) was 12.6 per cent in 1929, 14.2 per cent in 1939, and 7.6 per cent in both 1948 and 1949. While less was spent on housing, aggregate consumer spending changed little in relation to income as between 1939 and 1949. Without attaching too much importance to the exact ratios, these aggregate data supported by other sample surveys (see p. 220) indicate a distinct change in the

spending pattern of Canadians in the post-war period, with less being spent on housing and more being spent on other consumer goods and services than was customary before the war.

Is this change in the spending pattern one of the elements of the post-war housing shortage? Have Canadians found other goods and services on which they would rather spend their money? Or is this a peculiar situation which has its roots in the disturbed conditions of the war period and is therefore likely to disappear in time? If so, will the pre-war pattern of a higher ratio of disposable personal income spent on housing reappear in the future? Treating these questions in a simplified manner, the following brief observations appear appropriate.

TABLE 51

RENT, CONSUMER EXPENDITURES AND PERSONAL DISPOSABLE INCOME, CANADA, SELECTED YEARS, 1929-1949

Item	1929	1939	1948	1949
Rent[1]—$ Mill	563	594	835	884
Consumer Expenditures—$ Mill	4,383	3,861	10,151	10,956
Personal Disposable Income—$ Mill	4,464	4,181	11,020	11,680
Rent as a Proportion of Personal Disposable Income—Per cent	12.6	14.2	7.6	7.6
Rent as a Proportion of Consumer Expenditures—Per cent	12.9	15.4	8.2	8.1
Consumer Expenditures as a Proportion of Personal Disposable Income—Per cent	98.2	92.4	92.1	93.8

[1]Includes imputed rent of owner-occupied dwellings. Data are preliminary.

Among the many reasons why Canadians spent proportionately less on housing in the post-war period than before the war, two stand out.[1]

(1) Out of 3.1 million dwelling units, 1.3 million were rented at the end of 1949. Although new dwellings built since 1947, and dwellings that had been legally vacated since November 1, 1948 were exempt from rent control, the overwhelming majority of

[1]There is also another statistical reason of significance, namely, the fact that in estimating "imputed" rent for owner-occupied housing the same principles as are applied in estimating rentals for leased dwellings are used. However, the positions of owner occupiers and tenants in the post-war period varied somewhat, since the latter were protected by rent controls while the former were affected by the changing economic conditions in these years.

rented dwellings were still under rent control at the end of 1949. As the rental index indicates, the average rent in 1949 was only 19 per cent higher than in 1939 (see p. 467), but per capita disposable income which had been $371 in 1939 was up to $889 in 1949, an increase of 140 per cent.

(2) With construction costs more than twice as high in 1949 as before the war, and with smaller price increases recorded for many other consumer commodities and services, the choice of whether to spend more on housing or on other goods and services was often decided in favour of the latter.

As to the future impact of these two factors, it is likely in view of the Government's declared policy of gradual decontrol of rentals and occupancy of residential properties that rent payments will rise with the passing of time to levels where competition among landlords will make further increases ineffective. But even with such increases the ratio of rent payments to incomes may remain below the pre-war ratios. To throw light on the question of whether the higher pre-war ratios may reassert themselves after rent decontrol is accomplished requires an appraisal of the competition which housing faces from other consumer goods and services for its share of consumer dollars.

The problem has been appraised in a previous housing study. The conclusions are pertinent here and quoted below.

The construction of a house involves the assembly of a great number of parts requiring several thousand manual operations. The assembly takes place in most cases on an individual unit basis. Compared with the building of a house, the efficiency in producing other consumer goods, durable and non-durable, is much greater for a number of reasons:

(*a*) Most other consumer goods are mass-produced, while most houses are constructed as single units. The classic example, frequently referred to, is the mass-produced motor car put together on an assembly line, as compared with the made-to-measure job of fitting individual pieces together when building a house.[1]

(*b*) Most other consumer goods are manufactured in factories not affected by seasonal factors while housing construction, being carried on in the open air, can be delayed by inclement weather, resulting in higher cost of construction.

(*c*) Since many houses are produced in single units they do not enjoy the advantages of bulk purchasing, an important cost-reducing

[1]Reference is made here to the erection of the individual unit of traditional design. Prefabrication methods and erection of large housing projects are likely to introduce certain cost-saving elements but so far these have remained a minor factor in a national housing program.

factor in the production of such commodities as motor cars, furniture, refrigerators, radios, etc.

(*d*) In the production of most other consumer goods, a high degree of mechanization is applied, while a house is assembled on the site by hand with the use of little up-to-date machinery. Further, not only is assembly by hand but the pieces to be assembled are hand-cut in large part, and each piece may be worked over by different tradesmen. This requires a multitude of operations which so far have resisted most attempts of proper co-ordination and adequate simplification.

But in spite of the fact that house building is organized on a less efficient basis than other consumer goods industries, houses are being built continuously, both for ownership and rental, though their number varies considerably over a period of time. Obviously, shelter is a basic need for living and there are physical limitations to the number of families and persons that can live in a house. However, where minimum housing needs are met, consumer preferences might tend in some instances toward other consumer goods rather than improvement of housing conditions. For example, a family of four living in a small downtown apartment might, with the improvement of the earning situation of the family head, have a choice of either acquiring a larger and better home in a suburb or of continuing to live in the apartment and purchasing a motor car. In one case the family will decide on improving its living conditions and buy a new home. In the other, the family will forego the advantages of better housing accommodation and will prefer the convenience it can derive from the possession of a car to a more comfortable home. In this case, the belief that a motor car provides a greater use value for the money spent than the acquisition of a house would not be without impact on the choice of the consumer. The consumer will also be influenced by appropriate sales and advertising campaigns and the social habits of his friends and other families in his community.

It appears that, even with a high level of employment and earnings, the acquisition of a new home will always be competing with other consumer goods for its share of the consumer dollar. This factor is of great significance for the building industry. If it does not succeed in keeping unit costs low its business will decline because of the strong competition of other consumer goods industries working under more favourable conditions. The conclusion is self-evident. The greater the increase in the efficiency of the house-building industry and the narrower the present gap between housing construction and production of other consumer goods, the better are the prospects for a larger share of the consumer dollar going into housing than hitherto.[1]

[1] *Manpower and Material Requirements*, pp. 35-36.

Summarizing, the low ratio of rental payments to disposable income is in some measure the result of the special circumstances prevailing in the post-war period, with some controls of supply, prices and wages disappearing sooner than others, with personal incomes and building costs rising rapidly, and with efficiency in mass-produced consumer goods increasing more significantly than improvement in building methods. Looking ahead, competition for the consumer dollar will be keener. This assumes that as the economy grows to take care of military preparedness sufficient resources will become available for the laws of supply and demand to function in the civilian sector. In such a situation the trend in future years is likely to be towards a higher ratio of rent (including imputed rent) to income than has been observed for the immediate post-war period. But even as a higher plateau is reached, this ratio is likely to fluctuate. Variations in consumer expenditure levels and competition among various consumer goods and services for the consumer dollar will continuously affect the relative position which housing expenditures occupy in the family budget of Canadians. In the final analysis the ratio of housing expenditures to income is a matter of the consumer's choice, influenced by personal and economic considerations. Among the latter the most important is the conviction that the purchaser of a new house or the tenant of a new apartment is getting proper value for his money.

What Individual Families Spend on Housing

Operating Costs

How much it cost to operate an owner-occupied home or rent a dwelling is indicated in two family expenditure and income surveys of a cross-section of Canadian families undertaken by the Dominion Bureau of Statistics for the year ending September, 1938[1] and the year ending August, 1948.[2]

The first study indicates that families living in rented dwellings spent 20 per cent of total living expenditures for shelter. Those living in their own homes paid out a slightly lower proportion, 19.3 per cent.

Preliminary tabulations of the second survey suggest a con-

[1] *Family Income and Expenditures in Canada, 1937-1938*, Dominion Bureau of Statistics, Ottawa, 1941 (see in particular pp. 71 ff.).

[2] Several City Bulletins were released by the Dominion Bureau of Statistics during 1949 as the study progressed.

siderably smaller proportion of total expenditures is going into outlay for shelter than was the case a decade earlier. Also the spread between shelter costs of tenants and of owner-occupants, which was hardly in existence before the war, has widened somewhat in the post-war period.[1]

These surveys support the general observation made earlier that Canadians as a whole are spending less on housing in the post-war period than they did before the war. As long as Canadians are not willing to spend a larger portion of their earnings on housing they cannot expect, at prevailing levels of income, to obtain more accommodation than has already been forthcoming.

In this connection the following comments on the two family expenditure and income surveys as indicators of the willingness of Canadians to spend more on housing are of interest:

> This survey (1948) corresponds to similar work which they (Dominion Bureau of Statistics) did ten years ago when they found that about 19 per cent of the average family's income was used for shelter purposes. The 1948 figure of the family's income now being used for shelter purposes has dropped to about 12 per cent. There is little indication that the average Canadian voluntarily wants to increase the proportion of his monthly income devoted to shelter and will only do so under pressing circumstances.
>
> It is quite obvious that if there is to be an improvement both as to quality and quantity of Canadian housing, someone must pay for it. A reconstitution of the 1939 proportion of family income for housing purposes would create effective demand in 1950 and subsequent years for housing far greater than even the peak reached in 1949.[2]

It has been emphasized previously that aggregate data on incomes and rents should be considered only as a first approximation of the situation. Family expenditure and income surveys, which record changes in budgetary habits of a selected group of Canadians, provide useful cross-section data to supplement the rather over-simplified analysis made possible by aggregate data. If family expenditure and income surveys, particularly the sectors

[1]This is illustrated by the following preliminary figures for the three largest cities in Canada (percentage of shelter costs to incomes for tenant and owner-occupier families shown in brackets): Greater Montreal (13.0 per cent and 11.8 per cent), Greater Toronto (15.2 per cent and 11.9 per cent), and Greater Vancouver (13.5 per cent and 11.3 per cent). Tenant shelter costs include heating expenses. Owner shelter costs consist of all operating expenses including interest payments on the mortgage but excluding repayment of principal of outstanding mortgage.

[2]"Developments in Canada's Housing Program," *Proceedings of the Thirty-Second Annual General Meeting*, p. 36.

dealing with shelter costs and incomes, could be obtained at shorter intervals, they would aid greatly in obtaining a deeper insight into the willingness and ability of Canadian families to spend on housing, and thus throw more light on the forces that contribute to translating housing need into effective housing demand.

Capital Costs

How much families can afford to spend on housing in the post-war period and where the money comes from to pay for it are illustrated by two surveys undertaken by Central Mortgage and Housing Corporation and summarized below. The first is a survey of construction costs of new owner-occupied housing financed under the National Housing Act, 1944, and built in 1949, together with supplementary information on incomes and personal characteristics of the occupants of these houses. The second is a survey of the sources of financing house building of a selected group of families purchasing moderately priced homes under the National Housing Act, 1944, undertaken in 1949.[1]

Incomes of House Purchasers. Of the 14,953 families who acquired housing for owner occupancy in 1949 with financial assistance under the National Housing Act, 1944, 11 per cent had an annual gross income (including both the income of the head of the household and members of the family) of less than $2,400, and 33 per cent had incomes between $2,400 and $3,000. Almost half, then, of all families building houses under the National Housing Act were earning less than $3,000 per year, suggesting that a substantial proportion of loans was going to families with low or moderate incomes. Another 47 per cent comprised families earning between $3,000 and $5,000. This income group comprises the bulk of families who describe themselves as middle-class.[2] Only 9 per cent of the applicants had incomes exceeding $5,000 (see Table 52). Most families in the higher income brackets either were able to do their housing financing by means other than the provisions of the National Housing Act, or the properties in which they were interested were not eligible for loans under the Act.

Costs and Incomes. The 14,953 home purchasers had an average income of $3,405, and they purchased a home costing an estimated average of $8,489, or a ratio of income to costs of 1 to 2.5.

[1] *Mortgage Lending in Canada, 1949*, pp. 18-24 and pp. 56-65.

[2] The latest information available on income distribution in Canada is for the year 1948. The data are found in *Taxation Statistics, 1950*, Department of National Revenue, Ottawa, 1950.

The ratio varies for different income groups. As a rule, the burden of acquiring a house rests more heavily on persons with low incomes and appears to lighten as the income increases. This is reflected in the changing ratio of incomes to capital costs, which varies from 1 to over 4 for the low range of incomes to 1 to less than 2 for the upper range (see Table 52). This is true in spite of the fact that as the family income increases these families are apt to

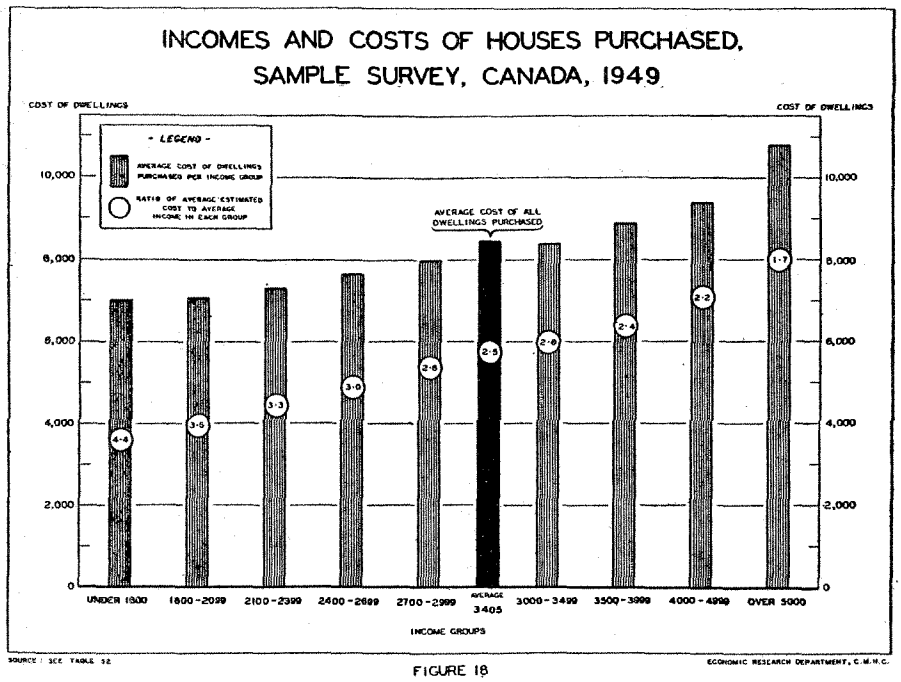


FIGURE 18

buy larger and more expensive types of houses. In fact, the highest income group canvassed in this survey paid about one and a half times as much for their houses as the lowest income group. One explanation for this situation is the fact that there is a minimum amount required for a house purchase below which a home cannot be bought. The purchaser in a low income group will therefore stretch his financial resources to acquire a home, even if this will mean curtailing expenditures for other things he may want or need. However, as income increases and families can afford to buy a more expensive type of house, they have a wider choice as to the final price which they will pay for their house. It will, then, frequently depend on whether a family may

TABLE 52

AVERAGE COST AND SIZE OF DWELLING, AVERAGE INCOME AND AGE OF OWNER AND SIZE OF HIS FAMILY, BY INCOME GROUP, SURVEY OF 14,953 DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Income Group $	Group Covered		Average Estimated Cost $	Average Income of Owner $	Average Size of Dwellings Finished Rooms	Average Size of Family Persons	Average Age of Owner Years
	Number	Per cent					
Under 1,800	46	.3	7,018	1,587	4.8	2.3	31.8
1,800—2,099	390	2.6	7,101	2,014	4.6	2.5	31.4
2,100—2,399	1,194	8.0	7,334	2,253	4.6	2.8	31.2
2,400—2,699	2,835	19.0	7,675	2,536	4.7	3.0	32.0
2,700—2,999	2,021	13.5	8,002	2,825	4.9	3.2	33.0
3,000—3,499	3,438	23.0	8,393	3,175	5.0	3.3	34.3
3,500—3,999	1,813	12.1	8,885	3,690	5.2	3.3	35.4
4,000—4,999	1,831	12.2	9,409	4,351	5.3	3.4	36.9
5,000 and over	1,385	9.3	10,805	6,423	5.6	3.5	38.7
Total	14,953	100.0	8,489	3,405	5.0	3.2	34.2

wish to forgo the purchase of a certain commodity to acquire a more expensive type of house, or whether the family is satisfied with a less expensive house in order to have sufficient money left to acquire other goods and services.

There are two lessons to be drawn from this for the house-building industry. First, unless houses can be produced at moderate cost most income recipients with low incomes, even if they strain their budgets, may find themselves unable to purchase houses. Secondly, houses for sale to families in the middle and higher income group are competing with other goods and services for the consumer dollar. There is therefore a selling job to be done if the house-building industry wants to obtain a larger share of the consumer dollar than it is obtaining at present. Demonstration that the purchaser is getting full value for his housing dollar is the surest way to consumer satisfaction and expansion of markets.

Income and Size of Families. It has become a commonplace to say that families with low incomes are larger than families with high incomes. This observation does not hold true for the home-purchasing public. As the data in Table 52 show, the average size of those families who were in receipt of incomes of less than $1,800 was 2.3 persons, while the average size of the families earning $5,000 or more was 3.5 persons. One of the main reasons for this is the fact that most of the families with low incomes were newly wed couples, whose breadwinner was usually a young man at the beginning of his career. Most of the families in the upper range of income brackets were headed by middle-aged breadwinners with two or three children, who were either approaching or had come close to the zenith of economic achievement in their lives (see below for discussion of age distribution).

It has been stated earlier that the arrival of children, particularly the first, is a strong factor in inducing home ownership if the family has the means to afford new housing at prevailing costs. This is also supported by data on the size distribution of families purchasing homes. Out of a total of 14,953 cases covered in this survey, 4,991 or 33 per cent were families of three persons, that is in most cases married couples with one child. The next largest group, 3,993 or 27 per cent, were families of two persons, mostly newly-weds. Families of four were the group next in importance, numbering 3,650 or 24 per cent, followed by families of five, making up 1,214 or 8 per cent. There were also 548 cases of single individuals purchasing homes, mainly young men

contemplating marriage, and some 551 families comprising six persons or more, each group comprising 4 per cent of the total.

Income and Size of Dwellings. Similar to the size of the family, the size of the dwelling increased as the income rose. The average size of the house built in 1948 for owner occupancy under the National Housing Act was 5 rooms, varying from an average of about 4½ rooms for the dwelling purchased by families in the lower income third to about 5½ rooms for families in the upper income third. For all income groups the houses purchased included on an average close to two rooms more than there were persons occupying the house. This suggests that most of the purchasers were buying a new home taking into account possible increases of their families. In fact, the leeway is even greater than the figures suggest because the data relate to finished rooms only. There were a number of five-and six-room houses being built with only three or four rooms finished and two rooms unfinished. These two rooms were to be finished at a later date when family requirements or availability of funds made the completion of the houses desirable for personal reasons or feasible on financial grounds.

If one room per person is taken as a desirable housing standard, the overwhelming majority of families purchasing homes under the National Housing Act are living up to this standard. Only 538 families, or 4.3 per cent of the total of 14,953, had less than one room per person. However, as families grow this favourable ratio will change and will lead in some instances to overcrowding. This in turn may eventually result in the sale of the house presently occupied by the owners and the subsequent purchase of a new and larger home.

The above figures on income and size of dwellings are averages. They hide the interesting fact that a significant number of houses built for ownership are in fact small four-room bungalows just within the reach of families with moderate incomes. Of a total of 14,953 houses covered by the survey, 5,561 dwellings or 37 per cent were four-room houses. This group however, included a significant number of six-room houses with two unfinished rooms. Of the remainder 4,542 were five-room houses (30 per cent) and 4,078 were six-room houses (27 per cent). Only 732 houses had more than six rooms (5 per cent), and there were 40 cases of one and a half storey dwellings with three rooms finished and two rooms unfinished (less than 1 per cent).

Income and Age of Purchasers. The average age of a house purchaser was 34 years. His age varied from an average of 32

years for purchasers earning less than $1,800 a year to an average of 39 years for house buyers in the $5,000 and over income group. As the data in Table 52 indicate, the older the man the higher his average income. This is not to say that earning capacity is of necessity a function of age. Home purchasers covered in this survey included men of over 50 years earning less than $1,800 and young men of less than 25 years earning over $5,000. But such income and age differentials tend to be obscured in a large sample, and the average points to rising incomes with increasing age.

The largest number of house purchasers were in the 26-30 year age group, 3,868 or 26 per cent, followed by the 31-35 age group, 3,681 or 25 per cent, the 36-40 age group, 2,688 or 18 per cent, and the 41-45 year age group, 1,493 or 10 per cent. Only 1,675 families were headed by men of 25 years or less, and 1,548 families by men belonging to the age group of over 45 years, representing 11 and 10 per cent respectively.

Income and Occupation of Purchasers. Salaried persons were the largest group of purchasers of new homes, involving 7,514 cases or 50 per cent of the total. Wage-earners and their families were the next largest group, involving 4,821 cases or 32 per cent. Self-employed comprised the smallest number, 2,618 or 18 per cent, but their average income was higher than the average of each of the other two groups. The figures are: $4,227 for the self-employed, $3,388 for salaried persons and $2,985 for wage-earners (see Table 53).

The significance of the occupational classification of home purchasers is that it indicates how widely home buying has spread in Canada. Almost all classes participate. The wage-earner group includes skilled artisans such as carpenters and electricians, semi-skilled men such as truck drivers and machine operators, and unskilled workers, mainly common labourers and young men learning a trade. The salaried group includes the executive type, e.g. a branch bank manager, professional persons, e.g. teachers, supervisors, e.g. foremen, and clerical staff, e.g. a shipper, and other types such as salesmen. Among the self-employed there were professional people such as lawyers, medical men and business men, including a great variety of callings, from a corner grocer to a vegetable gardener, from a small town hairdresser to a general store owner.

In the low and intermediate income groups wage earners and salary earners are most numerous. In the high income group the self-employed are more numerous among home purchasers. The type of houses bought and the personal characteristics of home

TABLE 53

NUMBER AND DISTRIBUTION OF HOUSE PURCHASERS, BY OCCUPATION AND INCOME, SURVEY OF 14,953 DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Income Group $	Self-Employed		Salaried Persons		Wage Earners		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Under 1,800	6	13.0	25	54.4	15	32.6	46	100
1,800—2,099	34	8.7	191	49.0	165	42.3	390	100
2,100—2,399	72	6.0	656	55.0	466	39.0	1,194	100
2,400—2,699	250	8.8	1,308	46.1	1,277	45.1	2,835	100
2,700—2,999	138	6.8	1,017	50.3	866	42.9	2,021	100
3,000—3,499	567	16.5	1,659	48.3	1,212	35.2	3,438	100
3,500—3,999	380	21.0	1,005	55.4	428	23.6	1,813	100
4,000—4,999	518	28.3	1,040	56.8	273	14.9	1,831	100
5,000 and over	653	47.1	613	44.3	119	8.6	1,385	100
Total	2,618	17.5	7,514	50.3	4,821	32.2	14,953	100

purchasers following various occupations are summarized in Table 54. The data throw light on the family and economic conditions of the various occupations in Canada and how this leads them to buy the kind of house they finally acquire. Similar data classified on the basis of estimated construction costs complete the picture. The statistics provide quantitative information on the type of family most likely to be buying a moderate cost home and the kind of family buying a more expensive type of house (see Table 55).

Summary of Income and Personal Characteristics of House Purchasers

To summarize the income and personal characteristics of the average home purchaser acquiring a new house under the provisions of the National Housing Act in 1949: He was 34 years of age, had a wife and one child, an annual income, including what his wife might have been earning and his family allowance, of some $3,400, or better than $275 a month. He bought a five-room house costing him an estimated $8,500. Frequently it was a six-room house with four finished and two unfinished rooms. Often the estimated costs were below his final capital outlay. More often than not his average costs would have been $9,000 or more. As the succeeding appraisal indicates, he was able to raise about one-quarter of the purchase price himself, partly from his own savings and partly through personal loans, with the remaining three-quarters being borrowed on the security of a mortgage on the house. The house-purchaser was more likely to be a person working for somebody else on a salary basis, but he could easily be a workingman depending for his income on hourly wages or a self-employed person in a profession or running his own business. On the whole he was most likely to belong to the middle income group. But he could also be a man in the low income brackets who, by stretching his family budget, made it possible for his family and himself to live in a home of their own. The survey leads to the conclusion that under the provisions and the financing practice as they existed in the post-war period, home ownership in Canada was not the privilege of any special class or profession but open to the great majority of Canadian families who were willing and able to devote an appropriate proportion of their incomes to shelter costs. However, there is little doubt that purchasing homes for some families involves a strain on the family budget. And as pointed out below, existing equity requirements may preclude a large number of potential home owners from buying homes of their own (see p. 236).

TABLE 54

AVERAGE COST AND SIZE OF DWELLING, AVERAGE INCOME AND AGE OF OWNER AND SIZE OF HIS FAMILY, BY OCCUPATION OF OWNER, SURVEY OF 14,953 DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Occupation of Owner	Group Covered		Average Estimated Cost $	Average Income $	Average Size of Dwelling Finished Rooms	Average Size of Family Persons	Average Age of Owner Years
	Number	Per cent					
Self-Employed							
Professional	252	1.7	10,300	4,954	5.5	3.0	34.7
Businessman	2,217	14.8	9,393	4,158	5.3	3.4	36.0
Other	149	1.0	8,569	4,031	4.9	3.0	42.5
Sub-total	2,618	17.5	9,434	4,227	5.3	3.3	36.2
Salaried Persons							
Executive	274	1.8	9,153	4,221	5.2	3.4	35.3
Professional	1,846	12.4	9,054	3,581	5.2	3.2	34.3
Supervisory	950	6.3	8,415	3,561	5.0	3.3	36.3
Clerical	2,131	14.3	8,202	2,922	4.9	2.9	33.2
Other	2,313	15.5	8,620	3,494	5.1	3.2	33.8
Sub-total	7,514	50.3	8,601	3,388	5.1	3.2	34.1
Wage Earners							
Skilled	2,710	18.1	7,927	3,058	4.8	3.2	33.4
Semi-Skilled	1,611	10.8	7,710	2,951	4.8	3.2	33.0
Unskilled	500	3.3	7,414	2,699	4.7	3.1	34.0
Sub-total	4,821	32.2	7,801	2,985	4.8	3.2	33.0
Total	14,953	100.0	8,489	3,405	5.0	3.2	34.2

TABLE 55

AVERAGE COST AND SIZE OF DWELLING, AVERAGE INCOME AND AGE OF OWNER AND SIZE OF HIS FAMILY, BY ESTIMATED COST OF DWELLING, SURVEY OF 14,953 DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Estimated Cost of Dwelling $	Group Covered		Average Estimated Cost $	Average Income $	Average Size of Dwelling Finished Rooms	Average Size of Family Persons	Average Age of Owner Years
	No.	Per cent					
Under 5,000	57	.4	4,715	2,590	4.3	3.0	31.3
5,000— 5,999	826	5.5	5,681	2,754	4.3	2.9	32.5
6,000— 6,999	1,937	12.9	6,638	2,861	4.4	3.0	32.9
7,000— 7,999	3,950	26.4	7,512	3,136	4.8	3.1	33.6
8,000— 8,999	3,823	25.6	8,409	3,289	5.0	3.2	34.0
9,000— 9,999	1,983	13.3	9,452	3,618	5.3	3.4	35.0
10,000—10,999	951	6.3	10,462	3,987	5.7	3.4	36.1
11,000—11,999	577	3.9	11,422	4,346	5.9	3.5	36.4
12,000 and over	849	5.7	14,152	5,319	6.2	3.5	37.6
Total	14,953	100.0	8,489	3,405	5.0	3.2	34.2

Equity Requirements

It has been stressed earlier that the income of individuals is not the only important factor in purchasing a home. The size of personal savings of individuals is also important, since equity requirements make a down payment necessary. Little up-to-date information is available on asset holdings by income groups in Canada, although the 1948 family income and expenditure survey when available in detail will shed some light on this subject. Some additional information on the extent to which actual home purchasers have been able to draw on their personal savings to make the necessary down payment is available from a sample survey undertaken in 1949 covering a cross-section of house purchases in Canada[1] (see Figure 19).

The average purchaser in this group had an income of about $3,300. He bought an $8,200 house. His own savings made it possible for him to put down 24 per cent of the purchase price in cash. He obtained another 2 per cent through personal loans or veterans' re-establishment credits and made a total down payment of 26 per cent, or $2,200. The remaining $6,000, or 74 per cent, comprised a mortgage on the house, of which 69 per cent was a first mortgage and 5 per cent a second mortgage (see Table 56). The majority of families, 56 per cent of the total, were able to purchase a house with a first mortgage. Still, a substantial proportion, 44 per cent, had to resort to a second mortgage. Second mortgages provide in substance the bridge between first mortgages and the equities required in the form of a down payment. This is indicated by the fact that 88 per cent of the families were able to produce the minimum down payment needed for a house purchase without recourse to personal borrowing. Only 12 per cent had insufficient cash to meet the down payment required and had therefore to resort to some additional financing. In 8 per cent of the cases this was done through personal loans from family, banks, employers and credit unions. In the other 4 per cent use was made of veterans' re-establishment credits.

Relating income to new house prices and personal savings used as a down payment, one would expect that the lower the income

[1]The survey, undertaken by Central Mortgage and Housing Corporation, covered 1,508 dwellings, including single units in all provinces except Quebec, and duplexes in the Province of Quebec, which type of home ownership is more frequent in this province than in any other. However, because the emphasis in this section is placed on income distribution in relation to personal savings and estimated costs of house purchases, the data shown above cover only single house purchases. On this basis it is possible to obtain comparable figures on income, personal savings, number of dwelling units purchased, and cost of acquisition. The number of cases covered on this more limited basis is 1,406 units. For a comparison with the results of a similar survey undertaken in 1948, see *Mortgage Lending in Canada, 1949*, pp. 18, 19, 57 and 58.

TABLE 56

PURCHASE PRICE, MORTGAGE LOANS AND DOWN PAYMENTS, SAMPLE SURVEY OF 1,406 SINGLE DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Income Group	Number of Dwellings Built	Average Purchase Price	Mortgage Loans			Down Payment			
			First Mortgage	Second Mortgage	Total Mortgages	Personal Savings	Personal Loans	Veterans Re-establishment Credit	Total Down Payment
$		$	$	$	$	$	$	$	$
Under 1,800[1]	7	8,577	5,196	500	5,696	2,281	100	500	2,881
1,800—2,099	40	7,087	4,964	173	5,137	1,855	13	82	1,950
2,100—2,399	104	7,256	5,258	320	5,578	1,452	174	52	1,678
2,400—2,699	305	7,564	5,467	461	5,928	1,529	75	32	1,636
2,700—2,999	188	8,094	5,670	593	6,263	1,728	76	27	1,831
3,000—3,499	321	8,193	5,806	473	6,279	1,815	89	10	1,914
3,500—3,999	173	8,685	5,903	499	6,402	2,206	66	11	2,283
4,000—4,999	159	8,903	5,986	441	6,427	2,341	129	6	2,476
5,000 and over	109	9,496	6,104	358	6,462	2,870	164	—	3,034
Total[2]	1,406	8,206	5,595	424	6,019	2,009	98	80	2,187

[1]Purchasers in the income group less than $1,800 financed the acquisition of more expensive houses than any other income group up to $3,500. The seven cases in this group included a widow, an immigrant and a student, all of whom had special sources of funds.

[2]The average income of a single house purchaser amounted to $3,289.

the smaller and lower-priced the house to be purchased, and that accordingly down payments would be correspondingly smaller. But, as the data of the survey indicate, this is not necessarily so for home purchasers earning less than $2,100 a year.[1] It appears to be true for the income groups of $2,100 and over. In these groups the higher the income the greater the purchase price of the house and the greater personal savings required as a down payment (see Table 57). But in the income group of less than $2,100 some

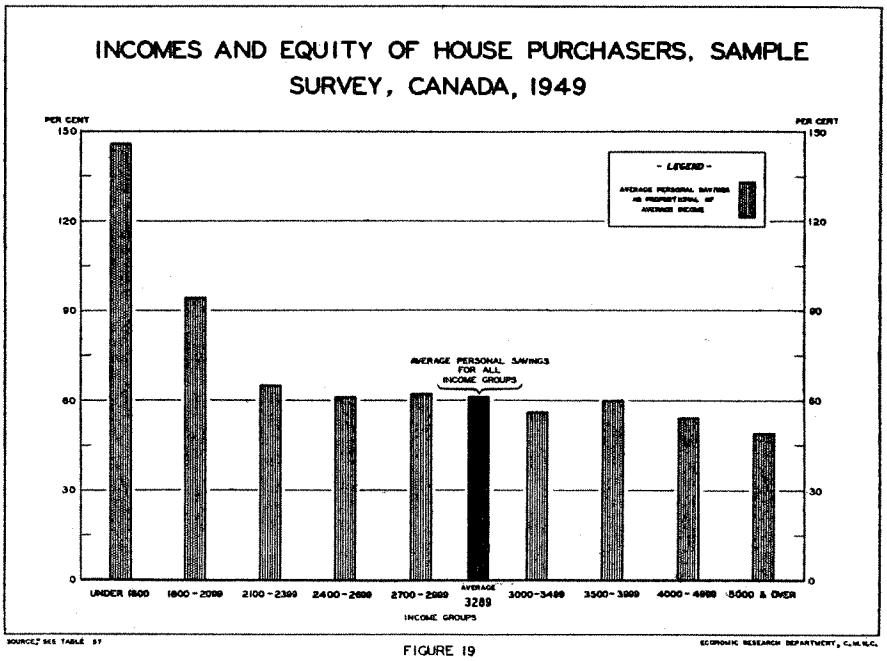


FIGURE 19

special conditions may prevail that enable the purchaser to acquire a more expensive home in spite of his low income. For example, this group in the survey included a young couple only recently married, with a low annual income, who obtained part of the equity for the down payment from their parents. It included an immigrant family whose initial earning power in this country was low, but who brought assets with them enabling them to make a down payment larger than usual for low income families. It also included a widow with a moderate pension who was able to make a substantial down payment out of funds left by her husband.

[1]In a larger sample such as the one examined previously in connection with capital costs of houses and incomes of home buyers, such special characteristics of purchasers in the less than $2,100 income group are not apparent without examination of individual cases.

Such cases of house buyers with special means are included throughout the sample, but it is only in the low income group of $2,100 or less that the weight of these cases is great enough to affect the results shown. In other cases in the less than $2,100 group where no special means were available to home purchasers, families usually bought lower-priced homes than families in the higher income groups, and made correspondingly smaller down payments.

The great difficulty which families in low income brackets have in accumulating sufficient savings for a down payment to buy a house is indicated by a ratio of savings of purchaser to his average annual income, including that of other members of the family. For the 1,406 cases of single units covered in the survey the average personal savings used as a down payment to acquire a house amounted to $2,000 or 61 per cent of the average income of $3,300. Even if families with annual incomes of less than $2,100—where the ratio may exceed 100 per cent—are omitted for reasons mentioned earlier, the proportion of personal savings used as down payment to income varied significantly, from 65 per cent for the $2,100 to $2,400 group to 49 per cent for the $5,000 and over group. Families earning between $2,400 and $4,000 were close to the national average of 61 per cent (see Table 57).

TABLE 57

INCOME AND PERSONAL SAVINGS USED AS DOWN PAYMENT, SAMPLE SURVEY OF 1,406 SINGLE DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Income Group $	Number of Dwellings Built	Average Income $	Average Personal Savings Used as Down Payment $	Average Personal Savings Used as Down Payment as Proportion of Average Income Per cent
Under 1,800	7	1,564	2,281	146
1,800—2,099	40	1,968	1,855	94
2,100—2,399	104	2,248	1,452	65
2,400—2,699	305	2,522	1,529	61
2,700—2,999	188	2,809	1,728	62
3,000—3,499	321	3,234	1,815	56
3,500—3,999	173	3,671	2,206	60
4,000—4,999	159	4,347	2,341	54
5,000 and over	109	5,862	2,870	49
Total	1,406	3,289	2,009	61

the smaller and lower-priced the house to be purchased, and that accordingly down payments would be correspondingly smaller. But, as the data of the survey indicate, this is not necessarily so for home purchasers earning less than $2,100 a year.[1] It appears to be true for the income groups of $2,100 and over. In these groups the higher the income the greater the purchase price of the house and the greater personal savings required as a down payment (see Table 57). But in the income group of less than $2,100 some

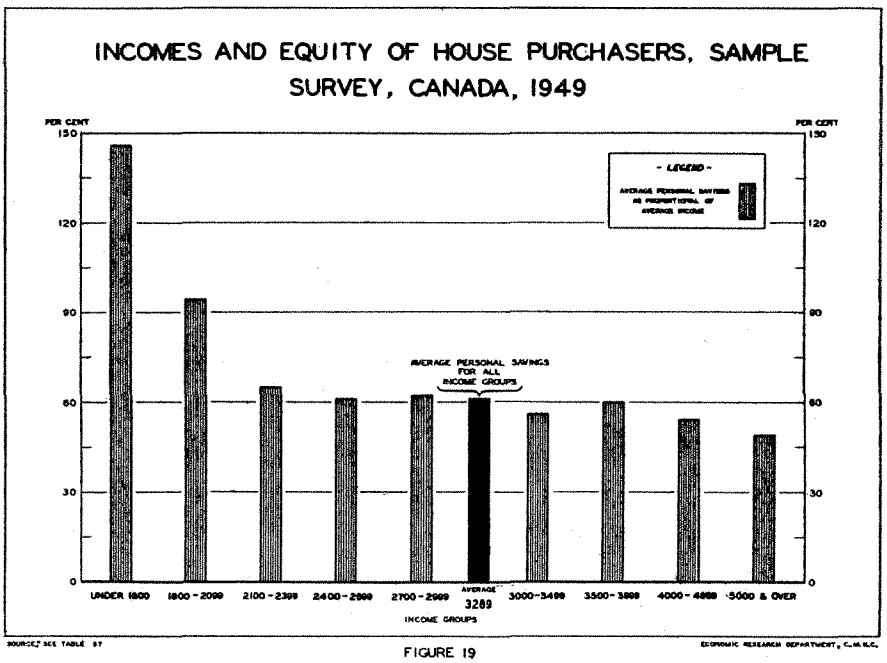


FIGURE 19

special conditions may prevail that enable the purchaser to acquire a more expensive home in spite of his low income. For example, this group in the survey included a young couple only recently married, with a low annual income, who obtained part of the equity for the down payment from their parents. It included an immigrant family whose initial earning power in this country was low, but who brought assets with them enabling them to make a down payment larger than usual for low income families. It also included a widow with a moderate pension who was able to make a substantial down payment out of funds left by her husband.

[1]In a larger sample such as the one examined previously in connection with capital costs of houses and incomes of home buyers, such special characteristics of purchasers in the less than $2,100 income group are not apparent without examination of individual cases.

Such cases of house buyers with special means are included throughout the sample, but it is only in the low income group of $2,100 or less that the weight of these cases is great enough to affect the results shown. In other cases in the less than $2,100 group where no special means were available to home purchasers, families usually bought lower-priced homes than families in the higher income groups, and made correspondingly smaller down payments.

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TABLE 57

INCOME AND PERSONAL SAVINGS USED AS DOWN PAYMENT, SAMPLE SURVEY OF 1,406 SINGLE DWELLINGS BUILT FOR OWNER OCCUPANCY UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1949

Income Group $	Number of Dwellings Built	Average Income $	Average Personal Savings Used as Down Payment $	Average Personal Savings Used as Down Payment as Proportion of Average Income Per cent
Under 1,800	7	1,564	2,281	146
1,800—2,099	40	1,968	1,855	94
2,100—2,399	104	2,248	1,452	65
2,400—2,699	305	2,522	1,529	61
2,700—2,999	188	2,809	1,728	62
3,000—3,499	321	3,234	1,815	56
3,500—3,999	173	3,671	2,206	60
4,000—4,999	159	4,347	2,341	54
5,000 and over	109	5,862	2,870	49
Total	1,406	3,289	2,009	61

In 1949 personal savings for Canada as a whole amounted to about 8 per cent of total personal income. If this ratio can be taken to be indicative of the savings-income relationship of the potential home-buying family, it would require about seven years for the average Canadian family to accumulate sufficient equity from their earnings to purchase a moderately priced house. This situation is indicative only of the conditions of income, employment and methods of house financing as it prevailed in 1949. As suggested earlier (in Section 4), new provisions incorporated in the amendments to the National Housing Act in 1949 opened the way for home purchases with lower down payments than required hitherto.

In some measure available data reflect the strain placed on families with moderate incomes to accumulate sufficient personal savings to make the cash down payment required in 1949 to purchase a home. It should be remembered that these data refer to the favourable economic conditions of 1949, when high levels of employment and income prevailed throughout the country and substantial savings had been accumulated during the war years and the immediate post-war period. They point to the fact that if and when these particularly favourable economic conditions are followed by less favourable conditions, the equity problem of families with moderate incomes may become increasingly difficult. The analysis is suggestive of the possibility that there may be large numbers of potential home owners who have so far been excluded from home ownership because their personal savings are inadequate under traditional methods of financing to make the required down payment on the purchase of a house.

Should additional systematic and continuing information on asset holdings by income groups and the personal characteristics of those household groups holding assets become available in the future it would aid greatly in determining the extent of potentially effective demand at varying levels of down payment requirements.

SECTION EIGHT

HOUSING AND THE NATIONAL ECONOMY

WHAT is Canada's capacity to build houses—today and ten years from now? How many houses can Canada afford to build in view of the competing demands from other sectors of the economy? If a given number of houses are built, what effect will this have on employment and income in the country? The answers to these questions are of major interest to (1) the policy maker, within both business and government, particularly insofar as he is concerned with the maintenance of stable levels of construction and general economic activity; (2) the economist and welfare expert concerned with the most effective and beneficial use of a country's resources; and (3) the general public, whose desire for a continuing improvement of the standard of living—of which housing is an important facet—is one of the basic driving forces of national growth and development.

RESOURCES DEVOTED TO HOUSING

The proportion of its resources which a nation devotes to housing will vary over time. A community which builds up a new settlement in an undeveloped area will in the first instance spend a significant proportion of its working time and resources in creating a minimum of shelter for protection against the elements. Thereafter additional effort on housing will be the result of keeping the housing stock in repair, increasing its size to take care of the growth of the community, and improving its quality to increase the amenities for the members of the community. Similar principles apply to the changing pattern of housing expenditures of a nation, subject to some qualifications referred to below.

There is a distinction, however, between what an individual householder spends on new housing and what a nation as a whole spends on housing. For the average individual householder the building or purchase of a new home is a major economic operation that he may repeat at most a few times during his life. But since individuals or groups of individuals build houses for both ownership and rental at different times, it is the aggregate of all the new houses built in a given period, say one year, which de-

termines the amount of resources which the nation as a whole devotes to housing purposes.

Since the volume of new house building on the North American continent is largely the result of decisions by many individuals or groups of individuals (e.g. real estate companies or co-operatives), such decisions may be more numerous at one time than at another, thereby leading to substantial fluctuations in the volume of new house building as indicated in Sections 2 and 13.

Such fluctuations have been described as cyclical, because past experience in North American countries suggests repetitive variations in the volume of new house building. The pattern of change insofar as can be detected from inadequate past records, originally not designed or collected for the purpose they are now being used for, is perhaps less rhythmic than the term "cyclical" would suggest. But the fact that violent changes in the aggregate volume of new house building have occurred in the past on the North American continent is well established. Some preliminary attempts to offset residential fluctuations have been made both in Canada[1] and the United States[2] through public financial assistance and in some instances direct public house building—but with limited results, as is indicated by the fact that significant variations in the volume of actual housing completions were still present in the second half of the 'thirties. More success in this direction has been achieved by some other countries, e.g. the United Kingdom[3] and Sweden,[4] where public assistance to house building had become accepted practice long before it was established on the North American continent.

Canadian House-Building Capacity—Past and Present

In 1949, Canada built 91,000 dwellings, exceeding by 41 per cent the pre-war peak of 1929 when 65,000 units were completed. There is little question that 1949 was a peak year of housing construction in Canada in absolute terms. The question is: Is this true in relative terms? On a population basis the answer is in the affirmative. On the basis of the proportion of total resources devoted to housing, the evidence indicates that Canada spent less on housing at the post-war peak than she did at the pre-war peak of residential construction activity.

[1]See Section 4.
[2]*Housing and Community Planning*, pp. 60 ff.
[3]*Housing and Community Planning*, pp. 41 ff., and *Housing Progress Abroad, April, 1947, June, 1948*, and *June, 1949*, Central Mortgage and Housing Corporation, Ottawa.
[4]*Housing Progress Abroad, April, 1947* and *June, 1948*.

Dwellings completed per 1,000 population numbered 6.4 in 1929, and 6.8 in 1949, an increase of 6 per cent. A somewhat greater difference, however, is yielded if the value of new residential construction and major improvements and alterations in constant dollars is taken as a basis for comparison. Using this approach, expenditures for new residential construction and major improvements and alterations on a per capita basis in constant dollars amounted to $22 in 1929 and were up to $27 in 1949, or 22 per cent higher than at the pre-war peak (see Table 58).

TABLE 58

CHANGE IN THE VOLUME OF RESIDENTIAL CONSTRUCTION ON A PER THOUSAND POPULATION BASIS, CANADA, 1929, 1948 AND 1949

Item	1929	1948	1949	Change Per cent	
				1929-1948	1929-1949
Dwellings Completed per 1000 Population	6.4	6.2	6.8	− 3	+ 6
New Residential Construction Per 1000 Population—Constant Dollars ($000)	20	24	25	+18	+22
New Residential Construction and Major Improvements and Alterations, per 1000 Population—Constant Dollars ($000)	22	26	27	+18	+22

In the main two factors account for the discrepancy between the increase in the number of dwellings and the value of new residential construction and major improvements and alterations in constant dollars if related to population for the years 1929 and 1949. One factor is the change in the type of the housing program. For example, in 1929 the housing program included more multiple non-farm and farm units than the 1949 housing program. Average costs for multiple non-farm and farm units are lower than average costs of single dwellings, which made up a larger proportion of total completions in 1949 than in 1929. The other factor is a purely statistical one, namely the limitations involved in the valuing technique used, whereby volume data are transformed into value data by use of price and wage rate indices along with some adjustment for changes in efficiency.

In summary the population comparison suggests that the average Canadian spent substantially more in 1949 in real terms

on new housing than he did in 1929, but did not achieve an equivalent increase in the number of new houses per thousand population. This appraisal emphasizes the great care that should be taken in any population comparison in relation to housing. For the evidence can be used, as indicated above, to support the claim that Canadians are not building substantially more houses per capita in the post-war period than in the pre-war peak, but it can also be used for the statement that Canadians are *spending* considerably more in real terms per capita in the post-war peak, as compared with the pre-war peak. Whether one or the other comparison is used will depend on the purpose. If the purpose is to measure the end product and the effect it has on the standard of living, then the comparison of dwelling completions per thousand population may be more indicative. On the other hand, if the purpose of the comparison is to determine spending by the average Canadian and to relate this to other types of expenditures, the value of new residential construction in constant dollars might be more appropriate.

There is, however, another method of measuring the relative position of housing expenditures in the Canadian economy; this approach consists of the measurement of the proportion of total output of the country devoted to residential construction. This measurement has the advantage that it can be made within the framework of the National Accounts, which are currently considered the most comprehensive measurement of total economic activity and allocation of resources.

The relevant data on construction, total investment in durable physical assets, personal expenditures and consumer goods and services and gross national expenditures, in both current and constant dollars, are assembled in Table 59. Two developments are indicated.

1. The annual volume of new residential construction (i.e. in constant dollar terms) increased 62 per cent from 1929 to 1949, but consumer expenditures in constant dollars increased 78 per cent. In other words, relatively more was spent to satisfy the needs of the consumer for the things he ate, used and enjoyed than was spent by the nation as a whole for new housing. The increase in total output of the nation in constant dollar terms amounted to 84 per cent as between 1929 and 1949. This rise is also considerably greater than the corresponding increase in residential construction. The reason for this is the specially large increase of personal consumer expenditures, comprising about two-thirds of the gross national product, and relatively greater increases of

TABLE 59

POPULATION AND SELECTED COMPONENTS OF GROSS NATIONAL EXPENDITURE, CANADA, 1929, 1948 AND 1949

Item	1929	1948	1949	Increase Per cent			
				1929-1948		1929-1949	
				Current Dollars	Constant Dollars	Current Dollars	Constant Dollars
Population as of December 31—Mill	10.1	13.1	13.4	30	—	33	—
Number of Dwellings Completed—000	64.7	81.2	91.0	25[1]	—	41[1]	—
New Residential Construction—$Mill	229	629	716	175	49[1]	213	62[1]
New Residential Construction and Major Improvements and Alterations—$Mill	247	668	763	170	46	209	59
New Residential Construction, Major Improvements and Alterations, and Repair and Maintenance —$Mill	303	830	938	174	49	209	59
New Business Construction, Major Improvements and Alterations and Repair and Maintenance—$Mill	357	651	590	82	4	66	−10
Total Investment in Durable Physical Assets—$Mill	1,316	3,171	3,401	141	45	158	47
Personal Expenditure on Consumer Goods and Services—$Mill	4,383	10,083	10,750	130	74	145	78
Gross National Expenditure—$Mill	5,956	15,503	16,074	160	80	170	84

[1]See p. 91.

exports of goods than of imports. The rapid rise of consumer expenditures in turn is explained by the significant increases in personal incomes by a large segment of the Canadian population, most of which was spent in the immediate post-war period on consumer goods, including a large volume of durable goods the purchase of which had been postponed during some of the depressed 'thirties and the war years. This large increase in consumer expenditures reflects the significant rise in the real standard of living experienced by the average Canadian family which has been described as at least 50 per cent better in the post-war period than before the war.[1] A larger proportion of resources devoted to current consumption meant fewer resources for the creation of capital goods, of which new housing construction is a significant segment.

2. Comparing for the period 1929 to 1949 the change in the annual volume of residential construction, including major improvement and alterations, with business construction, brings out the interesting observation that the latter, as measured in constant dollar terms, declined by 10 per cent, while the former increased by 59 per cent. This observation suggests that in spite of the pressing needs for new business construction in the post-war period and the more favourable conditions under which business construction competed for scarce materials in a period of high demand,[2] sufficient resources were made available for housing purposes to reach new absolute peaks of output. This evidence is somewhat contradictory to the belief, frequently held, that the volume of housing construction in the post-war period suffered greatly from the competitive demand of business construction of various types.

The evidence above can be presented in a different way, although it leads to similar conclusions. In 1929 new residential construction comprised on a volume basis 4 per cent of total output of the nation. In 1949 the proportion was down to 3.5 per cent.[3] Had the nation been willing to return to the living pattern of 1929, and had it been prepared to devote the same proportion of its output in 1949 to new house building, this would have involved an expenditure of $376 million in constant dollars, or $816 million in current dollars. At 1949 prices, and on the basis of the types

[1] *Investment and Inflation*, p. 25.

[2] *Ibid.* p. 60.

[3] An entirely different picture is presented in using current dollar figures because of the more than proportionate increase in residential construction costs in the post-war period. On a current dollar basis 3.8 per cent of the total output of the gross national product went into residential construction in 1929, and 4.5 per cent in 1949 (see also Table 59).

of houses built in this year, this would have involved a total of 104,000 units, or 13,000 units more than were actually completed. However, since there were other competing calls for Canada's resources,[1] of which increases in the volume of consumer expenditures were the most significant, these additional 13,000 units could not have been built unless other sectors of the economy had been cut.[2]

House-Building Capacity in 1960

This was the situation in the first four years following the conclusion of World War II, when overall demand, both domestic and foreign, for goods and services of almost all kinds was particularly pressing. But as some of this pressure subsides, particularly that part engendered by deferred demand accumulated during the pre-war and war periods, the Canadian economy, if it were to return to the 1929 ratio of new residential construction to total output, would build over 100,000 units annually. But this reflects only present potential capacity.

Since Canada's economy is a growing economy, it is important to consider the rate at which real output is rising. Some preliminary evidence is available for the last two decades.

In 1929 the Canadian population numbered 10.1 million, and its working force was estimated at close to 4 million, of whom 3.8 million were working. The nation's output (gross national product) for that year is estimated at $6 billion in 1929 dollars, and at $5.1 billion in constant (1939) dollars. The average output per man-year was therefore about $1,318 in constant dollars.

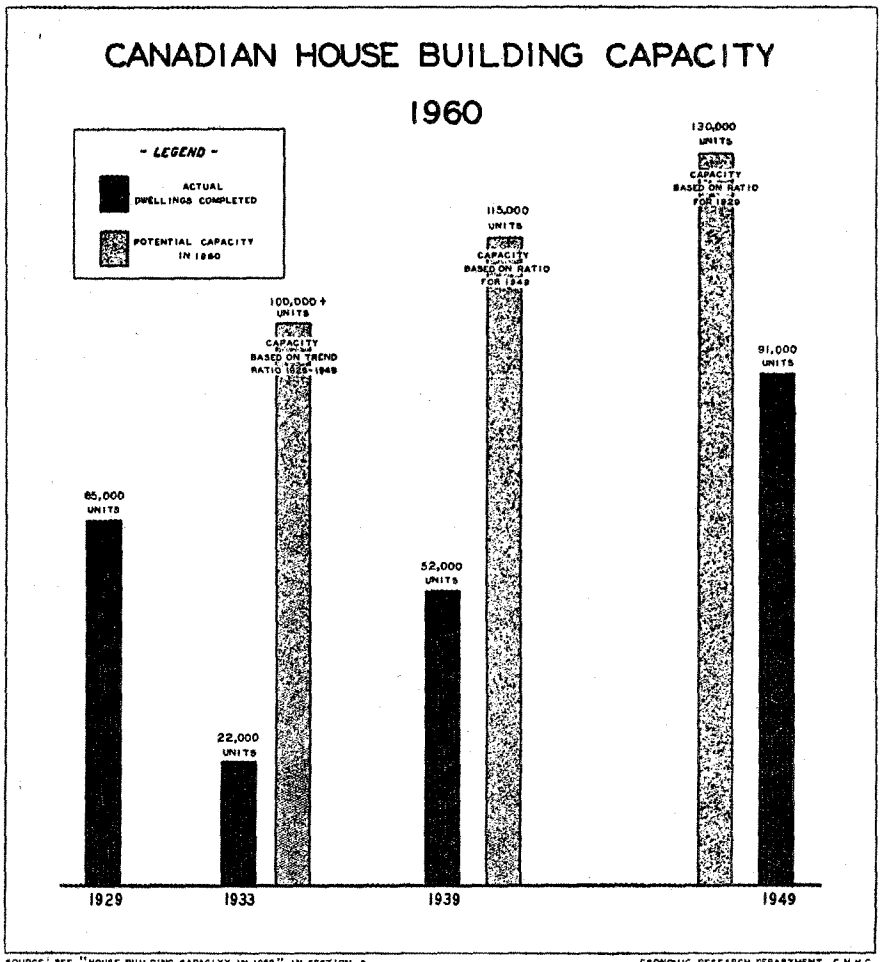
In 1949 there were 13.4 million people living in Canada,[3] of whom 5.1 million comprised the working force, with 5 million employed. Gross national product in current dollars was estimated at $16.1 billion for that year, or about $9.4 billion in constant dollars. The average output per man-year was therefore $1,890 in constant dollars, or $572 higher than in 1929 (see Table 60). This difference suggests in a very rough sort of way an overall increase of output per man-year during the twenty-one year period of 43 per cent, or an annual average of about 2 per cent. In fact, however, productivity changes did not occur evenly during this period. In certain years during this period pro-

[1] *Investment and Inflation*, p. 57.

[2] For an elaboration of this thesis, see statement by Hon. Robert H. Winters, Minister of Reconstruction and Supply, before the annual convention of the Canadian Construction Association, *Proceedings of the Thirty-First Annual General Meeting*, Canadian Construction Association, Toronto, January 24-26, 1949, p. 10.

[3] Excluding Newfoundland.

ductivity is likely to have decreased, with these declines being made up by greater increases in other years.[1] Had those overall productivity changes not occurred in this twenty-one year period, a labour force of 5.1 million, with 5 million working in 1949 would



SOURCE: SEE "HOUSE BUILDING CAPACITY IN 1960" IN SECTION 8. ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

FIGURE 20

have produced at the 1929 rate of output a total gross national product of only $6.7 billion in constant dollars, or about $11.4 billion in 1949 prices.

On the basis of the experience for the last two decades, real output over the next decade if the nation were to make full use of its resources might increase at an *average* rate of 2½ per cent

[1]For an example, see p. 404.

per year. This average rate is arrived at by subtracting from 3½ per cent (the sum of an annual average increase in the labour force of 1.5 per cent and in output per man-year of 2 per cent), an allowance of 1 per cent per year for the tendency towards greater leisure, as reflected in an average decrease in the number of hours worked per week. On this basis Canada could produce a gross national product in 1960 of over $20 billion in 1949 prices.[1] If the same proportion of resources were devoted to house building in 1960 as in 1929 and assuming no radical change in building methods and designs, some 130,000 houses could be built, or if

TABLE 60

CHANGE IN OUTPUT PER MAN YEAR, CANADA, 1929, 1948 AND 1949

Item	1929	1948	1949	Increase Per cent	
				1929-1948	1929-1949
Employment—Mill.	3.8	4.9	5.0	29	32
Gross National Product—In $Bill., Constant Dollars	5.1	9.2	9.4	82	86
Output per Man-Year—Constant Dollars	1,318	1,875	1,890	42	43

the 1949 ratio prevailed, about 115,000 houses could be built. However, even if the declining trend of resources devoted to houses observed for the last two decades were to continue, more than 100,000 dwellings might still be built in 1960 (see Figure 20).

These figures are illustrative of the tremendous house-building potential of the Canadian economy under various assumptions. The appraisal emphasizes the necessity for considering in all discussions of capacity the growth of the economy and its increased ability to turn out a greater output with a given labour input.

Barring a third world war it is quite likely that the Canadian economy will have sufficient resources to build between 100,000 and 130,000 units in 1960, and a continuously increasing number thereafter. There is no assurance that this number of houses will actually be built, however. Whether or not this capacity will actually be developed and used depends on whether effective demand for such a number of houses can be maintained over a long

[1]Full utilization of resources and increasing working hours which may result from intensified military efforts may lead to a considerably higher gross national product than envisaged above. Should this be the case, and assuming no overall price controls, prices may rise for the duration of the preparedness effort by 3 to 5 per cent per annum. If such a situation should develop over the next decade a gross national product of over $30 billion in 1960 prices is more likely.

period of time by some combination of private initiative and public assistance. If such demand for housing is not forthcoming some of the resources available for new residential construction will either be used for other purposes or will remain idle.[1]

The Problem of Effective Demand

The above analysis implies that the problem of housing Canadians in the next decade, and perhaps beyond it, requires two significant decisions by business, government, and the general public: (1) what proportion of Canada's resources should be devoted to new housing construction, taking into consideration other demands on the resources of the country and gradually rising standards of living and leisure; and (2) given a proportion of resources devoted to housing, how can effective demand be assured to get this number of houses, of the type and quality required, actually built.

The crucial question that may occupy the policy maker of tomorrow may be this matter of effective demand. This is a question which was pushed into the background in the 'forties when supply and capacity problems were very much to the fore. Sometimes in the *later* 'fifties, effective demand may dominate the scene unless the situation is changed considerably as a result of a general war or an armament race.

In this connection the following comments are illuminating.

As far as the construction industry is concerned, the problem of effective demand will be more difficult than the supply problem of the 'forties. There are many reasons for this, and I should like to mention one important one. On the supply side it was up to the construction industry and material suppliers to do something about it and you did. But on the demand side it depends almost entirely on the far-sightedness and willingness of people who place contracts with you. New construction contracts in large volume are dependent upon things going well

[1]Some of these resources may not become available in the first instance as a result of the reorientation of the Canadian economy towards more leisure and fewer material accomplishments. Such a reorientation has, in fact, been under way ever since the pioneering days of Canadian development. But changes in living and working habits have been slow and gradual. If past experience is any guide, the trend towards more leisure will continue, but no significant *voluntary* change in working and living habits is likely to occur in the course of the next few years. Allowance for small changes towards more leisure has been made in the above calculations by assuming a 1 per cent annual reduction in the number of hours worked. On the basis of an average 42-hour week in industry in 1949 the above allowance would mean a 38-hour average working week in 1960 (see p. 256).

and Canadians being prosperous and optimistic enough to spend large sums on new commercial buildings, roads, installations and housing. And if Canadians are somewhat less prosperous and less optimistic, the volume of construction work will only be maintained if governments at all levels step in and increase the volume of their own construction projects. All Canadians have an interest in maintaining effective demand for all the things that Canadians produce. For the best guarantee of a high volume of construction and of all business is that feeling of confidence that comes from everyone working and earning enough for a good livelihood.

Now we know, and the construction industry knows, that boom and bust is its worst enemy. But we also know that it is the Canadian people's worst economic enemy. Thus the construction industry's problem of the 'fifties is a national problem. Vice versa, the national problem of maintaining high levels of employment and income in Canada in the next decade must be a matter of prime concern to the construction industry.[1]

Economic Impact of Residential Construction

So far the discussion in this chapter has been concerned with the potential capacity of the Canadian economy for a continuing large scale program. In the preceding chapter some of the major considerations underlying effective housing demand have been appraised. Whether housing demand in the future will be sufficient to make full use of house-building capacity, both actual and latent, is a question of the ability and willingness of families to devote a certain proportion of their incomes to housing and the extent to which governments will be participating in assisting and encouraging the maintenance of high levels of residential building construction.

The policy considerations involved in assuring such levels of housing construction have been examined in other reports and investigations and are beyond the scope of this study.[2] But assuming that sufficient effective demand will be forthcoming in the future, to make use of all or at least a large portion of the Canadian house building potential the next question is: What will a given housing program mean for the Canadian economy? Its service effects in providing shelter for the Canadian population

[1]"Developments in Canada's Housing Program," *Proceedings of the Thirty-Second Annual General Meeting*, Canadian Construction Association, January 1950, pp. 34-35.

[2]For comprehensive recommendations for a national housing policy, see *Housing and Community Planning*. Many of these recommendations and additional provisions have been incorporated in the National Housing Act, 1944 and subsequent amendments.

have been discussed in Section 7. But the question still to be dealt with is: What is the likely effect of a housing program on economic activity in Canada? To answer this question the remainder of this section is concerned with an appraisal of the contribution which new residential construction makes to levels of business activity, employment and income in the country.

Residential Construction and Business Activity

Three aspects of residential construction indicate its contribution to business activity: (1) the part residential construction plays in total construction work in Canada; (2) the contribution residential construction makes to total investment and overall economic activity; and (3) what segments of economic activity are directly affected by residential construction expenditures as reflected in the various components of gross national expenditure, measured in the framework of the Canadian National Accounts.

Residential Construction and Total Construction—by Type of Enterprise

Expenditures for new house building, including major improvements and alterations, are the most important element of total new construction work carried out in Canada, close to two-fifths in 1948 and 1949. Construction by business enterprises, including manufacturing, primary industries and commercial groups, is next in importance, contributing one-fifth to one-quarter of the total. Construction for Government (excluding housing) follows with about one-sixth, with the rest distributed between construction for public utilities and institutions (see Table 61).

The ranking of these different types of enterprise remains unchanged if all construction activity, including new, major improvements and alterations and repairs and maintenance, is considered, except that in 1949 public utilities construction slightly exceeds the Government component. However, since more is spent, proportionately, on the upkeep of business property than on residential property, the difference between the contributions which these two types of enterprise make to total construction activity is narrowed somewhat, as the following percentage figures for 1949 suggest: residential construction, 34 per cent, business construction, 22 per cent, public utility construction, 19 per cent, Government construction (excluding housing), 18 per cent, and institutional construction, 7 per cent.

TABLE 61

NEW CONSTRUCTION, MAJOR IMPROVEMENTS AND ALTERATIONS AND REPAIR AND MAINTENANCE, BY TYPE OF ENTERPRISE, CANADA, 1948 AND 1949

Type of Enterprise	1948						1949					
	New Construction, Major Improvements and Alterations		Repair and Maintenance Construction		Total Construction		New Construction, Major Improvements and Alterations		Repair and Maintenance Construction		Total Construction	
	$ Mill	Per cent	$ Mill	Per cent	$ Mill	Per cent	$ Mill	Per cent	$ Mill	Per cent	$ Mill	Per cent
Housing	668	35.6	162	23.3	830	32.3	763	37. 2	175	25.5	938	34.2
Business Enterprises[1]	471	25.1	180	25.9	651	25.3	426	20.7	164	23.8	590	21.5
Public Utilities	281	15.0	188	27.1	469	18.2	335	16.3	191	27.7	526	19.2
Institutions	124	6.6	28	3.9	152	5.9	163	7.9	25	3.6	188	6.8
Direct Government[2]	333	17.7	138	19.8	470	18.3	368	17.9	134	19.4	502	18.3
All Enterprises	1,877	100.0	696	100.0	2,572	100.0	2,055	100.0	689	100.0	2,744	100.0

[1]Excluding public utilities.
[2]Excluding housing.

Residential Construction and Total Construction—by Type of Construction

New building construction makes up about three-quarters of total new construction, and engineering construction the rest. In the immediate post-war period close to one-half of all building construction work involved the building of new homes and the improvement, alterations and repairs of existing homes.

Residential Construction and Gross Investment

One of the most variable segments in economic activity[1] is expenditures on durable physical assets, that is, outlay on new construction, major improvements and alterations of all types,

TABLE 62

Role of New Residential Construction and Major Improvements and Alterations in Investment, Canada, 1948 and 1949

Item	1948		1949	
	Amount $ Mill	Per cent of Item Represented by New Residential Construction	Amount $ Mill	Per cent of Item Represented by New Residential Construction
New Residential Construction and Major Improvements and Alterations	668	100.0	763	100.0
Total New Building Construction	1,300	51.4	1,417	53.8
Total New Building and Engineering Construction	1,877	35.6	2,060	37.0
Total Investment in Durable Physical Assets	3,171	21.1	3,401	22.4
Total Domestic Gross Investment	3,780	17.7	3,512	21.7
Total Gross Investment	4,198	15.9	3,674	20.8
Gross Home Investment as per National Accounts	3,272	20.4	2,930	26.0

and purchases of new machinery and equipment. New residential construction itself, subject to notable changes in volume (see Section 2), contributes significantly to fluctuations of investment, since it makes up currently close to one-quarter of the total (see Table 62). The proportion is slightly smaller, about one-fifth, if *total* residential construction, i.e. new work, major improve-

[1]*Investment and Inflation*, p. 26.

ments and alterations, repairs and maintenance, is compared with total new investment *and* the maintenance and repair of durable physical assets (see Table 63).

As indicated in Table 62, three other comparisons of new residential construction with investment are possible (1949 figures in brackets): (1) as a proportion of total *domestic gross investment*, that is, investment in durable physical assets and the

TABLE 63

ROLE OF NEW RESIDENTIAL CONSTRUCTION, MAJOR IMPROVEMENTS AND ALTERATIONS, AND REPAIR AND MAINTENANCE IN THE NATIONAL ECONOMY, CANADA, 1948 AND 1949

Item	1948		1949	
	Amount $ Mill	Per cent of Item Represented by New Residential Construction	Amount $ Mill	Per cent of Item Represented by New Residential Construction
Total Residential Construction	830	100.0	938	100.0
Total Building Construction	1,562	53.1	1,670	56.2
Total Building and Engineering Construction	2,572	32.3	2,736	34.3
Total Investment in Durable Physical Assets and Repair and Maintenance	4,634	17.9	4,904	19.1
Gross National Expenditure	15,503	5.4	16,074	5.8

physical change of inventory holdings (22 per cent); (2) as a proportion of total *gross investment*, that is, total domestic gross investment and net foreign investment (21 per cent); and (3) as a proportion of what is described in the Canadian National Accounts as "*gross home investment*," equal to total domestic gross investment but excluding direct Government investment in durable physical assets (26 per cent).

RESIDENTIAL CONSTRUCTION AND GROSS NATIONAL EXPENDITURE

In 1949 total residential construction comprised 5.8 per cent of total expenditures on all goods and services as measured by gross national expenditure at market prices. Of this the major portion was new residential construction and major improvements and alterations, 4.7 per cent, and the remainder, 1.1 per cent, repairs and maintenance to residential structures. However,

since residential construction, particularly new activity, fluctuates more than almost any other non-investment component of economic activity, the above proportions have varied corres-

TABLE 64

RESIDENTIAL CONSTRUCTION AS A PROPORTION OF GROSS NATIONAL EXPENDITURE, CANADA, 1926-1949

Year	Residential Construction			Gross National Expenditure	Residential Construction as a Proportion of Gross National Expenditure		
	New, Major Improvements and Alterations $ Mill	Repair and Maintenance $ Mill	Total $ Mill	$ Mill	New, Major Improvements and Alterations Per cent	Repair and Maintenance Per cent	Total Per cent
1926	211.7	49.3	261.0	5,196	4.1	0.9	5.0
1927	216.4	50.1	266.5	5,447	4.0	0.9	4.9
1928	235.5	54.0	289.5	5,985	3.9	0.9	4.8
1929	247.0	56.4	303.4	5,956	4.1	0.9	5.1
1930	203.8	52.1	255.9	5,348	3.8	1.0	4.8
Average for Period	222.9	52.4	275.3	5,586	4.0	0.9	4.9
1931	167.6	45.6	213.2	4,480	3.7	1.0	4.8
1932	95.5	40.0	135.5	3,718	2.6	1.1	3.6
1933	76.1	39.6	115.7	3,468	2.2	1.1	3.3
1934	97.6	44.1	141.7	3,962	2.5	1.1	3.6
1935	113.6	45.8	159.4	4,285	2.7	1.1	3.7
1936	138.9	50.1	189.0	4,644	3.0	1.1	4.1
1937	175.3	54.8	230.1	5,279	3.3	1.0	4.4
1938	158.5	53.2	211.7	5,165	3.1	1.0	4.1
1939	185.1	56.6	241.7	5,598	3.3	1.0	4.3
1940	199.3	63.0	262.3	6,772	2.9	0.9	3.9
Average for Decade	140.8	49.3	190.1	4,737	2.9	1.0	3.9
1941	243.5	76.7	320.2	8,434	2.9	0.9	3.8
1942	223.3	86.7	310.0	10,455	2.1	0.8	2.9
1943	203.7	87.6	291.3	11,283	1.8	0.8	2.6
1944	236.6	91.8	328.4	11,919	2.0	0.8	2.8
1945	285.6	96.3	381.9	11,810	2.4	0.8	3.2
1946	412.0	105.3	517.3	12,008	3.4	0.9	4.3
1947	539.7	130.8	670.5	13,657	4.0	1.0	4.9
1948	667.7	161.9	829.6	15,503	4.3	1.0	5.3
1949	762.5	175.3	937.8	16,074	4.7	1.1	5.8
Average for Period	396.0	112.5	508.5	12,349	3.1	0.9	4.0
Average 1921-1949	254.1	73.6	327.7	7,769	3.2	1.0	4.2

TABLE 65

COMPONENTS OF GROSS NATIONAL EXPENDITURE, INCLUDING SEGMENTS COMPRISING RESIDENTIAL CONSTRUCTION, CANADA, 1948 AND 1949

Item No.	Component	1948		1949	
		Expenditure $ Mill	Distribution Per cent	Expenditure $ Mill	Distribution Per cent
1	Repair and Maintenance of Private Residential Structures[1]	160	1.6	173	1.6
2	Other Personal Expenditures on Consumer Goods and Services[1]	9,889	98.4	10,781	98.4
3	Total Personal Expenditures on Consumer Goods and Services (Items 1+2)	10,151	100.0	10,954	100.0
4	Direct Government Expenditures on Residential Construction, New, Repair and Maintenance[1]	73	4.0	74	3.5
5	Other Government Expenditures on Goods and Services	1,762	96.0	2,056	96.5
6	Total Government Expenditures on Goods and Services (Items 4+5)	1,835	100.0	2,130	100.0
7	Private New Residential Construction and Major Improvements and Alterations[1,2]	597	18.5	691	24.1
8	Private Investment in Plant, Equipment and Inventories	2,615	81.5	2,177	75.9
9	Gross Home Investment (Items 7+8)	3,222	100.0	2,868	100.0
10	Exports of Goods and Services	4,054	—	3,987	—
11	Imports of Goods and Services	3,636	—	3,825	—
12	Net Foreign Balance (Items 10−11)	418	—	162	—
13	Residual Error of Estimates as per National Accounts[3]	−121	—	−40	—
14	Total Residential Construction (Items 1+4+7)	830	5.4	938	5.8
15	Other Gross National Expenditures (Items 2+5+8+12+13)	14,673	94.6	15,136	94.2
16	Gross National Expenditures at Market Prices (Items 14+15)	15,503	100.0	16,074	100.0

[1]In this table expenditures by Central Mortgage and Housing Corporation are considered as Government expenditures whereas they are classed with private expenditures in the National Accounts.
[2]Including house building financially assisted by the Government. [3]See p. 377.

pondingly over time. In 1926 and 1929, for example, new residential construction made up 4.1 per cent of gross national expenditures in each of the two years, in 1933 it was down to 2.2 per cent, in 1939 up to 3.3 per cent, and in 1949 again up to 4.7 per cent (see Table 64). It should be emphasized that this is a comparison in current dollar terms. Because construction costs have increased more than most other cost items over the last few decades the importance of the volume of residential construction relative to total physical changes in gross national expenditures will vary somewhat from the above appraisal in current dollars. This is illustrated by the discussion of the physical changes that occurred between 1929 and 1949 (see p. 242).

The relationship between the residential construction estimates presented in this report and estimates of the various components of gross national expenditure as contained in the Canadian National Accounts for the years 1948 and 1949 is shown in Table 65.

The table also brings out the interesting fact that the private sector of the economy (consumer and business) spent 6.3 per cent of its total outlay on new residential construction, major improvements and alterations, and repairs and maintenance, while Government spent for the same purpose 3.5 per cent of all its outlay on goods and services in 1949. However, since Government, in addition to its direct expenditures, loaned out money and provided other financial assistance to aid in undertaking a comprehensive housing program in 1949, the situation is different if the Government financially assisted residential sector is added to direct Government housing expenditures and subtracted from private spending. On this basis the ratios are 5.9 per cent for the private sector and 5.8 per cent for the Government sector (see also Section 4).

Employment and Income Effects

Expenditures on residential construction have direct employment and income effects through the immediate use of resources of capital goods industries. But beyond this direct impact residential construction expenditures, like outlay on other investment goods, affect employment and income in many additional fields, mainly consumer goods and service industries. It is therefore desirable to distinguish between the direct employment and income effects and *secondary* employment and income effects of residential construction expenditures. In the present state of economic knowledge measurement of the former effect is well

within reach, but measurement of the latter effect, even in approximate terms, is still difficult. However, some observations about the quantitative impact of secondary employment and income effects can be made in relation to the level of economic activity that may be prevailing at a given time.

Direct Employment and Income Effects

Residential construction expenditures provide jobs and income directly for those who contribute labour, skill, initiative and capital to the construction of new houses, the improvement, alteration, repair and maintenance of existing houses, and the services required to carry out the residential construction program. Those who benefit *directly* from the employment and income effects of a housing program fall into two categories.

One group comprises the people who plan and design houses and equipment installed in residential structures, such as architects and engineers, and those who provide services essential in most cases to house building in its pre-construction stages, such as real estate dealers and other agents, lending institutions, lawyers and surveyors. It includes also, in the field of construction work, contractors, builders and developers who organize and supervise the completion of housing projects, and the actual on-site workers, foremen, building craftsmen, semi-skilled and unskilled construction workers. Producers and distributors of equipment for installation in residential structures are also included in this first group.

The second group consists of those who produce, store, sell and transport the building materials required for residential construction, and the raw and processed materials and supplies required for the manufacture of residential equipment. This group is wide and varied and includes people in all parts of the country, ranging from the producers of raw material in Canada's mines and forests to large manufacturing concerns, and from the wholesaler in a metropolitan centre to the hardware store keeper and station agent in a small community.

Direct Employment Effect. The above enumeration suggests that residential construction expenditures affect many Canadians in every walk of life. The question is: how many?

The latest survey of the employment effect of new house building was made in 1946.[1] It was estimated in this report, using the pattern of residential construction in that year, that the building of the average house of *desirable* standards would provide

[1] *Manpower and Material Requirements*, pp. 43 ff.

employment of 2,642 man-hours of on-site employment. This figure covers the number of hours worked by foremen, building mechanics and semi-skilled and unskilled construction workers in clearing the site and building the house. Off-site employment for the average house of desirable standards was estimated at 3,449 man-hours, covering the work involved in producing, storing, selling and transporting the building materials required for building a home. However, these estimates were based on arbitrary standards, described as "desirable," and not on actual standards. In reality many of the houses built do not come up to what is considered a desirable standard. Further, standards vary considerably across the country because of the differences in building by-laws or the complete absence of such by-laws in many communities. In view of this difference between a house of desirable standards and a house of actual standards, it was suggested in the study mentioned above that the latter house was likely to cost 18 per cent less and provide correspondingly fewer man-hours of employment than the former.

The estimate for 1946 requires certain adjustments to make it applicable to the estimates presented here for 1948 and 1949. First, the estimates of residential construction expenditures presented in this report include an allowance for supplementary buildings, e.g., garages, and finishing of grounds, e.g. landscaping, not included in the estimates prepared for 1946. Secondly, an increase in efficiency of building operations has occurred between 1946 and 1949. This is an offsetting item in that it contributes to a reduction in the number of man-hours required. The net effect of these two offsetting items is to reduce the employment content of a 1948 and 1949 house of actual standards to 88.8 per cent of the estimated employment content of a house of desirable standards. On this revised basis it is estimated that the construction of the average house in 1948-1949 provided 2,346 on-site man-hours, and 3,063 off-site man-hours.

In 1948-1949 the average construction year comprised about 1,900 man-hours,[1] a larger number than has been customary in either the pre-war or immediate post-war periods.[2] On this basis it required 1.2 man-years of on-site work to complete one house in 1948-1949.

[1]The average number of man-hours worked per week in 1949 by employees in the building industry paid by the hour was 40. (*Housing in Canada, January, 1950*, p. 80.)

[2]As a result of the large volume of construction work on hand builders and contractors were keeping the labour force employed during most of the usual "off season," hence loss of work due to seasonal influences was reduced to a minimum.

Average man-hours worked in manufacturing industries, which substantially reflect the seasonal pattern of off-site workers, numbered 42.3 per week, or 2,200 for 1949 as a whole.[1] The 3,063 off-site man-hours required to produce, distribute, store and transport building materials required for the construction of a house, would provide work for about 1.4 man-years.

To summarize the direct employment effect of the housing completed in 1949:

(1) The average unit provided 2,346 man-hours of on-site and 3,063 man-hours of off-site employment, a total of about 5,400 man-hours, or the equivalent of a year's work for about two and a half persons (2.6 man-years).

(2) The total housing program provided 215 million man-hours of on-site work and 281 million man-hours of off-site work, a total of 496 million man-hours. This means a year's work for 110,000 men in the construction industry and 128,000 persons in the industries producing and distributing building material, a total of about 240,000. This total, however, does not include an allowance for the gainful occupation of builders, contractors, architects, lawyers, notaries, real estate agents and for a small number of producers of installed residential equipment. If allowance is made for these the total year round employment provided by housing construction in 1949 probably reached the 250,000 mark. All the on-site employment meant jobs for Canadian residents. Some of the building materials and some of the component materials are imported, but, on the whole, Canada is dependent only to a small extent on the importation of building materials from abroad.[2] It is unlikely that more than 5 per cent of the total employment of the housing program meant jobs for workmen in other countries,[3] and the total Canadian employment content of the 1949 housing program was therefore probably some 235,000 persons working for the whole year.

(3) The full time equivalent of construction employment in carrying out the housing program in 1949, involving 110,000 man-years, comprised over one-third of the total number of men reported as employed in the construction industry,[4] 323,000. Since there are some differences in the definitions of the residential

[1]Computed from statistics published in monthly issues of *Man Hours and Hourly Earnings*, Dominion Bureau of Statistics, Ottawa.

[2]*Investment and Inflation*, p. 228.

[3]This proportion is much smaller than the corresponding proportion for the investment program as a whole, since the foreign employment content of the machinery and equipment program is substantially greater, cf. ibid., p. 119.

[4]*Housing in Canada, January, 1950*, p. 78.

construction employment estimates and the total employment reported for the construction industry,[1] comparisons of the part with the total, both arrived at by use of entirely different methods, must be used with great care.

Relating the total employment equivalent of the housing program of about 235,000 man-years to the total number employed in Canada in 1949 of 5 million, indicates that 4.7 per cent of all persons working were engaged in one way or the other in making the achievements of the housing program possible. In other words, one out of every twenty-one Canadian working men was fully employed during 1949 in the building of the 91,000 houses completed in that year.[2]

Direct Income Effect. Data relevant to the direct income effect of the housing program are assembled in Table 66. Total cost of the 1949 housing program was estimated at $731 million, of which $716 million went to the construction industry, $2 million for installed non-movable equipment,[3] and $13 million for service costs, architectural, legal, sales and financial fees. Construction costs of $716 million included $267 million for wage payments to the construction on-site labour force, $378 million for payments to the building materials supplying industries, and $71 million to contractors and builders covering their overhead and profits.

The construction payroll of $267 million represents compensation for 215 million man-hours worked on the site, or an average of $1.24 per hour. This is higher than the average of $1.09 reported for workers employed at hourly rates in the building industry, and employed by large and medium sized firms having 15 or more employees. There are several possible reasons why these two different sets of data do not yield the same result. The higher figure includes pay received by subcontractors whose

[1]Among the reasons for the differences in the definitions of the two sets of construction employment data shown above are: (*a*) The residential construction employment data include owner labour and force account work, that is, construction work done by companies engaged in other than construction work by their own crews. The total construction employment data exclude these types of employment. (*b*) The residential construction employment data reflect a man-year equivalent arrived at via an estimate of value of construction work performed, the portion going into construction work payments and average wages per man-hour. Total construction employment data are the annual average of four quarterly counts based on a 1 per cent population sample.

[2]The above ratio of 4.7 is close to the proportion of the value of new residential construction work carried out in 1949 (i.e., excluding land but including installed non-movable equipment and service costs) of $731 million to total national output of $16.1 billion, or 4.5 per cent.

[3]Includes elevators, incinerators, fire equipment, etc., but does not include movable equipment such as stoves and refrigerators, nor furnaces, which are included under construction.

earnings per hour would be higher than those of the construction workers employed. Large and medium-sized firms are likely to employ more semi-skilled and unskilled construction workers, whose pay scale would be lower than that of building craftsmen. Also, employment in the building industry reflects employment on all types of building projects, including repair and maintenance construction, while residential construction data refer to new house building only.

TABLE 66

INCOME EFFECT OF NEW HOUSE BUILDING, CANADA, 1948 AND 1949

Item	1948		1949
	Amount $ Mill	Per cent	Amount $ Mill
New Residential Construction			
On-site Labour	234.2	36.5	266.6
Material	331.7	51.6	377.5
Overhead and Profits	62.8	9.8	71.5
Sub-total	628.7	97.9	715.6
Installed Non-Movable Equipment[1]	2.2	.3	2.5
Service Costs[2]	11.0	1.8	13.1
Total House Building Costs	641.9	100.0	731.2

[1]Includes elevators, incinerators, fire escapes, etc.; does not include movable equipment, such as stoves and refrigerators, nor furnaces, which are included under construction.

[2]Includes architectural, legal, sales and financial fees.

The income effect of the housing program, however, goes beyond the wage payments to the construction labour force. About three-quarters of the total expenditures[1] on building materials went into salary and wage payments to those who produce, distribute and store building materials, and transport them to the construction site, involving a payroll of about $283 million. It has previously been estimated that the supply of building materials for the housing program provided 281 million man-hours of work in 1949. This meant an average pay per off-site man hour of $1.01, somewhat less than the average hourly wage actually paid to construction workers engaged in new residential work. The difference is in line with other indicators. Average hourly earnings as at January 1, 1950, were $1.01 in the

[1]For some exploratory investigations in this field see *The Importance of Construction Industry in Relation to the Canadian Economy*, Preliminary Report I prepared for the Advisory Committee on Reconstruction, Privy Council, Ottawa, 1942, pp. 77 ff.

manufacturing industries, $1.03 in the transportation industry, and 65 cents in the service trades, as compared with $1.09 in the building industry.[1]

Of the balance of the total cost of the housing program approximately $1.9 million[2] went into wage and salary payments for the production and distribution of installed non-movable residential equipment, and $13.1 million into payment for professional services of various kinds. Also, some of the $71 million involving payment for overhead and profit to builders and contractors included salary payments to staff in the employ of construction entrepreneurs.

Summarizing the direct income effect of the housing program of 1949: wage and salary payments, both on-site and off-site, involved an outlay of about $560 million, or about 7 per cent of total wages and salaries paid in this year. The remainder of about $170 million involved payment for professional services, profits of builders, contractors and building material producers and distributors, and overhead expenses, excluding salary payments.

Secondary Employment and Income Effects

So far the appraisal has been concerned with the direct employment and income effects of residential construction expenditures covering on-site operations in the construction industry, factory operations of producers and distributors of residential equipment, and off-site production, distribution and transportation of building materials, together with the host of specialized service functions involved in a housing program in an advanced industrial society. There are, however, other employment and income effects of residential investment. The most important of these, generally described as "secondary effects," consist of employment and income going to consumer goods industries through the spending of wages and salaries and profits earned by the groups of industries mentioned above. An increase in the volume of construction investment will be associated with subsequent increases in the volume of consumer expenditures and levels of employment and income. High activity in these industries may in turn stimulate new investment.

Secondary effects of residential capital expenditures will vary, depending on the level of employment and income prevailing in the country. A distinction should be made with regard to the effect on volume and on prices. As long as there are idle resources

[1]Computed from statistics published in *Man Hours and Hourly Earnings*, January, 1950.

[2]That is, 75 per cent of $2.5 million.

in the economy the secondary effects of the additional investment, whether residential or other, will mean an added volume of employment and income in consumer goods and service industries. In this situation increased investment will lead to an increased volume of consumer expenditures without significant changes in the level of prices and wages. However, as higher levels of employment and income are approached, an additional volume of investment, whether residential or other, can be achieved only by transfer of factors of production from other sectors of the economy, and little or no further overall increase in employment can be achieved. In the absence of controls such a transfer of factors of production from one sector of the economy to another will be accompanied by increases in prices and wages, which will spread throughout the system. Even if no exact quantitative measurement of the secondary employment and income effects of residential investment can be made, the following two broad observations appear to be indicated: (1) in periods of low or medium levels of employment and income, expenditures on residential investment will mean added employment and income in consumer goods and in service industries and an increase in total output; (2) in periods of prosperity such as prevailed in the immediate post-war period, further increases in residential investment and/or other types of investment will lead primarily to increases in the levels of prices and wages rather than to increased volume of output and employment.[1] It may be concluded, therefore, that the employment and income effects of the housing program may go beyond the immediate stimulus provided directly by expenditures on on-site residential construction and building materials but the impact will vary depending on the degree of fullness at which the economy is operating.[2]

Conclusion

To summarize the situation as reflected in 1949:

(1) One out of every twenty-one Canadian workingmen is engaged in house building or providing the materials and services required to complete a house.

(2) One dollar out of every fourteen paid out in Canada for wages and salaries is earned by people employed in carrying out the housing program.

[1]These observations are borne out by the analysis of post-war conditions in Canada conducted by the Royal Commission on Prices (*Report of the Royal Commission on Prices*, vol. II, Chapter 1).

[2]In addition to direct, secondary and further induced employment and income effects associated with making capital expenditures, there are also the employment and income effects that result from operating, servicing and maintaining property, e.g. the employment of janitors, firemen, garbage collectors and tradesmen doing repair work.

(3) As those working and earning incomes in building houses spend their incomes on the things they eat, use and enjoy, additional employment and income are created in consumer goods and service industries. As these industries in turn are active, new investment is encouraged and more business investment and residential construction may follow. However, such secondary and further induced employment and income effects will vary depending on the extent to which the resources of the country, human and natural, are already employed. Such secondary and related effects will be much greater when there is unused capacity in terms of unemployed workers and idle plants than in times of high levels of employment and income and full use of resources.

The impact of residential construction expenditures on the national economy is one of particular importance for the future, when, on the basis of pre-war experiences, and in the absence of stabilizing measures, under-employment of the country's resources must be counted as a definite possibility.

In Canada the Federal Government has repeatedly stated that one of its primary objectives is the maintenance of the high levels of production, income and employment achieved during the war years, through the introduction of measures which would aim at stabilizing the Canadian economy.[1] Stability was to be achieved for the various sectors that contribute to total economic activity and have their source in "the sales made into the export market, in rising levels of consumption, in private investment for the expansion of productive facilities, and in public investment for improving the productiveness of our natural resources and the construction of useful public works."[2]

Investment policies designed to reduce fluctuations in the flow of capital goods will of necessity include measures in the housing field.[3] Not only does residential investment comprise a significant portion of total investment, but it has an immediate effect on increasing the standard of living of the population. Further a large continuing housing program could make a contribution to the stabilization of employment and income far beyond its influence

[1]White Paper on *Employment and Income, With Special Reference to the Initial Period of Reconstruction*, Ottawa, April, 1945, pp. 1 and 23, and Budget Speech, October 12, 1945, *House of Commons Debates*, p. 1002.

[2]*Proposals of the Government of Canada*, Dominion-Provincial Conference on Reconstruction, Ottawa, August, 1945, p. 6.

[3]For a brief appraisal of using housing expenditures as an offsetting item to changes in the volume of private investment, see "Measurement of Housing Needs, Supply and Post-War Requirements," Chapter XI of *Housing and Community Planning*, McGill University, Montreal, 1944, pp. 130-132.

on the construction industry and the industries that supply materials and services for the housing program.

A great deal of quantitative evidence has been assembled in this report to demonstrate the above thesis. But there is another side to it. Even without the many facts, figures and estimates, public realization based on good common sense has been growing that a housing program continuing at high levels can be of considerable economic and social importance for an industrially advanced country like Canada. Barring an armament race of very large proportions or a World War III, it appears that the question of tomorrow will not be: "Can Canadians afford *to build* 100,000 or more houses a year?" but rather "Can Canadians afford *not to build* that number of houses each year?"

Part III

TABULAR MATERIAL, 1921-1949

SECTION NINE

ESTIMATES

TABLE 67

DWELLINGS COMPLETED, BY TYPE OF STRUCTURE AND AREA, CANADA, 1921-1949

(Thousands of Units)

Year	New Structures					Converted Structures	New and Converted Structures	
	Urban	Rural Non-Farm	Non-Farm	Farm	Sub-total	Non-Farm	Non-Farm	Total
1921	19.4	8.6	28.0	4.3	32.3	1.8	29.8	34.1
1922	24.8	10.3	35.1	5.2	40.3	2.0	37.1	42.3
1923	26.0	10.3	36.3	5.2	41.5	1.9	38.2	43.4
1924	22.1	8.8	30.9	4.5	35.4	3.3	34.2	38.7
1925	27.1	9.9	37.0	5.0	42.0	2.7	39.7	44.7
1926	34.7	11.8	46.5	5.9	52.4	2.8	49.3	55.2
1927	35.0	11.6	46.6	5.9	52.5	4.3	50.9	56.8
1928	40.3	12.4	52.7	6.3	59.0	3.9	56.6	62.9
1929	42.7	12.2	54.9	6.2	61.1	3.6	58.5	64.7
1930	32.8	12.1	44.9	5.3	50.2	2.8	47.7	53.0
1931	27.7	12.8	40.5	5.2	45.7	2.1	42.6	47.8
1932	15.3	8.3	23.6	3.3	26.9	1.2	24.8	28.1
1933	10.8	7.5	18.3	2.7	21.0	.9	19.2	21.9
1934	12.7	10.2	22.9	3.6	26.5	1.2	24.1	27.7
1935	14.9	12.6	27.5	4.3	31.8	1.1	28.6	32.9
1936	17.5	15.4	32.9	5.1	38.0	1.3	34.2	39.3
1937	21.1	19.5	40.6	6.3	46.9	1.7	42.3	48.6
1938	17.7	18.0	35.7	5.7	41.4	2.6	38.3	44.0
1939	21.5	21.2	42.7	6.1	48.8	2.9	45.6	51.7
1940	22.5	20.9	43.4	5.6	49.0	3.5	46.9	52.5
1941	26.5	21.7	48.0	5.2	53.2	3.6	51.6	56.8
1942	21.7	16.8	38.5	4.3	42.8	4.4	42.9	47.2
1943	16.9	12.4	29.3	3.4	32.7	4.1	33.4	36.8
1944	19.6	13.4	33.0	3.5	36.5	6.3	39.3	42.8
1945	24.8	14.1	38.9	3.6	42.5	6.0	44.9	48.5
1946	37.9	18.3	56.2	4.1	60.3	6.9	63.1	67.2
1947	44.6	23.5	68.1	4.1	72.2	7.0	75.1	79.2
1948	48.1	23.9	72.0	4.1	76.1	5.1	77.2	81.2
1949	55.3	27.0	82.3	5.2	87.5	3.4	85.8	91.0

TABLE 68

DWELLINGS COMPLETED, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949
(Thousands of Units)

Year	Single Dwellings					Multiple Dwellings			Total
	Urban	Rural Non-Farm	Non-Farm	Farm	Sub-total	Urban	Rural Non-Farm	Non-Farm	
1921	11.8	8.3	20.1	4.3	24.4	9.4	.3	9.7	34.1
1922	14.0	9.9	23.9	5.2	29.1	12.8	.4	13.2	42.3
1923	13.7	9.9	23.6	5.2	28.8	14.2	.4	14.6	43.4
1924	10.8	8.4	19.2	4.5	23.7	14.6	.4	15.0	38.7
1925	12.2	9.3	21.5	5.0	26.5	17.6	.6	18.2	44.7
1926	14.2	11.1	25.3	5.9	31.2	23.3	.7	24.0	55.2
1927	13.0	10.8	23.8	5.9	29.7	26.3	.8	27.1	56.8
1928	13.4	11.3	24.7	6.3	31.0	30.8	1.1	31.9	62.9
1929	12.6	11.2	23.8	6.2	30.0	33.7	1.0	34.7	64.7
1930	8.4	11.1	19.5	5.3	24.8	27.2	1.0	28.2	53.0
1931	7.1	11.7	18.8	5.2	24.0	22.7	1.1	23.8	47.8
1932	4.0	7.2	11.2	3.3	14.5	12.5	1.1	13.6	28.1
1933	2.9	6.2	9.1	2.7	11.8	8.8	1.3	10.1	21.9
1934	3.5	8.0	11.5	3.6	15.1	10.4	2.2	12.6	27.7
1935	4.1	9.2	13.3	4.3	17.6	11.9	3.4	15.3	32.9
1936	5.0	10.6	15.6	5.1	20.7	13.8	4.8	18.6	39.3
1937	6.1	12.6	18.7	6.3	25.0	16.7	6.9	23.6	48.6
1938	5.2	10.9	16.1	5.7	21.8	15.1	7.1	22.2	44.0
1939	6.5	14.1	20.6	6.1	26.7	17.9	7.1	25.0	51.7
1940	6.9	11.1	18.0	5.6	23.6	19.1	9.8	28.9	52.5
1941	10.4	13.7	24.1	5.2	29.3	19.1	8.4	27.5	56.8
1942	9.5	12.7	22.2	4.3	26.5	15.8	4.9	20.7	47.2
1943	10.7	10.8	21.5	3.4	24.9	9.6	2.3	11.9	36.8
1944	13.2	12.0	25.2	3.5	28.7	11.4	2.7	14.1	42.8
1945	17.3	12.5	29.8	3.6	33.4	12.9	2.2	15.1	48.5
1946	31.2	16.1	47.3	4.1	51.4	12.7	3.1	15.8	67.2
1947	33.5	21.2	54.7	4.1	58.8	17.5	3.0	20.5	79.2
1948	35.1	22.6	57.7	4.1	61.8	17.6	1.9	19.5	81.2
1949	41.5	21.7	63.2	5.2	68.4	16.9	5.6	22.5	91.0

TABLE 69

CHANGES IN THE HOUSING STOCK, BY AREA, CANADA, 1921-1949
(Thousands of Units)

Year	Non-Farm					
	Gross Increase	Destroyed and De-molished	Net Increase	Available Dwellings	Vacancies	Occupied Dwellings
1921	29.8	2.0	27.8	1207.5	32.1	1175.4
1922	37.1	2.6	34.5	1242.0	33.1	1208.9
1923	38.2	2.7	35.5	1277.5	71.3	1206.2
1924	34.2	2.5	31.7	1309.2	83.0	1226.2
1925	39.7	2.9	36.8	1346.0	76.7	1269.3
1926	49.3	3.3	46.0	1392.0	72.0	1320.0
1927	50.9	3.3	47.6	1439.6	73.0	1366.6
1928	56.6	3.7	52.9	1492.5	69.5	1423.0
1929	58.5	4.2	54.3	1546.8	68.6	1478.2
1930	47.7	3.8	43.9	1590.7	65.6	1525.1
1931	42.6	3.8	38.8	1629.5	77.3	1552.2
1932	24.8	3.5	21.3	1650.8	110.2	1540.6
1933	19.2	2.7	16.5	1667.3	111.1	1556.2
1934	24.1	2.9	21.2	1688.5	82.8	1605.7
1935	28.6	2.6	26.0	1714.5	63.7	1650.8
1936	34.2	2.7	31.5	1746.0	57.7	1688.3
1937	42.3	2.9	39.4	1785.4	47.6	1737.8
1938	38.3	2.5	35.8	1821.2	47.1	1774.1
1939	45.6	2.6	43.0	1864.2	48.6	1815.6
1940	46.9	2.5	44.4	1908.6	34.1	1874.5
1941	51.6	2.6	49.0	1957.6	36.0	1921.6
1942	42.9	2.5	40.4	1998.0	33.6	1964.4
1943	33.4	2.1	31.3	2029.3	32.8	1996.5
1944	39.3	2.5	36.8	2066.1	33.1	2033.0
1945	44.9	2.6	42.3	2108.4	33.3	2075.1
1946	63.1	3.4	59.7	2168.1	34.1	2134.0
1947	75.1	3.7	71.4	2239.5	35.8	2203.7
1948	77.2	3.7	73.5	2313.0	37.0	2276.0
1949	85.8	3.9	81.9	2394.9	38.3	2356.6

TABLE 69

CHANGES IN THE HOUSING STOCK, BY AREA, CANADA, 1921-1949—*Continued*

(Thousands of Units)

Year	Farm					
	Gross Increase	Destroyed and De-molished	Net Increase	Available Dwellings	Vacancies	Occupied Dwellings
1921	4.3	2.4	1.9	701.3	20.0	681.3
1922	5.2	2.6	2.6	703.9	21.0	682.9
1923	5.2	2.6	2.6	706.5	23.0	683.5
1924	4.5	2.4	2.1	708.6	25.0	683.6
1925	5.0	2.7	2.3	710.9	27.0	683.9
1926	5.9	2.7	3.2	714.1	26.0	688.1
1927	5.9	2.9	3.0	717.1	25.0	692.1
1928	6.3	2.4	3.9	721.0	24.0	697.0
1929	6.2	2.8	3.4	724.4	23.0	701.4
1930	5.3	2.8	2.5	726.9	25.0	701.9
1931	5.2	4.1	1.1	728.0	28.0	700.0
1932	3.3	3.1	.2	728.2	30.4	697.8
1933	2.7	2.8	− .1	728.1	32.8	695.3
1934	3.6	3.0	.6	728.7	35.2	693.5
1935	4.3	3.7	.6	729.3	37.6	691.7
1936	5.1	4.3	.8	730.1	40.0	690.1
1937	6.3	5.2	1.1	731.2	37.4	693.8
1938	5.7	4.5	1.2	732.4	34.8	697.6
1939	6.1	4.9	1.2	733.6	32.2	701.4
1940	5.6	4.4	1.2	734.8	29.6	705.2
1941	5.2	4.7	.5	735.3	27.0	708.3
1942	4.3	4.4	− .1	735.2	27.0	708.2
1943	3.4	4.7	−1.3	733.9	27.0	706.9
1944	3.5	4.5	−1.0	732.9	26.5	706.4
1945	3.6	4.7	−1.1	731.8	26.5	705.3
1946	4.1	4.8	− .7	731.1	26.0	705.1
1947	4.1	4.8	− .7	730.4	27.0	703.4
1948	4.1	5.0	− .9	729.5	27.0	702.5
1949	5.2	5.0	.2	729.7	27.0	702.7

TABLE 69

CHANGES IN THE HOUSING STOCK, BY AREA, CANADA, 1921-1949—*Continued*

(Thousands of Units)

Year	Total					
	Gross Increase	Destroyed and De-molished	Net Increase	Available Dwellings	Vacancies	Occupied Dwellings
1921	34.1	4.4	29.7	1908.8	52.1	1856.7
1922	42.3	5.2	37.1	1945.9	54.1	1891.8
1923	43.4	5.3	38.1	1984.0	94.3	1889.7
1924	38.7	4.9	33.8	2017.8	108.0	1909.8
1925	44.7	5.6	39.1	2056.9	103.7	1953.2
1926	55.2	6.0	49.2	2106.1	98.0	2008.1
1927	56.8	6.2	50.6	2156.7	98.0	2058.7
1928	62.9	6.1	56.8	2213.5	93.5	2120.0
1929	64.7	7.0	57.7	2271.2	91.6	2179.6
1930	53.0	6.6	46.4	2317.6	90.6	2227.0
1931	47.8	7.9	39.9	2357.5	105.3	2252.2
1932	28.1	6.6	21.5	2379.0	140.6	2238.4
1933	21.9	5.5	16.4	2395.4	143.9	2251.5
1934	27.7	5.9	21.8	2417.2	118.0	2299.2
1935	32.9	6.3	26.6	2443.8	101.3	2342.5
1936	39.3	7.0	32.3	2476.1	97.7	2378.4
1937	48.6	8.1	40.5	2516.6	85.0	2431.6
1938	44.0	7.0	37.0	2553.6	81.9	2471.7
1939	51.7	7.5	44.2	2597.8	80.8	2517.0
1940	52.5	6.9	45.6	2643.4	63.7	2579.7
1941	56.8	7.3	49.5	2692.9	63.0	2629.9
1942	47.2	6.9	40.3	2733.2	60.6	2672.6
1943	36.8	6.8	30.0	2763.2	59.8	2703.4
1944	42.8	7.0	35.8	2799.0	59.6	2739.4
1945	48.5	7.3	41.2	2840.2	59.8	2780.4
1946	67.2	8.2	59.0	2899.2	60.1	2839.1
1947	79.2	8.5	70.7	2969.9	62.8	2907.1
1948	81.2	8.7	72.5	3042.4	64.0	2978.4
1949	91.0	8.9	82.1	3124.5	65.3	3059.2

TABLE 70

CHANGES IN THE HOUSING STOCK, BY TENURE, CANADA, 1921-1949

(Thousands of Units)

Year	Non-Farm					
	Occupied Units		Net Annual Change			
	Owner	Tenant	Owner-Occupied	Tenant-Occupied	Vacant	Net Increase
1921	666.5	508.9	—	—	—	—
1922	680.2	528.7	13.7	19.8	1.0	34.5
1923	672.4	533.8	− 7.8	5.1	38.2	35.5
1924	677.6	548.6	5.2	14.8	11.7	31.7
1925	694.7	574.6	17.1	26.0	− 6.3	36.8
1926	715.7	604.3	21.0	29.7	− 4.7	46.0
1927	732.8	633.8	17.1	29.5	1.0	47.6
1928	756.1	666.9	23.3	33.1	− 3.5	52.9
1929	777.4	700.8	21.3	33.9	− .9	54.3
1930	794.3	730.8	16.9	30.0	− 3.0	43.9
1931	800.5	751.7	6.2	20.9	11.7	38.8
1932	787.5	753.1	−13.0	1.4	32.9	21.3
1933	788.1	768.1	.6	15.0	.9	16.5
1934	807.8	797.9	19.7	29.8	−28.3	21.2
1935	824.2	826.6	16.4	28.7	−19.1	26.0
1936	837.2	851.1	13.0	24.5	− 6.0	31.5
1937	855.6	882.2	18.4	31.1	−10.1	39.4
1938	867.5	906.6	11.9	24.4	− .5	35.8
1939	881.1	934.5	13.6	27.9	1.5	43.0
1940	904.0	970.5	22.9	36.0	−14.5	44.4
1941	919.3	1002.3	15.3	31.8	1.9	49.0
1942	933.6	1030.8	14.3	28.5	− 2.4	40.4
1943	949.2	1047.3	15.6	16.5	− .8	31.3
1944	972.0	1061.0	22.8	13.7	.3	36.8
1945	999.8	1075.3	27.8	14.3	.2	42.3
1946	1038.4	1095.6	38.6	20.3	.8	59.7
1947	1086.5	1117.2	48.1	21.6	1.7	71.4
1948	1136.7	1139.2	50.2	22.0	1.2	73.4
1949	1191.4	1165.1	54.7	25.9	1.3	81.9

TABLE 70

CHANGES IN THE HOUSING STOCK, BY TENURE, CANADA, 1921-1949—*Continued*

(Thousands of Units)

Year	Farm					
	Occupied Units		Net Annual Change			
	Owner	Tenant	Owner-Occupied	Tenant-Occupied	Vacant	Net Increase
1921	583.2	98.1	—	—	—	—
1922	582.5	100.4	− .7	2.3	1.0	2.6
1923	581.0	102.5	−1.5	2.1	2.0	2.6
1924	579.0	104.6	−2.0	2.1	2.0	2.1
1925	577.2	106.7	−1.8	2.1	2.0	2.3
1926	578.7	109.4	1.5	2.7	−1.0	3.2
1927	580.0	112.1	1.3	2.7	−1.0	3.0
1928	582.0	115.0	2.0	2.9	−1.0	3.9
1929	583.6	117.8	1.6	2.8	−1.0	3.4
1930	581.9	120.0	−1.7	2.2	2.0	2.5
1931	578.9	121.1	−3.0	1.1	3.0	1.1
1932	575.7	122.1	−3.2	1.0	2.4	.2
1933	572.9	122.4	−2.8	.3	2.4	− .1
1934	570.0	123.5	−2.9	1.1	2.4	.6
1935	567.9	123.8	−2.1	.3	2.4	.6
1936	565.2	124.9	−2.7	1.1	2.4	.8
1937	567.5	126.3	2.3	1.4	−2.6	1.1
1938	569.2	128.4	1.7	2.1	−2.6	1.2
1939	571.6	129.8	2.4	1.4	−2.6	1.2
1940	573.3	131.9	1.7	2.1	−2.6	1.2
1941	574.4	133.9	1.1	2.0	−2.6	.5
1942	575.1	133.1	.7	− .8	.0	− .1
1943	574.7	132.2	− .4	− .9	.0	−1.3
1944	574.9	131.5	.2	− .7	− .5	−1.0
1945	574.6	130.7	− .3	− .8	.0	−1.1
1946	575.2	129.9	.6	− .8	− .5	− .7
1947	574.6	128.8	− .6	−1.1	1.0	− .7
1948	574.7	127.8	.1	−1.0	—	− .9
1949	575.9	126.8	1.2	−1.0	—	.2

TABLE 70

CHANGES IN THE HOUSING STOCK, BY TENURE, CANADA, 1921-1949—*Continued*

(Thousands of Units)

Year	Total					
	Occupied Units		Net Annual Change			
	Owner	Tenant	Owner-Occupied	Tenant-Occupied	Vacant	Net Increase
1921	1249.7	607.0	—	—	—	—
1922	1262.7	629.1	13.0	22.1	2.0	37.1
1923	1253.4	636.3	− 9.3	7.2	40.2	38.1
1924	1256.6	653.2	3.2	16.9	13.7	33.8
1925	1271.9	681.3	15.3	28.1	− 4.3	39.1
1926	1294.4	713.7	22.5	32.4	− 5.7	49.2
1927	1312.8	745.9	18.4	32.2	.0	50.6
1928	1338.1	781.9	25.3	36.0	− 4.5	56.8
1929	1361.0	818.6	22.9	36.7	− 1.9	57.7
1930	1376.2	850.8	15.2	32.2	− 1.0	46.4
1931	1379.4	872.8	3.2	22.0	14.7	39.9
1932	1363.2	875.2	−16.2	2.4	35.3	21.5
1933	1361.0	890.5	− 2.2	15.3	3.3	16.4
1934	1377.8	921.4	16.8	30.9	−25.9	21.8
1935	1392.1	950.4	14.3	29.0	−16.7	26.6
1936	1402.4	976.0	10.3	25.6	− 3.6	32.3
1937	1423.1	1008.5	20.7	32.5	−12.7	40.5
1938	1436.7	1035.0	13.6	26.5	− 3.1	37.0
1939	1452.7	1064.3	16.0	29.3	− 1.1	44.2
1940	1477.3	1102.4	24.6	38.1	−17.1	45.6
1941	1493.7	1136.2	16.4	33.8	− .7	49.5
1942	1508.7	1163.9	15.0	27.7	− 2.4	40.3
1943	1523.9	1179.5	15.2	15.6	− .8	30.0
1944	1546.9	1192.5	23.0	13.0	− .2	35.8
1945	1574.4	1206.0	27.5	13.5	.2	41.2
1946	1613.6	1225.5	39.2	19.5	.3	59.0
1947	1661.1	1246.0	47.5	20.5	2.7	70.7
1948	1711.4	1267.0	50.3	21.0	1.2	72.5
1949	1767.3	1291.9	55.9	24.9	1.3	82.1

TABLE 71

DWELLINGS COMPLETED, PERMANENT AND TEMPORARY, CANADA, 1941-1949

(Thousands of Units)

Year	Permanent Dwellings	Temporary Dwellings	Total Dwellings
1941	55.1	1.7	56.8
1942	39.6	7.6	47.2
1943	30.5	6.3	36.8
1944	41.6	1.2	42.8
1945	47.4	1.1	48.5
1946	62.6	4.6	67.2
1947	75.0	4.2	79.2
1948	79.7	1.5	81.2
1949	91.0	—[1]	91.0

[1]No temporary dwelling construction was reported for 1949.

TABLE 72

VALUE OF DWELLINGS COMPLETED, BY TYPE OF STRUCTURE AND AREA, CANADA, 1921-1949

(Millions of Dollars)

Year	New Structures					Converted Structures	New and Converted Structures	
	Urban	Rural Non-Farm	Non-Farm	Farm	Sub-total	Non-Farm	Non-Farm	Total
1921	84.7	40.9	125.6	8.4	134.0	2.8	128.4	136.8
1922	97.3	44.5	141.8	9.0	150.8	2.8	144.6	153.6
1923	103.9	45.8	149.7	9.2	158.9	2.7	152.4	161.6
1924	85.4	38.2	123.6	7.7	131.3	4.7	128.3	136.0
1925	101.6	41.9	143.5	8.2	151.7	3.8	147.3	155.5
1926	127.3	49.4	176.7	9.6	186.3	3.9	180.6	190.2
1927	127.3	48.5	175.8	9.5	185.3	6.0	181.8	191.3
1928	148.8	52.9	201.7	10.3	212.0	5.6	207.3	217.6
1929	163.4	54.6	218.0	10.4	228.4	5.4	223.4	233.8
1930	120.9	52.7	173.6	8.5	182.1	4.1	177.7	186.2
1931	95.2	51.9	147.1	7.6	154.7	2.9	150.0	157.6
1932	48.2	30.5	78.7	4.4	83.1	1.5	80.2	84.6
1933	32.6	26.1	58.7	3.6	62.3	1.1	59.8	63.4
1934	39.7	36.4	76.1	5.1	81.2	1.5	77.6	82.7
1935	46.3	44.1	90.4	6.1	96.5	1.3	91.7	97.8
1936	56.0	54.8	110.8	7.5	118.3	1.6	112.4	119.9
1937	72.7	73.7	146.4	10.0	156.4	2.3	148.7	158.7
1938	59.7	66.0	125.7	8.7	134.4	3.4	129.1	137.8
1939	73.4	79.4	152.8	9.4	162.2	3.8	156.6	166.0
1940	81.8	80.5	162.3	9.2	171.5	4.9	167.2	176.4
1941	108.8	95.4	204.2	9.7	213.9	5.6	209.8	219.5
1942	97.1	83.6	180.7	9.1	189.8	7.4	188.1	197.2
1943	85.7	68.9	154.6	8.1	162.7	7.5	162.1	170.2
1944	104.7	80.2	184.9	8.7	193.6	12.1	197.0	205.7
1945	140.1	83.4	223.5	9.4	232.9	11.8	235.3	244.7
1946	236.9	116.0	352.9	11.1	364.0	14.6	367.5	378.6
1947	305.2	166.7	471.9	12.6	484.5	16.5	488.4	501.1
1948	374.8	196.1	570.9	14.6	585.4	13.8	584.6	599.2
1949	455.2	225.3	680.4	18.9	699.4	9.6	690.1	709.0

TABLE 73

VALUE OF DWELLINGS COMPLETED, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949
(Millions of Dollars)

Year	Single Dwellings					Multiple Dwellings			Total
	Urban	Rural Non-Farm	Non-Farm	Farm	Sub-total	Urban	Rural Non-Farm	Non-Farm	
1921	56.6	39.8	96.4	8.4	104.8	30.9	1.1	32.0	136.8
1922	61.0	43.2	104.2	9.0	113.2	39.1	1.3	40.4	153.6
1923	61.4	44.4	105.8	9.2	115.0	45.2	1.4	46.6	161.6
1924	47.3	36.8	84.1	7.7	91.8	42.8	1.4	44.2	136.0
1925	52.3	39.9	92.2	8.2	100.4	53.1	2.0	55.1	155.5
1926	60.2	47.1	107.3	9.6	116.9	71.0	2.3	73.3	190.2
1927	55.2	45.9	101.1	9.5	110.6	78.1	2.6	80.7	191.3
1928	58.4	49.2	107.6	10.3	117.9	96.0	3.7	99.7	217.6
1929	57.5	51.1	108.6	10.4	119.0	111.3	3.5	114.8	233.8
1930	37.3	49.3	86.6	8.5	95.1	87.7	3.4	91.1	186.2
1931	29.4	48.4	77.8	7.6	85.4	68.7	3.5	72.2	157.6
1932	15.2	27.3	42.5	4.4	46.9	34.5	3.2	37.7	84.6
1933	10.5	22.5	33.0	3.6	36.6	23.2	3.6	26.8	63.4
1934	13.1	30.0	43.1	5.1	48.2	28.1	6.4	34.5	82.7
1935	15.3	34.3	49.6	6.1	55.7	32.3	9.8	42.1	97.8
1936	19.1	40.6	59.7	7.5	67.2	38.5	14.2	52.7	119.9
1937	25.1	51.8	76.9	10.0	86.9	49.9	21.9	71.8	158.7
1938	20.9	43.9	64.8	8.7	73.5	32.2	22.1	64.3	137.8
1939	26.4	57.2	83.6	9.4	93.0	50.8	22.2	73.0	166.0
1940	29.8	47.9	77.7	9.2	86.9	56.9	32.6	89.5	176.4
1941	49.9	65.8	115.7	9.7	125.4	63.9	30.2	94.1	219.5
1942	49.4	66.0	115.4	9.1	124.5	54.3	18.4	72.7	197.2
1943	60.1	60.7	120.8	8.1	128.9	32.4	8.9	41.3	170.2
1944	78.2	71.1	149.3	8.7	158.0	37.3	10.4	47.7	205.7
1945	105.0	75.9	180.9	9.4	190.3	45.7	8.7	54.4	244.7
1946	203.2	104.9	308.1	11.1	319.2	46.4	13.0	59.4	378.6
1947	242.8	153.8	396.6	12.6	409.2	77.3	14.5	91.8	501.1
1948	291.7	187.5	479.2	14.6	493.8	95.5	9.9	105.4	599.2
1949	362.1	189.7	551.8	18.9	570.7	101.8	36.4	138.3	709.0

TABLE 74

VALUE OF NEW RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, PERMANENT AND TEMPORARY DWELLINGS, CANADA, 1941-1949

(Millions of Dollars)

Year	Permanent Dwellings	Temporary Dwellings	Total Dwellings
1941	208.2	10.0	218.2
1942	167.8	27.2	195.0
1943	154.1	22.0	176.1
1944	209.0	5.5	214.5
1945	267.0	1.7	268.7
1946	387.4	2.8	390.2
1947	503.1	3.0	506.1
1948	626.0	2.7	628.7
1949	715.6	—[1]	715.6

[1]No temporary dwelling construction was reported for 1949.

TABLE 75

VALUE OF NEW RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949

(Millions of Dollars)

Year	Non-Farm					Farm	Total
	Single	Multiple	Sub-total	Conversions	Total Non-Farm	Single	
1921	98.7	30.7	129.4	2.8	132.2	8.6	140.8
1922	103.8	38.3	142.1	2.8	144.9	8.9	153.8
1923	103.5	43.6	147.1	2.9	150.0	9.1	159.1
1924	85.3	41.2	126.5	4.5	131.0	7.9	138.9
1925	94.4	53.3	147.7	3.8	151.5	8.4	159.9
1926	106.1	69.7	175.8	4.1	179.9	9.6	189.5
1927	102.0	76.7	178.7	5.8	184.5	9.5	194.0
1928	106.7	95.1	201.8	5.6	207.4	10.3	217.7
1929	106.3	107.3	213.6	5.2	218.8	10.3	229.1
1930	86.7	85.7	172.4	4.1	176.5	8.5	185.0
1931	74.1	66.1	140.2	2.7	142.9	7.3	150.2
1932	41.7	35.1	76.8	1.5	78.3	4.3	82.6
1933	34.1	26.3	60.4	1.1	61.5	3.7	65.2
1934	43.8	34.1	77.9	1.5	79.4	5.3	84.7
1935	50.6	41.7	92.3	1.3	93.6	6.2	99.8
1936	60.8	52.9	113.7	1.6	115.3	7.6	122.9
1937	75.7	68.5	144.2	2.4	146.6	9.8	156.4
1938	66.8	61.9	128.7	3.4	132.1	8.8	140.9
1939	82.4	70.2	152.6	4.0	156.6	9.2	165.8
1940	80.7	84.0	164.7	4.9	169.6	9.2	178.8
1941	116.2	86.7	202.9	5.8	208.7	9.5	218.2
1942	117.5	61.3	178.8	7.3	186.1	8.9	195.0
1943	125.8	34.3	160.1	7.9	168.0	8.1	176.1
1944	156.3	37.4	193.7	12.1	205.8	8.7	214.5
1945	204.5	42.6	247.1	12.0	259.1	9.6	268.7
1946	315.2	49.3	364.5	14.6	379.1	11.1	390.2
1947	400.9	76.1	476.9	16.5	493.4	12.6	506.1
1948	504.7	94.5	599.2	13.8	613.0	15.7	628.7
1949	559.9	127.7	687.6	9.6	697.2	18.4	715.6

TABLE 76

VALUE OF ALL RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, NEW STRUCTURES AND CONVERSIONS, MAJOR IMPROVEMENTS AND ALTERATIONS, AND REPAIRS AND MAINTENANCE, CANADA, 1921-1949

(Millions of Dollars)

Year	New Construction Work Carried Out		Major Improvements and Alterations	Sub-total	Repairs and Maintenance	Total
	New Structures	Converted Structures				
1921	138.0	2.8	19.3	160.1	46.4	206.5
1922	151.0	2.8	19.9	173.7	44.3	218.0
1923	156.2	2.9	20.6	179.7	53.1	232.8
1924	134.4	4.5	18.5	157.4	52.1	209.5
1925	156.1	3.8	20.3	180.2	47.7	227.9
1926	185.4	4.1	22.2	211.7	49.3	261.0
1927	188.2	5.8	22.4	216.4	50.1	266.5
1928	212.1	5.6	17.8	235.5	54.0	289.5
1929	223.9	5.2	17.9	247.0	56.4	303.4
1930	180.9	4.1	18.8	203.8	52.1	255.9
1931	147.5	2.7	17.4	167.6	45.6	213.2
1932	81.1	1.5	12.9	95.5	40.0	135.5
1933	64.1	1.1	10.9	76.1	39.6	115.7
1934	83.2	1.5	12.9	97.6	44.1	141.7
1935	98.5	1.3	13.8	113.6	45.8	159.4
1936	121.3	1.6	16.0	138.9	50.1	189.0
1937	154.0	2.4	18.9	175.3	54.8	230.1
1938	137.5	3.4	17.6	158.5	53.2	211.7
1939	161.8	4.0	19.3	185.1	56.6	241.7
1940	173.9	4.9	20.5	199.3	63.0	262.3
1941	212.4	5.8	25.3	243.5	76.7	320.2
1942	187.7	7.3	28.3	223.3	86.7	310.0
1943	168.2	7.9	27.6	203.7	87.6	291.3
1944	202.4	12.1	22.1	236.6	91.8	328.4
1945	256.7	12.0	16.9	285.6	96.3	381.9
1946	375.6	14.6	21.8	412.0	105.3	517.3
1947	489.6	16.5	33.6	539.7	130.8	670.5
1948	614.9	13.8	39.0	667.7	161.9	829.6
1949	706.0	9.6	46.9	762.5	175.3	937.8

TABLE 77

GROSS RESIDENTIAL CAPITAL FORMATION AND GROSS ADDITIONS TO RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

(Millions of Dollars)

Year	Current Dollars						
	New Construction Work Carried Out	Major Improvements and Alterations	Additions Through Construction	Supplemental House-Building Costs	Gross Residential Capital Formation	Land Put In Use For Residential Purposes	Additions to Residential Real Estate
1921	140.8	19.3	160.1	3.2	163.3	10.0	173.3
1922	153.8	19.9	173.7	3.6	177.3	10.8	188.1
1923	159.1	20.6	179.7	3.8	183.5	11.2	194.7
1924	138.9	18.5	157.4	3.4	160.8	9.4	170.2
1925	159.9	20.3	180.2	4.0	184.2	10.9	195.1
1926	189.5	22.2	211.7	4.8	216.5	12.8	229.3
1927	194.0	22.4	216.4	5.0	221.4	12.8	234.2
1928	217.7	17.8	235.5	5.8	241.3	14.1	255.4
1929	229.1	17.9	247.0	6.3	253.3	14.8	268.1
1930	185.0	18.8	203.8	5.1	208.9	11.9	220.8
1931	150.2	17.4	167.6	4.0	171.6	9.9	181.5
1932	82.6	12.9	95.5	2.2	97.7	5.4	103.1
1933	65.2	10.9	76.1	1.7	77.8	4.3	82.1
1934	84.7	12.9	97.6	2.2	99.8	5.6	105.4
1935	99.8	13.8	113.6	2.7	116.3	6.6	122.9
1936	122.9	16.0	138.9	3.3	142.2	8.2	150.4
1937	156.4	18.9	175.3	4.2	179.5	10.3	189.8
1938	140.9	17.6	158.5	3.8	162.3	9.0	171.3
1939	165.8	19.3	185.1	4.4	189.5	10.9	200.4
1940	178.8	20.5	199.3	4.9	204.2	11.5	215.7
1941	218.2	25.3	243.5	5.7	249.2	14.5	263.7
1942	195.0	28.3	223.3	4.7	228.0	13.1	241.1
1943	176.1	27.6	203.7	3.8	207.5	12.4	219.9
1944	214.5	22.1	236.6	4.5	241.1	14.9	256.0
1945	268.7	16.9	285.6	5.7	291.3	19.2	310.5
1946	390.2	21.8	412.0	8.1	420.1	28.5	448.6
1947	506.1	33.6	539.7	10.5	550.2	37.5	587.7
1948	628.7	39.0	667.7	13.2	680.9	44.1	725.0
1949	715.6	46.9	762.5	15.6	778.1	51.3	829.4

TABLE 77

GROSS RESIDENTIAL CAPITAL FORMATION AND GROSS ADDITIONS TO RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949—*Continued*

(Millions of Dollars)

Year	Constant Dollars[1]						
	New Construction Work Carried Out	Major Improvements and Alterations	Additions Through Construction	Supplemental House-Building Costs	Gross Residential Capital Formation	Land Put In Use For Residential Purposes	Additions to Residential Real Estate
1921	118.7	16.3	135.0	2.7	137.7	8.4	146.1
1922	143.0	18.5	161.5	3.4	164.9	10.0	174.9
1923	143.8	18.6	162.4	3.4	165.8	10.0	175.8
1924	128.6	17.2	145.8	3.1	148.9	8.8	157.7
1925	151.1	19.2	170.3	3.7	174.0	10.2	184.2
1926	181.2	21.3	202.5	4.6	207.1	12.2	219.3
1927	185.4	21.4	206.8	4.8	211.6	12.3	223.9
1928	203.0	16.6	219.6	5.5	225.1	13.3	238.4
1929	204.1	16.0	220.1	5.6	225.7	13.3	239.0
1930	169.2	17.2	186.4	4.7	191.1	10.9	202.0
1931	147.9	17.1	165.0	4.0	169.0	9.7	178.7
1932	88.6	13.8	102.4	2.3	104.7	5.8	110.5
1933	73.1	12.2	85.3	1.9	87.2	4.9	92.1
1934	91.7	14.0	105.7	2.4	108.1	6.1	114.2
1935	108.9	15.0	123.9	2.9	126.8	7.2	134.0
1936	130.3	17.0	147.3	3.5	150.8	8.6	159.4
1937	154.2	18.7	172.9	4.2	177.1	10.2	187.3
1938	142.0	17.7	159.7	3.8	163.5	9.2	172.7
1939	165.8	19.3	185.1	4.4	189.5	10.9	200.4
1940	168.0	19.3	187.3	4.6	191.9	10.8	202.7
1941	184.1	21.3	205.4	4.8	210.2	12.3	222.5
1942	151.7	22.0	173.7	3.7	177.4	10.2	187.6
1943	126.7	19.8	146.5	2.7	149.2	8.9	158.1
1944	146.5	15.1	161.6	3.1	164.7	10.3	175.0
1945	179.1	11.3	190.4	3.8	194.2	12.7	206.9
1946	242.6	13.5	256.1	5.1	261.2	17.7	278.9
1947	281.2	17.7	298.9	5.7	304.6	20.8	325.4
1948	303.7	17.7	321.4	6.2	327.6	21.5	349.1
1949	329.8	21.0	350.8	7.0	357.8	23.8	381.6

[1]Base: 1939 = 100

TABLE 78

RESIDENTIAL CAPITAL CONSUMPTION AND DEDUCTIONS FROM RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

(Millions of Dollars)

Year	Current Dollars					Constant Dollars[1]				
	Damaged Dwellings	Depreciation of Residential Capital	Residential Capital Consumption	Land Removed from Use for Residential Purposes	Deductions from Residential Real Estate	Damaged Dwellings	Depreciation of Residential Capital	Residential Capital Consumption	Land Removed from Use for Residential Purposes	Deductions from Residential Real Estate
1921	5.9	93.8	99.7	.9	100.6	4.9	78.1	83.0	.7	83.7
1922	6.2	86.4	92.6	1.0	93.6	5.7	79.7	85.4	.9	86.3
1923	6.4	91.2	97.6	1.0	98.6	5.7	81.7	87.4	.9	88.3
1924	6.0	90.9	96.9	1.0	97.9	5.5	83.7	89.2	.9	90.1
1925	5.7	90.7	96.4	1.0	97.4	5.4	85.5	90.9	1.0	91.9
1926	5.5	91.9	97.4	1.1	98.5	5.3	87.7	93.0	1.1	94.1
1927	5.6	94.5	100.1	1.1	101.2	5.4	90.2	95.6	1.1	96.7
1928	3.8	99.3	103.1	1.3	104.4	3.6	92.7	96.3	1.2	97.5
1929	5.7	106.8	112.5	1.4	113.9	5.1	95.5	100.6	1.3	101.9
1930	5.3	106.9	112.2	1.3	113.5	4.9	98.5	103.4	1.2	104.6
1931	4.8	101.6	106.4	1.3	107.7	4.9	100.9	105.8	1.3	107.1
1932	4.1	95.3	99.4	1.0	100.4	4.4	103.3	107.7	1.1	108.8
1933	4.2	92.9	97.1	.8	97.9	4.8	104.6	109.4	.9	110.3
1934	2.5	97.4	99.9	.8	100.7	2.7	105.5	108.2	.9	109.1
1935	4.0	98.0	102.0	.9	102.9	4.4	106.8	111.2	1.0	112.2
1936	4.0	101.9	105.9	1.0	106.9	4.2	107.9	112.1	1.0	113.1
1937	4.4	111.3	115.7	1.1	116.8	4.4	109.4	113.8	1.1	114.9
1938	4.0	111.1	115.1	.9	116.0	4.0	111.9	115.9	.9	116.8
1939	4.2	113.9	118.1	1.1	119.2	4.2	113.9	118.1	1.1	119.2
1940	4.4	123.5	127.9	.9	128.8	4.2	115.9	120.1	.9	121.0
1941	4.7	140.9	145.6	1.2	146.8	3.9	118.5	122.4	1.0	123.4
1942	3.5	157.4	160.9	1.2	162.1	2.7	121.4	124.1	.9	125.0
1943	6.0	174.4	180.4	1.3	181.7	4.3	123.6	127.9	.9	128.8
1944	4.0	186.1	190.1	1.4	191.5	2.6	125.3	127.9	.9	128.8
1945	5.9	194.4	200.3	1.6	201.9	3.9	127.3	131.2	1.0	132.2
1946	6.0	210.6	216.6	2.0	218.6	3.7	129.2	132.9	1.2	134.1
1947	5.6	241.1	246.7	2.5	249.2	2.9	129.3	132.2	1.3	133.5
1948	6.8	285.5	292.3	3.2	295.5	3.1	133.3	136.4	1.4	137.8
1949	6.8	309.0	315.8	3.3	319.1	2.9	137.4	140.3	1.4	141.7

[1]Base: 1939 = 100

TABLE 79

NET RESIDENTIAL CAPITAL FORMATION, NET VALUE OF LAND ADDED TO RESIDENTIAL REAL ESTATE, AND NET CHANGES IN RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

(Millions of Dollars)

Year	Net Residential Capital Formation		Net Value of Land Added to Residential Real Estate		Net Changes in Residential Real Estate	
	Current	Constant[1]	Current	Constant[1]	Current	Constant[1]
1921	63.6	54.7	9.1	7.7	72.7	62.4
1922	84.7	79.5	9.8	9.1	94.5	88.6
1923	85.9	78.4	10.2	9.1	96.1	87.5
1924	63.9	59.7	8.4	7.9	72.3	67.6
1925	87.8	83.1	9.9	9.2	97.7	92.3
1926	119.1	114.1	11.7	11.1	130.8	125.2
1927	121.3	116.0	11.7	11.2	133.0	127.2
1928	138.2	128.8	12.8	12.1	151.0	140.9
1929	140.8	125.1	13.4	12.0	154.2	137.1
1930	96.7	87.7	10.6	9.7	107.3	97.4
1931	65.2	63.2	8.6	8.4	73.8	71.6
1932	− 1.7	− 3.0	4.4	4.7	2.7	1.7
1933	− 19.3	− 22.2	3.5	4.0	− 15.8	− 18.2
1934	− .1	− .1	4.8	5.2	4.7	5.1
1935	14.3	15.6	5.7	6.2	20.0	21.8
1936	36.3	38.7	7.2	7.6	43.5	46.3
1937	63.8	63.3	9.2	9.1	73.0	72.4
1938	47.2	47.6	8.1	8.3	55.3	55.9
1939	71.4	71.4	9.8	9.8	81.2	81.2
1940	76.3	71.8	10.6	9.9	86.9	81.7
1941	103.6	87.8	13.3	11.3	116.9	99.1
1942	67.1	53.3	11.9	9.3	79.0	62.6
1943	27.1	21.3	11.1	8.0	38.2	29.3
1944	51.0	36.8	13.5	9.4	64.5	46.2
1945	91.0	63.0	17.6	11.7	108.6	74.7
1946	203.5	128.3	26.5	16.5	230.0	144.8
1947	303.5	172.3	35.0	19.5	338.5	191.9
1948	388.6	191.2	40.9	20.1	429.5	211.3
1949	462.3	217.5	48.0	22.4	510.3	239.9

[1]Base: 1939 = 100

TABLE 80

VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, BY AREA, IN CURRENT DOLLARS, CANADA, 1921-1949

(Millions of Dollars)

Year	Non-Farm			Farm			Total		
	Residential Capital[1]	Value of Land Used for Residential Purposes	Residential Real Estate	Residential Capital[1]	Value of Land Used for Residential Purposes	Residential Real Estate	Residential Capital[1]	Value of Land Used for Residential Purposes	Residential Real Estate
1921	3,876	398	4,274	955	70	1,025	4,831	468	5,299
1922	3,622	371	3,993	833	61	894	4,455	432	4,887
1923	3,822	392	4,214	846	63	909	4,668	455	5,123
1924	3,808	391	4,199	802	61	863	4,610	452	5,062
1925	3,834	393	4,227	760	59	819	4,594	452	5,046
1926	3,921	399	4,320	739	59	798	4,660	458	5,118
1927	4,058	412	4,470	719	58	777	4,777	470	5,247
1928	4,308	434	4,742	722	60	782	5,030	494	5,524
1929	4,665	468	5,133	732	62	794	5,397	530	5,927
1930	4,653	467	5,120	683	59	742	5,336	526	5,862
1931	4,411	443	4,854	614	54	668	5,025	497	5,522
1932	4,044	410	4,454	550	49	599	4,594	459	5,053
1933	3,867	396	4,263	532	49	581	4,399	445	4,844
1934	4,008	414	4,422	556	52	608	4,564	466	5,030
1935	4,012	417	4,429	538	52	590	4,550	469	5,019
1936	4,169	436	4,605	547	54	601	4,716	490	5,206
1937	4,549	477	5,026	585	59	644	5,134	536	5,670
1938	4,513	475	4,988	552	56	608	5,065	531	5,596
1939	4,631	489	5,120	546	57	603	5,177	546	5,723
1940	5,015	530	5,545	573	61	634	5,588	591	6,179
1941	5,695	603	6,298	638	70	708	6,333	673	7,006
1942	6,253	665	6,918	703	79	782	6,956	744	7,700
1943	6,804	730	7,534	768	88	856	7,572	818	8,390
1944	7,250	783	8,033	782	93	875	8,032	876	8,908
1945	7,545	820	8,365	790	96	886	8,335	916	9,251
1946	8,328	907	9,235	795	100	895	9,123	1,007	10,130
1947	9,606	1,046	10,652	877	114	991	10,483	1,160	11,643
1948	11,436	1,238	12,674	988	130	1,118	12,424	1,368	13,792
1949	12,499	1,349	13,848	1,013	138	1,151	13,512	1,487	14,999

[1]Residential capital is defined to cover structures only including installed non-movable equipment.

TABLE 81

VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, BY AREA, IN CONSTANT DOLLARS,[1] CANADA, 1921-1949

(Millions of Dollars)

Year	Non-Farm			Farm			Total		
	Residential Capital[2]	Value of Land Used for Residential Purposes	Residential Real Estate	Residential Capital[2]	Value of Land Used for Residential Purposes	Residential Real Estate	Residential Capital[2]	Value of Land Used for Residential Purposes	Residential Real Estate
1921	3,282	337	3,619	753	54	807	4,035	391	4,426
1922	3,372	346	3,718	742	54	796	4,114	400	4,514
1923	3,462	355	3,817	731	55	786	4,193	410	4,603
1924	3,533	362	3,895	719	55	774	4,252	417	4,669
1925	3,628	371	3,999	708	55	763	4,336	426	4,762
1926	3,752	382	4,134	698	55	753	4,450	437	4,887
1927	3,876	393	4,269	687	56	743	4,563	449	5,012
1928	4,015	405	4,420	677	56	733	4,692	461	5,153
1929	4,150	417	4,567	667	56	723	4,817	473	5,290
1930	4,249	426	4,675	655	56	711	4,904	482	5,386
1931	4,325	434	4,759	644	56	700	4,969	490	5,459
1932	4,337	439	4,776	629	56	685	4,966	495	5,461
1933	4,330	443	4,773	613	56	669	4,943	499	5,442
1934	4,342	448	4,790	599	57	656	4,941	505	5,446
1935	4,370	454	4,824	586	57	643	4,956	511	5,467
1936	4,421	462	4,883	575	57	632	4,996	519	5,515
1937	4,491	471	4,962	566	57	623	5,057	528	5,585
1938	4,549	479	5,028	556	57	613	5,105	536	5,641
1939	4,631	489	5,120	546	57	603	5,177	546	5,723
1940	4,713	499	5,212	535	57	592	5,248	556	5,804
1941	4,814	510	5,324	523	57	580	5,337	567	5,904
1942	4,881	519	5,400	510	57	567	5,391	576	5,967
1943	4,917	527	5,444	495	57	552	5,412	584	5,996
1944	4,969	537	5,506	480	57	537	5,449	594	6,043
1945	5,047	548	5,595	465	57	522	5,512	605	6,117
1946	5,189	565	5,754	451	57	508	5,640	622	6,262
1947	5,375	585	5,960	437	57	494	5,812	642	6,454
1948	5,578	606	6,184	425	56	481	6,003	662	6,665
1949	5,813	628	6,441	415	56	471	6,228	684	6,912

[1]Base: 1939 = 100.

[2]Residential capital is defined to cover structures only including installed non-movable equipment.

TABLE 82

POPULATION AGGREGATES AND CHANGES, CANADA, 1921-1949
(Thousands of Units)

Year	Population as of Dec. 31[1]	Births	Deaths	Natural Increase	Less War Bride Arrivals			War Bride Arrivals	Married Female Migrants Including War Bride Arrivals
					Actual Increase	Net Migration	Estimated Married Female Migrants		
1921	8,852.4	257.7	101.2	156.5	173.5	+17.0	+ 3.4	—	+ 3.4
1922	8,960.1	252.6	102.5	150.1	107.7	−42.4	− 8.5	—	− 8.5
1923	9,075.6	240.5	105.3	135.2	115.5	−19.7	− 3.9	—	− 3.9
1924	9,219.1	244.5	98.6	145.9	143.5	− 2.4	− .5	—	− .5
1925	9,373.6	242.4	98.8	143.6	154.5	+10.9	+ 2.2	—	+ 2.2
1926	9,546.9	232.8	107.5	125.3	173.3	+48.0	+ 9.6	—	+ 9.6
1927	9,739.5	234.2	105.3	128.9	192.6	+63.7	+12.7	—	+12.7
1928	9,935.2	236.8	109.1	127.7	195.7	+68.0	+13.6	—	+13.6
1929	10,120.4	235.4	113.5	121.9	185.2	+63.3	+12.7	—	+12.7
1930	10,293.0	243.5	109.3	134.2	172.6	+38.4	+ 7.7	—	+ 7.7
1931	10,440.6	240.5	104.5	136.0	147.6	+11.6	+ 2.3	—	+ 2.3
1932	10,567.8	235.7	104.4	131.3	127.2	− 4.1	− .8	—	− .8
1933	10,682.0	222.9	102.0	120.9	114.2	− 6.7	− 1.3	—	− 1.3
1934	10,786.5	221.3	101.6	119.7	104.5	−15.2	− 3.0	—	− 3.0
1935	10,890.3	221.5	105.6	115.9	103.8	−12.1	− 2.4	—	− 2.4
1936	10,989.4	220.4	107.0	113.4	99.1	−14.3	− 2.8	—	− 2.8
1937	11,091.4	220.2	113.8	106.4	102.0	− 4.4	− .9	—	− .9
1938	11,202.5	229.2	106.8	122.4	111.1	−11.3	− 2.3	—	− 2.3
1939	11,316.5	229.5	109.0	120.5	114.0	− 6.5	− 1.3	—	− 1.3
1940	11,437.5	244.3	110.9	133.4	121.0	−12.4	− 2.5	—	− 2.5
1941	11,572.0	255.3	114.6	140.7	134.5	− 6.2	− 1.1	—	− 1.1
1942	11,724.6	272.3	113.0	159.3	152.6	− 6.7	− .9	—	− .9
1943	11,884.2	283.6	118.6	165.0	159.1	− 5.9	− .8	.5	− .3
1944	12,050.2	284.2	116.1	168.1	163.3	− 4.8	− 1.1	2.7	+ 1.6
1945	12,225.7	288.7	113.4	175.3	168.5	− 6.8	− 2.0	7.0	+ 5.0
1946	12,479.3	330.7	114.9	215.8	221.8	+ 6.0	− 2.1	31.8	+29.7
1947	12,749.8	359.1	117.7	241.4	269.2	+27.8	+ 4.9	1.3	+ 6.2
1948	13,067.0	345.7	119.5	226.2	317.2	+91.0	+18.0	—	+18.0
1949	13,360.7	350.4	119.3	231.1	293.7	+62.6	+14.2	—	+14.2

[1]As of December 31, 1920, population was estimated to number 8,691,300.

TABLE 83

NET FAMILY FORMATION, CANADA, 1921-1949
(Thousands of Units)

Year	Marriages	Deaths to Married Persons	Divorces	Married Female Migrants Including War Bride Arrivals	Apparent Net Family Formation	Adjusted Net Family Formation
1921	69.7	36.0	.6	+ 3.4	36.5	36.6
1922	64.4	36.0	.5	− 8.5	19.4	19.5
1923	66.5	37.0	.5	− 3.9	25.1	25.2
1924	65.1	35.0	.5	− .5	29.1	29.2
1925	64.6	35.0	.6	+ 2.2	31.2	31.3
1926	66.7	37.5	.6	+ 9.6	38.2	38.4
1927	69.5	37.5	.7	+12.7	44.0	44.2
1928	74.3	39.9	.8	+13.6	47.2	47.4
1929	77.3	41.1	.8	+12.7	48.1	48.3
1930	71.7	40.1	.9	+ 7.7	38.4	38.5
1931	66.6	39.0	.7	+ 2.3	29.2	28.8
1932	62.5	41.0	1.0	− .8	19.7	19.2
1933	63.9	41.0	.9	− 1.3	20.7	20.2
1934	73.1	40.6	1.1	− 3.0	28.4	27.7
1935	76.9	42.4	1.4	− 2.4	30.7	30.0
1936	80.9	43.9	1.6	− 2.8	32.6	31.8
1937	87.8	45.1	1.8	− .9	40.0	39.0
1938	88.4	43.7	2.2	− 2.3	40.2	39.2
1939	103.7	45.3	2.1	− 1.3	55.0	53.7
1940	123.3	46.6	2.4	− 2.5	71.8	70.0
1941	121.8	47.7	2.5	− 1.1	70.6	70.6[1]
1942	127.4	47.8	3.1	− .9	75.6	75.6[1]
1943	110.9	49.4	3.3	− .3	58.0	58.0[1]
1944	101.5	49.2	3.8	+ 1.6	50.1	50.1[1]
1945	108.0	48.6	5.1	+ 5.0	59.3	59.3[1]
1946	134.1	48.6	7.7	+29.7	107.5	107.5[1]
1947	127.3	49.9	8.2	+ 6.2	75.4	75.4[1]
1948	123.6	51.5	6.9	+18.0	83.3	83.3[1]
1949	120.9	51.5[1]	7.0[1]	+14.2	76.6[1]	76.6[1]

[1]Preliminary.

TABLE 84

FAMILIES, NON-FAMILY HOUSEHOLDS AND STOCK OF DWELLINGS, CANADA, 1921-1949

Year	Families	Non-Family Households	Families and Non-Family Households	Stock of Dwellings	Total Occupied Dwellings	Families and Non-Family Households Less	
						Stock of Dwellings	Total Occupied Dwellings
1921	1,815	239	2,054	1,909	1,857	145	197
1922	1,835	247	2,082	1,946	1,892	136	190
1923	1,860	253	2,113	1,984	1,890	129	223
1924	1,889	260	2,149	2,018	1,910	131	239
1925	1,920	267	2,187	2,057	1,953	130	234
1926	1,958	274	2,232	2,106	2,008	126	224
1927	2,002	281	2,283	2,157	2,059	126	224
1928	2,049	288	2,337	2,214	2,120	123	217
1929	2,097	295	2,392	2,271	2,180	121	212
1930	2,136	302	2,438	2,318	2,227	120	211
1931	2,165	309	2,474	2,358	2,252	116	222
1932	2,184	315	2,499	2,379	2,238	120	261
1933	2,204	321	2,525	2,395	2,252	130	274
1934	2,232	327	2,559	2,417	2,299	142	260
1935	2,262	333	2,595	2,444	2,342	151	253
1936	2,294	340	2,634	2,476	2,378	158	256
1937	2,333	347	2,680	2,517	2,432	163	248
1938	2,372	353	2,725	2,554	2,472	171	253
1939	2,426	360	2,786	2,598	2,517	188	269
1940	2,496	367	2,863	2,643	2,580	219	283
1941	2,567	373	2,940	2,693	2,630	247	310
1942	2,642	365	3,007	2,733	2,673	274	334
1943	2,700	357	3,057	2,763	2,703	294	354
1944	2,750	349	3,099	2,799	2,739	300	360
1945	2,810	341	3,151	2,840	2,780	311	371
1946	2,917	333	3,250	2,899	2,839	351	411
1947	2,993	348	3,341	2,970	2,907	371	434
1948	3,076	364	3,440	3,042	2,978	398	462
1949	3,153	379	3,532	3,125	3,059	407	473

SECTION TEN

BASIC DATA

TABLE 85

EXPENDITURES ON NEW HOUSING[1] BY SOURCE OF FUNDS AND INDIVIDUAL SECTORS, CANADA, 1948-1949

Item No.	Source of Funds	1948		1949	
		Amount $ Mill	Per cent	Amount $ Mill	Per cent
	Governments				
	Federal Government				
1	Direct Housing Expenditure	68.5	10.0	71.8	9.2
2	Disbursements on Direct Loans	12.7	1.8	25.8	3.3
3	Disbursements on Joint Loans	15.5	2.3	27.3	3.5
4	Sub-total (Items 1+2+3)	96.7	14.1	124.9	16.0
	Provincial Governments				
5	Disbursements on Second Mortgages	2.4	.5	11.5	1.4
6	Total (Items 4+5)	99.1	14.4	136.4	17.4
	Lending Institutions				
7	Disbursements on Joint Loans	46.5	6.8	81.8	10.4
8	Disbursements on Government Guaranteed Loans	2.7	.3	12.2	1.6
9	Sub-total	49.2	7.1	94.0	12.0
10	Disbursements on Conventional Loans	89.5	13.1	76.2	9.7
11	Total (Items 9+10)	138.7	20.2	170.2	21.7
	Chartered Banks				
12	Disbursements on Government Guaranteed Loans	.5	.1	.6	.1
	Credit Unions				
13	Disbursements on Conventional Loans	14.0	2.0	13.8	1.8
	Other Sources				
14	Individual Loans	19.0	2.7	21.0	2.7
15	Miscellaneous Loans	4.8	.8	20.1	2.6
16	Total (Items 14+15)	23.8	3.5	41.1	5.3

TABLE 85

EXPENDITURES ON NEW HOUSING[1] BY SOURCE OF FUNDS AND INDIVIDUAL SECTORS, CANADA, 1948-1949—*Continued*

Item No.	Source of Funds	1948		1949	
		Amount $ Mill	Per cent	Amount $ Mill	Per cent
	Owner's Equity				
17	In addition to Direct Government Loans	1.9	.2	7.4	.9
18	In addition to Government Guaranteed Loans	2.0	.3	6.3	.8
19	In addition to Joint Loans	28.5	4.2	53.4	6.8
20	Sub-total (Items 17+18+19)	32.4	4.7	67.1	8.5
21	In addition to Lending Institution Conventional Loans	88.4	12.9	69.6	8.9
22	In addition to Credit Union Conventional Loans	21.0	3.0	20.7	2.6
23	Sub-total (Items 21+22)	109.4	15.9	90.3	11.5
24	In addition to Individual Loans	38.0	5.5	42.0	5.4
25	In addition to Miscellaneous Loans	7.2	1.1	30.2	3.9
26	Sub-total (Items 24+25)	45.2	6.6	72.2	9.3
27	Fully Financed by Owner	222.9	32.5	190.8	24.4
28	Total (Items 20+23+26+27)	409.9	59.7	420.4	53.7
29	Government Assisted House Building (Items 6+9+12+20)	181.2	26.4	298.1	38.1
30	Non Government Assisted House Building (Items 10+13+16+23+26+27)	504.8	73.6	484.4	61.9
31	Total (Items 6+11+12+13+16+28)	686.0	100.0	782.5	100.0
32	Institutionally-Financed House Building (Items 3+11+12+13+18+19+23)	308.6	45.0	361.9	46.3
33	Non Institutionally-Financed House Building (Items 1+2+5+16+17+26+27)	377.4	55.0	420.6	53.7
34	Total (Items 6+11+12+13+16+28)	686.0	100.0	782.5	100.0

[1]Includes supplementary building costs and cost of land.

TABLE 86

DWELLINGS COMPLETED WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949

Year	Direct Government Built Dwelling Units							
	War Workers' Rental Housing	Veterans' Rental Housing	Veterans' Land Act, 1942, Subdivision Projects	Department of National Defence Housing	Emergency Shelter	Home Conversion Plan	Government Departments[1]	Total
1935	—	—	—	—	—	—	—	—
1936	—	—	—	—	—	—	—	—
1937	—	—	—	—	—	—	—	—
1938	—	—	—	—	—	—	—	—
1939	—	—	—	—	—	—	—	—
1940	—	—	—	—	—	—	—	—
1941	1,666	—	—	—	—	—	—	1,666
1942	7,635	—	—	—	—	—	—	7,635
1943	6,326	—	—	—	—	36	—	6,362
1944	1,196	395	—	—	—	1,209	—	2,800
1945	46	1,510	—	—	1,051	778	—	3,385
1946	—	6,997	2,290	—	4,642	76	2	14,007
1947	—	5,421	379	456	3,751	—	41	10,048
1948	—	6,934	4	1,006	860	—	67	8,871
1949	—	7,804	—	1,726	8	—	141	9,679

[1]Excludes a small number of dwellings built by Federal Government Departments from 1935 to 1945.

TABLE 86

DWELLINGS COMPLETED WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949—*Continued*

Year	Government Financially Assisted Dwelling Units													Total Publicly Assisted Dwelling Units
	Loans						Guarantees						Total	
	Dominion Housing Act, 1935	National Housing Act, 1938	National Housing Act, 1944	Veterans' Land Act, 1942, Excluding Sub-division Projects	Canadian Farm Loan Act, 1927	Sub-total	Home Improvement Loans Guarantee Act, 1937	Home Extension Loans 1942	Farm Improvement Loans Act, 1944	National Housing Act, 1944		Sub-total		
										Home Extension	Rental Insurance			
1935	3	—	—	—	469	472	—	—	—	—	—	—	472	472
1936	674	—	—	—	436	1,110	90	—	—	—	—	90	1,200	1,200
1937	1,365	—	—	—	147	1,512	909	—	—	—	—	909	2,421	2,421
1938	2,004	245	—	—	173	2,422	869	—	—	—	—	869	3,291	3,291
1939	752	4,264	—	—	171	5,187	1,103	—	—	—	—	1,103	6,290	6,290
1940	92	6,045	—	—	102	6,239	787	—	—	—	—	787	7,026	7,026
1941	8	4,847	—	—	63	4,918	—	—	—	—	—	—	4,918	6,584
1942	1	2,638	—	—	35	2,674	—	39	—	—	—	39	2,713	10,348
1943	—	1,319	—	—	36	1,355	—	53	—	—	—	53	1,408	7,770
1944	—	890	—	—	42	932	—	18	—	—	—	18	950	3,750
1945	—	706	1,226	—	58	1,990	—	—	232	—	—	232	2,222	5,607
1946	—	399	4,906	239	57	5,544	—	—	375	48	—	423	6,024	20,031
1947	—	61	8,846	1,599	57	10,563	—	—	387	16	—	403	10,966	21,014
1948	—	—	11,939	1,928	62	13,929	—	—	328	4	200	532	14,461	23,332
1949	—	—	21,738	1,561	86	23,385	—	—	434	—	2,300	2,734	26,119	35,798

TABLE 87

EXPENDITURES ON NEW HOUSING CONSTRUCTION WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949
(Thousands of Dollars)

Year	Direct Government Built Dwelling Units							
	War Workers' Rental Housing	Veterans' Rental Housing	Veterans' Land Act, 1942, Subdivision Projects	Department of National Defence Housing	Emergency Shelter	Home Conversion Plan	Government Departments[1]	Total
1935	—	—	—	—	—	—	—	—
1936	—	—	—	—	—	—	—	—
1937	—	—	—	—	—	—	—	—
1938	—	—	—	—	—	—	—	—
1939	—	—	—	—	—	—	—	—
1940	—	—	—	—	—	—	—	—
1941	10,501	—	—	—	—	—	—	10,501
1942	29,956	—	—	—	—	—	—	29,956
1943	29,707	—	—	—	—	508	—	30,215
1944	7,616	1,600	—	—	—	2,703	—	11,919
1945	311	10,367	—	—	1,184	1,498	—	13,360
1946	—	36,366	14,740	39	4,912	218	187	56,462
1947	—	28,558	2,240	1,044	3,399	—	797	36,038
1948	—	53,262	10	11,481	671	—	1,575	66,999
1949	—	43,586	—	23,954	6	—	2,772	70,318

[1]Excludes a small amount for housing by Government Departments for the years 1935 to 1945.

TABLE 87

EXPENDITURES ON NEW HOUSING CONSTRUCTION WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949—*Continued*

(Thousands of Dollars)

Year	Government Financially Assisted Dwelling Units													Total Publicly Assisted Dwelling Units
	Loans						Guarantees						Total	
	Dominion Housing Act, 1935	National Housing Act, 1938	National Housing Act, 1944	Veterans' Land Act, 1942, Excluding Sub-division Projects	Canadian Farm Loan Act, 1927	Sub-total	Home Improvement Loans Guarantee Act, 1937	Home Extension Loans 1942	Farm Improvement Loans Act, 1944	National Housing Act, 1944		Sub-total		
										Home Extension	Rental Insurance			
1935	30	—	—	—	662	692	—	—	—	—	—	—	692	692
1936	4,466	—	—	—	635	5,101	144	—	—	—	—	144	5,245	5,245
1937	8,998	—	—	—	232	9,230	1,446	—	—	—	—	1,446	10,676	10,676
1938	11,388	1,562	—	—	263	13,213	1,381	—	—	—	—	1,381	14,594	14,594
1939	1,501	17,480	—	—	262	19,243	1,765	—	—	—	—	1,765	21,108	21,108
1940	182	21,560	—	—	167	21,909	1,259	—	—	—	—	1,259	23,168	23,168
1941	11	16,933	—	—	118	17,062	—	—	—	—	—	—	17,062	27,563
1942	5	9,533	—	—	74	9,612	—	66	—	—	—	66	9,678	39,634
1943	—	3,829	—	—	86	3,915	—	98	—	—	—	98	4,013	34,228
1944	—	4,450	—	—	105	4,555	—	35	—	—	—	35	4,590	16,509
1945	—	3,857	6,063	—	151	10,071	—	—	605	—	—	605	10,676	24,036
1946	—	409	24,250	5,039	154	29,852	—	—	1,014	102	—	1,116	30,968	87,430
1947	—	76	69,561	12,235	175	82,047	—	—	1,191	38	—	1,229	83,276	119,314
1948	—	—	88,753	11,682	222	100,657	—	—	1,172	11	3,781	4,964	105,621	172,620
1949	—	—	170,797	13,381	317	184,495	—	—	1,598	—	17,046	18,644	203,139	273,457

TABLE 88

VALUE OF REAL ESTATE TRANSFERS, ONTARIO, BY MONTH, 1928-1949

(Thousands of Dollars)

Month	1928	1929	1930	1931
January	19,076	19,315	16,221	14,263
February	19,975	18,352	14,711	14,366
March	24,921	25,878	17,270	18,762
April	26,545	45,566	21,342	44,918
May	29,566	29,649	20,989	18,069
June	24,697	26,581	19,323	17,049
July	28,191	21,697	16,070	13,288
August	22,417	16,942	13,794	11,894
September	18,627	22,687	16,117	12,006
October	24,107	27,898	19,425	13,551
November	24,757	25,272	17,149	12,770
December	25,108	17,637	17,027	12,403
Annual Total	287,987	297,473	209,437	203,337
Monthly Average	23,999	24,789	17,453	16,945
	1932	1933	1934	1935
January	9,375	6,874	5,972	5,934
February	10,107	7,408	4,889	6,113
March	10,246	9,406	10,302	7,545
April	13,249	8,176	9,177	9,876
May	11,849	9,326	8,860	9,168
June	10,654	8,906	8,601	8,463
July	8,898	7,475	6,608	6,826
August	7,675	6,544	6,102	6,912
September	8,743	6,997	6,866	7,506
October	9,456	7,274	11,457	8,002
November	9,551	6,667	7,502	7,934
December	8,945	8,799	6,705	7,331
Annual Total	118,748	93,852	93,040	91,610
Monthly Average	9,896	7,821	7,753	7,634
	1936	1937	1938	1939
January	8,628	8,251	7,346	6,159
February	10,208	10,027	7,902	6,751
March	8,155	11,846	12,146	8,752
April	9,556	11,628	10,996	9,941
May	12,619	12,298	12,288	12,078
June	12,668	10,443	11,024	10,761
July	11,565	9,102	8,265	7,974
August	7,107	6,950	7,412	7,961
September	8,539	10,235	12,499	8,752
October	9,597	9,852	8,996	9,344
November	8,841	8,794	9,882	11,601
December	9,914	7,843	7,723	7,776
Annual Total	117,396	117,267	116,480	107,850
Monthly Average	9,783	9,772	9,707	8,987

TABLE 88

VALUE OF REAL ESTATE TRANSFERS, ONTARIO, BY MONTH, 1928-1949—*Continued*

(Thousands of Dollars)

Month	1940	1941	1942	1943
January	8,193	10,257	11,475	11,046
February	7,931	9,137	10,090	11,312
March	9,479	11,806	13,906	15,131
April	12,102	13,991	17,415	18,258
May	12,529	15,525	18,322	19,933
June	10,492	14,425	17,514	19,017
July	9,131	12,843	14,611	16,084
August	9,853	12,544	12,803	14,043
September	9,247	14,819	16,206	18,637
October	11,693	14,746	20,187	21,014
November	9,908	13,162	15,993	19,838
December	9,305	14,679	18,224	17,395
Annual Total	119,864	157,934	186,747	201,708
Monthly Average	9,989	13,161	15,562	16,809
	1944	1945	1946	1947
January	15,117	22,433	33,377	34,605
February	18,873	22,625	30,737	30,960
March	29,523	34,392	46,212	37,703
April	25,551	33,568	53,211	48,621
May	28,516	35,916	59,393	59,010
June	36,512	36,077	54,534	50,297
July	21,216	29,014	46,900	44,026
August	22,399	28,523	39,195	38,176
September	25,175	28,972	45,669	44,040
October	31,441	37,786	50,252	52,632
November	28,349	36,501	48,005	45,292
December	23,847	30,887	37,511	42,913
Annual Total	306,519	376,694	544,995	528,276
Monthly Average	25,543	31,391	45,416	44,023
	1948	1949		
January	37,239	38,824		
February	31,785	39,950		
March	42,076	49,399		
April	52,000	61,917		
May	56,021	60,090		
June	61,717	65,855		
July	50,772	51,448		
August	44,475	52,354		
September	51,096	58,138		
October	55,285	61,917		
November	56,421	74,453		
December	53,547	60,007		
Annual Total	592,432	674,352		
Monthly Average	49,369	56,196		

TABLE 89

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949

Month	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
	1921		1922	
January	1,245	4,567	1,499	5,927
February	1,598	5,872	1,575	6,366
March	2,212	8,202	2,457	9,769
April	3,153	11,650	2,584	10,317
May	4,177	15,379	3,120	12,403
June	1,586	5,872	3,007	11,964
July	1,808	6,711	2,186	8,671
August	1,829	6,711	2,229	8,891
September	1,993	7,363	2,286	9,220
October	2,180	8,016	2,416	9,659
November	1,891	6,991	2,321	9,220
December	1,609	5,872	1,841	7,354
Annual Total	25,281	93,206	27,521	109,759
Monthly Average	2,107	7,767	2,293	9,147
	1923		1924	
January	1,594	7,674	1,444	8,155
February	1,498	7,296	1,507	8,526
March	2,066	10,064	1,748	9,885
April	2,691	13,083	2,021	11,368
May	3,133	15,221	2,420	13,716
June	2,738	13,334	2,029	11,492
July	2,158	10,441	1,831	10,380
August	2,109	10,190	1,440	8,155
September	1,997	9,686	1,792	10,132
October	2,356	11,448	2,131	12,110
November	1,859	9,057	1,845	10,380
December	1,705	8,303	1,644	9,268
Annual Total	25,904	125,797	21,852	123,567
Monthly Average	2,159	10,483	1,821	10,297
	1925		1926	
January	1,343	7,040	1,302	5,964
February	1,317	7,514	1,308	7,041
March	1,630	8,399	1,610	8,008
April	2,088	11,532	1,709	9,202
May	2,157	10,581	1,934	9,297
June	2,169	10,718	1,984	10,137
July	1,937	9,385	1,680	9,592
August	1,454	6,720	1,397	6,561
September	1,769	7,959	1,629	7,938
October	1,903	8,557	1,784	8,871
November	1,642	8,563	1,469	7,353
December	1,569	8,349	1,400	7,631
Annual Total	20,978	105,317	19,206	97,595
Monthly Average	1,748	8,776	1,601	8,133

TABLE 89

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949—*Continued*

Month	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
	1927		1928	
January	1,068	6,002	1,313	7,498
February	1,254	6,956	1,343	9,112
March	1,576	9,820	1,572	8,864
April	1,730	9,149	1,635	9,742
May	1,906	11,214	1,984	11,355
June	1,894	10,591	1,943	11,733
July	1,479	8,637	1,614	9,751
August	1,349	6,742	1,499	10,862
September	1,560	7,599	1,434	7,867
October	1,685	9,851	1,917	11,135
November	1,585	9,936	1,710	10,535
December	1,453	10,235	1,433	12,403
Annual Total	18,539	106,732	19,397	120,857
Monthly Average	1,545	8,894	1,616	10,071
	1929		1930	
January	1,289	7,641	1,174	7,425
February	1,315	8,212	1,267	6,461
March	1,563	11,214	1,408	6,781
April	1,933	28,754	1,622	9,020
May	2,185	13,498	1,991	9,107
June	1,800	10,834	1,702	9,038
July	1,771	10,514	1,466	7,731
August	1,542	7,839	1,389	6,618
September	1,658	10,578	1,495	7,380
October	1,796	15,624	1,719	9,400
November	1,526	13,781	1,426	7,535
December	1,290	8,419	1,371	7,468
Annual Total	19,668	146,907	18,030	93,963
Monthly Average	1,639	12,242	1,503	7,830
	1931		1932	
January	1,257	6,686	941	3,771
February	1,187	6,027	925	4,517
March	1,509	9,021	948	4,188
April	1,508	10,020	1,180	5,667
May	1,570	8,511	1,139	5,108
June	1,558	8,824	1,139	4,562
July	1,372	7,043	999	3,890
August	1,165	4,457	791	3,047
September	1,264	5,767	943	3,736
October	1,394	5,890	879	3,565
November	1,317	5,344	915	3,854
December	1,145	5,837	816	3,729
Annual Total	16,246	83,427	11,615	49,635
Monthly Average	1,354	6,952	968	4,136

TABLE 89

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949—*Continued*

Month	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
	1933		1934	
January	713	2,219	639	2,150
February	615	2,732	559	1,742
March	802	3,328	719	3,406
April	831	2,798	812	3,246
May	932	3,234	924	3,045
June	957	3,439	916	3,503
July	691	2,847	701	2,460
August	654	2,317	676	2,182
September	745	2,543	791	2,482
October	777	2,789	831	2,809
November	758	2,612	846	2,765
December	687	4,734	712	2,519
Annual Total	9,162	35,592	9,126	32,308
Monthly Average	764	2,966	761	2,692
	1935		1936	
January	572	2,053	704	2,404
February	638	2,630	652	2,684
March	702	2,350	764	2,651
April	940	3,315	925	3,450
May	919	3,128	953	3,327
June	1,016	3,510	1,055	3,706
July	778	2,300	871	5,513
August	804	2,875	812	2,578
September	815	2,892	891	2,937
October	853	2,713	1,078	3,230
November	785	2,638	934	3,145
December	791	2,888	819	3,734
Annual Total	9,613	33,289	10,458	39,359
Monthly Average	801	2,774	872	3,280
	1937		1938	
January	724	2,407	687	2,650
February	738	4,052	657	2,177
March	956	3,900	907	3,200
April	1,163	4,259	1,044	3,975
May	1,140	4,578	1,156	4,983
June	1,183	3,995	1,279	4,194
July	919	3,292	821	2,496
August	770	2,368	857	2,806
September	984	3,327	1,039	4,950
October	1,015	3,274	963	2,856
November	951	2,935	996	3,030
December	820	2,658	906	2,819
Annual Total	11,363	41,046	11,312	40,136
Monthly Average	947	3,421	943	3,345

TABLE 89

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949—*Continued*

Month	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
	1939		1940	
January	699	1,854	832	2,328
February	686	2,173	902	3,085
March	805	2,459	940	2,939
April	909	2,876	1,322	3,871
May	1,115	3,232	1,499	3,969
June	1,311	3,921	1,374	3,522
July	1,008	2,828	1,303	3,335
August	1,046	2,431	1,276	4,493
September	1,133	3,166	1,216	3,184
October	1,084	3,024	1,419	4,727
November	1,211	5,539	1,285	3,497
December	1,012	2,700	947	3,530
Annual Total	12,019	36,203	14,315	42,480
Monthly Average	1,002	3,017	1,193	3,540
	1941		1942	
January	854	3,114	1,136	4,125
February	925	2,893	1,073	3,666
March	1,311	3,847	1,466	5,770
April	1,535	4,921	1,894	7,922
May	1,777	5,702	2,262	8,576
June	1,823	5,956	2,233	8,021
July	1,659	5,114	1,981	6,633
August	1,461	4,416	1,736	5,408
September	1,826	6,370	2,172	7,462
October	1,781	5,870	2,182	9,869
November	1,509	5,098	1,744	6,170
December	1,416	5,355	1,582	7,580
Annual Total	17,877	58,655	21,461	81,203
Monthly Average	1,490	4,888	1,788	6,767
	1943		1944	
January	1,061	4,167	1,438	5,533
February	987	5,397	1,924	8,194
March	1,326	5,748	2,682	12,758
April	1,622	6,999	2,039	9,638
May	1,895	7,738	2,579	11,367
June	2,079	8,273	2,704	18,725
July	1,752	7,298	2,042	9,269
August	1,597	5,786	2,003	9,227
September	1,917	7,605	2,383	10,511
October	2,116	8,362	2,709	13,467
November	2,071	7,964	2,434	10,932
December	1,682	7,231	1,807	9,934
Annual Total	20,105	82,567	26,744	129,555
Monthly Average	1,675	6,881	2,229	10,796

TABLE 89

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949—*Continued*

Month	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000	Number of Real Estate Transfers Registered	Value of Real Estate Transfers Registered $000
	1945		1946	
January	1,838	9,329	2,230	11,512
February	1,833	10,328	2,248	11,284
March	2,659	13,349	2,792	15,271
April	2,432	11,187	3,263	18,130
May	2,486	11,951	3,795	21,383
June	2,644	13,223	3,688	21,764
July	2,262	10,476	3,234	18,660
August	2,264	10,673	2,809	15,297
September	2,240	10,489	3,033	17,307
October	2,814	13,296	3,469	20,166
November	2,665	13,372	3,082	19,170
December	2,094	11,206	2,442	14,496
Annual Total	28,231	138,880	36,085	204,441
Monthly Average	2,353	11,573	3,007	17,037
	1947		1948	
January	2,161	13,929	2,174	16,192
February	2,076	11,432	2,013	12,165
March	2,412	12,328	2,454	16,223
April	2,707	17,936	3,119	20,878
May	3,320	22,325	3,273	22,088
June	3,176	20,300	3,899	26,201
July	2,892	16,907	3,059	20,472
August	2,299	13,584	2,727	16,696
September	2,772	16,789	3,133	21,541
October	3,532	21,537	3,279	22,858
November	2,859	19,565	3,529	23,928
December	2,556	18,363	3,065	21,823
Annual Total	32,762	204,996	35,724	241,065
Monthly Average	2,730	17,083	2,977	20,089
	1949			
January	2,446	16,873		
February	2,326	16,214		
March	3,002	20,143		
April	2,918	30,158		
May	3,683	26,111		
June	4,139	31,365		
July	3,228	23,111		
August	3,130	22,736		
September	3,609	25,251		
October	3,786	27,460		
November	4,072	31,796		
December	3,548	28,671		
Annual Total	39,887	299,889		
Monthly Average	3,324	24,991		

TABLE 90

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, SELECTED PROVINCES, BY MONTH, CANADA, 1949

Month	Maritimes				Manitoba	Alberta	British Columbia	
	Prince Edward Island Number	Nova Scotia Number	New Brunswick Number	Total Number	Number	Number	Number	Value $ Mill
January	103	884	1,138	2,125	1,830	2,860[1]	3,219	13
February	145	767	690	1,602	1,705	2,665[1]	2,954	20
March	56	828	802	1,686	2,224	3,476[1]	4,512	18
April	135	959	835	1,929	2,649	4,140[1]	4,026	19
May	170	1,383	1,266	2,819	3,198	4,998[1]	4,878	19
June	194	1,090	975	2,259	3,046	4,761[1]	4,604	18
July	161	1,055	902	2,118	2,599	3,601	3,893	15
August	234	1,465	1,239	2,938	2,727	1,981	4,032	18
September	192	1,150	1,012	2,354	3,250	3,614	3,992	16
October	234	1,767	1,357	3,358	3,173	3,946	3,962	18
November	169	1,083	915	2,167	3,128	4,352	4,249	18
December	146	1,213	858	2,217	2,348	3,806	3,864	16
Year	1,939	13,644	11,989	27,572	31,877[2]	44,200	48,185[3]	207[3]

[1]Estimated.
[2]The corresponding figures for 1947 and 1948 are 34,495 and 32,097 respectively.
[3]The corresponding figures for 1948 are 58,458 and $237 million respectively.

TABLE 91

NUMBER AND VALUE OF REAL ESTATE TRANSFERS AND POPULATION, BY REGISTRY DIVISION AND TYPE OF AREA, ONTARIO, 1941

Area and Registry Division[1]	Population	Real Estate Transfers	
		Number of Deeds Registered	Value of Transfers $000
Predominantly Urban			
Brant	56,695	1,218	1,706
Carleton	47,569	1,105	1,606
Essex	174,230	5,429	8,737
Frontenac	53,717	1,052	2,063
Lincoln	65,066	1,847	3,258
London	78,264	1,016	2,672
Middlesex E and N	34,759	1,122	1,569
Ontario R.O. and L.T.O.	65,718	1,946	2,587
Ottawa (includes R.O. and L.T.O.)	154,951	1,638	8,430
Peterborough	47,392	1,186	1,583
Toronto (Greater) Toronto R.O., York E and W R.O., Toronto and York L.T.O.	918,266	17,877	58,655
Waterloo	98,720	2,256	4,979
Welland	93,836	3,019	5,782
Wellington S and C	41,545	793	1,421
Wentworth	206,721	4,949	10,654
Total Predominantly Urban	2,137,449	46,453	115,704
Mixed Urban and Rural			
Durham East	12,114	210	281
Elgin R.O. and L.T.O.	46,150	922	1,426
Grenville	15,989	260	267
Grey North	35,267	719	1,052
Halton	28,515	886	1,711
Hastings	63,322	1,210	1,116
Kent	66,346	1,489	2,399
Lambton	56,925	1,208	1,514
Lanark North	13,691	206	184
Lanark South	19,452	341	292
Leeds	36,042	661	770
Norfolk	35,611	801	1,534
Northumberland E R.O. and Northumberland W R.O.	30,786	566	611
Oxford	50,974	937	1,668
Peel	31,539	855	1,691
Perth	49,694	827	1,291
Prescott	25,261	459	596
Simcoe	87,057	2,339	2,441
Stormont	40,905	549	987
Victoria	25,934	575	785
Total Mixed Urban and Rural	771,574	16,020	22,616

TABLE 91

NUMBER AND VALUE OF REAL ESTATE TRANSFERS AND POPULATION, BY REGISTRY DIVISION AND TYPE OF AREA, ONTARIO, 1941—*Continued*

Area and Registry Division[1]	Population	Real Estate Transfers	
		Number of Deeds Registered	Value of Transfers $000
Predominantly Rural			
Bruce	41,680	1,050	963
Dufferin	14,075	290	374
Dundas	16,210	211	275
Durham West	13,101	260	270
Glengarry	18,732	242	359
Grey South	21,893	468	612
Haldimand	21,854	381	531
Huron	43,742	943	1,174
Lennox and Addington	18,469	405	430
Middlesex West	14,143	250	324
Prince Edward	16,750	307	342
Russell	17,448	325	375
Wellington North	17,908	332	508
York North	33,283	804	1,086
Total Predominantly Rural	309,288	6,268	7,624
Northern Areas			
Algoma R.O. and L.T.O.	52,002	1,138	931
Cochrane R.O. and L.T.O.	80,730	1,084	2,344
Haliburton	6,695	414	225
Kenora R.O. and L.T.O.	33,372	527	627
Manitoulin R.O. and L.T.O.	10,841	211	130
Muskoka R.O. and L.T.O.	21,835	922	501
Nipissing R.O. and L.T.O.	43,315	703	600
Parry Sound R.O. and L.T.O.	30,083	859	487
Rainy River R.O. and L.T.O.	19,132	408	207
Renfrew	54,720	896	761
Sudbury R.O. and L.T.O.	80,815	1,518	1,647
Thunder Bay (including Thunder Bay R.O., Fort William R.O. and L.T.O. and Port Arthur R.O. and L.T.O.)	85,200	2,568	2,488
Temiskaming R.O. and L.T.O.	50,604	777	1,041
Total Northern Areas	569,344	12,025	11,991
All Areas	3,787,655	80,766	157,934

[1]R.O.—Registry Office; L.T.O.—Land Titles Office.

TABLE 92

NUMBER AND VALUE OF REAL ESTATE TRANSFERS, BY TYPE OF AREA, ONTARIO, 1928-1949

Year	Predominantly Urban Areas		Mixed Urban-Rural Areas		Predominantly Rural Areas		Northern Areas		All Areas	
	Number	Amount $000	Number	Amount $000	Number	Amount $000	Number	Amount $000	Number	Amount $000
1928	45,708	215,732	15,306	39,607	6,365	13,495	10,117	19,153	77,496	287,987
1929	45,497	229,771	14,557	33,605	6,024	12,272	10,099	21,824	76,177	297,473
1930	41,107	160,099	14,517	26,712	6,296	10,911	9,639	11,714	71,559	209,437
1931	34,790	138,266	13,722	22,125	6,089	9,337	12,804	33,610	67,405	203,337
1932	27,111	86,890	11,830	17,947	5,228	7,133	7,386	6,779	51,555	118,748
1933	22,353	64,955	9,918	15,030	4,912	6,687	7,107	7,180	44,290	93,852
1934	22,721	57,895	10,913	15,140	4,552	6,454	7,571	13,552	45,757	93,040
1935	24,335	61,750	11,639	15,446	4,917	6,151	8,147	8,263	49,038	91,610
1936	27,268	74,472	12,965	17,890	5,308	6,781	9,364	18,253	54,905	117,396
1937	30,766	76,075	14,561	20,480	5,726	7,385	10,458	13,328	61,511	117,267
1938	30,965	73,682	15,493	21,172	6,078	7,104	10,865	14,522	63,401	116,480
1939	32,038	67,389	15,908	20,029	6,001	7,373	11,312	13,059	65,259	107,850
1940	36,576	79,582	15,262	20,800	6,032	7,909	11,455	11,573	69,325	119,864
1941	46,453	115,704	16,020	22,616	6,268	7,624	12,025	11,991	80,766	157,934
1942	48,357	135,546	17,078	26,039	6,406	8,311	11,340	16,852	83,181	186,747
1943	48,389	143,954	19,355	33,025	7,707	11,461	12,038	13,269	87,489	201,708
1944	63,998	221,166	25,470	47,131	9,668	15,622	16,391	22,600	115,527	306,519
1945	71,301	262,439	29,940	62,579	11,845	21,157	19,447	30,519	132,533	376,694
1946	91,302	378,563	40,415	90,522	15,620	29,018	25,840	46,892	173,177	544,995
1947	81,071	375,027	33,916	84,363	13,209	26,588	22,809	42,298	151,005	528,276
1948	86,387	433,864	32,860	89,108	12,505	27,870	21,730	41,591	153,482	592,432
1949	91,139	504,272	32,737	93,164	12,262	29,727	20,145	47,189	156,283	674,352

TABLE 93

SELECTED INDICATORS OF NATIONAL ECONOMIC ACTIVITY, CANADA, 1921-1949

Year	Total Economic Activity				Non-Agricultural Economic Activity			
	Gross National Product at Market Prices $ Millions	Net National Income at Factor Cost $ Millions	Exports $ Millions	Revenue Freight Carried 000 Tons	Net National Income at Factor Cost $ Millions	Exports $ Millions	Revenue Freight Carried 000 Tons	Industrial Employment Index 1926=100
1921	—[1]	—[1]	814	103,131	—[1]	502	64,526	88.8
1922	—[1]	—[1]	894	108,531	—[1]	519	64,422	89.0
1923	—[1]	—[1]	1,016	102,259	—[1]	636	79,023	95.8
1924	—[1]	—[1]	1,042	91,600	—[1]	640	69,546	93.4
1925	—[1]	—[1]	1,252	94,625	—[1]	738	71,850	93.6
1926	5,196	4,078	1,277	105,222	3,387	756	81,673	99.6
1927	5,447	4,291	1,231	106,011	3,651	756	82,421	104.6
1928	5,985	4,750	1,364	118,653	4,057	788	88,476	111.6
1929	5,956	4,689	1,178	115,187	4,246	822	93,047	119.0
1930	5,348	4,190	883	96,194	3,831	624	76,530	113.4
1931	4,480	3,261	600	74,130	3,115	423	55,943	102.5
1932	3,718	2,582	498	60,807	2,474	318	41,906	87.5
1933	3,468	2,387	535	57,364	2,289	360	41,205	83.4
1934	3,962	2,820	656	68,037	2,630	464	51,407	96.0

[1]Not available.

TABLE 93

SELECTED INDICATORS OF NATIONAL ECONOMIC ACTIVITY, CANADA, 1921-1949—*Continued*

Year	Total Economic Activity				Non-Agricultural Economic Activity			
	Gross National Product at Market Prices $ Millions	Net National Income at Factor Cost $ Millions	Exports $ Millions	Revenue Freight Carried 000 Tons	Net National Income at Factor Cost $ Millions	Exports $ Millions	Revenue Freight Carried 000 Tons	Industrial Employment Index 1926=100
1935	4,285	3,117	738	69,141	2,879	540	53,425	99.4
1936	4,644	3,446	951	75,847	3,173	650	58,851	103.7
1937	5,279	4,017	1,012	82,220	3,691	818	68,487	114.1
1938	5,165	3,986	849	76,175	3,615	695	58,642	111.8
1939	5,598	4,289	936	84,631	3,828	757	64,331	113.9
1940	6,772	5,255	1,193	97,948	4,747	1,007	78,078	124.2
1941	8,434	6,594	1,640	116,808	6,046	1,393	91,103	152.3
1942	10,455	8,373	2,385	134,675	7,284	2,179	110,538	173.7
1943	11,283	9,102	3,001	153,314	8,133	2,587	122,337	184.1
1944	11,919	9,741	3,483	155,326	8,528	2,841	118,050	183.0
1945	11,810	9,788	3,267	147,349	8,829	2,549	109,523	175.1
1946	12,008	9,819	2,339	139,256	8,689	1,860	108,384	173.2
1947	13,657	10,916	2,775	152,705	9,812	2,091	120,600	187.9
1948	15,503	12,474	3,075	154,732	10,907	2,432	127,113	195.8
1949	16,074	12,917	2,993	141,868	11,408	2,220	113,554	196.2

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949
(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1919			1920		
January	.7	2.3	3.0	1.4	14.7	16.1
February	1.5	18.2	19.7	2.4	15.9	18.3
March	2.2	7.3	9.5	5.1	16.2	21.3
April	3.2	8.3	11.5	7.7	23.4	31.1
May	5.7	13.0	18.7	8.8	19.9	28.7
June	4.2	11.5	15.7	7.0	22.3	29.3
July	6.8	15.0	21.8	5.3	18.9	24.2
August	5.7	16.3	22.0	4.2	19.3	23.5
September	4.9	11.9	16.8	4.0	16.8	20.8
October	4.9	20.7	25.6	4.4	13.8	18.2
November	4.6	12.3	16.9	3.1	12.3	15.4
December	2.6	6.2	8.8	1.5	7.2	8.7
Annual Total	47.0	143.0	190.0	54.9	200.7	255.6
Monthly Average	3.9	11.9	15.8	4.6	16.7	21.3
	1921			1922		
January	1.2	7.8	9.0	2.4	6.0	8.4
February	3.0	14.6	17.6	4.1	6.6	10.7
March	4.6	5.7	10.3	5.9	8.6	14.5
April	9.5	12.1	21.6	12.5	18.9	31.4
May	10.5	16.4	26.9	15.6	21.2	36.8
June	8.0	18.4	26.4	13.0	24.6	37.6
July	6.7	11.0	17.7	9.4	20.3	29.7
August	5.9	30.4	36.3	8.6	20.6	29.2
September	8.1	11.5	19.6	9.5	22.8	32.3
October	7.2	11.8	19.0	8.8	17.5	26.3
November	7.5	9.1	16.6	7.9	14.5	22.4
December	4.5	14.6	19.1	6.5	46.0	52.5
Annual Total	76.7	163.4	240.1	104.2	227.6	331.8
Monthly Average	6.4	13.6	20.0	8.7	19.0	27.7
	1923			1924		
January	2.6	7.2	9.8	2.5	4.0	6.5
February	2.8	10.5	13.3	2.2	19.1	21.3
March	6.0	14.0	20.0	4.5	7.0	11.5
April	11.8	19.1	30.9	9.6	20.6	30.2
May	14.9	25.8	40.7	12.4	20.6	33.0
June	12.2	38.5	50.7	9.3	16.9	26.2
July	9.4	21.4	30.8	7.2	16.6	23.8
August	8.6	18.9	27.5	8.2	18.5	26.7
September	8.1	15.3	23.4	7.6	14.9	22.5
October	8.4	21.7	30.1	8.1	13.0	21.1
November	6.7	8.9	15.6	13.7	10.9	24.6
December	6.1	15.4	21.5	5.9	23.0	28.9
Annual Total	97.6	216.7	314.3	91.2	185.1	276.3
Monthly Average	8.1	18.1	26.2	7.6	15.4	23.0

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1925			1926		
January	2.6	6.3	8.9	2.6	10.1	12.7
February	2.5	8.6	11.1	4.5	9.0	13.5
March	7.1	6.3	13.4	6.6	13.2	19.8
April	10.8	14.1	24.9	11.8	25.5	37.3
May	13.0	21.1	34.1	16.6	40.5	57.1
June	11.0	22.2	33.2	14.3	39.9	54.2
July	8.9	13.3	22.2	10.2	23.6	33.8
August	9.5	21.7	31.2	8.7	23.0	31.7
September	7.7	22.0	29.7	7.7	13.0	20.7
October	8.8	20.8	29.6	10.4	33.0	43.4
November	9.3	37.7	47.0	10.4	24.6	35.0
December	5.3	7.4	12.7	5.8	7.9	13.7
Annual Total	96.5	201.5	298.0	109.6	263.3	372.9
Monthly Average	8.0	16.8	24.8	9.1	22.0	31.1
	1927			1928		
January	3.4	13.4	16.8	6.6	13.9	20.5
February	4.8	14.7	19.5	4.9	21.0	25.9
March	6.9	10.6	17.5	8.6	14.3	22.9
April	12.9	25.7	38.6	17.2	39.1	56.3
May	16.9	29.8	46.7	16.7	54.0	70.7
June	13.8	38.4	52.2	18.6	41.3	59.9
July	12.1	38.8	50.9	13.0	25.4	38.4
August	10.2	19.7	29.9	10.6	28.9	39.5
September	10.0	22.8	32.8	13.6	31.8	45.4
October	15.9	31.2	47.1	12.1	32.5	44.6
November	11.4	18.9	30.3	11.4	17.6	29.0
December	6.6	30.1	36.7	5.9	13.0	18.9
Annual Total	124.9	294.1	419.0	139.2	332.8	472.0
Monthly Average	10.4	24.5	34.9	11.6	27.7	39.3
	1929			1930		
January	4.1	37.9	42.0	3.6	33.9	37.5
February	5.4	23.0	28.4	3.8	24.7	28.5
March	8.8	18.3	27.1	6.1	18.2	24.3
April	14.6	28.7	43.3	9.6	39.2	48.8
May	18.8	46.1	64.9	13.2	33.7	46.9
June	17.8	54.6	72.4	12.2	42.5	54.7
July	11.5	46.4	57.9	6.6	30.8	37.4
August	11.5	47.1	58.6	6.6	42.8	49.4
September	10.2	36.8	47.0	8.5	23.9	32.4
October	11.1	46.0	57.1	9.3	24.0	33.3
November	10.3	35.1	45.4	9.2	30.1	39.3
December	4.8	27.8	32.6	4.6	19.9	24.5
Annual Total	128.9	447.8	576.7	93.3	363.7	457.0
Monthly Average	10.8	37.3	48.1	7.8	30.3	38.1

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1931			1932		
January	3.9	16.4	20.3	2.7	10.0	12.7
February	3.7	22.2	25.9	2.0	12.8	14.8
March	5.6	21.7	27.3	1.9	8.9	10.8
April	8.2	14.5	22.7	2.5	7.6	10.1
May	10.3	26.6	36.9	3.5	10.7	14.2
June	10.5	19.3	29.8	3.1	9.1	12.2
July	7.1	21.0	28.1	2.7	9.8	12.5
August	7.4	18.7	26.1	2.3	10.4	12.7
September	6.7	27.0	33.7	2.3	7.3	9.6
October	7.6	21.2	28.8	2.6	6.3	8.9
November	7.0	17.6	24.6	2.1	8.1	10.2
December	3.7	7.6	11.3	1.2	3.0	4.2
Annual Total	81.7	233.8	315.5	28.9	104.0	132.9
Monthly Average	6.8	19.5	26.3	2.4	8.7	11.1
	1933			1934		
January	.9	2.5	3.4	.9	5.8	6.7
February	.9	2.2	3.1	1.2	4.4	5.6
March	1.1	2.1	3.2	1.5	6.0	7.5
April	1.9	6.7	8.6	2.8	8.7	11.5
May	2.1	4.4	6.5	4.1	13.3	17.4
June	3.0	5.1	8.1	4.0	8.2	12.2
July	3.0	9.7	12.7	3.4	7.8	11.2
August	2.3	7.2	9.5	2.8	10.7	13.5
September	2.6	5.8	8.4	2.3	10.2	12.5
October	2.7	12.3	15.0	2.8	8.4	11.2
November	2.3	8.3	10.6	3.3	7.1	10.4
December	1.1	7.1	8.2	1.5	4.6	6.1
Annual Total	23.9	73.4	97.3	30.6	95.2	125.8
Monthly Average	2.0	6.1	8.1	2.6	7.9	10.5
	1935			1936		
January	1.2	9.0	10.2	1.2	12.4	13.6
February	1.2	9.5	10.7	1.1	7.1	8.2
March	2.1	6.4	8.5	2.1	8.2	10.3
April	3.8	7.6	11.4	3.7	6.1	9.8
May	3.9	12.4	16.3	4.6	10.4	15.0
June	4.6	13.9	18.5	5.3	15.5	20.8
July	3.9	14.7	18.6	4.3	13.6	17.9
August	3.5	20.3	23.8	5.1	10.4	15.5
September	3.7	11.0	14.7	4.3	12.3	16.6
October	3.0	11.9	14.9	5.1	9.9	15.0
November	3.5	4.8	8.3	4.2	9.6	13.8
December	2.0	2.4	4.4	1.9	4.2	6.1
Annual Total	36.4	123.9	160.3	42.9	119.7	162.6
Monthly Average	3.1	10.3	13.4	3.6	10.0	13.6

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1937			1938		
January	2.8	3.8	6.6	2.3	6.9	9.2
February	3.0	5.7	8.7	2.0	4.6	6.6
March	3.7	12.4	16.1	2.1	8.3	10.4
April	6.4	18.0	24.4	5.3	9.7	15.0
May	6.5	17.7	24.2	7.7	10.9	18.6
June	7.0	23.4	30.4	6.2	14.8	21.0
July	5.4	16.1	21.5	5.8	15.4	21.2
August	4.7	20.1	24.8	5.3	16.8	22.1
September	4.8	16.9	21.7	4.6	15.0	19.6
October	4.9	15.3	20.2	5.2	12.9	18.1
November	4.3	10.4	14.7	5.6	9.4	15.0
December	2.7	8.1	10.8	2.9	7.6	10.5
Annual Total	56.2	167.9	224.1	55.0	132.3	187.3
Monthly Average	4.7	14.0	18.7	4.6	11.0	15.6
	1939			1940		
January	3.1	4.2	7.3	2.4	6.4	8.8
February	5.6	5.7	11.3	3.3	8.5	11.8
March	3.7	5.3	9.0	3.8	7.9	11.7
April	5.8	6.5	12.3	6.0	19.9	25.9
May	7.3	11.1	18.4	8.6	19.5	28.1
June	7.9	17.3	25.2	8.5	30.6	39.1
July	7.7	14.4	22.1	5.5	23.8	29.3
August	7.1	18.7	25.8	5.8	34.9	40.7
September	5.5	13.9	19.4	5.6	46.7	52.3
October	4.7	9.5	14.2	6.3	20.1	26.4
November	5.2	7.6	12.8	7.6	47.4	55.0
December	3.9	5.5	9.4	4.3	12.6	16.9
Annual Total	67.5	119.7	187.2	67.7	278.3	346.0
Monthly Average	5.6	10.0	15.6	5.6	23.2	28.8
	1941			1942		
January	3.4	23.2	26.6	2.8	10.1	12.9
February	3.5	21.2	24.7	2.5	8.6	11.1
March	4.9	9.1	14.0	4.7	13.2	17.9
April	9.5	14.1	23.6	9.1	13.5	22.6
May	13.0	27.9	40.9	9.0	14.9	23.9
June	10.8	74.9	85.7	10.8	36.0	46.8
July	8.5	23.4	31.9	8.8	23.4	32.2
August	11.8	24.3	36.1	7.5	24.3	31.8
September	8.2	31.2	39.4	5.6	24.1	29.7
October	8.2	20.9	29.1	7.1	14.4	21.5
November	5.9	17.0	22.9	8.0	14.1	22.1
December	4.7	14.4	19.1	3.4	5.7	9.1
Annual Total	92.4	301.6	394.0	79.3	202.3	281.6
Monthly Average	7.7	25.1	32.8	6.6	16.9	23.5

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1943			1944		
January	2.2	9.8	12.0	3.5	5.3	8.8
February	2.0	17.0	19.0	8.3	7.9	16.2
March	4.7	6.4	11.1	8.8	22.2	31.0
April	8.8	7.2	16.0	13.9	13.8	27.7
May	10.4	13.1	23.5	16.7	15.0	31.7
June	10.4	10.1	20.5	21.7	15.6	37.3
July	7.3	8.9	16.2	17.7	14.5	32.2
August	7.2	16.7	23.9	9.0	15.2	24.2
September	8.3	10.3	18.6	9.4	15.9	25.3
October	7.8	11.4	19.2	9.3	16.6	25.9
November	5.9	8.2	14.1	7.8	11.1	18.9
December	4.1	7.9	12.0	5.1	7.7	12.8
Annual Total	79.1	127.0	206.1	131.2	160.8	292.0
Monthly Average	6.6	10.6	17.2	10.9	13.4	24.3
	1945			1946		
January	4.3	6.9	11.2	4.8	22.6	27.4
February	6.3	6.6	12.9	9.3	23.8	33.1
March	9.3	10.4	19.7	15.7	41.9	57.6
April	16.6	17.7	34.3	26.9	49.0	75.9
May	24.4	13.9	38.3	32.2	50.0	82.2
June	32.1	26.8	58.9	22.7	43.7	66.4
July	23.2	27.3	50.5	21.1	46.6	67.7
August	20.2	20.4	40.6	19.2	31.2	50.4
September	19.5	22.6	42.1	13.5	31.3	44.8
October	15.2	14.3	29.5	21.5	51.8	73.3
November	16.6	28.5	45.1	16.0	32.0	48.0
December	8.3	17.6	25.9	10.2	26.4	36.6
Annual Total	196.0	213.0	409.0	213.1	450.3	663.4
Monthly Average	16.3	17.8	34.1	17.8	37.5	55.3
	1947			1948		
January	5.1	39.6	44.7	15.0	19.2	34.2
February	7.4	46.0	53.4	15.1	27.9	43.0
March	6.5	31.9	38.4	20.5	30.9	51.4
April	15.6	37.3	52.9	33.2	47.6	80.8
May	22.0	42.2	64.2	51.8	88.1	139.9
June	23.6	51.9	75.5	40.9	92.9	133.8
July	17.9	54.6	72.5	38.3	51.5	89.8
August	25.3	45.1	70.4	44.4	47.3	91.7
September	22.5	53.7	76.2	34.1	45.6	79.7
October	17.7	57.3	75.0	32.1	38.7	70.8
November	20.2	39.6	59.8	29.8	53.2	83.0
December	13.4	21.7	35.1	17.9	38.1	56.0
Annual Total	197.2	520.9	718.1	373.1	581.0	954.1
Monthly Average	16.4	43.4	59.8	31.1	48.4	79.5

TABLE 94

CONTRACTS AWARDED, RESIDENTIAL AND OTHER CONSTRUCTION, CANADA, BY MONTH, 1919-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction
	1949		
January	30.3	42.5	72.8
February	19.2	44.1	63.3
March	19.9	47.7	67.6
April	36.4	40.4	76.8
May	48.2	57.8	106.0
June	46.9	55.5	102.4
July	52.2	77.1	129.3
August	55.9	34.7	90.6
September	50.8	52.5	103.3
October	44.7	44.6	89.3
November	31.3	85.9	117.2
December	28.5	93.0	121.5
Annual Total	464.3	675.8	1,140.1
Monthly Average	38.7	56.3	95.0

TABLE 95

BUILDING PERMITS ISSUED, RESIDENTIAL AND OTHER CONSTRUCTION, 35 CITIES, CANADA, BY MONTH, 1921-1949
(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1921			1922		
January	.9	1.3	2.2	1.2	1.5	2.7
February	1.3	1.7	3.0	1.8	2.3	4.1
March	3.3	2.9	6.2	4.5	3.9	8.4
April	6.3	5.2	11.5	7.1	5.8	12.9
May	6.3	5.5	11.8	9.0	8.0	17.0
June	6.4	6.2	12.6	7.6	7.3	14.9
July	4.3	5.2	9.5	6.2	7.6	13.8
August	5.1	4.2	9.3	10.0	8.1	18.1
September	4.8	4.7	9.5	5.1	5.1	10.2
October	5.7	3.4	9.1	5.5	3.3	8.8
November	6.7	4.4	11.1	5.6	3.8	9.4
December	2.4	2.6	5.0	4.2	4.8	9.0
Annual Total	53.5	47.3	100.8	67.8	61.5	129.3
Monthly Average	4.5	3.9	8.4	5.7	5.1	10.8
	1923			1924		
January	1.2	2.5	3.7	2.1	1.9	4.0
February	1.4	3.3	4.7	1.8	1.5	3.3
March	4.0	4.3	8.3	4.2	4.2	8.4
April	7.4	10.3	17.7	6.5	5.6	12.1
May	9.5	7.5	17.0	6.8	6.8	13.6
June	7.5	5.7	13.2	6.1	6.8	12.9
July	4.9	5.9	10.8	4.8	5.8	10.6
August	4.9	4.8	9.7	4.9	3.3	8.2
September	6.1	3.4	9.5	4.6	9.6	14.2
October	5.7	3.2	8.9	6.2	4.5	10.7
November	4.5	2.9	7.4	5.5	3.9	9.4
December	2.5	3.8	6.3	3.0	2.9	5.9
Annual Total	59.6	57.6	117.2	56.5	56.8	113.3
Monthly Average	5.0	4.8	9.8	4.7	4.7	9.4
	1925			1926		
January	2.2	2.7	4.9	2.3	1.9	4.2
February	2.6	2.5	5.1	2.5	4.1	6.6
March	4.4	2.5	6.9	4.7	4.3	9.0
April	7.9	6.0	13.9	8.9	8.8	17.7
May	6.8	6.5	13.3	9.2	8.0	17.2
June	6.6	7.3	13.9	7.6	9.3	16.9
July	5.2	6.6	11.8	6.5	10.2	16.7
August	4.6	3.7	8.3	4.5	5.9	10.4
September	5.4	3.4	8.8	4.8	5.0	9.8
October	6.3	2.9	9.2	6.3	7.5	13.8
November	4.4	2.8	7.2	5.1	4.1	9.2
December	3.6	3.4	7.0	3.7	7.9	11.6
Annual Total	60.0	50.3	110.3	66.1	77.0	143.1
Monthly Average	5.0	4.2	9.2	5.5	6.4	11.9

TABLE 95

BUILDING PERMITS ISSUED, RESIDENTIAL AND OTHER CONSTRUCTION, 35 CITIES, CANADA, BY MONTH, 1921-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1927			1928		
January	1.9	3.1	5.0	2.9	3.7	6.6
February	2.8	3.3	6.1	3.3	6.6	9.9
March	4.7	4.8	9.5	5.0	9.4	14.4
April	7.3	7.2	14.5	7.2	9.0	16.2
May	8.4	9.6	18.0	12.0	12.4	24.4
June	7.4	8.5	15.9	8.7	11.5	20.2
July	6.7	7.8	14.5	6.7	17.2	23.9
August	5.0	24.2	29.2	8.4	8.1	16.5
September	6.2	6.2	12.4	6.3	12.7	19.0
October	8.1	9.0	17.1	7.2	10.8	18.0
November	5.5	6.2	11.7	6.3	7.3	13.6
December	3.6	7.3	10.9	3.0	11.9	14.9
Annual Total	67.6	97.2	164.8	77.0	120.6	197.6
Monthly Average	5.6	8.1	13.7	6.4	10.1	16.5
	1929			1930		
January	2.6	5.0	7.6	1.3	5.4	6.7
February	1.8	7.1	8.9	1.9	5.8	7.7
March	4.6	17.8	22.4	3.7	8.4	12.1
April	9.5	18.0	27.5	5.9	9.5	15.4
May	8.3	13.9	22.2	6.5	12.4	18.9
June	8.6	16.8	25.4	5.8	11.6	17.4
July	6.5	13.8	20.3	4.8	9.8	14.6
August	6.0	13.4	19.4	3.7	9.1	12.8
September	4.9	10.8	15.7	4.6	5.7	10.3
October	4.1	11.1	15.2	5.6	6.1	11.7
November	4.9	10.4	15.3	4.2	6.5	10.7
December	3.2	11.2	14.4	2.5	11.6	14.1
Annual Total	65.0	149.3	214.3	50.5	101.9	152.4
Monthly Average	5.4	12.4	17.8	4.2	8.5	12.7
	1931			1932		
January	2.2	5.5	7.7	1.2	1.3	2.5
February	2.3	3.7	6.0	1.4	1.7	3.1
March	3.2	5.0	8.2	.8	2.1	2.9
April	5.2	7.4	12.6	1.1	2.9	4.0
May	5.5	4.9	10.4	1.2	3.9	5.1
June	4.7	3.0	7.7	1.1	3.3	4.4
July	4.1	6.2	10.3	1.0	3.2	4.2
August	3.6	3.7	7.3	.9	2.3	3.2
September	3.4	6.2	9.6	1.2	1.0	2.2
October	4.1	3.8	7.9	1.3	1.6	2.9
November	3.3	3.3	6.6	.6	1.9	2.5
December	2.1	5.4	7.5	.4	1.0	1.4
Annual Total	43.7	58.1	101.8	12.2	26.2	38.4
Monthly Average	3.7	4.8	8.5	1.0	2.2	3.2

TABLE 95

BUILDING PERMITS ISSUED, RESIDENTIAL AND OTHER CONSTRUCTION, 35 CITIES, CANADA, BY MONTH, 1921-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1933			1934		
January	.3	.8	1.1	.1	.5	.6
February	.3	.6	.9	.2	.6	.8
March	.3	.6	.9	.3	.7	1.0
April	.5	.9	1.4	.7	1.4	2.1
May	.7	1.1	1.8	1.2	1.4	2.6
June	1.1	2.3	3.4	1.0	1.2	2.2
July	.9	1.1	2.0	1.0	2.1	3.1
August	.6	1.1	1.7	1.2	2.4	3.6
September	.8	1.0	1.8	.5	1.4	1.9
October	.6	1.0	1.6	.7	1.7	2.4
November	.6	.9	1.5	.8	1.5	2.3
December	.3	1.5	1.8	.4	1.9	2.3
Annual Total	7.0	12.9	19.9	8.1	16.8	24.9
Monthly Average	.6	1.1	1.7	.7	1.4	2.1
	1935			1936		
January	.4	.4	.8	.5	.7	1.2
February	.3	3.1	3.4	.3	1.5	1.8
March	.5	3.4	3.9	1.1	1.0	2.1
April	2.6	3.3	5.9	1.1	1.6	2.7
May	1.3	3.1	4.4	1.7	2.4	4.1
June	1.1	3.4	4.5	1.9	2.2	4.1
July	1.0	3.0	4.0	1.9	2.5	4.4
August	1.7	2.2	3.9	1.4	1.8	3.2
September	1.1	1.9	3.0	1.1	2.1	3.2
October	1.2	2.5	3.7	1.4	2.4	3.8
November	1.4	1.7	3.1	1.2	1.6	2.8
December	.7	1.5	2.2	1.2	1.7	2.9
Annual Total	13.3	29.5	42.8	14.8	21.5	36.3
Monthly Average	1.1	2.5	3.6	1.2	1.8	3.0
	1937			1938		
January	.6	.8	1.4	.5	1.1	1.6
February	.8	1.2	2.0	.7	1.5	2.2
March	1.2	5.2	6.4	1.1	2.2	3.3
April	1.8	3.8	5.6	1.7	2.8	4.5
May	1.7	3.1	4.8	2.1	3.9	6.0
June	1.9	3.0	4.9	1.7	3.5	5.2
July	1.5	3.4	4.9	1.9	3.5	5.4
August	1.2	2.6	3.8	1.4	3.7	5.1
September	1.4	3.0	4.4	1.5	3.4	4.9
October	1.2	2.6	3.8	1.7	7.2	8.9
November	1.1	3.3	4.4	1.4	2.8	4.2
December	.7	2.6	3.3	1.0	2.2	3.2
Annual Total	15.1	34.6	49.7	16.7	37.8	54.5
Monthly Average	1.2	2.9	4.1	1.4	3.1	4.5

TABLE 95

BUILDING PERMITS ISSUED, RESIDENTIAL AND OTHER CONSTRUCTION, 35 CITIES, CANADA, BY MONTH, 1921-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1939			1940		
January	.6	.9	1.5	.9	1.3	2.2
February	.8	.9	1.7	1.5	1.3	2.8
March	1.1	2.1	3.2	2.1	1.8	3.9
April	1.8	3.6	5.4	3.6	2.4	6.0
May	2.8	3.0	5.8	5.8	2.9	8.7
June	2.2	4.6	6.8	3.6	3.3	6.9
July	2.3	3.5	5.8	3.6	4.1	7.7
August	2.2	3.2	5.4	3.2	3.9	7.1
September	1.3	2.1	3.4	2.5	3.1	5.6
October	1.7	3.3	5.0	3.6	3.9	7.5
November	1.7	2.0	3.7	3.0	3.8	6.8
December	1.0	4.3	5.3	2.2	3.4	5.6
Annual Total	19.5	33.5	53.0	35.6	35.2	70.8
Monthly Average	1.6	2.8	4.4	3.0	2.9	5.9
	1941			1942		
January	1.6	1.6	3.2	1.1	2.8	3.9
February	1.7	2.3	4.0	1.5	1.8	3.3
March	2.9	2.6	5.5	2.7	2.1	4.8
April	5.5	5.2	10.7	4.0	3.9	7.9
May	6.2	4.9	11.1	3.6	1.8	5.4
June	4.8	2.3	7.1	4.2	2.4	6.6
July	4.3	3.7	8.0	3.4	2.9	6.3
August	4.3	4.0	8.3	3.0	2.4	5.4
September	3.3	3.6	6.9	3.3	3.5	6.8
October	4.5	3.6	8.1	3.6	1.9	5.5
November	2.9	4.6	7.5	2.0	2.9	4.9
December	1.8	2.8	4.6	1.5	2.3	3.8
Annual Total	43.8	41.2	85.0	33.9	30.7	64.6
Monthly Average	3.7	3.4	7.1	2.8	2.6	5.4
	1943			1944		
January	.5	1.1	1.6	1.9	2.2	4.1
February	.9	.8	1.7	2.3	2.2	4.5
March	2.3	1.4	3.7	2.6	.9	3.5
April	2.6	2.2	4.8	6.6	2.3	8.9
May	3.8	2.0	5.8	7.6	2.8	10.4
June	3.4	1.6	5.0	7.2	2.2	9.4
July	4.5	2.0	6.5	5.3	3.5	8.8
August	2.8	1.7	4.5	5.4	2.4	7.8
September	3.3	1.5	4.8	4.0	2.3	6.3
October	3.0	1.1	4.1	4.6	3.2	7.8
November	3.3	1.3	4.6	3.4	2.3	5.7
December	1.9	2.6	4.5	2.5	3.7	6.2
Annual Total	32.3	19.3	51.6	53.4	30.0	83.4
Monthly Average	2.7	1.6	4.3	4.5	2.5	7.0

TABLE 95

BUILDING PERMITS ISSUED, RESIDENTIAL AND OTHER CONSTRUCTION, 35 CITIES, CANADA, BY MONTH, 1921-1949—*Continued*

(Millions of Dollars)

Month	Residential Construction	Other Construction	Total Construction	Residential Construction	Other Construction	Total Construction
	1945			1946		
January	1.3	2.6	3.9	6.1	4.8	10.9
February	2.3	2.6	4.9	4.8	5.1	9.9
March	3.6	2.8	6.4	12.2	12.2	24.4
April	6.7	4.4	11.1	17.8	15.1	32.9
May	8.3	2.4	10.7	14.4	12.9	27.3
June	8.4	4.0	12.4	10.9	7.0	17.9
July	8.1	4.3	12.4	8.4	9.5	17.9
August	5.4	5.6	11.0	11.1	7.5	18.6
September	7.2	4.0	11.2	8.6	7.1	15.7
October	7.6	4.2	11.8	10.1	11.2	21.3
November	6.1	5.5	11.6	8.1	7.3	15.4
December	4.5	5.6	10.1	5.3	10.7	16.0
Annual Total	69.5	48.0	117.5	117.8	110.4	228.2
Monthly Average	5.8	4.0	9.8	9.8	9.2	19.0
	1947			1948		
January	2.9	7.2	10.1	3.6	5.5	9.1
February	5.1	7.0	12.1	5.8	5.9	11.7
March	7.1	8.4	15.5	9.6	11.3	20.9
April	11.2	14.9	26.1	17.6	14.7	32.3
May	11.9	13.5	25.4	20.6	11.2	31.8
June	10.1	11.7	21.8	16.8	16.9	33.7
July	9.1	15.4	24.5	19.0	18.9	37.9
August	9.7	8.9	18.6	17.5	14.8	32.3
September	11.3	10.2	21.5	14.5	12.4	26.9
October	14.4	11.3	25.7	12.8	10.9	23.7
November	6.2	7.9	14.1	11.8	15.4	27.2
December	5.8	10.1	15.9	11.1	16.6	27.7
Annual Total	104.8	126.5	231.3	160.7	154.5	315.2
Monthly Average	8.7	10.4	19.3	13.4	12.9	26.3
	1949					
January	4.7	14.1	18.8			
February	6.0	9.0	15.0			
March	15.8	13.5	29.3			
April	21.4	18.9	40.3			
May	23.5	16.3	39.8			
June	18.3	15.7	34.0			
July	17.4	14.0	31.4			
August	17.0	14.8	31.8			
September	21.6	13.6	35.2			
October	14.8	15.5	30.3			
November	12.6	16.3	28.9			
December	13.7	19.3	33.0			
Annual Total	187.0	181.0	368.0			
Monthly Average	15.6	15.1	30.7			

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949

(1926=100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1921				1922			
January	55.6	112.0	78.5	63.1	40.6	133.1	71.3	56.7
February	56.9	108.1	75.2	61.4	37.1	56.3	65.8	49.0
March	47.4	82.9	68.4	54.7	37.1	25.3	68.7	51.3
April	48.8	73.0	65.7	53.2	37.7	28.4	64.8	49.9
May	54.9	29.1	69.4	56.9	54.0	44.8	80.7	62.0
June	50.1	65.3	88.3	68.7	64.0	94.2	102.2	79.4
July	57.6	86.9	100.6	77.7	70.7	219.1	114.3	96.6
August	70.0	163.8	109.4	88.7	75.7	223.7	123.3	103.9
September	68.2	147.5	108.1	86.9	77.3	210.6	117.4	100.8
October	64.4	153.8	112.6	87.4	80.2	275.3	108.4	102.0
November	64.9	153.9	110.6	85.5	80.2	192.7	105.0	94.0
December	53.3	179.4	82.8	69.4	65.8	150.4	85.0	75.2
Monthly Average	57.7	113.1	89.1	71.1	60.0	137.8	92.2	76.7
	1923				1924			
January	51.2	91.1	71.3	58.9	62.3	49.1	66.2	60.6
February	41.7	59.2	71.6	52.8	56.3	26.4	70.6	58.1
March	39.9	39.8	72.1	51.4	50.4	27.3	73.0	57.0
April	42.4	42.4	71.3	52.3	53.4	33.9	67.0	56.1
May	48.7	46.3	86.6	62.3	59.9	35.5	86.6	68.2
June	62.8	127.2	115.4	86.0	74.4	61.0	113.2	90.4
July	79.8	179.9	128.6	103.5	81.7	114.6	125.9	108.0
August	89.6	230.7	135.1	112.7	86.0	126.6	113.9	106.2
September	92.1	238.4	128.6	110.8	88.2	126.5	103.9	101.4
October	90.4	162.5	110.6	105.4	84.7	118.9	99.2	96.6
November	88.7	145.5	100.2	97.7	82.1	108.5	89.1	88.9
December	79.8	80.0	77.7	76.7	74.7	64.0	72.4	71.5
Monthly Average	66.4	120.3	97.4	80.9	71.2	74.5	90.1	80.3

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1925				1926			
January	57.1	45.6	61.7	57.2	68.3	46.0	66.0	63.4
February	55.8	53.8	67.9	60.3	69.5	30.5	65.4	61.0
March	57.4	46.7	65.1	58.8	67.8	25.4	78.2	65.6
April	62.4	48.7	63.1	59.4	81.7	26.7	75.8	69.8
May	70.1	59.1	90.0	77.1	90.6	60.8	85.9	82.6
June	76.8	100.6	109.8	95.6	104.3	95.4	128.3	114.5
July	84.7	186.8	117.5	115.0	115.0	156.0	138.5	133.0
August	90.5	154.9	111.5	110.6	121.4	193.5	129.8	137.1
September	92.1	164.1	102.4	107.7	124.8	188.1	121.2	133.5
October	93.0	143.3	101.1	104.1	122.4	169.5	115.6	126.9
November	88.0	124.7	91.2	94.6	111.7	131.0	103.9	111.2
December	81.5	84.8	75.8	78.7	104.4	83.2	83.8	91.3
Monthly Average	75.8	101.1	88.1	84.9	98.5	100.5	99.4	99.2
	1927				1928			
January	86.7	40.0	73.5	73.1	82.8	63.1	79.0	78.6
February	82.9	30.3	68.9	67.6	84.6	54.0	74.9	75.6
March	87.3	27.4	76.2	72.3	79.3	49.9	75.1	73.3
April	88.7	35.7	73.0	72.5	87.1	43.2	82.8	78.6
May	102.9	68.5	99.7	95.0	102.6	83.8	109.7	103.7
June	112.4	125.0	126.8	121.3	118.3	142.5	144.1	136.8
July	120.8	221.1	137.7	144.2	120.5	222.3	159.8	154.3
August	129.6	242.4	132.4	150.2	131.9	251.9	168.8	167.7
September	134.7	238.8	129.1	150.4	137.7	243.7	145.6	158.7
October	133.7	215.4	115.7	139.8	138.2	212.7	130.5	147.3
November	117.7	193.4	101.2	122.1	136.0	166.2	127.7	137.4
December	107.4	113.9	85.5	99.5	125.0	111.8	102.5	113.2
Monthly Average	108.7	129.3	101.6	109.0	112.0	137.4	116.7	118.8

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1929				1930			
January	96.6	70.4	85.0	87.4	121.4	59.0	79.3	92.7
February	93.0	43.0	79.9	79.3	114.9	55.9	75.5	88.0
March	94.3	40.7	81.4	80.0	109.2	52.0	72.7	83.7
April	102.5	38.2	87.3	85.4	110.5	57.8	75.1	86.4
May	114.3	77.9	123.2	112.0	127.6	101.2	101.5	112.0
June	134.7	144.3	154.2	144.6	140.8	177.2	114.8	137.0
July	148.8	213.3	160.4	164.5	150.9	319.7	120.6	170.1
August	170.2	298.2	153.8	186.8	154.9	362.9	120.0	179.8
September	174.8	293.5	137.7	181.3	155.4	299.9	122.3	169.2
October	169.7	240.7	119.7	162.4	156.9	277.7	115.9	163.0
November	173.1	214.8	106.0	153.6	145.3	242.3	109.2	148.8
December	150.8	125.7	84.3	119.0	123.3	197.9	91.5	127.3
Monthly Average	135.3	150.1	114.4	129.7	134.3	183.6	99.9	129.8
	1931				1932			
January	96.0	172.4	75.1	110.7	64.3	197.1	63.7	104.8
February	91.0	149.8	80.9	104.5	59.1	160.0	60.2	90.4
March	90.3	138.1	81.0	101.1	55.0	138.6	62.5	83.3
April	94.1	123.9	76.3	96.8	51.7	134.9	59.4	79.9
May	106.7	135.4	82.0	106.6	58.5	130.7	65.8	83.2
June	113.8	159.7	97.7	121.8	62.9	147.7	74.0	92.9
July	117.3	201.8	101.9	137.1	59.1	149.7	77.3	93.3
August	119.4	285.2	101.8	162.8	57.1	146.9	72.3	90.0
September	117.5	337.0	98.3	176.8	52.8	133.4	73.3	84.4
October	112.2	314.8	87.7	164.5	49.1	137.3	73.4	84.3
November	106.4	334.0	77.7	165.4	42.4	134.9	63.6	77.9
December	86.8	244.2	68.7	128.8	37.4	115.4	56.3	67.6
Monthly Average	104.3	216.4	85.8	131.4	54.1	143.9	66.8	86.0

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1933				1934			
January	29.7	97.1	53.7	58.5	33.9	179.1	59.4	88.1
February	28.7	92.8	51.0	56.2	34.7	201.1	67.6	98.0
March	25.3	97.0	51.8	56.5	36.8	202.1	72.3	100.8
April	25.2	88.5	54.2	54.7	38.6	201.9	56.2	95.8
May	28.4	97.4	60.5	60.8	42.5	192.6	59.8	95.8
June	33.8	106.7	66.3	67.8	47.8	242.8	69.5	116.7
July	39.0	129.2	71.1	78.2	52.2	310.0	73.0	140.6
August	43.1	156.5	71.7	88.4	56.6	266.2	75.1	129.0
September	45.9	155.6	69.7	88.4	56.3	224.7	81.9	118.1
October	45.2	185.5	68.2	97.0	58.1	222.3	79.0	117.0
November	45.0	184.9	62.1	94.6	60.6	214.0	66.7	111.0
December	42.5	194.6	55.4	94.6	55.2	198.9	54.7	100.3
Monthly Average	38.5	137.2	61.3	74.6	47.8	221.3	67.9	109.3
	1935				1936			
January	45.4	165.4	59.3	87.9	56.0	119.4	52.4	74.8
February	43.3	161.4	62.6	87.2	53.6	109.0	63.4	74.4
March	43.3	183.4	63.0	94.2	52.1	112.6	72.9	78.2
April	45.2	143.4	56.9	80.2	52.2	111.9	54.8	71.8
May	47.2	154.5	58.0	84.7	55.6	124.0	62.1	79.4
June	54.0	146.1	72.9	89.5	52.0	129.8	82.7	87.0
July	57.3	170.2	81.5	101.1	51.3	147.7	97.5	97.4
August	60.6	179.0	80.6	104.7	57.4	152.1	103.6	102.9
September	63.2	191.8	84.5	110.9	60.1	161.9	109.6	109.0
October	67.2	213.3	79.3	117.4	61.4	159.5	95.0	103.9
November	70.4	226.3	71.5	119.9	61.0	165.1	77.9	99.6
December	67.3	171.5	55.3	95.9	51.5	133.5	59.4	80.1
Monthly Average	55.4	175.5	68.8	97.8	55.4	135.5	77.6	88.2

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1937				1938			
January	39.6	93.4	53.2	61.2	56.9	131.3	60.7	81.9
February	33.8	83.4	56.5	57.2	49.1	106.7	61.5	71.6
March	32.7	67.9	59.3	52.8	44.9	108.8	63.2	71.4
April	36.3	69.3	56.8	53.7	43.9	116.6	57.5	71.6
May	45.2	106.3	65.2	71.4	46.8	160.9	61.9	88.2
June	58.7	180.3	81.7	105.2	54.5	232.2	72.9	114.5
July	69.6	232.7	89.9	128.5	60.9	250.7	71.6	124.9
August	76.9	266.2	84.5	139.8	64.6	261.4	66.7	128.0
September	81.6	278.1	82.4	144.5	71.7	262.1	76.1	133.8
October	86.3	280.3	74.8	144.3	77.8	289.3	73.1	143.5
November	85.3	250.8	66.2	131.7	80.4	238.2	56.3	122.5
December	75.4	182.5	59.4	104.2	69.5	227.5	48.9	112.8
Monthly Average	60.1	174.3	69.2	99.5	60.1	198.1	64.2	105.4
	1939				1940			
January	53.5	192.0	50.3	96.4	55.7	101.8	51.1	68.8
February	44.2	172.9	57.2	89.4	48.4	72.0	55.0	58.1
March	43.3	177.3	68.9	94.3	44.4	67.3	55.9	55.4
April	43.4	182.7	55.5	91.6	45.9	78.3	56.3	59.6
May	46.2	182.9	60.3	94.2	54.0	91.7	61.4	68.4
June	53.8	227.6	73.1	115.3	68.4	126.1	79.9	90.5
July	62.5	270.7	76.2	133.1	79.9	152.7	86.2	105.0
August	76.1	297.1	76.4	146.3	97.8	162.5	85.7	114.3
September	80.5	309.7	77.5	152.2	116.5	166.8	82.0	121.1
October	82.0	245.3	75.3	131.5	127.2	156.3	80.5	121.1
November	85.1	209.1	64.5	117.6	137.8	157.6	66.0	120.5
December	75.2	158.1	52.1	93.8	125.9	132.2	59.0	105.9
Monthly Average	62.1	218.8	65.6	113.0	83.5	122.1	68.3	90.7

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1941				1942			
January	108.9	84.4	53.7	83.0	146.8	157.9	72.0	124.7
February	108.3	77.6	59.4	82.5	145.2	131.9	78.3	118.1
March	104.7	79.4	62.9	83.0	133.6	92.5	83.8	103.7
April	122.2	105.6	73.1	100.2	131.3	89.0	72.6	98.0
May	127.2	142.8	91.8	120.0	132.4	114.3	81.6	109.3
June	141.1	180.3	100.9	139.5	138.9	135.3	96.7	123.3
July	148.1	200.0	105.7	149.9	148.0	165.6	101.6	137.7
August	155.9	224.9	106.9	160.7	164.8	172.3	104.9	146.8
September	158.2	203.4	104.3	153.9	167.5	172.9	101.0	146.5
October	164.6	208.7	97.5	155.4	179.7	174.1	96.4	149.6
November	167.8	198.4	81.2	147.7	201.4	172.1	91.8	154.9
December	167.3	192.8	74.1	143.4	205.6	161.6	86.9	151.3
Monthly Average	139.5	158.2	84.3	126.6	157.9	145.0	89.0	130.3
	1943				1944			
January	190.9	117.5	85.9	132.1	113.8	119.3	85.2	105.8
February	180.3	98.1	95.8	125.7	100.0	87.2	85.0	90.9
March	174.1	92.9	97.9	122.6	90.4	81.4	83.7	85.3
April	171.3	96.3	86.2	118.8	83.0	79.7	82.5	81.8
May	159.4	101.7	84.3	115.7	83.9	99.8	78.9	87.2
June	157.0	131.3	90.7	126.3	86.2	132.1	88.1	101.3
July	159.5	149.9	92.3	133.6	90.7	151.3	93.9	110.8
August	159.5	179.8	96.2	144.3	94.3	185.6	98.9	124.5
September	153.5	166.1	97.4	138.3	99.6	199.2	100.4	130.8
October	145.9	169.1	98.4	136.9	100.0	149.0	97.2	114.2
November	140.8	173.3	94.9	135.3	102.8	144.0	94.6	112.7
December	130.9	165.4	91.6	128.3	98.8	141.1	91.8	109.5
Monthly Average	160.3	136.8	92.6	129.8	95.3	130.8	90.0	104.6

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*

(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction	Building Construction	Highway Construction	Railway Construction	Total Construction
	1945				1946			
January	87.2	115.8	93.3	98.2	120.9	113.6	88.8	107.7
February	83.3	89.9	96.5	89.9	121.4	99.1	85.9	102.4
March	81.5	84.2	101.4	89.2	118.3	95.6	89.1	101.3
April	82.9	87.8	90.3	87.0	123.1	106.8	87.5	106.0
May	85.5	131.6	82.6	98.8	130.9	138.1	77.8	115.2
June	90.7	131.8	89.6	103.1	142.9	167.0	85.7	131.1
July	98.5	146.6	96.0	112.6	154.5	180.6	92.3	141.7
August	103.0	156.9	101.7	119.3	162.3	190.0	94.4	148.1
September	115.2	158.3	101.7	123.9	165.6	199.0	94.9	152.3
October	122.1	155.8	99.2	124.7	165.6	201.8	91.7	152.2
November	134.4	162.4	98.3	130.7	171.8	194.4	91.1	151.9
December	137.3	167.4	94.6	132.0	171.3	181.4	85.7	145.8
Monthly Average	101.8	132.4	95.4	109.1	145.7	155.6	88.7	129.6
	1947				1948			
January	157.2	136.3	80.8	125.1	191.7	150.5	81.6	142.5
February	158.1	115.9	87.0	121.2	182.5	137.9	88.7	137.6
March	161.0	112.0	95.4	123.8	176.9	120.7	84.7	129.0
April	167.1	124.9	91.3	128.6	180.5	124.8	82.2	130.8
May	174.1	149.6	74.4	133.2	189.9	167.9	80.6	147.0
June	186.2	179.1	83.0	149.6	208.0	197.1	92.6	166.6
July	198.3	209.1	88.4	165.0	223.7	232.4	99.6	185.5
August	210.0	224.0	94.9	176.2	232.8	289.6	103.7	207.8
September	216.9	228.6	94.2	179.9	238.4	261.7	104.4	201.5
October	220.6	228.3	91.8	180.4	240.4	247.0	102.9	197.3
November	223.8	230.6	89.0	181.3	245.5	232.3	96.3	192.7
December	213.9	211.6	85.0	170.5	240.6	220.9	87.3	184.6
Monthly Average	190.6	179.2	87.9	152.9	212.6	198.6	92.5	168.6

TABLE 96

INDICES OF EMPLOYMENT IN BUILDING, HIGHWAY AND RAILWAY CONSTRUCTION, CANADA, BY MONTH, 1921-1949—*Continued*
(1926 = 100)

Month	Building Construction	Highway Construction	Railway Construction	Total Construction
	1949			
January	212.0	158.9	82.3	153.6
February	204.5	131.8	83.4	142.9
March	197.8	124.3	84.8	138.7
April	202.0	127.5	87.2	142.0
May	212.4	171.8	82.9	158.0
June	226.0	196.7	92.7	173.8
July	247.7	206.8	99.0	187.0
August	256.4	225.6	103.8	197.5
September	265.6	241.4	103.1	205.6
October	266.4	238.6	95.7	202.6
November	265.8	226.6	92.3	197.7
December	257.1	218.4	89.6	191.0
Monthly Average	234.5	189.0	91.4	174.2

TABLE 97

PERCENTAGES OF UNEMPLOYMENT IN THE BUILDING AND CONSTRUCTION TRADE UNIONS, CANADA, BY MONTH, 1921-1949

Month	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	30.8	32.8	24.6	26.3	27.5	26.6	22.6	23.2	19.0	30.6
February	31.4	29.8	24.1	28.7	26.1	26.6	24.3	23.2	19.8	34.0
March	25.7	23.4	20.6	26.4	22.5	20.9	18.7	19.1	17.9	30.5
April	20.0	15.5	7.7	19.1	18.4	12.5	11.9	13.6	11.3	23.2
May	15.8	8.3	4.3	15.5	7.0	7.4	9.3	8.2	8.2	23.3
June	13.4	5.2	3.1	10.6	8.4	4.4	8.0	3.9	7.5	26.2
July	18.7	4.0	4.0	12.1	7.4	3.6	6.9	3.3	7.0	28.3
August	18.2	3.8	5.5	11.8	6.1	4.7	8.5	3.5	7.2	28.8
September	11.7	2.7	4.3	11.9	10.5	5.5	8.3	2.9	8.6	27.9
October	12.7	6.0	6.5	13.1	11.4	7.8	10.0	5.1	10.4	31.5
November	17.8	10.4	13.0	14.2	12.4	12.7	13.3	9.3	16.3	37.7
December	25.9	18.6	21.7	24.9	21.0	19.3	19.1	15.5	25.6	44.5
Monthly Average	20.2	13.4	11.6	17.9	14.9	12.7	13.4	10.9	13.2	30.5
Quarterly Average	19.2	12.5	12.4	18.5	15.6	12.5	13.5	10.4	14.9	32.3
Month	**1931**	**1932**	**1933**	**1934**	**1935**	**1936**	**1937**	**1938**	**1939**	**1940**
January	46.2	63.8	69.4	69.2	61.6	41.5	43.7	37.0	43.8	35.6
February	47.1	65.3	71.7	69.2	65.1	40.3	43.0	42.5	44.6	38.2
March	45.7	62.3	71.0	69.6	59.2	44.3	39.1	40.8	40.2	36.5
April	40.5	62.7	66.7	61.3	61.1	44.8	30.8	33.7	40.0	30.2
May	37.7	57.2	65.6	63.7	45.5	40.5	26.4	30.9	30.4	19.9
June	38.6	60.8	62.5	57.8	44.5	40.5	24.6	31.2	24.7	13.5
July	39.9	58.6	61.9	57.0	46.3	37.4	22.4	29.2	24.7	11.9
August	41.5	61.2	63.6	57.3	44.1	29.9	15.6	30.3	28.1	11.1
September	47.5	61.5	65.8	53.9	41.5	32.3	19.2	26.7	21.3	7.1
October	49.7	59.6	65.4	55.1	42.8	32.6	21.4	31.8	20.5	9.9
November	51.9	63.5	67.6	61.6	42.5	34.1	28.3	36.6	25.0	11.6
December	58.1	69.2	69.1	58.6	45.1	40.0	34.5	41.2	30.3	15.6
Monthly Average	45.4	62.1	66.7	61.2	49.9	38.2	29.1	34.3	31.1	20.1
Quarterly Average	47.5	63.5	67.1	60.0	47.6	39.3	29.4	35.0	29.1	18.2

TABLE 97

PERCENTAGES OF UNEMPLOYMENT IN THE BUILDING AND CONSTRUCTION TRADE UNIONS, CANADA, BY MONTH, 1921-1949—*Continued*

Month	1941	1942	1943	1944	1945	1946	1947	1948	1949
January	17.4	14.2	6.2						
February	19.5	15.5	8.4						
March	19.9	16.3	9.0	6.5	1.9	3.1	5.0	8.1	11.4
April	15.2	12.5	5.1						
May	10.0	8.4	2.6						
June	7.9	5.8	2.8	.9	.3	.8	.4	1.5	4.3
July	7.3	4.2	1.4						
August	6.9	3.3	1.3						
September	7.1	3.2	1.0	.7	1.5	.8	.8	1.5	4.6
October	7.7	2.2	1.2						
November	8.6	3.2	2.2						
December	10.6	5.1	3.1	2.8	3.5	2.6	6.5	7.9	15.0
Monthly Average	11.5	7.8	3.7	—[1]	—[1]	—[1]	—[1]	—[1]	—[1]
Quarterly Average	11.4	7.6	4.0	2.7	1.8	1.8	3.2	4.8	8.8

[1]Not available.

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1921							
January	61,447	177,997	20,029	17,331	9,110	5,808	291,722
February	93,005	246,063	16,682	22,755	10,521	4,455	393,481
March	90,038	267,664	38,782	34,346	22,622	4,559	458,011
April	166,303	278,453	65,004	42,301	26,396	7,601	586,058
May	355,920	282,998	95,361	54,338	28,911	9,556	827,084
June	403,616	319,768	117,700	58,887	29,625	11,357	940,953
July	443,394	288,840	90,485	57,076	22,401	9,969	912,165
August	516,153	309,290	99,109	56,758	35,845	12,062	1,029,217
September	514,485	316,993	93,377	47,831	29,775	9,697	1,012,158
October	428,159	319,997	83,448	55,307	23,447	12,381	922,739
November	256,882	275,588	38,961	50,830	21,136	5,591	648,988
December	103,500	223,086	13,516	27,427	15,630	4,489	387,648
Annual Total	3,432,902	3,306,737	772,454	525,187	275,419	97,525	8,410,224
Monthly Average	286,075	275,561	64,371	43,766	22,952	8,127	700,852
1922							
January	52,197	209,133	10,168	20,717	12,307	3,535	308,057
February	57,474	252,149	11,971	27,185	16,835	3,733	369,347
March	78,809	363,794	37,071	50,143	25,962	4,758	560,537
April	143,726	334,001	63,900	68,026	29,977	6,529	646,159
May	355,770	438,240	104,279	93,928	34,184	11,568	1,037,969
June	475,446	452,475	138,869	94,809	32,572	13,012	1,207,183
July	509,778	479,453	127,751	101,008	30,581	13,206	1,261,777
August	579,243	469,819	138,360	98,102	41,411	12,999	1,339,934
September	520,667	411,513	113,528	99,330	35,629	12,146	1,192,813
October	517,007	428,209	106,576	79,517	34,746	11,514	1,177,569
November	359,252	433,117	52,410	73,344	25,130	8,632	951,885
December	121,913	401,652	21,071	37,834	17,735	4,688	604,893
Annual Total	3,771,282	4,673,555	925,954	843,943	337,069	106,320	10,658,123
Monthly Average	314,274	389,463	77,163	70,329	28,089	8,860	888,177

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1923							
January	59,024	349,507	15,095	26,365	18,076	2,636	470,703
February	47,679	348,521	12,972	23,873	17,296	2,831	453,172
March	74,850	461,775	39,484	48,736	26,235	4,352	655,432
April	117,777	578,648	61,296	54,759	35,678	6,030	854,188
May	371,044	594,094	94,774	117,866	45,205	10,734	1,233,717
June	581,321	775,528	161,673	98,186	51,933	9,550	1,678,191
July	569,033	664,761	204,979	99,603	40,891	8,881	1,588,148
August	642,131	625,006	156,602	101,713	39,864	8,940	1,574,256
September	568,094	556,590	140,819	90,857	38,528	6,367	1,401,255
October	591,443	584,978	115,518	91,372	38,451	10,352	1,432,114
November	383,761	557,219	61,603	73,098	46,154	7,009	1,128,844
December	197,861	475,050	37,133	60,375	26,638	4,628	801,685
Annual Total	4,204,018	6,571,677	1,101,948	886,803	424,949	82,310	13,271,705
Monthly Average	350,335	548,473	91,829	73,900	35,412	6,859	1,105,975
1924							
January	89,177	332,288	21,093	26,312	19,083	4,316	492,269
February	50,780	405,545	22,829	23,537	20,242	4,413	527,346
March	80,930	504,467	43,515	37,946	25,328	3,902	696,088
April	165,960	457,449	61,361	50,849	32,452	6,397	774,468
May	371,575	438,893	97,007	71,203	33,199	8,885	1,020,762
June	522,956	435,007	126,991	74,284	28,051	11,160	1,198,449
July	573,923	431,613	139,128	77,625	29,769	12,434	1,264,492
August	530,223	442,234	153,841	75,492	34,812	12,666	1,249,268
September	542,889	438,905	145,750	72,989	32,463	11,967	1,244,963
October	598,286	488,511	136,734	73,934	29,039	11,032	1,337,536
November	348,345	417,563	67,650	57,574	25,921	8,113	925,166
December	126,777	367,369	23,914	33,839	19,255	4,427	575,581
Annual Total	4,001,821	5,159,844	1,039,813	675,584	329,614	99,712	11,306,388
Monthly Average	333,485	429,987	86,651	56,299	27,468	8,309	942,199

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1925							
January	63,743	366,276	20,476	23,296	17,992	4,415	496,198
February	64,251	399,819	23,536	27,962	19,832	2,958	538,358
March	105,799	472,942	40,986	41,034	26,543	4,626	691,930
April	238,239	449,838	78,896	67,472	36,485	6,358	877,288
May	400,301	489,631	104,180	78,930	38,530	10,196	1,121,768
June	559,925	526,891	141,886	84,630	43,825	10,363	1,367,520
July	619,585	494,001	147,570	81,037	40,595	9,342	1,392,130
August	599,962	498,250	143,138	78,848	40,671	9,295	1,370,164
September	565,002	486,156	142,838	70,024	38,372	11,676	1,314,068
October	547,521	514,623	129,791	66,552	41,576	9,709	1,309,772
November	382,179	435,748	72,830	59,911	32,410	6,024	989,102
December	191,718	418,927	28,772	40,135	31,451	3,631	714,634
Annual Total	4,338,225	5,553,102	1,074,899	719,831	408,282	88,593	12,182,932
Monthly Average	361,519	462,759	89,575	59,986	34,024	7,383	1,105,244
1926							
January	119,094	393,416	20,327	26,682	17,420	1,795	578,734
February	109,063	428,941	24,381	26,458	17,955	2,785	609,583
March	149,067	540,136	44,171	39,351	27,111	3,671	803,507
April	236,820	478,593	60,364	50,574	33,370	4,896	864,617
May	565,610	478,778	114,721	77,578	37,056	10,022	1,283,765
June	734,088	518,065	152,939	92,482	37,292	12,208	1,547,074
July	821,575	538,998	167,758	95,460	41,575	13,183	1,678,549
August	765,182	481,939	169,188	87,024	36,964	9,889	1,550,186
September	717,719	477,647	139,388	86,599	32,814	11,165	1,465,332
October	697,772	495,638	123,021	89,342	36,414	9,573	1,451,760
November	463,885	447,693	65,279	70,972	30,852	5,597	1,084,278
December	207,536	361,131	32,894	47,053	23,262	3,581	675,457
Annual Total	5,587,411	5,640,975	1,114,431	789,575	372,085	88,365	13,592,842
Monthly Average	465,618	470,081	92,869	65,798	31,007	7,364	1,132,737

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1927							
January	133,516	362,199	27,723	35,579	19,055	2,298	580,370
February	134,239	397,808	32,320	32,009	20,621	2,248	619,245
March	183,345	518,150	48,840	49,430	28,829	3,246	831,840
April	379,655	465,890	94,524	57,825	33,705	6,484	1,038,083
May	568,290	491,493	131,900	67,861	36,918	8,262	1,304,724
June	911,751	516,356	184,677	77,641	44,774	10,638	1,745,837
July	849,521	505,770	167,839	80,556	36,253	11,455	1,651,394
August	947,323	492,539	180,226	93,674	43,324	11,470	1,768,556
September	785,351	446,400	160,890	88,721	48,905	9,419	1,539,686
October	749,283	446,012	141,417	80,180	34,404	9,745	1,461,041
November	523,045	370,841	74,993	62,387	26,996	6,385	1,064,647
December	214,302	325,855	40,315	47,751	22,844	3,429	654,496
Annual Total	6,379,621	5,339,313	1,285,664	773,614	396,628	85,079	14,259,919
Monthly Average	531,635	444,943	107,139	64,468	33,052	7,090	1,188,327
1928							
January	147,375	304,347	28,360	37,305	20,106	2,525	540,018
February	174,891	416,854	36,858	34,060	24,041	2,852	689,556
March	229,452	486,903	60,178	43,356	32,709	3,491	856,089
April	349,785	407,650	87,197	52,220	37,414	6,324	940,590
May	618,664	442,089	147,648	75,760	39,741	13,216	1,337,118
June	876,032	512,357	197,546	95,879	41,880	16,128	1,739,822
July	965,371	535,281	207,410	83,301	44,730	15,382	1,851,475
August	995,085	527,946	198,577	88,431	45,100	13,378	1,868,517
September	858,259	456,292	167,751	73,361	40,350	12,486	1,608,499
October	964,274	463,115	159,650	81,855	45,614	10,596	1,725,104
November	664,924	400,507	96,972	71,963	30,500	8,039	1,272,905
December	380,447	354,504	53,100	43,010	29,318	4,284	864,663
Annual Total	7,224,559	5,307,845	1,441,247	780,501	431,503	108,701	15,294,356
Monthly Average	602,047	442,320	120,104	65,042	35,959	9,058	1,274,528

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1929							
January	234,203	310,114	42,346	34,010	24,329	2,579	647,581
February	247,372	386,372	44,225	33,714	25,287	2,377	739,347
March	294,713	466,274	60,095	46,806	30,315	4,119	902,322
April	449,846	469,828	105,659	60,085	37,357	9,044	1,131,819
May	722,590	472,092	144,147	78,270	46,602	10,835	1,474,536
June	987,473	520,128	207,182	89,303	48,823	12,545	1,865,454
July	1,133,730	543,594	228,076	91,576	47,237	13,334	2,057,547
August	1,211,436	478,577	228,293	82,006	46,311	14,873	2,061,496
September	1,062,399	410,547	204,005	70,173	39,086	13,537	1,799,747
October	1,043,578	454,774	198,531	87,760	41,241	13,064	1,938,948
November	718,643	386,524	109,823	56,030	35,037	6,665	1,312,722
December	271,452	277,630	37,126	31,118	23,564	3,957	644,847
Annual Total	8,377,435	5,176,454	1,609,508	760,851	445,189	106,929	16,476,366
Monthly Average	698,120	431,371	134,126	63,404	37,099	8,911	1,373,031
1930							
January	184,957	284,381	31,038	21,972	22,336	2,745	547,429
February	200,342	332,773	37,005	23,500	26,360	3,862	623,842
March	202,102	378,928	53,631	31,424	27,955	4,033	698,073
April	356,661	358,387	99,223	39,517	32,103	5,492	891,383
May	717,528	369,842	154,421	49,583	34,321	8,342	1,334,037
June	899,800	354,850	165,759	42,681	40,359	8,826	1,512,275
July	1,025,793	353,916	182,633	49,602	30,115	8,148	1,650,207
August	1,048,198	316,984	172,396	49,377	28,375	7,583	1,622,913
September	984,694	306,532	171,191	43,554	27,425	6,363	1,539,759
October	811,014	287,373	132,224	41,542	28,470	7,924	1,308,547
November	528,647	225,345	76,583	26,078	24,121	8,491	889,265
December	272,298	192,280	39,293	18,366	18,913	7,993	549,143
Annual Total	7,232,034	3,761,591	1,315,397	437,196	340,853	79,802	13,166,873
Monthly Average	602,670	313,466	109,616	36,433	28,404	6,650	1,097,239

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1931							
January	215,942	201,784	35,573	15,582	18,968	6,394	494,243
February	190,073	246,024	42,107	13,151	18,992	5,150	515,497
March	224,508	272,616	72,473	16,426	23,794	6,099	615,916
April	309,480	264,560	95,568	23,720	29,099	5,688	728,115
May	536,836	287,127	126,160	28,212	27,674	6,297	1,012,306
June	602,937	257,314	149,037	27,245	26,697	6,406	1,069,636
July	680,878	218,958	129,066	30,627	26,943	4,598	1,091,070
August	645,548	219,215	124,744	26,348	22,591	4,546	1,042,992
September	599,296	189,134	127,331	22,828	22,083	5,301	965,973
October	480,293	215,006	132,792	23,759	20,865	6,366	879,081
November	357,334	197,298	90,661	14,654	18,744	5,836	684,527
December	148,281	162,638	44,278	14,340	13,819	7,265	390,621
Annual Total	4,991,406	2,731,674	1,169,790	256,892	270,269	69,946	9,489,977
Monthly Average	415,951	227,640	97,483	21,408	22,522	5,829	790,831
1932							
January	69,632	150,791	35,783	8,532	13,907	4,644	283,289
February	73,921	155,516	27,117	7,870	14,726	3,478	282,628
March	96,740	186,279	31,244	7,595	19,214	4,026	345,098
April	174,647	181,851	50,260	9,655	18,208	3,796	438,417
May	252,232	187,905	60,179	11,181	18,267	2,485	532,249
June	292,715	199,350	60,099	11,889	16,260	2,254	582,567
July	238,309	135,208	57,693	11,739	16,888	1,936	461,773
August	292,224	125,939	57,194	9,393	15,639	3,277	503,666
September	275,154	128,157	53,426	12,466	14,281	1,695	485,179
October	209,773	136,599	40,414	8,603	15,421	1,922	412,732
November	123,657	120,448	12,618	4,631	12,566	1,143	275,063
December	29,174	87,468	6,624	4,695	8,164	571	136,696
Annual Total	2,128,178	1,795,511	492,651	108,249	183,541	31,227	4,739,357
Monthly Average	177,348	149,626	41,054	9,021	15,295	2,606	394,946

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1933							
January	21,183	75,607	4,669	3,584	9,257	714	115,014
February	16,515	92,869	3,061	1,792	8,907	488	123,632
March	18,885	111,881	8,174	2,628	9,173	899	151,640
April	33,978	130,328	22,067	4,749	14,908	747	206,777
May	87,048	194,877	32,789	6,617	17,060	2,120	340,511
June	148,325	230,522	44,328	7,040	16,343	2,941	449,499
July	115,863	251,429	49,024	8,089	18,769	1,619	444,793
August	155,843	221,777	54,864	7,078	19,720	1,212	460,494
September	159,689	194,104	50,479	7,896	17,076	1,146	430,390
October	195,664	195,203	42,079	8,059	15,945	1,465	458,415
November	120,531	183,942	19,074	5,511	14,895	1,646	345,599
December	33,168	143,075	10,498	2,785	11,617	475	201,618
Annual Total	1,106,692	2,025,614	341,106	65,828	173,670	15,472	3,728,382
Monthly Average	92,224	168,801	28,426	5,486	14,473	1,289	310,699
1934							
January	33,562	153,315	7,313	5,527	10,929	673	211,319
February	23,796	171,383	6,221	4,483	11,086	625	217,594
March	28,883	230,532	12,323	7,075	15,690	410	294,913
April	39,619	198,370	24,103	7,488	16,765	1,875	288,220
May	109,159	245,711	44,610	10,611	20,180	2,035	432,306
June	224,722	266,270	68,435	10,244	18,378	2,495	590,544
July	265,796	225,988	73,840	10,549	15,605	1,687	593,465
August	292,942	222,830	71,784	10,578	16,709	1,470	616,313
September	236,033	194,180	60,848	12,429	14,289	1,332	519,111
October	286,008	227,807	63,209	16,132	16,458	1,833	611,447
November	152,413	199,713	24,931	9,630	14,975	1,522	403,184
December	46,004	153,198	7,984	5,744	11,347	956	225,233
Annual Total	1,738,937	2,489,297	465,601	110,490	182,411	16,913	5,003,649
Monthly Average	144,911	207,441	38,800	9,208	15,201	1,409	416,971

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1935							
January	18,525	121,260	5,916	3,689	11,347	326	161,063
February	23,427	165,483	6,830	3,336	11,744	436	211,256
March	23,957	204,305	14,792	4,612	14,347	675	262,688
April	41,313	210,628	28,936	7,231	18,832	808	307,748
May	133,873	224,488	46,095	10,003	18,510	2,626	435,595
June	191,999	259,509	55,675	13,154	18,044	3,241	541,622
July	204,900	270,889	53,683	13,605	18,826	2,585	564,488
August	230,587	251,046	53,383	16,929	17,829	2,720	572,494
September	264,586	231,313	58,627	15,667	16,665	3,068	589,926
October	325,573	246,349	58,953	13,258	17,090	4,520	665,743
November	131,897	210,156	25,336	11,060	14,784	1,620	394,853
December	61,856	180,666	10,756	5,968	14,072	464	273,782
Annual Total	1,652,493	2,576,092	418,982	118,512	192,090	23,089	4,981,258
Monthly Average	137,708	214,674	34,915	9,876	16,008	1,924	415,105
1936							
January	26,705	146,793	10,204	3,647	15,030	171	202,550
February	20,536	165,277	9,797	2,856	13,877	202	212,545
March	47,295	195,786	15,578	8,008	16,020	759	283,446
April	71,483	212,557	32,877	8,541	19,345	1,678	346,481
May	132,026	240,083	49,456	13,879	21,035	2,112	458,591
June	195,046	261,047	65,587	18,301	20,141	3,246	563,368
July	303,158	277,858	64,476	15,962	20,705	4,968	687,127
August	345,814	248,578	70,620	17,598	19,891	3,589	706,090
September	389,022	257,588	83,919	16,539	20,413	2,716	770,197
October	374,265	278,826	70,133	13,640	19,180	2,649	758,693
November	196,479	280,660	30,744	10,667	18,176	1,991	538,717
December	101,053	262,447	12,254	6,023	15,214	773	397,764
Annual Total	2,202,882	2,827,500	515,645	135,661	219,027	24,854	5,925,569
Monthly Average	183,574	235,625	42,970	11,305	18,252	2,071	493,797

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1937							
January	81,575	228,195	10,079	5,259	15,676	643	341,427
February	70,489	224,590	10,166	5,514	16,810	566	328,135
March	96,025	292,090	20,363	7,325	19,989	551	436,343
April	125,298	261,631	41,353	13,285	22,434	2,085	466,086
May	220,174	291,029	67,077	17,320	23,761	3,201	622,562
June	418,110	343,078	91,212	17,916	23,315	3,300	896,931
July	581,021	335,951	105,731	17,568	22,283	3,473	1,066,027
August	601,655	319,881	119,142	21,837	24,203	3,233	1,089,951
September	585,052	291,648	122,058	20,804	23,431	3,099	1,046,092
October	576,660	291,420	98,964	22,101	20,806	2,995	1,012,946
November	339,960	258,251	45,135	18,868	20,000	3,061	685,275
December	113,223	177,829	18,000	8,603	14,392	690	332,737
Annual Total	3,809,242	3,315,593	749,280	176,400	247,100	26,897	8,324,512
Monthly Average	317,437	276,299	62,440	14,700	20,592	2,241	693,709
1938							
January	75,021	152,584	11,502	5,230	16,465	959	261,761
February	66,392	164,290	13,191	4,746	16,097	1,133	265,849
March	76,972	211,764	22,503	6,236	19,353	899	337,727
April	138,638	193,784	41,686	10,790	20,408	1,984	407,290
May	218,514	233,652	60,034	14,982	23,172	2,860	553,214
June	326,068	232,114	85,685	16,466	22,334	3,491	686,158
July	369,798	259,754	72,225	15,768	21,947	2,857	742,349
August	347,923	258,303	70,916	16,915	25,356	3,825	723,238
September	343,199	220,557	73,841	18,498	22,466	3,659	682,220
October	222,989	225,300	69,224	18,874	23,361	3,062	562,810
November	118,469	227,577	32,991	11,281	20,864	1,724	412,906
December	70,269	193,163	14,831	6,635	17,539	812	303,249
Annual Total	2,374,252	2,572,842	568,629	146,421	249,362	27,265	5,938,771
Monthly Average	197,854	214,403	47,386	12,202	20,780	2,272	494,898

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1939							
January	46,326	164,934	8,861	4,691	18,629	615	244,056
February	44,915	156,977	10,110	3,779	16,999	791	233,571
March	60,333	218,650	18,379	6,158	20,670	784	324,974
April	69,885	208,532	29,587	10,523	20,737	1,628	340,892
May	175,946	260,805	56,622	14,184	26,264	3,289	537,110
June	260,570	281,756	68,003	15,717	24,861	3,448	654,355
July	348,512	295,068	78,819	15,876	26,499	3,887	768,661
August	319,031	303,164	83,955	17,968	26,846	3,143	754,107
September	350,256	279,485	90,301	22,053	25,916	3,837	771,848
October	350,264	349,277	60,428	23,833	27,392	3,609	814,803
November	242,491	326,167	27,805	14,701	25,637	2,083	638,884
December	134,729	209,057	14,623	8,960	23,736	1,522	392,627
Annual Total	2,403,258	3,053,872	547,493	158,443	284,186	28,636	6,475,888
Monthly Average	200,272	254,489	45,624	13,204	23,682	2,386	539,657
1940							
January	70,844	190,823	16,133	6,245	25,924	781	310,752
February	73,700	208,614	17,514	6,254	23,063	563	329,706
March	83,927	237,228	26,542	8,438	25,119	530	381,784
April	144,223	288,178	43,137	11,166	29,524	1,619	517,847
May	364,366	388,706	77,661	19,128	35,042	3,223	888,126
June	628,826	383,711	96,554	23,792	28,854	4,091	1,165,828
July	622,201	504,391	112,098	25,863	30,694	4,491	1,299,738
August	580,966	552,771	88,439	24,907	30,790	4,837	1,282,710
September	590,106	508,705	89,682	24,964	29,690	6,103	1,249,250
October	616,869	525,952	98,458	26,895	32,800	5,128	1,306,102
November	335,704	432,173	53,916	16,589	28,452	3,219	870,053
December	160,273	327,855	26,408	10,574	28,131	1,906	555,147
Annual Total	4,272,005	4,549,107	746,542	204,815	348,083	36,491	10,157,043
Monthly Average	356,000	379,092	62,212	17,068	29,007	3,041	846,420

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1941							
January	145,421	309,931	24,497	9,628	30,774	1,062	521,313
February	118,323	346,821	27,677	12,358	29,196	675	535,050
March	126,225	417,134	37,360	14,229	32,580	1,464	628,992
April	187,395	397,887	59,908	18,491	37,379	2,765	703,825
May	311,778	445,843	84,098	21,694	38,145	3,565	905,123
June	487,330	437,430	91,203	20,175	35,930	3,521	1,075,589
July	449,906	497,977	88,444	20,170	39,258	3,607	1,099,362
August	507,882	608,966	90,245	24,326	36,670	3,789	1,271,878
September	486,108	532,461	99,341	24,220	35,495	4,350	1,181,975
October	542,945	562,964	97,401	24,713	36,458	4,255	1,268,736
November	324,308	559,507	59,928	23,226	36,452	3,683	1,007,104
December	192,408	435,002	37,872	17,841	32,025	2,272	717,420
Annual Total	3,880,029	5,551,923	797,974	231,071	420,362	35,008	10,916,367
Monthly Average	323,336	462,660	66,498	19,256	35,030	2,917	909,697
1942							
January	138,312	347,381	25,122	12,524	32,876	1,068	557,283
February	124,589	396,744	36,417	13,952	33,997	906	606,605
March	176,369	485,846	43,410	22,405	37,991	1,512	767,533
April	180,206	428,267	71,299	20,435	39,047	2,084	741,338
May	361,208	481,858	93,623	20,469	37,984	4,220	999,362
June	435,510	564,694	117,328	18,881	37,080	14,400	1,187,893
July	512,119	575,707	133,537	22,300	39,486	7,200	1,290,349
August	479,400	563,017	129,970	27,480	39,025	8,082	1,246,974
September	463,161	539,686	117,761	21,453	37,448	8,309	1,187,818
October	537,901	569,698	125,681	26,063	41,456	7,167	1,307,966
November	344,010	501,998	65,875	21,416	36,134	5,494	974,927
December	215,366	421,424	36,959	17,632	33,228	4,405	729,014
Annual Total	3,968,151	5,876,320	996,982	245,010	445,752	64,847	11,597,062
Monthly Average	330,688	489,693	83,082	20,418	37,146	5,404	966,422

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1943							
January	136,253	311,444	29,549	11,765	29,523	3,273	521,807
February	158,273	375,125	34,060	14,118	34,788	2,937	619,301
March	170,343	459,527	51,170	15,042	37,778	4,237	738,097
April	197,212	456,807	60,906	20,988	42,664	4,575	783,152
May	278,889	384,662	86,356	18,946	39,242	4,529	812,624
June	352,096	440,652	89,105	20,148	38,597	4,393	944,991
July	374,627	464,217	111,628	22,153	37,938	4,573	1,015,136
August	427,146	523,118	120,637	21,981	38,447	4,504	1,135,833
September	446,224	512,646	101,515	21,814	37,794	4,399	1,124,392
October	508,891	482,037	83,404	22,271	37,004	3,825	1,137,432
November	419,423	487,018	45,821	20,758	42,687	3,156	1,018,863
December	244,063	426,364	21,001	16,918	34,085	2,075	744,506
Annual Total	3,713,440	5,323,617	835,152	226,902	450,547	46,476	10,596,134
Monthly Average	309,453	443,635	69,596	18,909	37,546	3,873	883,011
1944							
January	131,274	406,393	16,430	11,599	36,484	956	603,136
February	109,648	411,873	19,028	10,387	38,278	620	589,834
March	126,225	444,939	23,260	13,606	40,710	1,311	650,051
April	179,518	402,715	43,803	15,406	37,587	1,600	680,629
May	377,074	426,976	76,357	19,723	41,336	4,621	946,087
June	416,309	452,187	105,380	21,839	37,468	4,788	1,037,971
July	489,204	511,317	114,371	23,740	34,195	4,759	1,177,586
August	447,617	564,123	104,177	24,085	32,138	5,299	1,177,439
September	439,058	519,764	85,531	23,283	34,973	3,739	1,106,348
October	441,775	507,072	81,662	23,881	35,474	3,356	1,093,220
November	358,721	474,010	44,155	20,711	33,165	2,960	933,722
December	165,894	399,543	14,983	17,437	31,426	1,866	631,149
Annual Total	3,682,317	5,520,912	729,137	225,697	433,234	35,875	10,627,172
Monthly Average	306,860	460,076	60,761	18,808	36,103	2,990	885,598

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1945							
January	134,525	336,094	11,915	15,923	30,991	1,959	531,407
February	125,204	380,050	13,728	16,501	28,281	1,284	565,048
March	171,188	491,468	33,178	19,791	36,561	1,747	753,933
April	225,753	407,921	63,800	24,464	40,590	4,231	766,759
May	318,440	428,370	77,142	23,112	37,376	4,939	889,379
June	455,703	498,339	108,187	24,269	35,850	5,167	1,127,515
July	512,346	554,738	136,283	25,569	35,524	5,069	1,269,529
August	516,791	537,490	103,698	26,820	33,075	4,707	1,222,581
September	401,054	485,940	113,259	28,050	33,820	7,508	1,069,631
October	493,585	537,875	109,968	28,672	37,857	7,267	1,215,224
November	345,059	453,907	59,475	25,071	33,899	5,176	922,587
December	223,755	405,100	26,658	22,143	31,747	4,059	713,462
Annual Total	3,923,403	5,517,292	857,291	280,385	415,571	53,113	11,047,055
Monthly Average	326,950	459,774	71,441	23,365	34,631	4,426	920,588
1946							
January	181,738	364,043	24,464	22,054	33,200	2,154	627,653
February	105,149	358,672	19,822	19,281	31,426	2,980	537,330
March	164,111	432,868	49,111	24,250	38,046	4,484	712,870
April	293,218	398,345	110,825	32,417	42,618	5,307	882,730
May	447,477	442,269	150,942	29,916	46,792	4,511	1,121,907
June	479,973	409,976	164,318	29,333	40,551	5,336	1,129,487
July	552,840	552,486	143,386	36,935	41,012	6,577	1,333,236
August	560,684	658,718	120,165	38,614	39,985	6,442	1,424,608
September	580,070	623,072	113,876	34,724	36,774	5,970	1,394,486
October	583,705	603,304	115,204	38,555	40,578	5,800	1,387,146
November	489,753	531,942	90,395	33,748	42,177	4,664	1,192,679
December	277,998	493,739	57,519	28,338	39,469	4,129	901,192
Annual Total	4,716,716	5,869,434	1,160,027	368,165	472,628	58,354	12,645,324
Monthly Average	393,060	489,120	96,669	30,680	39,386	4,863	1,053,777

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1947							
January	181,277	401,912	41,804	27,606	40,457	2,893	695,949
February	168,519	394,217	42,770	24,705	34,351	3,407	667,969
March	207,581	578,795	80,523	35,242	47,161	4,972	954,274
April	327,658	465,299	131,361	34,068	48,145	6,164	1,012,695
May	492,548	489,325	137,763	40,010	48,340	7,444	1,215,430
June	621,942	567,274	129,215	38,286	43,566	8,070	1,408,353
July	810,375	673,005	122,365	38,740	47,126	7,389	1,699,000
August	715,953	634,140	124,368	39,553	44,761	6,824	1,565,599
September	735,822	617,433	116,777	40,981	52,926	8,020	1,571,959
October	775,331	642,858	120,854	39,182	49,617	8,270	1,636,112
November	489,677	581,983	102,726	34,996	47,140	5,538	1,262,060
December	266,837	602,034	78,330	35,331	48,776	4,086	1,035,394
Annual Total	5,793,520	6,648,275	1,228,856	428,700	552,366	73,077	14,724,794
Monthly Average	482,793	554,023	102,405	35,725	46,031	6,090	1,227,066
1948							
January	180,477	453,752	57,142	25,372	41,472	4,061	762,276
February	181,296	490,707	74,583	22,323	43,239	4,153	816,301
March	235,323	600,337	139,493	29,532	53,479	4,684	1,062,848
April	351,231	510,477	155,855	39,648	54,905	5,309	1,117,425
May	523,761	487,976	153,629	36,533	52,581	6,897	1,261,377
June	708,847	519,194	149,901	40,059	50,343	8,621	1,476,965
July	801,187	622,880	143,569	43,856	51,399	9,191	1,672,082
August	828,255	633,223	141,027	39,460	56,059	8,113	1,706,137
September	800,474	648,232	140,500	39,077	57,464	7,194	1,692,941
October	760,025	615,396	135,631	40,701	57,294	8,021	1,617,068
November	561,673	569,890	140,324	37,983	55,508	8,507	1,373,885
December	305,540	456,834	83,876	30,624	47,467	5,159	929,500
Annual Total	6,238,089	6,608,898	1,515,530	425,168	621,210	79,910	15,488,805
Monthly Average	519,841	550,742	126,294	35,431	51,776	6,659	1,290,734

TABLE 98

RAILWAY FREIGHT OF BUILDING MATERIALS LOADED IN CANADA, BY MONTH, 1921-1949—*Continued*

(Tons)

Year and Month	Gravel, Sand, Crushed Stone	Lumber, Timber and Related Material	Cement	Brick and Artificial Stone	Lime and Plaster	Sewer Pipe and Drain Tile	Total
1949							
January	162,500	368,700	72,800	27,900	46,800	3,800	682,500
February	146,000	379,600	120,100	26,200	43,100	3,400	718,400
March	205,900	477,400	175,400	24,200	53,000	4,400	940,300
April	347,800	406,800	193,200	29,500	54,200	5,100	1,036,600
May	531,400	451,800	162,500	35,100	54,400	7,500	1,242,700
June	700,300	514,400	169,300	34,400	59,400	9,000	1,486,800
July	696,400	495,400	162,600	32,000	48,200	8,200	1,442,800
August	744,100	526,300	171,700	32,700	56,000	9,000	1,539,800
September	654,600	440,200	164,500	32,900	56,100	7,500	1,395,800
October	504,000	531,800	157,500	31,800	57,900	7,900	1,290,900
November	445,400	507,400	161,400	30,000	56,900	4,900	1,205,000
December	246,800	476,700	103,000	22,700	52,100	3,400	904,700
Annual Total	5,385,200	5,616,500	1,814,000	359,400	581,200	74,100	13,886,300
Monthly Average	448,767	468,042	151,167	29,950	48,433	6,175	1,157,192

Part IV

METHODOLOGY AND TESTING

SECTION ELEVEN

REVIEW OF AVAILABLE DATA

THIS SECTION appraises the tie-in of the estimates on residential real estate included in this report with other more fragmentary data and comments on the quality of both the new overall estimates presented here and the more partial data and estimates available heretofore.

The basic data on which the estimates in this report are based are the stock of dwellings in existence at a given time and the changes in stock that occur from year to year.

Current Methods of Estimating Numbers of Dwellings Started and Completed. Estimates of the number of dwellings *completed* annually in the whole of Canada are available only for the years after 1944. Data on the number of dwellings started are available for cities and towns with population of 5,000 and over beginning with 1947 and for the whole of Canada beginning with 1948. Estimates of completions and starts are prepared by the Dominion Bureau of Statistics in conjunction with the Central Mortgage and Housing Corporation, based since January 1948 on actual counts by Central Mortgage and Housing Corporation officials in larger cities and towns and by sampling officers of the Dominion Bureau of Statistics in smaller localities. A count of the number of dwellings started and completed is obtained for (a) all cities and towns with population of 5,000 and over (some 159 cities and towns and 163 districts surrounding large cities and included as metropolitan areas), and (b) selected sample areas considered representative of the population living outside the larger urban centres. The sample areas cover about 10 per cent of the population living in urban municipalities with less than 5,000 inhabitants and 5 per cent of the rural population. On the basis of population, coverage of the survey of all municipalities is approximately 66 per cent. The method used involves a margin of sampling error which, according to the Dominion Bureau of Statistics, may go as far as 6 per cent in either direction.

Methods of Estimating Completions for Prior Years. Since enumeration of the number of dwellings completed annually in Canada commenced in 1945, comparable data have been unavailable for the preceding period. This study provides an estimate of the number of housing units completed annually for the period 1921-1944, together with other related estimated data, and links

this material with statistics available for the years commencing in 1945. The estimates of the number of dwellings completed during 1921-1941 are based on the interpolation of the estimated decennial increase in the number of housing units, based on the 1921, 1931 and 1941 Censuses and supplementary data. The data for 1941 and 1945 are then linked on the basis of a trend factor. The methods used are described in detail in the notes referring to specific tables in Section 12.

The Quality of Completion Estimates. The detailed description of estimating techniques applied, given in the succeeding section, will enable the reader to judge for himself the degree of reliability of the basic data used and the reasonableness of the final estimates. Broadly speaking, the estimates of completions vary in quality for three different periods.

(1) Estimates for the periods 1921-1941 and 1945-1949 are likely to be subject to a smaller margin of error than those for the years 1942-1944. Since a careful examination did not divulge any apparent bias in the Census enumeration of the number of houses occupied in 1931 and 1941, and as a correction was made for an enumerating bias in multiple dwellings in the 1921 Census, the net increase of the number of occupied dwellings during this twenty-year period appears to be a reasonably firm figure. Some margin of error must be allowed for the estimate of vacant dwellings which was used to convert data on occupied dwellings into terms of available dwellings, the estimate of dwellings destroyed and demolished which was used to convert the *net* increase of dwellings into terms of *gross* increase, and the estimate of the distribution of the gross increase over the period 1921-1941. But because of the firmness of the basic material the probable error of these estimates on an annual basis is likely to be within a 5 per cent margin in either direction.

(2) Estimates for the period 1942-1944 appear to be less firm than those for the preceding period or the succeeding years. A number of indicators of trend that could be used in peacetime became biassed in wartime because of a diversion of a major part of the country's resources to serve other than peacetime purposes. The absence of data on the net increases from decennial Censuses or actual counts even of partial coverage for this period makes it possible that these estimates are subject to a larger margin of error than those for the other two periods. Some check, however, was possible on the basis of special sample surveys undertaken by the Dominion Bureau of Statistics asking for information on the age of residential dwellings. Even allowing for a memory bias

the totals for the period are pretty close. Preliminary figures on the number of new units (excluding conversions) listed in the sample as having been built from 1941 to 1944 are given as 135,000, as compared with the estimate shown here of 144,000, the difference averaging just a little over 2,000 units per year. While in the light of available information the estimates appear reasonable, they remain preliminary until the 1951 Census, which will give a complete count of the number of dwellings in existence at that time (see below).

(3) Estimates for the period 1945-1949 are subject to a margin of error of approximately 6 per cent. It may be possible to check in some measure this margin of error when the data of the 1951 Census become available. Then the net increase of the number of houses built in Canada during the decade 1941-1951 can be computed and the resulting aggregate distributed for each year by using an actual building trend. After allowing for houses destroyed and demolished each year an annual figure of the number of units built is reached. The series thus computed might be helpful in narrowing down further the margin of error indicated above.

The qualifications attached to the overall totals have to be borne in mind when estimates of sub-divisions of the totals are considered, such as the classification of the number of dwellings constructed into new and conversions, urban and rural, non-farm and farm, single and multiple, occupied and vacant units. The preparation of all these detailed estimates has faced a number of additional problems which are discussed in the notes that follow. Related estimates are subject to similar qualifications, as, for example, the value of new residential construction work undertaken in Canada, which depends greatly on the reliability of the basic material on the number of dwellings built each year.

In general, then, while the estimates presented here are subject to a margin of error, it is not large enough to affect the reliability of the major trends which appear. As indicated in Sections 2 and 9, the data shown reflect the substantial fluctuations of the volume of residential construction, a phenomenon that has been observed in many other fields of economic behaviour, both in Canada and other countries. The estimates are thought to be a reasonable quantitative indication of what happened in the housing field in Canada in the last twenty-nine years.

Comparison with Other Estimates and Enumerations of Completions. The data provided in this report represent the first estimate of the *total* number of dwellings constructed in Canada

in the period 1921-1949. Partial estimates of the number of units built or enumerations of the number of dwellings intended to be built in a large section of the country have been made previously. The comments that follow are designed to indicate some of the differences between the estimates contained in this report and other data available.

1. *Number of Urban Dwellings Constructed, 1921-1939: Advisory Committee on Reconstruction, Final Report of the Sub-Committee on Housing and Community Planning.* The present report uses in part a technique similar to that adopted by the Sub-Committee on Housing and Community Planning,[1] but the results differ somewhat for several reasons:

(*a*) The new series covers Canada as a whole, the old series only "urban" areas.

(*b*) The new urban series has been adjusted annually for new incorporations, while the old series assumed all areas classified as urban in 1941 to be urban over the whole period.

(*c*) Adjustments have been made in the basic Census material used: for 1921 account was taken of an enumerating bias of multiple dwellings and for 1941 allowance was made for revisions in the Census material made after the preparation of the old estimates.

(*d*) Adjustments were made to raise the Census figures on occupied units to available units by estimating vacant units. In the old estimates only occupied units were used.

(*e*) The totals were distributed in the new series by means of indices of domestic disappearance of building materials primarily used in residential construction, while the old series used MacLean's Residential Contracts Awarded. The new method was considered an improvement in the technique because of uniformity in coverage of the domestic disappearance of residential building material series as against variations in coverage in the MacLean's Residential Contracts Awarded series (see below).

2. *Number of Dwellings for Which Residential Contracts were Awarded, 1918-1949, Hugh C. MacLean Publications Limited, Toronto.*

(*a*) This series, available currently, provides information on the number of units for which building contracts have been awarded. As such it reflects the number of units intended to be built in a major part of Canada. Since contracts awarded are in some instances cancelled, while in others no contracts are awarded,

[1]For a description of techniques used in the earlier estimates, see *Housing and Community Planning*, p. 308.

as, for example, in the case of the owner-builder, the series does not cover all new residential construction in Canada.

(*b*) Dwellings in multiple housing projects are listed by numbers of buildings, e.g. an apartment building with twenty apartments is listed as one. In combining this series with the number of single units for which contracts have been awarded, the number of dwellings in multiple projects has to be estimated by the use of a conversion factor.[1]

(*c*) MacLean's contracts awarded for new residential construction provide only partial coverage that varies over time. It is possible to obtain an approximation of coverage by use of the following technique. Assuming no cancellations, making use of a conversion factor for multiple dwellings to obtain a comparable series, and allowing an average completion period of eleven months for 1946, eight months for 1947 and seven months each for 1948 and 1949,[2] it is possible to estimate the number of completed dwellings for which contracts have been awarded. On this basis, the variations in coverage were as follows:

Year	Estimated Dwellings Completed		Estimated Coverage of Series Based on MacLean's Reports
	MacLean's Reports 000	Dominion Bureau of Statistics Reports 000	Per cent
1946	49.4	67.2	73.5
1947	37.4	79.2	47.2
1948	51.7	81.2	63.7
1949	64.8	91.0	71.2

3. *Number of Dwellings for which Residential Building Permits were Issued in 204 Municipalities, 1942-1949, Dominion Bureau of Statistics.*

(*a*) This series, compiled currently, provides data on the number of units for which residential building permits have been issued, including new construction and conversions. Similar to the contracts awarded series, building permits issued provides an indication of house-building intentions and covers 204 large and medium sized municipalities in Canada. In a number of instances

[1]See *Housing in Canada, January, 1947*, pp. 33 and 37.

[2]The average completion periods are from the *Annual Report, 1947*, of Central Mortgage and Housing Corporation, Ottawa, February, 1948, p. 18, and *Housing in Canada, January, 1950*, p. 91.

the building permit issued is not used at all, while in others the construction of the building may be postponed.

(*b*) The 204 municipalities reporting to the Dominion Bureau of Statistics represent approximately 5,257,000 persons, or 46 per cent of the total population of Canada (as of the date of the 1941 Census). The series excludes a number of suburban municipalities which form parts of metropolitan cities where a large part of present-day house building is taking place.[1] As a result, coverage will vary over time. A rough indication of the coverage can be obtained by applying a technique similar to that used in respect to MacLean's Residential Contracts Awarded. Assuming that all building permits issued were used, and allowing similar average completion periods as above, variations in coverage were as follows:

Year	Estimated Dwellings Completed		Estimated Coverage of Series Based on Building Permits Issued
	Series Based on Building Permits Issued 000	Dominion Bureau of Statistics Reports 000	Per cent
1946	29.8	67.2	44.3
1947	38.0	79.2	48.0
1948	42.1	81.2	51.8
1949	54.1	91.0	59.5

4. *Number of Occupied Dwellings—Census Years.* Such data are available for Canada as a whole for the period reviewed in this report for the years 1921, 1931 and 1941, and for the Prairie provinces for the year 1946. To assure comparability some adjustments are necessary, as indicated in the succeeding text. The adjusted data tie in closely with the estimates presented in this report.

Comparison with Other Estimates and Surveys of the Value of Residential Construction. No comparable estimates of residential capital and gross residential capital formation as defined in this report are available for Canada over the period covered, but a number of estimates and surveys of segments of these quantities are available. They are mainly attempts to measure residential

[1]For the years following 1947 the Dominion Bureau of Statistics has increased the coverage of this series to include 507 municipalities (*Canadian Statistical Review, January, 1949*, p. 79).

construction work performed or contemplated with varying degrees of coverage. There also exist early attempts to estimate the value of urban real property.

(1) *Value of Urban Real Property—Estimates for 1921, 1925, 1927, 1929 and 1933.* These estimates are the early estimates of Canada's national wealth, prepared by the Dominion Bureau of Statistics, the last bulletin being published in 1936. Real property is defined as all urban real estate, residential and non-residential, including roads, streets, bridges and sewers. The estimates are based on assessed value of taxed and exempted property. Since municipal assessments usually understate market valuations, some adjustments based on informed municipal opinion are made in the estimates to allow for undervaluation. The estimates were considered first approximations only and do not cover years after 1933.

(2) *Value of Residential Construction, 1934-1949, Reports on the Construction Industry, Dominion Bureau of Statistics.* These reports are annual censuses of construction work performed and are a continuing series. Some statistics on the value of construction work performed were collected as part of the Census of Industry during 1920-1922, but the coverage of these data is even more limited than that of the more recent data. The current construction census collects information separately for new construction and for alterations, maintenance and repair on all types of construction, including residential construction. The coverage of the construction census in the residential field, although it has increased greatly in more recent years because of the availability of data on housing starts and completions, remains incomplete. In the first instance, many housebuilders do not report construction costs of new housing, while others frequently send in returns of estimated construction costs which differ from the final actual construction costs. Further, the construction census does not cover residential construction work undertaken by many thousands of building tradesmen whose volume of business is small, and by home owners themselves with the assistance of their immediate family and of others, e.g. farm labourers. In addition, certain types of residential construction, for example, the work carried out by trade contractors, is included in the construction census but not listed as residential construction. To give an approximation of the coverage of residential construction work included in the construction census, all items in census listed as residential amounted to $194 million in 1946, or 47 per cent of the $412 million estimated in this report as the amount that has been spent

on new residential construction and major improvements and alterations in the whole of Canada in the same year. The ratio is reduced to 37 per cent if the construction census figure is taken as a proportion of total residential construction including all residential repair and maintenance work. For 1947 and 1948, the corresponding ratios of coverage are 43 and 35 per cent, and 35 and 31 per cent respectively.

(3) *Value of Residential Construction Contracts Awarded, 1918-1949, Hugh C. MacLean Publications, Toronto.* This series, currently available, provides data on the contracts awarded for new residential construction, including contracts for major residential improvements and alterations. The limitations as to coverage mentioned on page 351 also apply to the value data. Little repair work is included in the series. Contracts awarded for new residential construction work and major improvements and alterations amounted to $197 million in 1947. Compared with the series on actual work performed as estimated in this report, this is 37 per cent of new construction and major improvements and alterations, and 29 per cent of total residential construction, including repair and maintenance work. For 1948 and 1949, the corresponding ratios are 56 and 45 per cent, and 59 and 48 per cent respectively.

(4) *Value of Residential Construction for which Residential Building Permits were issued in 204 Municipalities, 1940-1949, Dominion Bureau of Statistics.* Value of all types of construction work performed is available for the years prior to 1940, but a separation of residential construction from other types has been published only since 1940. However, some unpublished records, referred to later, which cover a smaller number of municipalities, are available in the files of Dominion Bureau of Statistics. The qualifications referred to earlier (p. 352) in connection with the report on the number of units for which building permits were issued in the 204 municipalities apply also to the value figures. Data are available for new residential construction, additions, alterations and repairs. Comparing these statistics for 1947, 1948 and 1949 with the estimate of total residential construction work performed presented in this report indicates a coverage of 27, 36 and 37 per cent respectively. The coverage varies for the preceding years.

(5) *Value of Private New Residential Construction and Major Improvements and Alterations, Estimates 1926-1949—Canadian National Accounts, Dominion Bureau of Statistics.* The data of

these quantities included in the "Gross Home Investment" component of gross national expenditure in the Canadian National Accounts are the estimates as developed in this report.

(6) *Value of Urban Residential Construction, Estimates, 1926-1941, Public Investment and Capital Formation, Dominion-Provincial Conference on Reconstruction, Ottawa, 1945.* These estimates are based on a valuation of the number of urban dwellings completed as estimated in *Housing and Community Planning.* The qualifications attached to the latter estimates are mentioned on p. 350 and apply also to the value estimates. Value of residential repair and maintenance work for urban dwellings was estimated by the application of the ratio of "repair and maintenance" to "new" given in the Census of Construction reports to the Dominion Bureau of Statistics (*Public Investment and Capital Formation,* p. 105). New urban residential construction work is given in the above-mentioned report as $105 million for 1941. This compares with the corresponding estimate of $107 million in this report. The reason for the difference lies in some refinement in estimating technique employed.

(7) *Value of Residential Construction, 1945-1950, Outlook Documents of Private and Public Investment, by Department of Trade and Commerce, formerly by Department of Reconstruction and Supply.* In conjunction with their forecasting of private investment in durable physical assets in 1946 and 1947 and private and public investment in durable physical assets in 1948 to 1950, these outlook documents contain estimates of residential construction, with the most complete estimates given for 1948 to 1950 covering new residential construction, major improvements and alterations, supplementary house building costs, and repair and maintenance work (see *Private and Public Investment in Canada, Outlook 1950*). Total residential construction of all kinds is estimated in the outlook documents at $851 million and $969 million for 1948 and 1949 respectively, as compared with $830 million and $938 million as shown in this report. The small differences are due to further refinements in estimating techniques which have been made since the outlook report was published and the exclusion of Newfoundland from the estimates shown in this report.

Comparison with Other Estimates of Residential Capital Consumption. In connection with its estimates of "depreciation allowances and similar business costs" for the National Accounts, the Dominion Bureau of Statistics includes an allowance for

depreciation to housing and residential fire losses. Totals of "depreciation allowances and similar business costs" are published for the years 1926-1949. Residential depreciation and fire losses are not shown separately. Residential depreciation is estimated by applying a fixed proportion to estimated gross rent for rented property and to imputed rent for owned property. This method in general reflects market conditions and thus comes closer to actual life expentancy and a current cost concept of housing than is feasible by using a minimum life expentancy and original or acquisition costs employed in taxation or business practice. To illustrate: in Canadian income tax practice annual depreciation of 5 per cent was allowed on acquisition costs of a wood frame house used for rental purposes. Assuming that this house lies in a well-preserved neighbourhood, is kept in good repair and remains in use for sixty years until it is demolished and replaced by another building, the original owner of the property may write off its initial cost at an annual rate of 5 per cent, reaching a full write-off at the end of twenty years.[1] If he then sold the property at say two-thirds of the original cost, the new owner would be able to write off his acquisition cost at 5 per cent annually until at the end of twenty years he again has written off fully his purchase price. The house, then forty years old, might still fetch about half of the original cost—depending, of course, on the state of the real estate market at that time—and the third owner could then start depreciating again his purchase price at 5 per cent per year. If at the end of the third twenty-year period the house is demolished—it would have a residual value because the lot would still be there—the original cost of the property will have been written off more than twice over its actual life (the original cost by the first owner, plus two-thirds of the original cost by the second owner, plus one-half of the original cost by the third owner). Up to 1949 depreciation allowances for taxation purposes were primarily designed to provide relief from income tax to taxpayers making a capital investment. In 1949 the principle was changed to one of amortization of costs of depreciable assets (see p. 424). However, as indicated above depreciation allowances as provided in

[1]The above calculation is indicative of taxation practice in Canada before the switch-over from the straight line to the diminishing balance basis in 1949. As a result of the shift a frame building as used in the above example could under the new provisions be written off at a 10 per cent annual rate. On a diminishing balance basis this rate would allow for a write-off of approximately 88 per cent over a 20-year period as compared to 100 per cent using a rate of 5 per cent on a straight line basis. For a schedule of new depreciation rates see *The Canada Gazette*, January 11, 1950, Vol. LXXXIV, No. 1, p. 33.

income tax practice do not necessarily represent a full measure of economic depreciation.

The approach of estimating residential depreciation used in the National Accounts yields results for the pre-war and early war period similar to the estimates shown in this report, with minor variations, mainly due to differences in the basic statistical material used and some variance of the assumption of the period of actual life expectancy and the method of evaluating assets. The difference, however, becomes more marked for the latter part of the war and the immediate post-war period, mainly because the rental approach used in the National Accounts is affected by rental controls in existence in Canada since 1942. Depending on the purpose of estimating depreciation of residential property, a case can be made for either approach. As far as the estimates of fire losses are concerned, the estimates in both the National Accounts and in this report use the same basic data.

SECTION TWELVE

SOURCES AND METHODS OF ESTIMATES

THE NOTES that follow provide for each table in this report a reference to the basic data used, their sources and the techniques employed in arriving at the estimates presented here. The notes are organized in three parts.

Part A provides explanatory notes to Tables 1 to 66 which are included in Sections 2 to 8. In large part these notes deal with sources and estimating techniques of data not included in Sections 9 and 10. Where data used in Sections 2 to 8 are summary statements of the more detailed estimates and basic figures assembled in Sections 9 and 10, only a brief reference to the notes to subsequent tables is made.

Part B, which is the most comprehensive, provides explanatory notes to Tables 67 to 84 included in Section 9. These tables represent the basic estimates assembled in this report and provide in addition to a discussion of sources and methods of estimates comments, where appropriate, on the meaning and limitations of available data and likely margins of errors of the estimates. The overall appraisal of the quality of the basic estimates is contained in Section 11, which also provides a review of related data available on the subject of inquiry.

The basic estimates on residential capital and residential real estate and their annual changes, as well as population and family data shown in Section 9, cover Canada excluding Newfoundland, Yukon and Northwest Territories. Estimates of dwelling construction in Newfoundland, Yukon and Northwest Territories are included in Table 6 in Section 2 and in Table 14 in Section 3. These two tables provide separately, national totals and totals for nine provinces only. Explanation of the methods used in making the estimates for Newfoundland, Yukon and Northwest Territories are given on pages 433 ff.

Part C provides source notes to the basic data shown in Tables 85 to 98 in Section 10, Tables 99 to 101 in Section 13, and Tables 102 to 122 in Appendices A and B.

Sources of the charts contained in this study are indicated by reference to the respective tables.[1]

[1]Mr. M. J. G. Hache and Mrs. I. M. Ford prepared the 24 charts included in this report.

A. Explanatory Notes to Tables 1-66

TABLE 1. Total and Occupied Housing Stock, Canada, 1921-1949

See notes to Tables 69 and 70.

TABLE 2. Age Distribution of Housing Stock, Canada, 1949

Estimates were made on the basis of the total number of dwellings shown in Table 69 for 1921-1949, and in Table 102 in Appendix A for the census years 1881-1911. The method involved the assumption of annual losses through destruction, demolition and abandonment of 5 per cent during the 1881-1921 period. These losses were assumed to be one-third accidental distributed throughout the age intervals on a pro rata basis with the total existing stock, and two-thirds demolished or abandoned occurring among the oldest age group of the existing stock. The corresponding assumptions used for the period 1921-1949 are outlined in the notes to Table 69 below.

TABLE 3. Average Age of Housing Stock, by Area, Canada, 1921-1949

See notes to Table 78, particularly pp. 428 ff.

TABLE 4. Location of Occupied Housing Stock, Canada, 1949

For distribution of occupied housing stock by region, see note to Table 34 below. The location of occupied housing stock by farm and non-farm is from Table 70. The non-farm component was broken down between urban and rural non-farm on the basis of Census data for the year 1941 (see Table VI, p. 381 below), the number of urban and rural non-farm completions from 1941-1949 as shown in Table 68, and assumptions outlined in the note to Table 68 regarding vacancies and the number of units destroyed, demolished, or abandoned during the 1921-1949 period.

TABLE 5. Net Annual Change in Occupancy of Dwellings, Canada, 1922-1949

See notes to Table 70.

TABLE 6. Dwellings Completed, Destroyed, Demolished and Abandoned, Canada, 1921-1949

For data for Canada, excluding Newfoundland, Yukon and Northwest Territories, see notes to Tables 69. For estimates of dwellings completed in Newfoundland, Yukon and Northwest Territories, see pp. 433 ff.

TABLE 7. Dwellings in New Structures Started, by Area, Canada, 1948 and 1949

Data obtained from *Housing Bulletin*, Nos. 1-24.

TABLE 8. STAGES OF CONSTRUCTION FOR DWELLINGS IN NEW STRUCTURES, CANADA, 1947-1949

Data for 1948 and 1949 were obtained from *Housing Bulletin*, Nos. 12 and 24. Data on completions in 1947 were obtained from *Supplement to Housing Statistics, 1947*. The number of units under construction at the beginning of 1947 was obtained from *Housing Bulletin*, No. 1. Starts during 1947 were estimated on the basis of the number of units under construction at the beginning and end of the year, and the number of completions during the year.

TABLE 9. DWELLINGS COMPLETED, BY TYPE OF STRUCTURE, CANADA, 1921-1949

See notes to Tables 67, 68, and 71

TABLE 10. HOUSING CONSTRUCTION IN CANADA, UNITED KINGDOM AND UNITED STATES, 1921-1949

Data for Canada based on figures shown in Tables 67 and 71. Data for the United Kingdom, 1945-1949, obtained from monthly issues of the *Digest of Statistics of the United Kingdom*, Central Stastitical Office, London, and for 1921-1944 the figures shown are estimated on the basis of fiscal year data obtained from annual issues of the *Abstract of Statistics for the United Kingdom*, Central Statistical Office, London. Data for the United States obtained from monthly issues of *Construction*, Bureau of Labour Statistics, United States Department of Labour, Washington, D.C.

TABLE 11. POPULATION AND HOUSING CONSTRUCTION, CANADA, UNITED KINGDOM AND UNITED STATES, 1945-1949

Total population data for Canada were obtained from *Population of Canada by Provinces, 1921-1949—Estimated as of June 1 for Inter-censal Years*, Dominion Bureau of Statistics; for the United Kingdom from monthly issues of the *Digest of Statistics;* and for the United States from issues of *Current Population Reports*, Series P-20, Bureau of the Census, United States Department of Commerce. Estimates of the farm population for Canada were based on the total farm population and total agricultural employment in 1941, as obtained from the 1941 Census, and total agricultural employment in the years 1947, 1948 and 1949, obtained from quarterly issues of the *Labour Force Bulletin*, Dominion Bureau of Statistics. Farm population data for the United States were obtained from *Estimates of the Farm Population of the United States, 1940-1949*, Series Census—BAE—No. 14, January 13, 1950, Bureau of the Census, United States Department of Commerce. Data on house-building activity were obtained from the sources given above in respect to Table 10.

TABLE 12. VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, CANADA, 1921-1949

See notes to Tables 80 and 81.

TABLE 13. VALUE OF RESIDENTIAL REAL ESTATE IN USE AND AVAILABLE, CANADA, SELECTED YEARS, 1929-1949

Value of available real estate is from Table 80. Value of residential real estate not in use is estimated by applying the proportion of vacant to total dwellings obtained from Table 69, to the value of available residential real estate. Value of residential real estate in use was arrived at by subtracting residential real estate not in use from the value of available residential real estate. As pointed out in footnote 1 on page 81 this estimating technique may on occasion understate considerably the value of residential real estate not in use. This would likely be the case in a year such as 1929, when a number of the more expensive types of houses or apartments were without occupants because of the substantial capital costs involved or high rentals demanded.

TABLE 14. VALUE OF DWELLINGS COMPLETED AND RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, CANADA, 1921-1949

For data for Canada excluding Newfoundland, Yukon and Northwest Territories, see notes to Tables 72 and 76. For estimate of new construction, major improvements and alteration work carried out in Newfoundland, Yukon and Northwest Territories, see pp. 433 ff.

TABLE 15. VALUE OF DWELLINGS COMPLETED, BY LOCATION AND TYPE OF STRUCTURE, CANADA, SELECTED YEARS, 1929-1949

See notes to Tables 72, 73 and 74.

TABLE 16. GROSS AND NET RESIDENTIAL CAPITAL FORMATION, CANADA, 1921-1949

See notes to Tables 77, 78 and 79.

TABLE 17. GROSS AND NET ADDITIONS TO RESIDENTIAL REAL ESTATE, CANADA, 1921-1949

See notes to Tables 77, 78 and 79.

TABLE 18. AVERAGE VALUE OF EXISTING DWELLINGS, INCLUDING LAND, AND PRICE INDICES OF RESIDENTIAL REAL ESTATE, CANADA, 1921-1949

Current value of residential real estate is from Table 80. Number of dwellings comprising housing stock is from Table 69. The average value of existing dwellings, including land, is arrived at by dividing the value of residential real estate by the number of dwellings comprising the housing stock. Indices of additions to residential real estate in current

and constant dollars are based on absolute figures as shown in Table 77. The index of price of residential real estate was arrived at by dividing the value by the volume series.

TABLE 19. DWELLINGS STARTED, BY SOURCE OF INITIATION AND FINANCING, CANADA, 1947-1949

Data based on Tables shown in Appendix B and *Mortgage Lending in Canada, 1947, 1948* and *1949*.

TABLE 20. EXPENDITURES ON NEW HOUSING, BY SOURCE OF FUNDS, CANADA, 1949

Data based on Tables shown in Appendix B.

TABLE 21. HOUSING STOCK, BY TYPE OF OWNERSHIP AND OCCUPANCY, CANADA, 1949

Number of publicly owned units was obtained from the records of Central Mortgage and Housing Corporation. This figure is published quarterly in *Housing in Canada*, and annually in the *Annual Report* of Central Mortgage and Housing Corporation. Privately owned units represent the difference between total available dwellings and those publicly owned. Owner-occupied and rented dwellings for non-farm and farm areas are from Table 70.

TABLE 22. DWELLINGS COMPLETED, WITH AND WITHOUT PUBLIC ASSISTANCE, CANADA, 1921-1949

Data are from Table 86 and Appendix B.

TABLE 23. EXPENDITURES ON NEW HOUSING CONSTRUCTION BY FEDERAL GOVERNMENT, PRIVATE PERSONS WITH FEDERAL GOVERNMENT LOAN AND GUARANTEE ASSISTANCE, AND WITHOUT FEDERAL GOVERNMENT ASSISTANCE, CANADA, 1935-1949

Data are from Table 87.

TABLE 24. ESTIMATED NUMBER AND VALUE OF REAL ESTATE TRANSFERS, CANADA, 1947-1949

Availability of Basic Data. The following basic data were available:

(1) Number and value of real estate transfers for Ontario, 1947 to 1949; number of real estate transfers for Quebec and Manitoba, 1947 to 1949; number and value of real estate transfers for British Columbia, 1948 and 1949; number of real estate transfers for Prince Edward Island, Nova Scotia, New Brunswick and Alberta for 1949; no data were available for Newfoundland and Saskatchewan (see Table I below). Sources of data for Ontario and Quebec are given in the notes to Table 25. Data for British Columbia, Manitoba and Alberta were obtained by courtesy of the Registrars of Land Registry Offices in British Columbia and the

Registrars of Land Titles Offices in Manitoba and Alberta. Data for the three Maritime Provinces are from Registry Offices in these provinces as compiled by Dun and Bradstreet of Canada Ltd., and summarized here by courtesy of that company.

TABLE I

AVAILABLE DATA OF NUMBER AND VALUE OF REAL ESTATE TRANSFERS, EIGHT PROVINCES, CANADA, 1947-1949

Province	1947		1948		1949	
	Number	Value $ Mill	Number	Value $ Mill	Number	Value $ Mill
Prince Edward Island	—	—	—	—	2	—
Nova Scotia	—	—	—	—	14	—
New Brunswick	—	—	—	—	12	—
Quebec	94	—	97	—	94	—
Ontario	151	528	153	592	156	674
Manitoba	34[1]	—	32[1]	—	32[1]	—
Alberta	—	—	—	—	46[1]	—
British Columbia	—	—	57	237	47	207

[1]Preliminary.

(2) Purchases of land, used buildings and equipment by selected business enterprises in Canada, 1947 (see Table II below). These data were obtained from a special compilation of one of the supplementary questions contained in the capital schedule circulated by Dominion Bureau of Statistics. This schedule is primarily designed to obtain information on new, repair and maintenance construction and purchases of new machinery and equipment, and repair and maintenance of existing machinery and equipment. The data on purchases of *existing* durable physical assets are available on the basis of partial coverage only. There are several reasons for the partial coverage: (*a*) The data cover selected industries only, including manufacturing, mining, quarrying and oil wells, certain public utilities and the construction industry. In terms of 1947 total new investment in durable physical assets these groups comprise about 37 per cent. (*b*) The data are based on reports by establishments, and not by companies. As a result many purchases of existing property transacted by head offices are not reported by field establishments. This is a disadvantage as far as the Canadian total is concerned, but it does not necessarily invalidate the approximate character of the regional distribution of the purchases. (*c*) Some establishments did not report purchases of existing fixed property and

used machinery and equipment. However, allowance for non-respondents was made in the data shown below to assure comparability in the regional distribution of expenditures reported.

TABLE II

PURCHASES OF LAND, USED BUILDINGS AND EQUIPMENT BY SELECTED BUSINESS ENTERPRISES IN CANADA, 1947

Region	Amount $ Mill	Per cent
Maritimes[1]	4.7	8.0
Quebec	15.7	26.7
Ontario	21.7	37.0
Prairies	8.8	15.1
British Columbia	7.7	13.2
Canada	58.6	100.0

[1]Including an allowance for Newfoundland.

(3) Number and amount of mortgage loans approved on existing non-farm property, by lending institutions in Canada, 1947 to 1949 (see Table III below). These data are from annual issues of *Mortgage Lending in Canada*, for the years 1947 to 1949. Since new mortgages on existing property are frequently taken out in conjunction with sales of those properties, such data are useful indicators of the direction in which sales are moving.

Estimates of Value of Real Estate Transfers Registered in 1947-1949. Such estimates were necessary for all provinces except Ontario, where original data were available. For the Maritimes, Quebec and the Prairies the estimates for 1947 were arrived at by applying the proportions shown in Table II to the value of real estate transfers registered available for Ontario. A different method was used for British Columbia. Here the value of real estate transfers was available for 1948. This figure was adjusted to its 1947 level by use of the factor of change indicated by mortgage loans approved on existing non-farm property shown in Table III. This method yielded a total of $190 million for British Columbia. As a check the estimating method used for the Maritimes, Quebec and Prairies was applied also to British Columbia, yielding a value figure of $188 million, indicating a variation between the two methods of estimating of 1 per cent. Value figures for Ontario and British Columbia for 1948 and 1949 were those reported by Registry Offices. For the Maritimes, Quebec and the Prairies values of real

TABLE III

NUMBER AND AMOUNT OF MORTGAGE LOANS APPROVED ON EXISTING NON-FARM PROPERTY BY LENDING INSTITUTION, CANADA, 1947-1949
(Amount in Millions of Dollars)

Province	1947		1948		1949		Per cent Change			
							1947–1948		1948–1949	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Prince Edward Island	81	.4	55	.2	67	.3	−32.1	−48.7	+21.8	+67.6
Nova Scotia	3,556	11.2	3,869	11.9	3,265	9.8	+ 8.8	+58.2	−15.6	−17.7
New Brunswick	533	2.3	653	2.9	564	2.5	+22.5	+24.7	−13.6	−15.1
Maritimes	4,170	13.9	4,577	15.0	3,896	12.6	+ 9.7	+ 7.5	−14.9	−16.1
Quebec	1,949	25.6	2,135	29.4	1,811	28.8	+ 9.5	+15.0	−15.2	− 2.1
Ontario	10,791	57.5	12,087	66.1	11,859	62.6	+12.0	+15.0	−18.9	− 5.4
Manitoba	2,035	8.7	2,009	9.0	1,946	9.2	− 1.3	+ 3.7	− 3.1	+ 1.9
Saskatchewan	419	1.2	440	1.5	458	1.6	+ 5.0	+19.4	+ 4.1	+11.1
Alberta	1,482	5.9	1,663	6.6	1,653	7.8	+12.2	+13.2	− .01	+17.5
Prairies	3,936	15.8	4,112	17.1	4,057	18.6	+ 4.5	+ 8.5	− 1.3	+ 8.7
British Columbia	3,278	13.1	3,589	16.3	3,504	14.9	+ 9.5	+24.8	− 2.4	− 8.8
Canada[1]	24,124	125.9	26,500	143.9	25,127	137.5	+ 9.8	+14.4	− 5.1	− 4.5

[1]Excluding Newfoundland.

estate transfers were estimated on the basis of the rate of change in the amounts of mortgage loans approved by lending institutions on existing non-farm property as shown in Table III.

As a check the same method was used for Ontario, yielding a total value of real estate transfers for this province of $607 million for 1948. This compares with the value of real estate transfers as reported amounting to $592 million, a difference of 2.5 per cent between the estimated and reported total.

Estimates of the Number of Real Estate Transfers Registered in 1947-1949. Original data were available only for Ontario, Quebec and Manitoba for 1947-1949. Estimates were therefore necessary for the Maritimes, two of the three Prairie Provinces, and British Columbia. For British Columbia 1948 and 1949 data were available. For 1947 the same estimating method was used for the number of real estate transfers as was used in estimating the value of real estate transfers in that province. For the Maritimes, excluding Newfoundland, the number of real estate transfers were given for 1949. An allowance was first made for Newfoundland by applying a per thousand population registration rate for the three Maritime provinces to the population of Newfoundland.[1] Total registrations for the four Maritime provinces were then projected back to 1947 and 1948 by use of the trend of the number of mortgage loans approved by lending institutions on existing non-farm property as shown in Table III.

For the Prairies the number of real estate transfers were given for 1949 for Manitoba and Alberta. Transfers for Saskatchewan were estimated for 1949 by applying the per thousand population registration rate of Manitoba to Saskatchewan's population. This was done in preference to using a combined Manitoba and Alberta average since the level of real estate activity in Alberta was particularly buoyant in 1949 because of the rapid rate of oil development, an experience not shared by Saskatchewan. The total number of registrations for Saskatchewan and Alberta for 1949 was then projected back to 1947-1948 in the same manner as had been done for the Maritime provinces. The resulting figures were then added to real estate transfers reported for Manitoba, to yield the Prairie total for the three years covered in Table 24.

To test the validity of the trend as shown in Table III an estimate was prepared of real estate transfers in 1948 for Ontario and Quebec, by applying to the 1947 base the rate of change as indicated by Table III.

[1]This method of estimating is likely to overstate somewhat the actual number and value of real estate transfers *registered*, although it may come closer to the actual volume and value of real estate transactions *undertaken*. There is only one registry office in Newfoundland, and that is St. John's. This office theoretically services the entire province, but as a matter of practice changes of titles to property in Newfoundland are rarely registered except for real estate in St. John's, Grand Falls and Corner Brook.

The estimated figures were 10 per cent and 7 per cent respectively higher than the number of transactions reported.

TABLE 25. NUMBER AND VALUE OF TRANSFERS OF REAL ESTATE, ONTARIO AND QUEBEC, 1921-1949

Number of Real Estate Transfers Registered, Ontario.

The data for 1934-1949 are a special compilation[1] based on returns, made to the Inspector of Legal Offices, Attorney General's Department, Ontario Government, by local registrars and masters of titles, covering 66 registry and 16 land titles offices, or a total of 82, in the province in 1949.

For the years 1925 to 1933 the figures represent estimates based on (*a*) actual count of the number of real estate transfer deeds in the Registry Offices of Toronto and York, representing a coverage of 21 per cent in 1926 and 16 per cent in 1934 in terms of numbers of real estate transfer deeds registered in Ontario as a whole, (*b*) an actual count of the number of real estate transfer deeds registered in all Land Titles Offices, representing a coverage of 10 per cent in 1926 and 13 per cent in 1934, and (*c*) an actual count of the total number of instruments (including others than real estate transfer deeds, e.g. mortgages, liens, etc.) registered in all other Registry Offices not covered in (*a*).

For the period 1921 to 1924 the figures are the actual number of real estate transfer deeds for all Registry Offices obtained from the published annual reports of the Inspector of Legal Offices of the Ontario Government.[2] To these actual figures was added an estimate of real estate transfer deeds registered in Land Titles Offices to make the series comparable with data for succeeding years. The estimate was based on the assumption, borne out by tests for some of the succeeding years, that real estate transfer deeds in Land Titles Offices followed reasonably closely the trend of registrations in the County of York. The latter data were obtained from the York County Registry Office and were used to run back to 1921 the Land Titles Office registry deed series. The margin of error for the whole series, that is, both Registry and Land Titles Offices, for the years 1921 to 1924 is believed to be small, since the weight of the number of real estate transfer deeds registered in Land Titles Offices comprised only a small fraction of the total, as indicated previously.

The number of real estate transfers for the period 1921 to 1949

[1]Mrs. H. L. Buckley of Saskatoon, Saskatchewan, was in charge of the survey of transfers of real estate in Ontario for the period 1921-1948. Data for 1949 were compiled by Central Mortgage and Housing Corporation. Valuable cooperation in conducting the survey was received from the Inspector of Legal Offices, Attorney General's Department, Ontario Government and the registrars of the Toronto and York registry divisions and the Toronto Land Titles Office.

[2]The publication of this series was discontinued after 1924.

includes the number of actual sales and nominal sales as well as transfers of property without involving any consideration (see pp. 368-369).

Value of Real Estate Transfers, Ontario. These data are estimates based for the period 1928 to 1949 on the amounts of the land transfer tax collected, as obtained from the records of the Controller of Revenue, Department of the Treasury, Ontario Government. These records provide unpublished monthly information on the taxes collected on real estate transfers registered in all Registry and Land Titles Offices which cover the whole province. For the period under review the tax is .2 per cent of the considerations involved for all sales involving a transaction of $100 or more. The value of real estate transfers was therefore arrived at by multiplying the amount of tax by 500. For the period 1922 to 1927 the data are estimates based on transfer tax collected, as published annually in the provincial Public Accounts. The figures obtained were for the fiscal years ending October 31, and adjustments were made to bring them to a calendar year basis to assure comparability with the series for the succeeding years. This adjustment for the years 1925-1927 was based on monthly data of taxes collected for real estate transfers in Toronto and York County Registry Offices and Toronto Land Titles Office, which for 1927 represent a coverage of 36 per cent of the total value indicated for the province as a whole. For the years 1922-1924 the adjustment was based on monthly data of taxes collected for real estate transfers in York County Registry Office, which for 1923 represent a coverage of about 9 per cent. For 1921 information was available for seven months only. The estimate for the year is based on raising the seven months total on the basis of the seasonal pattern available for Greater Toronto for 1921. As a check the 1921 value total was arrived at by blowing up the Greater Toronto value of real estate sales of 1921 by the 1922 ratio of Greater Toronto to the province as a whole, 42 per cent. The resulting figure of $222 million was quite close to the estimate used above for 1921 of $224 million.

The series for the whole period covers the value of considerations involved in bona fide sales for $100 or more made to private individuals, corporations and institutions. Not included is the value of property which is transfer tax exempt, such as purchases of real estate made by the Crown through Federal and provincial governments. Included however, are municipal transactions and purchases by certain publicly owned corporations which are predominantly engaged in business transactions, e.g., Canadian National Railways and Ontario Hydro.

The series on the value of real estate transfers is not quite comparable with the series on the number of real estate transfers registered, since the latter provides a wider coverage, including actual sales of real estate involving less than $100 and nominal sales with a consideration of $1 or

similar nominal amount, as well as other means of transfer not involving any consideration, e.g. a will or a trust deed. Several spot checks taken for different periods suggest that between 5 and 12 per cent of the number of real estate transfer deeds registered are not included in the value series.

Number of Real Estate Transfer Deeds Registered, Quebec. These data include the number of all changes of ownership of real estate brought about by sale, gift, will, or any other document transferring immovable property. Data for 1922 to 1947 were obtained from *Statistical Year Book*, Quebec, 1942-43, p. 195; 1944, p. 246; 1945-46, pp. 253-254; 1947, p. 266; 1948, p. 258. Data for 1948 and 1949 were obtained by courtesy of the Provincial Statistician, Bureau of Statistics, Province of Quebec.

TABLE 26. NUMBER AND VALUE OF REAL ESTATE TRANSFERS AND POPULATION, ONTARIO AND GREATER TORONTO, SELECTED YEARS, 1921-1949

Population data for Ontario for the years 1921, 1931 and 1941 are from *Census of Canada*, 1941, Vol. II, p. 3. The figures for 1946-1949 are from *Population of Canada by Provinces, 1921-1949.* Data for Greater Toronto for the years 1921, 1931 and 1941 are from *Census of Canada 1941*, Vol. II, pp. 120 and 121, obtained by the addition of the population figures for the fifteen municipalities which are served by the Toronto Registry Office, the York East and West Registry Office and the Toronto and York Land Titles Office. The variation between the number of residents in this area and that defined as Metropolitan Toronto in the Census of 1941 is small, 2 per cent. Data for 1946, 1947, 1948 and 1949 are estimates arrived at by projecting the 1941 Census figure on the basis of local assessment population figures available in the *Annual Report of the Assessment Commissioner for the City of Toronto, 1941*, and provided by the Ontario Regional Office of Central Mortgage and Housing Corporation. The figure for the population of Greater Toronto as shown in this table differs from that shown in Table 38. The latter figure excludes the village and township of Markham and certain rural parts of Etobicoke and Scarborough Townships, which are served by the Registry and Land Titles Offices covered by the data in Table 26. For source of data on real estate transfers see note to Table 25.

TABLE 27. PER THOUSAND POPULATION COMPARISON OF THE NUMBER AND VALUE OF REAL ESTATE TRANSFERS WITH DWELLINGS COMPLETED AND BUSINESS CONSTRUCTION, ONTARIO, QUEBEC AND BRITISH COLUMBIA, 1949

Population data are from *Population of Canada by Provinces, 1921-1949.*

Number and Value of Real Estate Transfers. Data for Ontario, Quebec and British Columbia are from Table 24.

Number of Dwellings Completed. These data include conversions and are from *Housing Bulletin*, Nos. 12 and 24.

Value of Business Construction. These data cover primary, construction and manufacturing industries, public utilities, trade finance, commercial and service groups and electric railways. The data are from *Private and Public Investment in Canada, Outlook 1950*, p. 6.

TABLE 28. NUMBER AND VALUE OF REAL ESTATE TRANSFERS, BY TYPE OF AREA AND ON A PER THOUSAND POPULATION BASIS, ONTARIO, 1931 AND 1941

Population. Special compilation based on county population data available from the *Census of Canada*, 1941, Vol. II, pp. 94-121.

Real Estate Transfers. Special compilation based on the records described in the notes to Table 25.

TABLES 29 to 33. INTENSIVE SURVEY OF REAL ESTATE TRANSFERS, CARLETON AND HULL REGISTRY DIVISIONS, 1947 AND 1948

Special compilation based on records available in the Carleton (Ontario) and Hull (Quebec) registry divisions for the period June, 1947 to May, 1948, supplemented where necessary by additional data from the assessment records of the respective municipal offices.

TABLE 34. NUMBER OF OCCUPIED DWELLINGS, BY REGION, CANADA, SELECTED YEARS, 1921-1949

Data on occupied dwellings were available by provinces from decennial censuses from 1921 to 1941 (see 1941 Census, Vol. V, p. 942). Tabulations for 1921 included an error caused by the classification of some apartment buildings as single dwelling units. A correction factor was obtained for 1921 by the method described on pp. 378-379. This correction factor, applicable for Canada as a whole, was applied to the provincial distribution of the number of occupied dwellings. The estimate for 1948 was arrived at as follows. The total of occupied dwellings for all regions was obtained as per Table 70 for 1941 and 1948. The provincial distribution of housing completions in 1948 was obtained from *Housing Bulletin*, No. 12. The provincial distribution of housing completions for 1947 was obtained from *Mortgage Lending in Canada, 1948*. The increase of total occupied dwellings 1941-1948 was distributed by region according to the respective regional proportions of dwellings completed in 1947 and 1948. To obtain the 1949 estimates the net increase in occupied dwellings 1948-1949 was distributed according to the respective regional proportions of 1949 completions as obtained from *Housing Bulletin*, No. 24. Partial data obtained from *Supplement to Housing*

Statistics, 1945 and 1946, suggested that the regional breakdown of completions for the period 1945 and 1946 did not materially differ from the distribution in 1947 and 1948.

TABLE 35. AVERAGE ANNUAL NUMBER OF DWELLINGS COMPLETED, BY REGION, CANADA, 1921-1949

The data represent average annual completions by province for the decades June, 1921 to June, 1931 and June, 1931 to June, 1941, the period June, 1941 to December, 1946, and the calendar years 1947, 1948 and 1949.

The number of occupied dwellings by provinces for the years 1921, 1931 and 1941 was given in Table 34. The next step was to estimate vacant dwellings. National vacancy rates of 2.8 per cent, 4.6 per cent and 2.4 per cent for the three census years, estimated below (see pp. 380-381), were applied. While it is acknowledged that vacancy rates may vary between regions, the variations are small and do not materially affect the overall estimates. Adding vacant dwellings to occupied dwellings yielded available dwellings. Subtracting the 1921 figure from its 1931 counterpart yielded the net increase of dwellings for each province during the 'twenties. A similar procedure was applied for the 'thirties. The next step was to estimate the number of dwellings destroyed, demolished and abandoned. The national rate for non-farm dwellings was 2.7 per cent for the 'twenties and 1.7 per cent for the 'thirties (see pp. 382-383). An allowance was made for a higher farm rate of destroyed, demolished and abandoned dwellings, which raised the national rate per year to approximately 3 per cent for both decades. This ratio was applied to the provincial data of net increase of dwellings. Adding destroyed, demolished and abandoned dwellings to the net increase yielded the gross increase in terms of dwelling units added by provinces for the period 1921 to 1931 and 1931 to 1941. These figures divided by 10 yield the annual average as shown in Table 35.

Subtracting the number of available dwellings for Canada (that is, excluding Newfoundland, Yukon and Northwest Territories) in June, 1941 (Census date) from the estimated number at the end of 1946 as given in Table 69 yielded the net increase in the number of dwellings for a period of five years and seven months. To this was added an allowance for dwellings destroyed, demolished and abandoned (see Table 69). The gross increase in total dwellings for the period was then multiplied by the ratio of regional to total dwellings completed in 1947 and 1948, to arrive at the number of units completed in each of the five regions. The regional totals were then divided by 5.66 (allowing for the seasonal pattern of house building) to arrive at the annual average for the period June, 1941 to December, 1946.

The figures for 1948 and 1949 are from *Housing Bulletin*, Nos. 12 and 24. The provincial distribution as used here for 1947 is the one published in *Mortgage Lending in Canada, 1948*, pp. 72-5.

TABLE 36. POPULATION BY PROVINCE, CANADA, SELECTED YEARS, 1921-1949

Population data are as of June for the years 1921, 1931 and 1941 and as at the end of December for 1948 and 1949. These dates have been chosen so as to obtain population data comparable to those on the number of occupied dwellings as shown in Table 34.

Population data by province for the first three years are from *Population of Canada by Provinces, 1921-1949*. The figures for 1948 and 1949 are estimated by the method outlined for Canada as a whole on pp. 435-437.

TABLE 37. DWELLINGS COMPLETED PER THOUSAND POPULATION, BY PROVINCE, CANADA, 1948 AND 1949

Population data are as of June 1, and are obtained from *Population of Canada by Provinces, 1921-1949*. Dwellings completed by province for 1948 and 1949 are from *Housing Bulletin*, Nos. 12 and 24.

TABLE 38. POPULATION AND DWELLINGS COMPLETED, BY CITY AND AREA, CANADA, 1949

Population data for metropolitan centres and other major cities with population of 30,000 and over and between 5,000 and 30,000 are based on municipal counts and are from the *Annual Report 1949* of Central Mortgage and Housing Corporation, pp. 4 and 55. The estimate of population for Canada as a whole is from Table 37 and for farm population from Table 11. Non-farm population was arrived at by subtracting farm population from total. Data are for Canada excluding Newfoundland, Yukon and Northwest Territories.

Dwellings completed excluding conversions for metropolitan centres and other major cities are from *Housing Bulletin*, No. 24. To these figures were added estimates of conversions as obtained by a special survey conducted by the field staff of Central Mortgage and Housing Corporation. The remaining data on dwellings completed by area are also from *Housing Bulletin*, No. 24. The definition of "urban" as used in this Table differs from the definition of urban used in Table 3 in Section 2 in that it includes rural areas forming part of metropolitan centres. In Table 3 rural areas forming part of metropolitan centres are included under rural since the series shown in this Table and in the Tables in Section 9 follow the census definition of "urban" and "rural." The division of permanent units into single and multiple dwellings was obtained from a special compilation prepared by courtesy of the Do-

minion Bureau of Statistics. The figures shown include an allowance for conversions based on a separate Central Mortgage and Housing Corporation survey.

TABLE 39. NUMBER OF DWELLINGS COMPLETED, SINGLE AND MULTIPLE TYPE, AND BUILT FOR OWNERSHIP, BY PROVINCE, CANADA, 1949

Number of single unit completions are from *Housing Bulletin*, No. 24. Total completions are from Table 37. Dwelling units built for ownership are a percentage of total based on estimates shown in *Mortgage Lending in Canada, 1949*, pp. 66-7.

TABLE 40. DWELLINGS COMPLETED AND INVESTMENT IN MANUFACTURING PER THOUSAND POPULATION, BY PROVINCE, CANADA, 1947-1949

Dwellings completed by province per thousand population for 1948 and 1949 are those shown in Table 37. Dwellings completed for 1947 by province are from *Mortgage Lending in Canada, 1948*, p. 82. Investment in manufacturing per thousand population by province is based on data from *Private and Public Investment in Canada, Outlook, 1950*, p. 6. Population figures are from Table 37.

TABLE 41. DWELLINGS COMPLETED AND INVESTMENT IN MANUFACTURING, PER THOUSAND POPULATION, FOR TWELVE METROPOLITAN CENTRES, CANADA, 1947-1949

Dwellings completed for metropolitan centres for the years 1947 to 1949 are from the same source as the data shown in Table 38. Investment in manufacturing for metropolitan centres is from the same source as the provincial data shown in Table 40. Population figures used for metropolitan centres are from the *Annual Report, 1947* and *1949*, Central Mortgage and Housing Corporation.

TABLE 42. OCCUPIED DWELLINGS, POPULATION, INDUSTRIAL EMPLOYMENT, CAR LOADINGS AND PERSONAL INCOME PER CAPITA IN CONSTANT (1949) DOLLARS, CANADA, 1929 AND 1949

The number of occupied dwellings for 1949 is from Table 34. The estimates for 1929 are based on the data available for 1931 as shown in Table 34. The total number of occupied dwellings in Canada as a whole for 1929, as shown in Table 60, was distributed by region by using the distribution available for 1931. To check this estimate a trend interpolation of 1921 to 1931 by regions was attempted. This method yielded similar results.

Population data for 1929 and 1949 on a regional basis are from *Population of Canada by Provinces, 1921-1949*.

Data on industrial employment for 1949 were from monthly issues of *The Employment Situation Together with Payrolls*, Dominion Bureau of Statistics. The absolute figures for employment in industry for 1929 were arrived at by applying the employment indices available by provinces to the number of employed given for 1949. The indices are from monthly issues of *The Employment Situation*.

Data on car loadings are from *Monthly Traffic Reports of Railways in Canada*, Dominion Bureau of Statistics, for 1929 and 1949. Estimates of personal income by regions are preliminary and were prepared by Economic Research and Development Branch, Department of Trade and Commerce. These data in current dollars were adjusted to constant (1949) dollars by the cost of living index obtained from monthly issues of *Prices and Price Indexes*.

TABLE 43. PERSONS PER DWELLING BY REGION AND AREA, CANADA, SELECTED YEARS, 1921-1949

The number of dwellings by province refers to occupied dwellings as shown in Table 34. Population data for 1949 by provinces are from Table 36. Data on the number of occupied dwellings for 1949 by urban, rural non-farm and farm areas are from Table 4. Corresponding data for 1921, 1931 and 1941 are obtained in the same manner as the overall Canadian figures (see notes to Table 67 below). The area breakdown of population figures was available for the years 1931 and 1941 from decennial censuses (*Census 1941*, Vol. V, Table 4, and *Census 1931*, Vols. I and VIII). For 1921 only urban and rural population was given, but with the aid of data on the number of occupied farms and occupied rural dwellings for the years 1921, 1931 and 1941, it was possible to estimate the number of persons per occupied farm in 1921 and hence the farm population. The estimate of farm and non-farm population for 1949 is from Table 38.

TABLE 44. NUMBER OF FAMILIES WITHOUT HOMES OF THEIR OWN, BY REGION, CANADA, 1947 and 1948

The number of families without homes of their own for Canada as a whole for 1947, 1948 and 1949 is from Table 84 in Section 9. The regional distribution for 1947 and 1948 was based on special sample surveys undertaken by the Dominion Bureau of Statistics during the weeks ending March 31, 1947 and February 21, 1948. These surveys yielded regional estimates of the number of "sub-families," published in *Housing Bulletin*, No. 8, p. 9.

TABLE 45. POPULATION AND STOCK OF DWELLINGS, CANADA, 1921-1949

Population data are from Table 82 and represent year end estimates. Data on stock of dwellings are from Table 69.

TABLE 46. FAMILIES AND DWELLINGS, CANADA, 1921-1949
See notes to Tables 67 and 84.

TABLE 47. INDICATORS OF PRESSURE ON THE HOUSING MARKET, CANADA, 1921-1949
See notes to Tables 67 and 84. The net family formation series, adjusted for change in the birth rate, represents the basic net family formation series plus or minus one-quarter of the increase or decrease in the annual number of births from the previous year to the year covered.

TABLES 48-50. SAMPLE SURVEY OF THE FILTERING PROCESS 1947 AND 1949
These three tables summarize the results of special sample surveys of the type of accommodation vacated by 500 families moving into newly built housing accommodation provided by the Federal Government under the Veterans' Rental Housing program in 1947 and 1949. The surveys were conducted by Central Mortgage and Housing Corporation and covered 100 cases each in the following five cities: Montreal, Ottawa, Winnipeg, Calgary, Victoria. The surveys also covered the number of self-contained units vacated as a result of a chain of moves, and the reasons for moving.[1]

TABLE 51. RENT, CONSUMER EXPENDITURES AND PERSONAL DISPOSABLE INCOME, CANADA, SELECTED YEARS, 1929-1949
Data are by courtesy of the National Income Unit, Dominion Bureau of Statistics.

TABLES 52-55. SAMPLE SURVEY OF CAPITAL COSTS, INCOMES AND PERSONAL CHARACTERISTICS OF HOUSE PURCHASERS, 1949
These four tables summarize a special tabulation of house purchases financed under Sections 4 and 4B of the National Housing Act, 1944, in 1949. A total of 15,500 cases are involved, providing a fairly comprehensive cross-section of home purchases in 1949.

TABLES 56-57. SAMPLE SURVEY OF EQUITY REQUIREMENTS, 1949
This special survey of equity requirements of 1,406 single houses sold in 1949 and financed under the National Housing Act, 1944, was conducted by Central Mortgage and Housing Corporation, and the detailed results were published in *Mortgage Lending in Canada, 1949*. For a description of coverage and survey methods, see p. 87 of the above publication.

TABLE 58. CHANGE IN THE VOLUME OF RESIDENTIAL CONSTRUCTION ON A PER THOUSAND POPULATION BASIS, CANADA, 1929, 1948 AND 1949. See notes to Tables 67, 77 and 82.

[1]Mr. K. S. Clark and Mr. B. F. Attridge were in charge of the surveys for 1947 and 1949 respectively.

TABLE 59. POPULATION AND SELECTED COMPONENTS OF GROSS NATIONAL EXPENDITURE, CANADA, 1929, 1948 AND 1949

Data on investment in durable physical assets, personal expenditure on consumer goods and services and gross national expenditure, all in current dollars, were obtained from *National Accounts, Income and Expenditure, 1926-1947*, and *ibid., 1942-1949*, Dominion Bureau of Statistics, Ottawa, 1948 and 1950 respectively. Data on new business construction are from Table 61. Data on new residential construction, major improvements and alterations, and repair and maintenance are from Table 76.

Percentage increases, 1929-1949, were based on constant dollar estimates of new residential construction and major improvements from Table 77 and constant dollar estimates of residential repair and maintenance based on the same method of estimating used for the new construction series in constant dollars. Constant dollar estimates for new business construction, investment in durable physical assets, and gross national expenditure were obtained by courtesy of the Economic Research and Development Branch of the Department of Trade and Commerce, the preliminary estimates for gross national expenditure being based on separate price indexes for the different segments of the economy. Constant dollar estimates for personal consumer expenditures were based on the current dollar figures and the cost-of-living index (monthly issues of *Prices and Price Indexes*).

Data on population are from Table 22. Data on dwellings completed are from Table 67.

TABLE 60. CHANGE IN OUTPUT PER MAN-YEAR, CANADA, 1929, 1948 AND 1949

Employment and gross national product estimates in constant dollars by courtesy of Economic Research and Development Branch, Department of Trade and Commerce. Output per man-year was arrived at by dividing gross national product in constant dollars by the number of persons employed.

TABLE 61. NEW CONSTRUCTION, MAJOR IMPROVEMENTS AND ALTERATIONS AND REPAIR AND MAINTENANCE, BY TYPE OF ENTERPRISE, CANADA, 1948 AND 1949

Data are from *Private and Public Investment in Canada, Outlook 1950*, p. 6. Latest revisions are included.

TABLE 62. ROLE OF NEW RESIDENTIAL CONSTRUCTION AND MAJOR IMPROVEMENTS AND ALTERATIONS IN INVESTMENT, CANADA, 1948 AND 1949

Data on new residential construction, major improvements and alterations are from Table 76. Estimates of total new building con-

struction were obtained by courtesy of the Economic Research and Development Branch, Department of Trade and Commerce. Data on total new building and engineering construction are from Table 61. Data on total investment in durable physical assets are from *Private and Public Investment in Canada, Outlook 1950*, p. 6. Total domestic gross investment represents total investment in durable physical assets and net investment and inventories. Total gross investment represents total domestic gross investment and net foreign investment. Data on net foreign investment and on net investment and inventories were obtained from *National Accounts, Income and Expenditure, 1942-1949*, p. 9. The figures for gross home investment as per the National Accounts were obtained from the same source. These differ from the figures for domestic gross investment as they exclude Government expenditures on durable physical assets.

TABLE 63. ROLE OF NEW RESIDENTIAL CONSTRUCTION, MAJOR IMPROVEMENTS AND ALTERATIONS, AND REPAIR AND MAINTENANCE IN THE NATIONAL ECONOMY, CANADA, 1948 AND 1949

Data are from the same sources as the corresponding items excluding repair and maintenance shown in Table 62.

TABLE 64. RESIDENTIAL CONSTRUCTION AS A PROPORTION OF GROSS NATIONAL EXPENDITURE, CANADA, 1926-1949

Value of residential construction is from Table 76. Gross national expenditures are from *National Accounts, Income and Expenditure, 1926-1947*, and *ibid.*, 1942-1949.

TABLE 65. COMPONENTS OF GROSS NATIONAL EXPENDITURE, INCLUDING SEGMENTS COMPRISING RESIDENTIAL CONSTRUCTION, CANADA, 1948 AND 1949

Data on residential construction are from Table 76 and Appendix B with the Government component for repairs and maintenance and major improvements and alterations being obtained from the *Annual Report, 1948* and *1949*, Central Mortgage and Housing Corporation. Remaining data are from *National Accounts, Income and Expenditure, 1942-1949*. The residual error of estimate on p. 9 of the latter publication differs from that shown in this table because of recent revisions in housing data.

TABLE 66. INCOME EFFECT OF NEW HOUSE BUILDING, CANADA, 1948 AND 1949

Percentage distribution is based on material discussed under "Problems of Weighting" on p. 403 in the notes to Table 72 and additional data shown in Table XXII. Remaining data are from Table 77.

B.—Explanatory Notes to Tables 67-84

TABLE 67. Dwellings Completed, by Type of Structure and Area, Canada, 1921-1949

Census Material. The basic material for the period 1921 to 1944 were data from the decennial Censuses shown in Table IV below while data for 1945 to 1949 are based on actual counts. The definitions of dwellings and areas used were substantially the same in the three Censuses taken in 1921, 1931 and 1941. The resulting data are broadly comparable and require only minor adjustments to allow for changes in the enumerating techniques employed in the earlier Censuses. The quality of the Census data on dwellings and the adjustments made to assure a satisfactory degree of comparability are discussed below.[1]

TABLE IV

Number of Occupied Dwellings as of Census Dates, Actual Series
(Thousands of Units)

Census Date	Urban	Rural			Total
		Non-Farm	Farm	Sub-total	
1921	843	—[1]	—[1]	921	1,764
1931	1,212	—[1]	—[1]	1,015	2,227
1941	1,414	455	704	1,159	2,573

Source: Data for 1921 from *Census of Canada, 1921*, Vol. III, p. 4; data for 1931 from *Census of Canada, 1931*, Vol. V, pp. 942 and 943, adjusted for footnote 1 on p. 943 to assure comparability with 1921 and 1941 Census data; data for 1941 from *Census of Canada, 1941*, Vol. V, pp. 2 and 6.
[1]Breakdown not available.

Quality of 1921 Census Data. Data on the number of occupied dwellings for urban and rural areas separately are given in the 1921 Census. On examination it was found that Census enumerators did not make a clear distinction between buildings, that is separate structures, and dwellings, that is self-contained units used for residential purposes, several units of which may be contained in one structure. As a result, apartment buildings were reported as single dwellings in a number of cities in the 1921 Census. Comparison of the number of apartment units listed between 1921 and 1931 in different cities of over 7,500 population indicated an adjustment to be necessary for 47 cities. The method used was to apply the ratio of households to dwellings in 1931 to

[1]Mr. K. A. H. Buckley of the University of Saskatchewan assisted in the examination of census records and prepared the adjustments necessary to make census data on housing stock usable for the purpose of this study.

the number of households reported in 1921 for the 7 largest cities requiring adjustment. This increased the number of apartment dwelling units for these cities from a reported 19,954 to an estimated 76,739 and indicated an average of 3.9 dwelling units per apartment building. The latter average was applied to the 5,774 apartment buildings reported in the remaining 40 cities requiring adjustment to estimate a new unit figure of 22,519. Substitution of estimated units for apartments increased the total urban units in 1921 from 843,588 to an estimated 917,118.

Quality of 1931 Census Data. Survey methods of the 1931 Census were similar to the 1921 Census, but in preparing the data for publication the Census Branch of the Dominion Bureau of Statistics made adjustments in the number of apartment units reported based on a hand count for all large urban municipalities. There was therefore no further adjustment necessary for 1931.

Quality of 1941 Census Data. According to the Dominion Bureau of Statistics appropriate precautions were taken in the 1941 Census to yield the desired data separately for buildings and dwellings. No further revisions were therefore required on this count. The only adjustment necessary was an allowance for 24,814 occupied dwellings with "tenure not stated" (see footnote 2, p. 6, Census 1941, Vol. V) which were not included in the total number of dwellings as given on page 2, Census 1941, Vol. V. This adjustment, which raises the total occupied dwellings from 2,573,000 to 2,597,000 (rounded to fit constituent items) is shown in the *Canada Year Book, 1947*, p. 126. A breakdown of occupied dwellings with tenure not stated into urban, rural non-farm and farm, was obtained from original Census records and yields an adjusted series as shown below in Table V.

Census Data in Yukon and Northwest Territories. The figures shown in Table IV are exclusive of dwellings in Yukon and Northwest Territories (see pp. 433 ff).

Census Data on Non-Traditional Housing Units. The figures on occupied dwellings obtained in all three Censuses include a certain number of non-traditional housing units classified as dwellings in hotels, rooming-houses, institutions, camps, etc. In 1931 these numbered 21,772 and in 1941, 23,723 (information from Census work sheets). Since the change during this decade is small the inclusion of these non-traditional housing units has little effect on the increase in traditional dwellings in this period. No comparable data are available for 1921. But informed opinion holds that the change in the number of dwellings in this special category was comparatively small during the 'twenties and would not significantly affect the total change in the number of traditional housing units in this decade.

Subdivision of Rural Dwellings. Census data for occupied rural dwellings divided into farm and non-farm were available for 1941 only. In 1921 and 1931 occupied farm dwellings were estimated on the basis of information tabulated from occupied, vacant and non-resident farms. Rural non-farm dwellings were arrived at by subtracting farm dwellings from rural dwellings.

Adjusted Census Data. After adjusting as indicated above the basic data given in Table IV, a revised series of the number of occupied dwellings as shown in Table V was obtained.

TABLE V

NUMBER OF OCCUPIED DWELLINGS AS OF CENSUS DATES, ADJUSTED SERIES
(Thousands of Units)

Census Date	Urban	Rural			Total
		Non-Farm	Farm	Sub-Total	
1921	917	241	680	921	1,838
1931	1,212	315	700	1,015	2,227
1941	1,427	462	708	1,170	2,597

Urban Vacancy Rates, as of Census Dates. In order to arrive at the net change in the total number of dwelling units between Census dates, vacant dwelling units must be added to occupied units. The number of vacant dwellings was available from Census data for 1941 only. Vacancy rates for 1921 and 1931 were established on total available units for a sample of cities in Canada. A series of geometric averages of the vacancy rates in four major cities, for which annual data were available from municipal reports for the period under review (Toronto, Montreal, Winnipeg and Ottawa), was used as an indicator of national urban rates. The sample covered 31 per cent of the urban population in 1941. No population weighting was used since the two smaller cities covered were considered to be more representative of the balance than the two large ones (see p. 390).

Farm Vacancy Rates, as of Census Dates. For farm vacancies the 1941 rate was taken from the Decennial Census, the 1931 rate was estimated from information on vacant and abandoned farms in 1931 and 1941, and the 1921 rate was arbitrarily chosen assuming that farm vacancies would be lower in this year than in 1931 because of favourable conditions existing for agriculture after World War I.

Rural Non-Farm Vacancy Rates, as of Census Dates. Rural non-farm vacancy rates for 1941 were available from the Census. For 1921 and

1931 this rate was adjusted in line with changes in the urban vacancy rates.

Available Dwellings. Using vacancy rates established above, the number of vacant units was estimated. These were added to occupied dwellings separately for urban, rural non-farm and farm areas, as shown in Table V, to yield the total number of available dwellings (see Table VI). The net changes between Census benchmarks are shown in Table VII.

TABLE VI

TOTAL NUMBER OF AVAILABLE DWELLINGS AS OF CENSUS DATES
(Thousands of Units)

Census Date	Urban	Rural			Total
		Non-Farm	Farm	Sub-total	
1921	938	251	700	951	1,889
1931	1,262	340	728	1,068	2,330
1941	1,449	475	735	1,210	2,659

TABLE VII

NET INCREASES IN THE NUMBER OF AVAILABLE DWELLINGS FOR CENSUS PERIODS, PRELIMINARY SERIES
(Thousands of Units)

Census Period	Urban	Rural			Total
		Non-Farm	Farm	Sub-total	
1921-1931	324	89	28	117	441
1931-1941	187	135	7	142	329

Adjustment for Incorporations. Using increases of the number of dwelling units shown in Table VII to obtain the change in urban and rural units introduced a small bias because a number of rural localities acquired urban status between Census dates. This would result in an increase to urban units with a corresponding decrease to rural units. The decennial Census lists new incorporations with their population at the time of the following Census. To estimate the number of dwellings in existence at that time a population per dwelling factor obtained for Canada as a whole was applied to the number of residents in these newly incorporated localities. To obtain the number of dwellings in existence at the Census preceding incorporation, the rate of change of dwellings in

the decade for all Canada was applied to dwellings in existence in newly incorporated communities at the Census date following incorporation. This approach is an attempt to approximate changes which have occurred in newly incorporated communities. The possibility of a large margin of error cannot be excluded, but the segment affected is so small that even a large margin of error would have little effect on the overall urban-rural distribution, and no effect on the aggregate figure for non-farm areas. Adjustments of the data in Table VII for incorporations are shown in Table VIII.

TABLE VIII

NET INCREASE IN THE NUMBER OF AVAILABLE DWELLINGS FOR CENSUS PERIODS, ADJUSTED SERIES
(Thousands of Units)

Census Period	Urban	Rural			Total
		Non-Farm	Farm	Sub-total	
1921-1931	309	104	28	132	441
1931-1941	179	143	7	150	329

Urban Dwellings Destroyed and Demolished. The gross increase in dwellings is computed by adding to the increase in available dwellings the number of units destroyed and demolished for all areas and the number of units abandoned in rural non-farm and farm areas. Information on dwellings destroyed and demolished during each of the two decades, 1921-1931 and 1931-1941, and the ratio of these to the total number of dwellings in existence at the beginning of each of the two decades, were available for seven Canadian cities from municipal reports. These included Ottawa, Hamilton, Toronto, Montreal, Winnipeg, Vancouver and Quebec. The rates showed a marked consistency among the cities over a period of time. Therefore, the average rate for these cities was used as the urban rate for Canada (2.9 per cent for 1921-1931 and 1.8 per cent for 1931-1941) and by applying it to the total number of available units an estimate of destroyed and demolished dwellings for urban areas was arrived at.

Rural Non-Farm Dwellings Destroyed, Demolished and Abandoned. The same approach as for urban dwellings was used for non-farm rural dwellings, except that the ratio of destroyed, demolished and abandoned dwellings to the total number of dwellings at the beginning of each decade differed. For rural non-farm dwellings a ratio of 2 per cent was chosen for the period 1931-1941. This ratio was estimated to be slightly higher than the corresponding ratio of 1.8 per cent for urban dwellings, in line

with the practice of fire insurance companies to charge a moderately higher premium rate for rural non-farm properties than for urban properties. The same ratio of 2 per cent was used for the period 1921-1931. The higher ratio of 2.9 per cent for urban dwellings in this period is reconcilable with a lower ratio for rural non-farm areas because of the large number of demolitions that occurred in the downtown districts of older urban centres in the 'twenties, when for the most part favourable economic conditions prevailed and the volume of building activity was high.

Farm Dwellings Destroyed, Demolished and Abandoned. The number of farm dwellings destroyed and demolished was estimated on the basis of the number of farm fires reported to the Federal Government Fire Commissioner in Ottawa. The figures obtained were adjusted to fires on farm dwellings by using a ratio (40 per cent) of residential fires to total fires on farms obtained from a special sample survey conducted by the Dominion Bureau of Statistics in 1946 (unpublished). The number of abandoned farm dwellings was estimated on a provincial basis to allow for variations in settlement methods and inter- and intra-regional migration of the agricultural population. Some of the provinces showed declines in the number of farms during Census periods. It was assumed that where such declines occurred this would be indicative of abandoned farm dwellings. Allowance was made for a decrease of 4,000 in the number of Prairie farms occupied from 1936 to 1941 and also for changes in vacant farms, as estimated for Census dates. This approach, taken by itself, would understate somewhat the number of farm dwellings abandoned because farms might be abandoned also in those provinces which showed an overall increase in the number of farms between Census periods. Against this there are two main offsetting considerations: (*a*) that some of the abandoned farms will not have had farm dwellings on them, and (*b*) that some of the dwellings on abandoned farms may have been destroyed by fire or other causes, in which case an allowance for them would have been made in the estimates of the number of destroyed and demolished dwellings mentioned above. In the absence of further information on this subject the estimate of abandoned farm dwellings used here remains an approximation.

Gross Increase of Available Dwellings. By adding the estimated number of destroyed, demolished and abandoned dwellings to the net increase of dwellings separately for urban, rural non-farm and farm, the gross increase in the number of available dwellings as between Census periods is arrived at as shown in Table IX.

Distribution of Gross Change in Dwellings, Urban and Rural Non-Farm. An index of domestic disappearance of building materials primarily or largely used in new residential construction formed the basis for dis-

TABLE IX

GROSS INCREASE IN THE NUMBER OF AVAILABLE DWELLING UNITS FOR CENSUS PERIODS
(Thousands of Units)

Census Period	Urban	Rural			Total
		Non-Farm	Farm	Sub-total	
1921-1931	336	109	54	163	499
1931-1941	201	150	48	198	399

tributing the gross increase in urban and rural non-farm dwellings for the years 1921-1941. Using a similar index the resulting annual series was then linked with the estimates for the years 1945-1949 which were based on annual surveys of housing completions. Insofar as the building material index included items which would be required in non-residential building, engineering construction and repair and maintenance construction, the trend of house building is influenced somewhat by the behaviour pattern of other types of construction. But available evidence brought out in part in the test series discussed in Section 13 suggests that in the pre-war period the pattern of fluctuations of new residential construction appears to have varied only a little from other types of new building construction. The weight of materials also going into engineering construction was so small as to affect little the trend shown. Special care was taken for the years 1940-1944 so as to eliminate the influence of building materials which were used primarily in war construction (see p. 386). There still remains the influence of building materials going into repair and maintenance construction. Expenditures of this type seem to fluctuate less than new construction outlay. Insofar as the building material index used is weighted by materials going into repair and maintenance construction—the weight of this component is believed to be small—it would have the effect of reducing somewhat the fluctuations of new residential construction. The technique used here must therefore allow for a small error in the amplitude of fluctuations. For reasons given on pp. 351 ff., the method was considered preferable to one of estimating new residential construction on the basis of building *intentions* as shown by contracts awarded or building permits issued in selected cities.

The series of domestic disappearance of building materials was computed from annual sales figures, adjusted for exports and imports where these appeared significant. An exception was made in the case of lumber, where no sales data were available and production figures had to

be substituted. This introduced the possibility of a bias caused by sudden changes of the volume of lumber inventories held at the producer level. Some check of the significance of such a bias was made, as indicated later, and the weight of lumber in the index was reduced in order to cut down the extent of a variation from the basic trend that might be introduced by sudden inventory accumulation or decline. Window glass is one of the few important building materials for which residential construction depends almost fully on imports. These imports usually precede the sale of window glass for residential purposes by several months. Accordingly a monthly series of window glass imported, lagged by three months, was used. In all cases volume data were used to avoid the problem of deflating value series and of introducing errors caused by unrepresentative price series.

Reasons for Sub-dividing Trend. The series for 1921 to 1949 was broken into three periods in order to facilitate its application to data from the decennial Censuses and to establish a variable component system which appeared representative of building materials going into residential construction during the different periods. Three sub-divisions of the period under review were chosen: (*a*) June, 1921 to June, 1931; (*b*) June, 1931 to December 31, 1939; and (*c*) January 1, 1940 to December 31, 1949. Available building material data were examined for each period to determine those that appeared to be most indicative of the level of new residential construction. Where a series was not complete or where an unevenly fluctuating domestic disappearance seemed to denote changes in the uses of a material the item was excluded. All materials were weighted evenly. This was done in the belief that the number of furnaces or square feet of window glass used in Canada would give as good an indication of the number of housing units constructed as domestic disappearance of such basic materials as lumber or cement. It was thought that this would yield a more representative index than weights based on the value of total sales or value of quantities going into a house would, because it provided for a heavier weighting of items used principally in residential construction.

Unit Distribution, 1921-1930. For the period June 1921 to June 1931 the materials used were brick, nails, glass, cement, lumber, paint, sanitary ware, and furnaces. An index was computed for each type of material using the year 1925 as base. These indices were then combined to an average index which was used as a trend in distributing the gross increase in the number of non-farm dwellings as established in Table IX. To allow for the linking of Census data it was assumed that each decennial Census would divide construction for that year in the ratio of one to two. Since Censuses are usually taken in June of the year this ratio approximates the seasonal pattern of housing completions.

Unit Distribution, 1931-1939. For the period June, 1931 to December 31, 1939, the materials used were brick, nails, glass, cement, lumber, furnaces, sanitary ware, structural tile, steel pipe, and soil pipe. From the units shown in Table IX were subtracted those estimated as constructed in 1940 and the first half of 1941, as established below. The balance was distributed according to the average index computed from the materials chosen for the period.

Unit Distribution, 1940-1949. A new series was used for the period starting January 1, 1940 because it seemed apparent that a heavy proportion of some of the materials listed above were being used, either directly or indirectly, for war construction purposes. Therefore, a new series was computed from those items which would continue to be used primarily in housing construction. The materials so chosen included furnaces, brick, structural tile, cast iron soil pipe, bathtubs, hot water tanks and gypsum plaster. The year 1947 was used as a base with the Dominion Bureau of Statistics' estimates of the number of dwellings constructed providing a bench mark. These estimates were projected backward to 1940 on the basis of an average material index comprising the seven above-mentioned items. The behaviour of this index was checked as against estimated completion of housing units in 1945 and 1946 as reported by the Dominion Bureau of Statistics. The variations between the two series were 6 and 1 per cent respectively. However, for the years 1945 to 1949 the number of housing completions as reported by the Dominion Bureau of Statistics were used in preference to the interpolated data obtained. The close relationship between the two sets of data in the years they overlap gave added assurance of the reasonableness of the interpolated series (see also Section 13). The resulting estimates yield a total stock of dwellings as of the end of December, 1947 of 2,973,000 units. *Housing Bulletin* No. 8, includes the results of a sample survey of 1 per cent coverage, giving an estimate of the number of dwelling units in existence in Canada in February, 1948 as 3,179,000. The main reason for the difference between this figure and the estimate presented in this report is in the definitions used. A dwelling unit was defined in the sample survey as a place occupied by a household, i.e. a group of people having common housekeeping arrangements. The resulting data reflect more closely what has been defined as a household in the Census of 1941, while this report uses the definition of a dwelling as given in the 1941 Census.

Division of Yearly Distribution of Non-Farm Dwellings Constructed. The percentage distribution of newly built non-farm dwellings into urban and rural non-farm is given for the census periods 1921-1931 and 1931-1941 in Table X. Additional information is available for the calendar years 1945 to 1949 from the housing statistics reports issued by the

Dominion Bureau of Statistics. Available information is summarized in Table XI below, with an estimate of a non-farm breakdown added for the years 1945 to 1949.

TABLE X

GROSS INCREASE OF DWELLINGS, PERCENTAGE DISTRIBUTION, BY AREA

Period	Urban	Rural	Total	Urban	Rural Non-Farm	Non-Farm
Census Period						
1921-1931	67.3	32.7	100	75.5	24.5	100
1931-1941	50.4	49.6	100	57.3	42.7	100
Calendar Year						
1945	62.1	37.9	100	67.1	32.9[1]	100
1946	61.4	38.6	100	65.4	34.6[1]	100
1947	64.2	35.8	100	67.6	32.4[1]	100
1948	64.9	35.1	100	68.3	31.7	100
1949	64.2	35.8	100	68.1	31.9	100

[1]To obtain this breakdown farm units were estimated first (see p. 388) and then deducted from rural to yield rural non-farm dwellings.

In order to arrive at a reasonable interpolation of the percentage distribution of urban and rural non-farm dwellings added during inter-censal periods, and to link these series with more recent figures, assumptions must be made about the behaviour of the distribution within given periods. The following assumptions were made: (*a*) Because the urban incorporations were heavy during the 'twenties and disposable income was rising rapidly, it was assumed that the percentage of urban to total non-farm units constructed would increase until 1929 and then drop sharply during the depression, when a larger proportion of the smaller volume of housing construction would tend to take place in suburban areas where land was cheaper and taxes were lighter. The assumption is supported by the relatively low urban percentage for the decade 1931-1941 shown in Table IX. Consequently, the urban peak was assumed to be 79 per cent of total non-farm in 1929, 3.5 per cent above the average for the decade. A gradually decreasing urban rate was projected back to 1921 on a straight-line trend and a rapidly declining rate was projected forward to 1933. From 1934 to 1938 the rate was still decreased but on a gradually declining slope, assuming that with the volume of housing construction rising the rate would tend to become more stable. (*b*) Since the percentage of urban units constructed was high in the years 1945 to 1949 it seemed likely that urban migration during the war had reversed the trend. Accordingly, it was assumed that the ratio

reached a low point in 1938, commencing to rise in 1939, with this trend continuing until 1945 to 1949, the first calendar years for which actual information on the urban proportion was available. The percentage distribution obtained in the above manner was applied to the number of dwellings constructed annually to yield a breakdown of urban and rural non-farm units.

Yearly Distribution of Farm Dwellings Constructed. For reasons similar to those indicated on p. 387 the proportion of farm to non-farm units constructed was assumed to follow the same trend as that of rural non-farm to total non-farm, i.e. a straight-line decreasing percentage from 1921 to 1929 and an increasing proportion to 1933, with a minor decrease to 1939. Total housing construction rose rapidly in the first two war years. The bulk of this increase took place in urban and non-farm areas, with little change in farm areas, because of the flow of farm population to war jobs in urban centres. Accordingly the ratio of farm dwellings to total dwellings newly constructed was decreased notably for 1940 to 1941, held about the same for 1942 and 1943, when total residential construction was at low levels, and then decreased from 1944 to 1948, when increased house-building activity was again mainly concentrated in urban and rural non-farm areas. The ratio of 5.3 per cent for 1948 is based on *Housing Bulletin* No. 10, with a small adjustment as shown in *Mortgage Lending in Canada, 1948*, p. 83. The figure for 1949 is from *Housing Bulletin* No. 24.

The Prairie Census, 1946, included a question concerning the date of construction of urban and rural dwellings. The results obtained from this question suggested the possibility of an enumerating bias when compared with data from the 1941 Census and the annual and monthly completion data available since 1945. It was therefore not possible to integrate the information on the date of construction shown in the Prairie Census, 1946, with the estimates presented in this report.

New Structures. The estimates of newly constructed units in urban, rural non-farm and farm areas for the years 1921-1949 cover both new units in new structures and new units created by the conversion of existing structures. To arrive at a separate total of new units in new structures, dwellings resulting from conversions were estimated as described below and subtracted from yearly aggregates.

Converted Structures. Estimates of the actual number of dwelling units created by conversion in the years 1945-1947 were available from the housing statistics reports of the Dominion Bureau of Statistics. Actual conversions were also available yearly back to 1921 from municipal reports of eight cities (Montreal, Three Rivers, Sherbrooke, Shawinigan Falls, Westmount, Saskatoon, Edmonton and Victoria) covering 19 per cent of the urban population in 1941. The actual number of con-

versions in 1945 was projected back to 1921 according to the trend indicated by the total number of converted units created yearly in these eight cities. In computing the index to reflect the trend for this period, Montreal and the other cities were weighted in the ratio of 1 to 5, to allow for the fact that Montreal has many large old homes available for conversion and would not be representative of other parts of Canada. The weighting used for the other cities was based on the actual number of conversions for the year 1945 as reported in *Housing Statistics*, 1945. In view of the fact that little subdivision of existing homes into multiple

TABLE XI

DWELLINGS COMPLETED IN NEW STRUCTURES, METROPOLITAN AND OTHER URBAN AND RURAL NON-FARM, CANADA, 1921-1949
(Thousands of Units)

Year	Metropolitan and Other Urban	Rural Non-Farm	Total Non-Farm
1921	22.7	5.3	28.0
1922	28.8	6.3	35.1
1923	30.0	6.3	36.3
1924	25.5	5.4	30.9
1925	30.9	6.1	37.0
1926	39.3	7.2	46.5
1927	39.5	7.1	46.6
1928	45.1	7.6	52.7
1929	47.4	7.5	54.9
1930	37.5	7.4	44.9
1931	30.8	9.7	40.5
1932	16.8	6.8	23.6
1933	12.1	6.2	18.3
1934	14.5	8.4	22.9
1935	17.1	10.4	27.5
1936	20.2	12.7	32.9
1937	24.6	16.0	40.6
1938	20.9	14.8	35.7
1939	25.3	17.4	42.7
1940	26.2	17.2	43.4
1941	30.0	18.0	48.0
1942	24.7	13.8	38.5
1943	19.1	10.2	29.3
1944	23.2	9.8	33.0
1945	29.4	9.5	38.9
1946	44.3	11.9	56.2
1947	52.4	15.7	68.1
1948	58.0	14.0	72.0
1949	68.3	14.0	82.3

units is occurring in rural areas, all new units created through conversion were treated as urban dwellings. Data on conversions for 1948 and 1949 are based on direct field surveys by Central Mortgage and Housing Corporation.

Special Adjustment for Metropolitan Areas. Monthly housing bulletins issued by the Dominion Bureau of Statistics and other current housing publications use a definition of urban which combines the Census definition of urban with rural areas forming part of metropolitan centres[1] to take account of the predominantly urban character of these areas. Correspondingly, dwellings constructed in rural areas exclude housing completions in rural parts belonging to metropolitan centres. To provide a background series comparable with currently published statistics on housing completions, Table XI above provides housing completions excluding conversions in urban and rural non-farm areas, as defined in housing bulletins currently issued by the Dominion Bureau of Statistics, excluding Newfoundland, Yukon and Northwest Territories.

TABLE 68. DWELLINGS COMPLETED, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949

Distribution of Occupied Dwellings. The basic Census material adjusted as in Table V was distributed between single and multiple dwelling units by use of ratios obtained from the respective Censuses. For 1921 data shown on p. 26, Volume III, were used. For 1931 data shown on p. 965, Volume V, adjusted for footnote 1, were used. For 1941 data shown on p. 6, Volume V, were used. Two adjustments to the latter data were necessary to assure comparability. First, dwellings with kind of dwelling not stated had to be distributed between single and multiple units, and secondly, dwellings with type of occupancy not stated had also to be distributed in a similar manner. This was done by pro rating both items by using the ratio of single to multiple dwellings for all units for which this information was reported. The resulting data are shown in Table XII.

Distribution of Urban Vacancies. In order to arrive at a distribution in terms of available dwelling units it is necessary to add to the figures shown in Table XII a distributed allowance for vacant units. Vacancy rates for urban single units were established from data available for Toronto, Montreal, Ottawa and Winnipeg. The vacancy rates thus obtained were smaller than those for multiple dwellings because of the heavy concentration of multiple dwellings in the four sample cities. It seemed therefore that the vacancy rate for single dwellings obtained from

[1]Most of these rural areas are classed as rural non-farm although in a few instances some sections are classed in the Census as "farms" within the boundary of metropolitan centres. In Table X above all rural areas forming part of metropolitan centres were considered to be rural non-farm.

TABLE XII

DISTRIBUTION OF SINGLE AND MULTIPLE OCCUPIED DWELLINGS, AS OF CENSUS DATES, ADJUSTED SERIES
(Thousands of Units)

Census Date	Single Dwellings			Multiple Dwellings			Total
	Urban	Rural	Sub-total	Urban	Rural	Sub-total	
1921	600	904	1,504	317	17	634	1,838
1931	702	992	1,694	510	23	533	2,227
1941	743	1,102	1,845	684	68	752	2,597

this sample would understate the vacancy rate in smaller cities and towns, where the proportion of single dwellings was much higher than that of the above-mentioned metropolitan centres. To take account of the probable statistical bias resulting from the coverage, the average *ratio* of single vacancy rates to total vacancy rates for the four sample cities was applied to the urban vacancy rate series established for Table VI. The urban single vacancy rate thus calculated was applied to total available single dwellings to estimate urban single vacancies. Urban multiple vacancies then appeared as a residual.

Distribution of Rural Vacancies. No information was available on the division of rural vacancies into single and multiple units, consequently the total rural vacancies established were divided by the same proportion of single and multiple as was available for total occupied units as of Census dates shown in Table XII.

Distribution of Available Dwellings. Adding vacancies to occupied dwelling units given in Table XII, total available dwelling units by single and multiple types were established for Census dates as shown in Table XIII.

TABLE XIII

DISTRIBUTION OF SINGLE AND MULTIPLE AVAILABLE DWELLINGS, AS OF CENSUS DATES
(Thousands of Units)

Census Date	Single Dwellings			Multiple Dwellings			Total
	Urban	Rural	Sub-total	Urban	Rural	Sub-total	
1921	608	933	1,541	330	18	348	1,889
1931	712	1,044	1,756	550	24	574	2,330
1941	751	1,140	1,891	698	70	768	2,659

Adjustments for Incorporations. The adjustments for incorporations were subdivided by using the ratio of single to multiple rural dwellings in existence at the previous Census date. Rural units were used as the base since the adjustments represented those dwellings which were in existence in rural areas at the time of the Census date prior to their incorporation.

Distribution of Net Increase in Dwellings. The increase in available dwellings as shown in Table XIII, allowing for the urban-rural incorporation adjustment is presented by single and multiple types in Table XIV.

TABLE XIV

NET INCREASE IN THE NUMBER OF AVAILABLE SINGLE AND MULTIPLE DWELLINGS FOR CENSUS PERIODS
(Thousands of Units)

Census Date	Single Dwellings			Multiple Dwellings			Total
	Urban	Rural	Sub-total	Urban	Rural	Sub-total	
1921-1931	89	126	215	220	6	226	441
1931-1941	31	104	135	148	46	194	329

Distribution of Destroyed, Demolished and Abandoned Dwellings. To arrive at the gross increase of single and multiple dwellings, destroyed, demolished and abandoned dwellings have to be added to the net increase. The number of urban and rural non-farm destroyed and demolished dwellings estimated previously (see p. 382) was distributed as between single and multiple dwellings on the basis of ratios for available units. Farm units destroyed, demolished and abandoned previously estimated (see p. 383) were assumed to be single units. By adding the resulting data on destroyed, demolished and abandoned units to those given in Table XIV the gross increase of dwellings for the two Census decades was arrived at as shown in Table XV.

Urban and Rural Distribution of Single-Multiple Completions, 1921-1941. The single-multiple distribution by years was done separately for urban and rural completions. First, a base year had to be established. The average ratio of multiple dwellings to total dwellings in existence in 1921 and 1931 was applied to new completions in 1921. Straight line trends were then applied to the percentage distribution of multiple to total units constructed as between Census dates in such a way that the resulting absolutes were equal to increases shown in Table XV.

TABLE XV

GROSS INCREASE IN THE NUMBER OF SINGLE AND MULTIPLE DWELLINGS, FOR CENSUS PERIODS
(Thousands of Units)

Census Period	Single Dwellings			Multiple Dwellings			Total
	Urban	Rural	Sub-total	Urban	Rural	Sub-total	
1921-1931	107	156	253	229	7	236	499
1931-1941	43	150	193	158	48	206	399

Farm Distribution of Single Completions 1921-1941. Since 98 per cent of occupied farm dwellings in Canada were single units in 1941, it was assumed that all new farm homes constructed were of the single dwelling type (data from the 1941 Census, Vol. V, p. 6). It was therefore possible to use the trend of farm housing construction already established.

Urban and Rural Distribution of Single-Multiple Completions, 1941-1949. Single-multiple unit distributions were available for the years 1945-1949 from the housing statistics reports of the Dominion Bureau of Statistics. The series up to 1941 was linked with data available for 1945-1949 by straight line interpolation of the percentage distribution in the intervening years. The interpolation was done separately for urban and rural units.

Special Adjustment for Metropolitan Areas. Classification of single and multiple housing completions for metropolitan and other urban centres and rural non-farm areas similar to the data shown in Table XI, but including conversions, is given below in Table XVI.

TABLE 69. CHANGES IN THE HOUSING STOCK, BY AREA, CANADA, 1921-1949

Gross Increase of Dwellings. These figures, separately for non-farm and farm areas, on an annual basis, were taken from Table 67.

Destroyed, Demolished and Abandoned Dwellings, Non-Farm, Yearly Distribution. These data were estimated in aggregate form for Census decades for use in Table 67. For Table 69 the ten-year totals were distributed annually according to an index which combined the trend of new dwellings constructed as established in Table 67 with the trend of fire losses. It was reasoned that in times of large-scale building activity demolitions would be more numerous than in times of declining building activity. To take account of this factor the trend of housing com-

TABLE XVI

DWELLINGS COMPLETED, SINGLE AND MULTIPLE TYPES, METROPOLITAN AND OTHER URBAN AND RURAL NON-FARM, CANADA, 1921-1949
(Thousands of Units)

Year	Single Dwellings			Multiple Dwellings		
	Metro-politan and Other Urban	Rural Non-Farm	Total Non-Farm	Metro-politan and Other Urban	Rural Non-Farm	Total Non-Farm
1921	15.1	5.0	20.1	9.4	.3	9.7
1922	18.0	5.9	23.9	12.8	.4	13.2
1923	17.7	5.9	23.6	14.2	.4	14.6
1924	14.2	5.0	19.2	14.6	.4	15.0
1925	15.9	5.6	21.5	17.7	.5	18.2
1926	18.7	6.6	25.3	23.4	.6	24.0
1927	17.4	6.4	23.8	26.4	.7	27.1
1928	18.0	6.7	24.7	31.0	.9	31.9
1929	17.1	6.7	23.8	33.9	.8	34.7
1930	12.9	6.6	19.5	27.4	.8	28.2
1931	10.0	8.8	18.8	22.9	.9	23.8
1932	5.4	5.8	11.2	12.6	1.0	13.6
1933	4.1	5.0	9.1	8.9	1.2	10.1
1934	5.1	6.4	11.5	10.6	2.0	12.6
1935	6.0	7.3	13.3	12.2	3.1	15.3
1936	7.2	8.4	15.6	14.3	4.3	18.6
1937	8.9	9.8	18.7	17.4	6.2	23.6
1938	7.7	8.4	16.1	15.8	6.4	22.2
1939	9.6	11.0	20.6	18.6	6.4	25.0
1940	9.6	8.4	18.0	20.1	8.8	28.9
1941	13.5	10.6	24.1	20.1	7.4	27.5
1942	12.3	9.9	22.2	16.8	3.9	20.7
1943	13.0	8.5	21.5	10.2	1.7	11.9
1944	17.2	8.0	25.2	12.3	1.8	14.1
1945	22.2	7.6	29.8	13.2	1.9	15.1
1946	38.0	9.3	47.3	13.2	2.6	15.8
1947	40.8	13.9	54.7	18.1	2.3	20.5
1948	44.5	13.2	57.7	18.0	1.5	19.5
1949	51.2	12.0	63.2	20.5	2.0	22.5

pletions was used. The other factor was concerned with destruction by natural causes. It was thought that fire losses might be indicative of the frequency of such recurrent losses. An index of fire losses was prepared from an actual value series of fire losses of residential property in Canada. These data were taken from the annual reports of the Federal Government Fire Commissioner for the period 1921-1949. Losses were deflated by the housing construction cost index as established

for use in Table XIX. With no aggregate available for the period 1941-1949 annual absolutes were obtained by projecting the index from the base year 1937. This technique was used separately for urban and rural non-farm areas. The figure for 1949 is preliminary.

Destroyed, Demolished and Abandoned Dwellings, Farm, Yearly Distribution. The decade totals of destroyed and demolished farm dwellings (see p. 383) were distributed on the basis of the number of total farm fires obtained from annual reports of the Federal Government Fire Commissioner. Abandonments for the period 1921-1931 and 1931-1941 as estimated on page 383 were distributed by years according to an index of new farm completions. This was done in the belief that frequently farmers abandoning a dwelling in one area would be building a new home in the process of migrating to new farm areas. The resulting distribution was consistent with the data available in quinquennial Prairie censuses. The annual average of farm demolitions for the period 1936 to 1941 was considered to approximate the annual average of the years 1942 to 1949. This rate of abandonment was supported by data shown in the 1946 Prairie Census, which indicated a significantly smaller number of occupied Prairie farm dwellings than the 1941 Census. In the main this development was the result of frequent amalgamation of smaller farms into larger units. Often such amalgamation resulted in abandonment of dwelling units.

Net Increase of Dwellings. The net increase for the year is the difference between the annual gross increase of dwellings completed and the number of destroyed and demolished units in that period.

Available Dwellings. These figures reflect the housing situation at the end of the year. The available units for 1921 are computed by adding two-thirds of the 1921 net increase to the units available at the 1921 Census date (June, 1921) as shown in Table VI. To illustrate: available units in June, 1921, numbered 1,889,000. To this was added two-thirds of 29,700, the net increase in 1921, yielding 1,908,800, the total number of units available at December 31, 1921. Because of the seasonal character of the house-building industry the major part of completions falls in the second half of the year. Available units for other years were computed by adding the net yearly increase to the units available at the beginning of the year.

Yearly Distribution of Vacant Dwellings—Non-Farm. Average urban vacancy rates were established yearly from the sample of Canadian cities referred to earlier on page 380 and using the methods described there. When comparing the resulting vacancy rate with data available from the 1941 Census the above data proved to be lower than the urban rate shown in the Census. An adjustment appeared to be necessary for the war years to take account of a probable downward bias in the

series available because of the heavy influx of war workers and others associated with the war effort to the larger cities on which the above index was based. The method adopted was to use for 1941 the urban vacancy rate obtained from the Census and to adjust vacancy rates for 1940 and 1942 to 1946 upward by assuming no change in the vacancy rate in the smaller cities from 1939 to 1946 and using the sample trend available for larger cities. The resulting vacancy rates were checked against vacancy data available for 21 cities for the years 1941 and 1946. Both sets of data indicated a similar change for this period. For the years 1947-1949 vacancy data for 21 cities were used in place of the original four cities. Data for 1949 are preliminary. Vacancy rates thus established were applied to available urban dwellings to obtain yearly urban vacancies. The same method was also applied for rural non-farm dwellings using the 1941 ratio given in the Census and the urban trend.

Yearly Distribution of Vacant Dwellings—Farm. Farm vacancies were estimated for the period 1931-1941 by establishing first a benchmark for the year 1936, based on data of vacant and abandoned farms available from the Prairie Census 1936. This benchmark was then linked with 1931 and 1941 by straight line interpolation. The year 1925, having the smallest cultivated area and a relatively low agricultural income, was taken as the high point of farm vacancies for the period 1921 to 1931. The year 1929, representing the greatest cultivated area for the period and a relatively high agricultural income, was taken as the low point of farm vacancies. These points were then linked together and with Census dates by straight-line interpolation. This method was considered preferable to one of straight-line interpolation for the decade as a whole because it takes account of the effect of good agricultural crops and high prices for farm products on the state of agricultural settlement practice. A declining trend of farm vacancies was continued for the years 1941 to 1946 but the decline was assumed to be gradual, in line with the prosperous agricultural conditions both during the war and the immediate post-war period and consistent with the large number of abandonments apparent for this period (see p. 395). During the years 1947 to 1949 it appears that because of continuing agricultural prosperity there was little change in farm vacancies.

Occupied Dwellings. These figures are obtained by subtracting vacant dwellings at the end of the year from the number of available dwellings. The data only approximate the year-end position, because vacancy rates are obtained from municipalities which compute this information at various dates, usually throughout the late autumn.

TABLE 70. CHANGES IN THE HOUSING STOCK, BY TENURE, CANADA, 1921-1949

Tenure of Occupied Dwellings, Census Material. The basic Census material, adjusted as in Table V, was distributed between owner and tenant-occupied dwellings in the following way. For 1941, a breakdown into owner and tenant-occupied dwellings by area was given on page 6 of Volume V, Census 1941. The data exclude 24,000 units with occupancy status not stated. These 24,000 dwellings were distributed as between owner and tenant-occupied units on the basis of the ratios given for dwellings with occupancy status reported. No comparable data were available on a yearly basis in the 1921 and 1931 Censuses, but tenure data for households were given (Census 1921, Volume III, p. 54, and Census 1931, Volume V, p. 984). It was assumed that there would be one owned dwelling for each owner-occupied household. The number of owner-occupied households was therefore taken as the number of owner-occupied dwellings, and the number of rented dwellings was arrived at by subtracting the number of owner-occupied households from the total number of dwellings. This was done separately for urban and rural areas. The resulting data are summarized in Table XVII below.

TABLE XVII

OWNER- AND TENANT-OCCUPIED DWELLINGS, AS OF CENSUS DATES, ADJUSTED SERIES
(Thousands of Units)

Census Date	Owner-Occupied Dwellings					Tenant-Occupied Dwellings				Total
	Urban	Rural			Total	Urban	Rural			
		Non-Farm	Farm	Sub-total			Non-Farm	Farm	Sub-total	
1921	471	—[1]	—[1]	768	1,239	446	—[1]	—[1]	153	599
1931	565	—[1]	—[1]	798	1,363	647	—[1]	—[1]	217	864
1941	587	310	574	884	1,471	840	152	134	286	1,126

[1]Breakdown not available.

Farm Tenure 1921 and 1931. No information was available on owner-occupied farm dwellings in 1921 and 1931. However, the 1941 Census (Vol. VIII, Part I, p. 8) gave a comparison of farm tenure for the years 1921, 1931 and 1941, according to the classifications of owner-occupied, hired manager, tenant-occupied and partly owned, partly tenant-occupied. Adding one-half the latter classification to the owner-occupied group for 1941 gave the same percentage of total farms as there were owner-occupied farm dwellings. It was assumed that this

comparison would hold true for the other two Census years. Accordingly, the percentage of owner-occupied plus half the partly owner-occupied farms was applied to the farm dwelling units available in order to obtain the owner-occupied farm dwellings in 1921 and 1931.

Tenure of Occupied Dwellings, Completed Series. These estimates complete Table XVIII to yield the breakdown as shown in Table 70.

TABLE XVIII

OWNER- AND TENANT-OCCUPIED DWELLINGS, AS OF CENSUS DATES, COMPLETED SERIES
(Thousands of Units)

Census Date	Owner-Occupied Dwellings					Tenant-Occupied Dwellings				Total
	Urban	Rural			Total	Urban	Rural			
		Non-Farm	Farm	Sub-total			Non-Farm	Farm	Sub-total	
1921	471	186	582	768	1,239	446	79	74	153	599
1931	565	219	579	798	1,362	647	116	101	217	864
1941	587	310	574	889	1,471	840	152	134	286	1,126

Yearly Tenure Distribution, 1921-1941. The percentage distributions between owner and tenant were computed separately for urban, rural non-farm and farm for each Census decade. These percentages were adjusted to a year-end basis, assuming even monthly changes, and straight-line interpolation was used to estimate the yearly tenure.

Yearly Tenure Changes. The yearly tenure changes were calculated by subtraction. This method of calculation reflects changes resulting from sales as well as new construction.

Yearly Vacancy Changes. Changes in vacancy status were calculated by subtraction from cumulative vacancies shown in Table 69.

Yearly Tenure Distribution, 1942-1949. For the period 1942 to 1949 it was assumed that all new single houses plus one-half of the two-family dwellings (duplexes and semi-detached houses), other than Wartime Housing or other Government units constructed for rental purposes, would be for owner-occupancy and all multiple projects would be for rental. This assumption was made in view of the rental and eviction controls operative since 1942, which tended to keep rents low, and the great housing demand, which made it more profitable to sell new single houses than keep them for rent. Demolitions for the period were distributed in proportion to total available units. The figures for

ownership during 1942-1949 can be regarded as preliminary only. One weakness in these estimates lies in the fact that they do not take account of single houses rented in 1941 but since sold to home owners. Many an unwilling landlord who acquired residential property in the depression must have found an opportunity to sell during the war or in the immediate post-war period. But no factual information is available about the number of houses of this type that changed hands from 1942 to 1949. It will be possible to work backwards to obtain an approximation when the results of the 1951 Census become available. In the meantime it may be sufficient to note that the home ownership figures are likely to understate somewhat the actual position.

Net Increase of Dwellings. This is the sum total of net annual changes of owner-occupied, tenant-occupied and vacant dwellings. It is identical with the series shown in column 4 of Table 69. Both the series of net annual changes of owner-occupied and vacant dwellings show minus quantities for certain years. This means, in the case of owner-occupied dwellings, that the number of new houses built for home ownership was exceeded by the number of transfers of existing houses from owner-occupancy to tenant status. In the case of vacant dwellings it means a reduction in the number of vacancies, mainly because of renewed occupancy, although in some instances vacant dwellings have been reduced in number because of destruction, demolition and abandonment.

TABLE 71. DWELLINGS COMPLETED, PERMANENT AND TEMPORARY, CANADA, 1941-1949

Permanent Dwellings. This item is arrived at by deducting the number of temporary dwellings completed shown in column 3 from total housing completions shown in column 4.

Temporary Dwellings. This item covers Wartime Housing units completed during 1941-1945, Emergency Shelter dwellings built during 1945-1948, and houses for married service personnel, including employees of the Defence Research Board, constructed by the Department of National Defence during 1947 and 1948. Wartime Housing Limited continued building low rental homes for veterans after 1945, but these homes were of a more permanent type, with basement in some cases and facilities common to traditionally built homes described as "permanent" dwellings in this report. The data for Wartime Housing unit completions are from the operating records of Wartime Housing Limited, amalgamated with Central Mortgage and Housing Corporation in 1948. The data on housing completions under the Emergency Shelter Regulations are from the Records of the Emergency Shelter Division, Central Mortgage and Housing Corporation. The data on temporary dwellings completed

under the armed services married quarters scheme of the Department of National Defence were obtained by courtesy of the Joint Services Accommodation Committee, Department of National Defence. The above-mentioned data are published separately in *Housing in Canada, January, 1949*, pp. 37, 38 and 43.

Total Dwellings. This item is from column 9 of Table 67.

TABLE 72. VALUE OF DWELLINGS COMPLETED, BY TYPE OF STRUCTURE AND AREA, CANADA, 1921-1949

Method of Valuation. The purpose of this table is to translate into dollar terms the estimate of the number of dwellings completed shown by type of structure and area in Table 67. The method adopted is to value the unit completions for one year (1946) for which detailed information on building costs of 17 representative types of houses most commonly built in Canada is available and then to extend the series back to 1921 and forward to 1949 by means of price indices. This series represents a valuation of the number of dwellings completed each year with the valuation for each dwelling assigned to the year of its completion. This approach does not take account fully of the time in which the work was performed, since the determining factor is the date of completion of a housing unit. For example, the value of a dwelling which was two-thirds built in year one and completed in year two would be allotted to year two. The approach differs from an estimate of work carried out which aims at allotting the work to the time it is performed, irrespective of the completion date. In the case of the above example the "work carried out" technique would mean that two-thirds of the estimated construction costs would be allotted to year one and one-third to year two. For an analysis of economic flows an estimate of work carried out is preferable to one of work completed. Separate estimates of new residential construction work carried out are therefore shown in Table 75, p. 279.

In using the valuation approach indicated above two main questions arise: (1) Does this method take adequate account of structural, type and size changes of Canadian housing that have occurred in the last 29 years; and (2) how representative are available price indices of variations in building costs that have taken place in the period under review?

Structural, Type and Size Changes of Dwellings. By valuing housing additions on the basis of available information it is possible to take account of (*a*) changes in the number of new dwellings in new structures and new dwellings created through conversion of existing structures; (*b*) changes in the type of dwellings, including single and multiple units (apartment, flat and row houses, etc.); and (*c*) variations as between non-farm and farm residences. The estimates in their present form do not take account of changes in the standard of conveniences or in the size of

dwellings. Since public preference for the traditionally built house has remained unaltered in the period under review, structural changes that have taken place have been small. Great strides have been made, particularly during World War II, in prefabricating methods, and some experimentation has been carried out with new types of housing units in Canada. But the number of non-traditional housing units erected in Canada has been small in relation to total additions. Significant changes, however, occurred with regard to standards of conveniences, particularly in heating, plumbing and lighting. New or improved conveniences have been installed involving additional costs in housing construction. Against this there is a trend towards smaller single houses or multiple units, which tends to bring costs down. In estimating the value of new residential construction for past years it was assumed that cost increases resulting from improvements in the standard of conveniences would tend to be offset by cost reductions attributable to smaller units and whatever increases in efficiency may have occurred in the period between the wars. During the years of World War II efficiency in the house-building industry declined and a special allowance has been made for this factor, as indicated on page 404.

Sources of Price Indices. Two basic series are available: (*a*) an index of wholesale prices of materials used in housing construction covering 54 different building material items in 1947, compiled by the Dominion Bureau of Statistics (*Price Index Numbers of Residential Building Materials*, Ottawa, March 1949), and (*b*) an index of hourly wage rates of building trades covering prevailing rates of both skilled and unskilled construction workers in 29 cities across Canada as of 1949, compiled by the Department of Labour and published in annual issues of *Wage Rates and Hours of Labour in Canada.* The estimates for 1947, 1948 and 1949 are taken from *Housing in Canada, January, 1950*, p. 89 (last column). The index is adjusted for holiday pay allowances, which have become significant since 1944.

Quality of Building Material Index. This index combines wholesale prices of 54 building material items used in house building, weighted according to the value of materials used in a housing program of 50,000 units as estimated in the study *Manpower and Material Requirements for a Housing Program in Canada*, pp. 60-61. This index has been newly compiled by the Dominion Bureau of Statistics for the period 1926-1949. For the pre-war period the trend of the *house* building material index varies only slightly from the *general* index of wholesale prices of building materials, a composite index, which in 1949 included 111 building material items (*Prices and Price Indices*). The house-building material index was therefore extended back to 1921 on the trend of the general building material index.

One shortcoming of the house-building material index as an indicator of changes in building material prices should be noted. The index reflects wholesale prices of building materials, while building costs are estimated on the basis of retail prices. However, since changes in retail prices are to a large extent affected by changes in wholesale and factory prices, and wholesale prices again by factory prices, the wholesale price index is considered indicative of price trends as they take place over *longer* periods.

Quality of Wage Rates in Building Trades Index. This is an index of prevailing hourly wage rates, not of actual wages paid. Actual hourly earnings of construction workers may be higher than prevailing rates, particularly in a tight labour market with extra pay for overtime or holiday work. On the other hand, actual hourly earnings may be lower than prevailing rates, as, for example, in the case of tradesmen acting as subcontractors and working on a lump sum basis. For the purpose in hand an index of hourly earnings in the building industry would be preferable because it is likely to reflect more closely actual employment conditions in building trades than a prevailing rate index which indicates what construction workers are likely to be paid if they are hired on an hourly basis (and not on a subcontract basis).

Data on hourly earnings in the building industry are available from November, 1944 to the present from reports of employers with fifteen or more employees, compiled by the Dominion Bureau of Statistics (*Statistics of Average Hours Worked and Average Hourly Earnings*, monthly issues). For the purpose of measuring changes in building labour costs this series has two disadvantages, as compared with the series of wage rates of building trades used in this report: (*a*) the hourly earnings series goes back only to 1944, while comparable data in the wage rate series are available back to 1901; (*b*) the hourly earnings series covers only wage income of men employed with larger employers, thus omitting a substantial number of tradesmen engaged in smaller jobs. Large construction companies are more active in the fields of industrial, commercial and engineering construction than in the field of housing, although there has been a change in the pattern in the last few years, with some of the bigger contracting firms undertaking a number of large housing developments. The fact remains however, that a great number of houses built in Canada are erected by small contractors and tradesmen acting as contractors, with a large portion of the work subcontracted to other tradesmen. Thus, an index based on hourly earnings of construction workers with firms employing fifteen or more persons would not necessarily reflect earning conditions of a large number of tradesmen working with small firms or on their own. Against this the index of prevailing wage rates reflects the earning potential of all tradesmen, whether working with large or small employers or on their own. Prevailing wage rates, which are

supported by strong construction trade unions and backed to some extent by provincial wage legislation, have therefore become more and more accepted as a yardstick of earning capacity of construction workers. In the light of these considerations it appears preferable to use the wage rate index available to one of hourly earnings available.

Two other limitations of the wage rate index remain: (*a*) the index does not indicate changes in labour output; and (*b*) the index is mainly an urban index and does not reflect rural earning conditions. It was possible, however, to make separate allowance for both these factors as indicated below.

Problem of Weighting. There are three major components of construction costs: (1) building material costs, including the purchase of materials, transportation costs of building materials to the site, and storage of building materials; (2) labour costs, including salary payments to supervisory staff, wage payments to on-site labour force, hire of machine operators and social security payments; and (3) overhead and profits, including job overhead such as depreciation of machinery, fuel and lubricants, etc., office overhead, and remuneration and profits of the builder.[1]

A survey of the experiences of contractors and builders undertaken in 1942 yielded the following ratios of the three components for house building: building material costs, 50 to 55 per cent, labour costs, 35 to 40 per cent, and overhead and profits about 10 per cent.[2] In 1946 these ratios were examined again in the light of prevailing experience. It was found that the ratios had hardly changed for the ordinary type of housing construction (i.e. excluding houses built by speculative builders, who may assume the roles of both developers and builders) from those established in 1942. The ratios which were considered most representative in 1946 were: 52.5 for cost of building materials, 37.5 for cost of on-site labour and 10 per cent for overhead and profits.[1]

No comparable surveys are available on a yearly basis for other years to indicate what variations in the ratios of the three components have occurred in the period under review. There was a possibility, therefore, that a bias would be introduced if a constant material-labour-overhead and profits ratio as established for 1946 were to be used for the whole period. Separate tests were made for two segments of the period: (*a*) the pre-war period 1921-1939; and (*b*) the war and post-war period 1940-1949.

Tests for 1921-1939. It was possible to obtain from the Department of National Revenue aggregate data showing the ratio of overhead and

[1]For a more detailed discussion see *Manpower and Material Requirements*, pp. 36-37.

[2]*The Labour Value of the Building Dollar*, Housing Administration, Department of Finance, Ottawa, 1943, p. 29.

profits to gross sales for nineteen construction companies over the period 1921 to 1939. Gross sales correspond to the value of construction work performed. Of the nineteen years, fourteen showed overhead and profit ratios varying from 8 to 12 per cent, with a median of 10 per cent, while five years, in the early 'twenties and early 'thirties, showed ratios from 13 to 15 per cent. This series pointed to a reasonable consistency of the ratios of overhead and profits to total value of construction work performed for periods of a large and medium sized volume of construction activity, with some more significant variations indicated for years of low construction activity. On the basis of this survey and information on the rather small technological changes occurring in the building industry before the war which would cause a shift from labour costs to building material costs, it was estimated that the likely bias introduced by constant ratios of material, labour and overhead and profits for pre-war years would be negligible in periods of high and medium sized volume of building activity, and would not exceed 5 per cent in times of low volume of building activity. The constant ratio was therefore considered adequate for the purpose on hand.

It bears emphasis that this approach through varying the cost of individual components by means of price indices does not take account fully of changes in output per man-hour. This, however, does not affect the series presented in this report materially because, as indicated previously, it was assumed that whatever improvements in efficiency may have occurred in the building and related industries in the pre-war period would in part be offset by added costs resulting from improvements in the standard of conveniences used in Canadian housing (see p. 401).

Tests for 1940-1949. The two investigations for 1942 and 1946 referred to above indicate little change in the ratios of the three major components of building material costs. The more important problem faced in using the combined material and wage rate index—in the absence of an index of overhead and profits—as indicators of changes in construction costs, was the fact that efficiency in the construction industry was known to have dropped considerably during the war years for a number of reasons, of which dilution of the skilled labour force, a tight labour market and construction material shortages were the most important. As a result of these and similar factors, informed opinion in the construction industry held that to take account of the decline in efficiency and to arrive at comparable construction costs for the pre-war and post-war periods, it was necessary to add between 10 and 25 points to indices of costs of materials and labour with a 1939 base.[1]

It was not until 1947 that improvements in efficiency in the building industry were noted and a reduction of the "inefficiency factor" from

[1]*Manpower and Material Requirements*, p. 34.

10 to 25 points to 10 to 20 points seemed appropriate.[1] To allow for the decline in efficiency that occurred during the war and the immediate post-war period, a factor of 10 per cent of costs in 1939 was used for 1947. The lower of the two ranges mentioned above appeared to be indicated in the light of the results of a study of building costs in 1948 based on the records of houses financed under the National Housing Act, 1944 (see p. 419). To allow for the fact that inefficiency appeared to have reached its highest point in 1946—it took 11 months to complete a house in this year, as compared with 8 months in 1947, 7 months in 1948 and 1949, and 5 months in 1939—the inefficiency factor was raised to 12 points for this peak year. For the years 1941 to 1945 the inefficiency factor was decreased gradually by 2 points each year. No inefficiency factor was allowed for 1940 because building material and labour shortages did not generally appear until 1941. For 1948 a further improvement in efficiency of 2 points was allowed in line with evidence that (*a*) sales prices of newly completed houses rose at a slower pace than the combined index of residential building materials and construction wage rates,[2] and (*b*) the average period of housing completion was reduced from eight months in 1947 to seven months in 1948.[3] No significant change in efficiency was indicated for 1949, as completion time increased slightly during that year.[3]

Combined Price Indices. The price indices used to take account of value changes in house building are assembled below in Table XIX. The wholesale price index of house-building materials is the one prepared by the Dominion Bureau of Statistics, and the wage rate of building trades index is the one published by the Department of Labour, adjusted for holiday pay allowances. These two indices were combined by using the weights of 52.5 and 37.5, obtained from the 1946 investigation (see p. 403). A special allowance for changes in efficiency was made for the years 1940-1949 as indicated above, to yield the adjusted combined price index for use in this study. Because of different weighting separate indices are shown for new dwellings in new structures and new dwellings created by the conversion of existing structures in non-farm areas. A different index is used for new farm residences to take account of wage rates in rural areas (see pp. 409-410).

Valuation of New Structures. New dwellings completed in new structures were valued for 1946 by type of dwellings (single and multiple) and by area (urban, rural non-farm and farm), using the method indicated on pp. 407-409. Each group with dwelling completions was then valued back to 1921 and ahead to 1949 on the basis of the adjusted

[1] *Housing in Canada, January, 1948*, p. 22.
[2] *Annual Report, 1948*, p. 6.
[3] *Housing in Canada, January, 1950*, p. 91.

TABLE XIX

INDICES OF WHOLESALE PRICES OF HOUSE BUILDING MATERIALS AND WAGE RATES IN BUILDING TRADES, COMBINED AND ADJUSTED, FOR NEW AND CONVERTED DWELLINGS IN NON-FARM AREAS, CANADA, 1921-1949
(1939 = 100)

Year	Index of Wholesale Prices of Residential Building Materials	Index of Wage Rates in Building Trades	Combined Index of Residential Building Material Prices and Wage Rates in Building Trades Applicable to			
			New Dwellings		Converted Dwellings	
			Unadjusted for "Inefficiency Factor"	Adjusted for "Inefficiency Factor"	Unadjusted for "Inefficiency Factor"	Adjusted for "Inefficiency Factor"
1921	131.1	99.9	118.1	118.1	115.8	115.8
1922	116.2	95.3	107.4	107.4	105.9	105.9
1923	119.5	97.5	110.4	110.4	108.7	108.7
1924	113.9	99.4	107.8	107.8	106.8	106.8
1925	109.9	99.8	105.7	105.7	104.9	104.9
1926	107.1	100.9	104.5	104.5	104.0	104.0
1927	104.5	105.0	104.7	104.7	104.8	104.8
1928	106.4	108.7	107.3	107.3	107.6	107.6
1929	109.9	115.8	112.4	112.4	112.8	112.8
1930	102.5	119.1	109.5	109.5	110.7	110.7
1931	93.0	114.7	102.0	102.0	103.6	103.6
1932	85.5	104.5	93.4	93.4	94.8	94.8
1933	87.0	92.5	89.3	89.3	89.7	89.7
1934	93.4	90.7	92.3	92.3	92.0	92.0
1935	90.5	93.6	91.8	91.8	92.1	92.1
1936	94.4	94.2	94.3	94.3	94.3	94.3
1937	104.5	96.9	101.3	101.3	100.8	100.8
1938	99.1	99.2	99.2	99.2	99.1	99.1
1939	100.0	100.0	100.0	100.0	100.0	100.0
1940	107.8	104.5	106.4	106.4	106.2	106.2
1941	119.8	111.6	116.3	118.3	115.8	117.8
1942	128.0	118.6	124.1	128.1	123.4	127.4
1943	136.0	127.4	132.4	138.4	131.8	137.8
1944	143.3	130.4	137.9	145.9	136.9	144.9
1945	145.0	132.0	139.5	149.5	138.6	148.6
1946	151.0	145.1	148.0	160.0	148.2	160.2
1947	176.4	158.6	168.3	178.3	167.7	177.7
1948	212.6	174.3	196.6	204.6	193.8	201.8
1949	222.9	184.7	206.5	214.5	204.1	212.1

combined price index shown in Table XIX. An exception to this method was the use of somewhat different price trends for farm dwelling completions and valuation of converted dwellings completed.

Valuation of Converted Structures. Dwelling units created by conversions were valued at $2,122 for the year 1946, as shown in the report *Manpower and Material Requirements*, p. 40. This price was projected back to 1921 on an index which combines the construction material and labour indices with weightings of 50.9 and 49.1, as estimated in the same report. This change in weight appeared to be advisable in view of the greater labour content in a housing conversion as compared with the construction of a dwelling in a new structure. For the war and immediate post-war period an adjustment was made in this combined price index to allow for the "inefficiency factor" as indicated in Table XIX. All converted dwellings were treated as non-farm multiple units.

TABLE 73. VALUE OF DWELLINGS COMPLETED, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949

Valuation of Single Dwellings, Non-Farm. The average cost of a single dwelling of desirable standards was estimated for 1946 to vary from $6,976 for a wood frame house with wood clapboard to $7,976 for a solid masonry house, built of masonry block with part stone facing and part stucco facing. For a number of reasons (e.g. the building of "shack" homes in urban fringe and rural frontier areas, as elaborated further in the study *Manpower and Material Requirements*, pp. 75-77) average cost of houses of "actual" standards would be lower than average cost of houses of "desirable" standards. The difference suggested was 18 per cent. On the other hand, the estimates of construction costs of a given housing target were made on the assumption of a reasonable degree of efficiency of construction labour, no delays as a result of material shortages, no increased cost because of substitution of building materials, and no disproportionate increase in profits by speculative builders. In carrying out the housing program in 1946 these factors—which add to construction costs—were prevalent. There were, then, two offsetting forces at work which determined construction costs of the average house built in Canada in 1946. "Actual standards" of houses built were lower than "desirable standards," thus contributing to a reduction of construction costs. But declining efficiency, material shortages and speculative profits raised the cost to an extent estimated to be on an average 12 per cent higher than 1939 (see p. 405). These two factors cancel each other out to some extent. In considering the averages shown below it should be borne in mind that the 18 per cent is a proportion of 1946 costs and the 12 per cent a proportion of 1939 costs. Allowing for the two offsetting factors described above, an average cost figure of $6,357 per

single unit in urban and rural non-farm areas was arrived at. This average is a weighted average based on seven different types of single dwellings most commonly in use in Canada. To the above-mentioned average cost was added $157 as an allowance for the additional costs involved in the construction of garages and other buildings supplementary to residences and expenditures for land improvements associated with new residential construction. This allowance reflects the *average* additional cost, that is, it takes account of the incidence of the building of garages and other buildings supplementary to residences, and land improvement costs of various sorts (see p. 419). The adjusted combined price index was used to value non-farm single units for the other years in the period under review.

Valuation of Multiple Dwellings, Non-Farm. The method of valuing completions of multiple dwellings was the same as for single dwellings, but dwellings in new structures were valued separately from dwellings created by the conversion of existing structures (see p. 407). Using the same sources as above, the average cost of a multiple dwelling was estimated at $4,894. This average is the weighted average of nine different types of multiple dwellings most commonly built in Canada. To the above figure an allowance of $131 was added for the incidence of costs of garages, other supplementary buildings, and residential land improvements. The valuation of multiple dwellings in non-farm areas for other years was carried out by use of the adjusted combined price index for all units excluding converted units, for which a slightly different weighting system was used as indicated previously. Special allowances were made for the valuation of temporary dwellings which from 1946 to 1948 were all conversions and during 1941-1945 were single units in new structures (see p. 399).

Valuation of Single Dwellings, Farm. Farm dwellings were valued at an average of $2,705 for 1946. This price was based on a special sample survey of construction costs of farm houses in various parts of Canada which was conducted by the Veterans' Land Act Section of the Department of Veterans Affairs. The sample was related to total farm houses completed under the Veterans' Land Act during 1946 in order to make it representative of all farm-house building activity financed under this Act. The following is a summary of the data obtained from the sample survey and their application (see Table XX).

The price of $2,705 for 1946 was extended back to 1921 and forward to 1949 by an index which combined house-building material and labour indices with a weighting of 75 to 25. No specific information on the labour content of farm housing was available, except that it was known that the veteran's own labour comprised 16 per cent of the total cost of his home. It was reasoned that the labour content would be lower than

the 41.7 per cent for non-farm units (i.e. 37.5 out of 90 per cent) because of different farm construction methods, the small number of man-hours of specialized craftsmen employed and the usual low valuation of the farmer's own labour. It was further reasoned that the ratio would be higher than the work by owner ratio found in the veterans' sample of 16 per cent since some of the veteran's expenditures would have been made for wage payments. In the light of these considerations a labour content of 25 per cent for the construction of farm dwellings was used.

TABLE XX

AVERAGE UNIT VALUE OF NEW FARM DWELLINGS CONSTRUCTED UNDER THE VETERANS' LAND ACT, APPLICATION OF RESULTS OF SAMPLE SURVEY, 1946

Item	Average for Sample Units Surveyed Dollars	Average for Total Units Financed Dollars
Expenditures		
V.L.A. loan	1,075	1,055
Veteran's expenditure	1,257	—[1]
Sub-total	2,332	—[1]
Work by Owner		
Estimated by veteran	452	—[1]
Total Value of New Farm Home	2,784	2,705[2]

[1]Not available.
[2]Estimated by applying the proportion of average loan to total value of new farm home obtained from sample survey to average loan for all farm units completed under the terms of the Veterans' Land Act in 1946.

To construct a combined price index a series of wholesale prices of house-building materials and a series of wage rates of farm labour and common labour were used. From investigations it appeared that an index of wage rates of farm labour and common labour would be more representative of labour rates paid to workers doing construction work in rural areas, most of whom are semiskilled or unskilled, than the index of wage rates in the building trades, which reflects earning conditions of skilled building mechanics in urban centres. Data on wage rates of male farm labour are compiled by the Agricultural Statistics Branch of the Dominion Bureau of Statistics and are available for the period 1940-1949.[1] No comparable data are available for the period prior to 1940.

[1]*Quarterly Bulletin of Agricultural Statistics*, Dominion Bureau of Statistics, Ottawa, July-September, 1949, p. 150.

However, an index of wage rates of common labour published in annual issues of *Wages and Hours of Labour in Canada* of the Department of Labour is available. This index follows the trend of male farm labour more closely than the index of wage rates in the building trades does and is available for the whole period under review in this report. The use of the wage rates of common labour index for the purpose of extending back

TABLE XXI

INDICES OF WHOLESALE PRICES OF HOUSE-BUILDING MATERIALS AND WAGE RATES OF COMMON AND FARM LABOUR, COMBINED INDEX FOR FARM AREAS, CANADA, 1921-1949
(1939 = 100)

Year	Index of Wholesale Prices of Residential Building Materials	Index of Wage Rates of Common and Farm Labour[1]	Combined Index of Wholesale Prices of Residential Building Materials and Wage Rates of Common and Farm Labour
1921	131.1	114.0	126.8
1922	116.2	100.0	112.2
1923	119.5	104.6	115.8
1924	113.9	104.6	111.6
1925	109.9	100.0	107.4
1926	107.1	102.4	105.9
1927	104.5	104.6	104.6
1928	106.4	107.0	106.6
1929	109.9	109.3	109.7
1930	102.5	109.3	104.2
1931	93.0	102.4	95.4
1932	85.5	93.0	87.4
1933	87.0	86.1	86.8
1934	93.4	90.7	92.8
1935	90.5	95.4	91.8
1936	94.4	97.7	95.2
1937	104.5	100.0	103.4
1938	99.1	100.0	99.3
1939	100.0	100.0	100.0
1940	107.8	104.6	107.1
1941	119.8	128.2	122.0
1942	128.0	167.3	137.8
1943	136.0	212.2	155.1
1944	143.3	221.3	162.8
1945	145.0	243.8	169.8
1946	151.0	252.1	176.3
1947	176.4	273.4	200.6
1948	212.6	292.5	232.6
1949	222.9	289.2	239.5

[1]The indices of wage rates of common and farm labour were linked together in 1940.

the farm labour index was tested against data on earning conditions of farm workers available in the Censuses of 1921, 1931 and 1941. Census data seemed to confirm the broad movement of the wage rate of common labour index for the two decades for which information was available and this index was therefore used for the years prior to 1940.

The indices of wholesale prices of house-building materials and wage rates of farm and common labour and the combined index, using a weight of 75 and 25 as indicated above, are shown in Table XXI. No adjustments were made for the "inefficiency factor" for the war and immediate post-war period as was done for the combined index applicable to non-farm areas. There are two main reasons for this: (1) a substantial portion of labour costs in the farm dwelling is the farmer's and his immediate family's own labour and the "inefficiency factor" would not apply here; and (2) some of the elements contributing to the increase of building costs in non-farm areas in recent years are not applicable to farm areas, e.g. there are no increased profits by speculative builders.

TABLE 74. VALUE OF NEW RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, PERMANENT AND TEMPORARY DWELLINGS, CANADA, 1941-1949

Permanent Dwellings. This item is arrived at by deducting construction expenditures on temporary dwellings shown in column 3 from the total value of dwelling construction work carried out shown in column 4.

Temporary Dwellings. This item covers construction expenditures on Wartime Housing units built during 1941-1945, excluding costs of supplementary buildings and land improvement and related expenditures, Federal financial assistance grants and an estimated allowance of construction expenditures by municipalities and universities for housing projects under the Emergency Shelter Regulations during 1945-1948, and construction expenditures on temporary housing made during 1947 and 1948 by the Department of National Defence as part of its program to provide married service personnel, including employees of the Defence Research Board, with living accommodation. The sources of the data are the same as those for the number of temporary dwellings shown in Table 71, with the exception of the data on construction expenditures under the Emergency Shelter Regulations. The estimates for these were arrived at by applying for the years 1946 and 1947 a factor to the Federal assistance grants to allow for the share in the construction expenditures by municipalities and universities. The factor was obtained from a study of experiences of administering Emergency Shelter Regulations from the files of the Emergency Shelter Division of Central Mortgage and Housing Corporation. No comparable cost figures were

available for 1945. The Administrator of the Emergency Shelter Regulations held that there was little change in the type of structures used for conversion purposes between 1945 and 1946, and that average construction costs per unit would be approximated by allowing for general building cost changes that occurred in these two years. On this basis, cost of Emergency Shelter units was estimated to be 6 per cent lower than in 1946. The data on emergency shelter expenditures presented in this report relate to construction work performed with adjustments made for annual carry-over (see also Table 118).

Total Dwellings. This item is taken from column 8 of Table 75.

TABLE 75. VALUE OF NEW RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, BY TYPE OF DWELLING AND AREA, CANADA, 1921-1949

Purpose of Estimate of Dwelling Construction Work Carried Out. This table adjusts the estimates of the value of *dwellings completed* shown in Tables 72 and 73, to arrive at an estimate of *dwelling construction work carried out* in each year in the period covered. This estimate is needed for inclusion in Table 76 to arrive at a total of residential construction work of all types, new, major improvements and alterations, repairs and maintenance undertaken in Canada, and for Tables 77 and 78, which show both gross and net residential capital formation. The last two items mentioned are essential components of the National Accounts and are commonly used in national income analysis. Estimates of total residential construction are important segments of all construction activity, the measurement of which indicates the total demand for the factors of production of a particular segment of the Canadian economy, e.g. building materials, building labour, co-ordinating activity of builders and contractors.

Estimating Method. The method adopted is to estimate average periods required for housing completions of permanent dwellings at different times and the number of dwellings started in one year but completed in the next year and then to pro rate construction of this group of dwellings according to the year in which the work is actually done. Because information is more plentiful for recent years than for earlier years, and because substantial changes in completion periods have occurred in the last eight years, different techniques are used for the pre-war period, 1921-1939[1], and the war and immediate post-war period, 1940-1949. For temporary dwellings data on actual expenditures made are available (see p. 411).

Techniques Used, 1921-1939. Before the war it took about five months to build a small house of the traditional type in Canada.[2] This

[1]The outbreak of the war in September, 1939 did not materially affect the completion of the housing program in that year.

[2]*Annual Report, 1947*, Central Mortgage and Housing Corporation, p. 18.

meant that most houses completed between January and May of one year were started between August and December of the preceding year. These houses would be carried over from one year to another in various degrees of completion, from a completely "closed in" house started in August to October to a house started in November or December with just the foundation completed. Cost of construction of houses reaching the stage of "closed in," that is, basement completed, walls and roof erected, with the outside walls covered at least with sheathing felt, windows and outside doors inserted, is roughly put at half of total building cost. But since many of the houses carried over from one year to the other would not have reached the "closed in" stage, a proportion of one-third of total construction work on dwellings carried over appeared to be a more reasonable approximation of the *average* value of the construction work carried out in the year preceding completion.

The technique adopted was to estimate the dwelling equivalent of construction work performed in the year prior to completion. The factor used was one-ninth of dwelling completions in a given year (i.e. one-third value of one-third completions) with this number deducted from the year the units were completed and added to the preceding year, in which they were started. These dwellings were then valued in terms of average cost prevailing for the year in which the units had been started. Estimates were prepared separately for non-farm and farm areas, for single and multiple units, and for new and converted structures, and then combined to yield the type of dwellings and area combinations shown in Table 75.

Techniques Used, 1940-1949. More detailed information as to carry-over was available for 1946 to 1949. The number of dwellings under construction, excluding conversions, for December 31, 1946 was given as 40,170, for December 31, 1947 as 42,215, for December 31, 1948 as 56,456, and for December 31, 1949 as 58,169, in the housing statistics publications by the Dominion Bureau of Statistics.[1] For the last two years details on single and multiple units in non-farm and farm areas were also available. Estimates of completion periods of the average house in Canada for 1946-1949 were also given as eleven and eight months for the first two years and seven months for each of the last two years.[2]

In 1947 it took about three months longer and in 1948 and 1949 about two months longer than in 1939 to complete a house. However, as far as construction work performed in the preceding year is concerned, the determining factor is the stage of construction which a house reaches at the end of the year. At the end of the years 1946-1949, as in pre-war years, the main aim of builders was to get their houses to the "closed in"

[1] *Housing Bulletins*, Nos. 1, 12, and 24.
[2] *Annual Report, 1947*, p. 18, and *Housing in Canada, January, 1950*, p. 91.

stage, in order to remain unaffected by inclement winter weather. Because of material and labour shortages it usually took longer to reach this stage than in 1939. On the basis of this reasoning it was assumed that as in the pre-war years, one-third of the construction work of the *average* dwelling completed in 1947, 1948 or 1949 but started in 1946, 1947 or 1948 respectively would have been carried out in the year construction was started. Expressing construction work carried out in terms of equivalent dwelling completions, this meant that 13,390 of the 40,170 units carried over into 1947 should be added to 1946, and 14,072 of the 42,215 units carried over into 1948 should be added to 1947. The 13,390 and the 14,072 equivalent units are about 18 per cent of total completions (excluding conversions) in 1947 and 1948 respectively. The ratio compares with one-ninth (about 11 per cent) for 1939 and other pre-war years.

A trend had to be established for the intervening years 1940-1946. Because of the particularly long completion period required in 1946, it appeared likely that, *proportionately* speaking, the largest carry-over of uncompleted units occurred at the end of 1945. This would mark 1946 as the year with the largest proportion of housing completions which were started in the previous year. To give effect to such a trend it was assumed that the dwelling equivalent to construction work performed in 1945 would be 20 per cent of completions in 1946, slightly higher than the 18 per cent ratio for the succeeding year. The ratio for 1946 was then linked with the corresponding ratio of one-ninth for 1939 by straight-line interpolation, to yield ratios for the intervening years of 1940 to 1945. The use of such a trend for the war and immediate post-war period implies that housing completions which took five months before the war were extended, as material and labour shortages became more pressing in the course of the war until by 1946, the first full year of reconversion after the war, the period of completing a dwelling reached a maximum of eleven months. By 1947, as reconversion of industry was accomplished[1] and supplies of material and labour improved,[2] the completion period of the average house was reduced to eight months, and still further in 1948 to seven months.

Using the techniques indicated above, estimates of the value of work performed on permanent dwellings included in Table 75 were prepared separately, by type of dwellings and by areas. In the absence of information on carry-over of conversions of permanent units, and because of the comparatively short construction period for such units, they were treated in the same manner as dwellings in new structures for the period

[1]*Encouragement to Industrial Expansion, Operation of Special Depreciation Provisions, November 10, 1944—March 31, 1949*, Department of Reconstruction and Supply, Ottawa, 1948, pp. 3 and 39.

[2]*Housing in Canada, January, 1948*, pp. 15-20.

to 1945 and as if the carry-over changed only little from year to year for the period 1946-1949.

Estimating Method for Temporary Dwellings. The value of work carried out in connection with the construction of temporary dwellings was taken to equal the construction expenditures made for this purpose. The data are those shown in Table 74 and the sources are described on p. 411.

Since estimates of the value of completions as distinct from work performed were required for temporary dwellings for inclusion in Tables 72 and 73, the actual construction expenditure data were adjusted slightly to assure comparability with other completion data. The adjustments were based on information available on completions of temporary dwellings from the original records shown in summarized form in *Housing in Canada, January, 1949*, pp. 37, 38 and 43.

TABLE 76. VALUE OF ALL RESIDENTIAL CONSTRUCTION WORK CARRIED OUT, NEW STRUCTURES AND CONVERSIONS, MAJOR IMPROVEMENTS AND ALTERATIONS, AND REPAIRS AND MAINTENANCE, CANADA, 1921-1949

New Construction Work Carried Out. This item represents the value of new residential construction work covering both the building of new dwellings in new structures and new dwellings created by the conversion of existing structures, together with construction expenditures on garages, buildings, supplementary residence and land improvements associated with new residential construction. The two components are from Table 75.

Coverage of Major Improvements and Alterations. This item comprises expenditures for structural changes and improvements to existing residential buildings. Expenditures of this type are akin to expenditures for new residential construction because in many instances they are postponable. This is true to a smaller degree for repair and maintenance expenditures which have to be made more or less regularly in order to maintain residential structures in a livable condition.

Major Improvements and Alterations, 1940-1949. The value of residential building permits issued in 204 municipalities was available for both new and repair work for the years 1940 to 1949. Most of the work classified as "repair" in the building permit series involves larger jobs exceeding in cost $500, and would therefore be more akin to what has been defined in this report as "major improvements and alterations." This classification is also in line with the practice of most municipalities requiring a building permit for major improvements and alterations in order to assure that such improvements and alterations conform with fire regulations and other by-laws. The ratios thus obtained tie in quite

closely with corresponding ratios available in the annual construction censuses compiled by the Dominion Bureau of Statistics. The ratios of "repairs" to new residential building permits were applied to the value of new residential construction work carried out, as shown in Table 75, for the years 1940 to 1949. Since the value of conversions is classified as repair work in the building permit series, the value of conversions as estimated in this report was deducted each year in order to arrive at the value of major improvements and alterations, exclusive of conversions.

Major Improvements and Alterations, 1921-1939. Data corresponding to those available for 1940 to 1949 are not available for the years preceding 1940. However, it was possible to establish the range of variations in the ratio of new residential construction to major improvements and alterations for this period based on the more recent data available. From 1940 to 1949 the ratio of what is called "repair" in the building permit series to new residential construction varied inversely with the amount of new construction. The highest ratio of 21 per cent was indicated for 1943, the year of comparatively little new residential construction work. An intermediate ratio of close to 15 per cent was obtained for 1940 and 1941, when new residential construction work was greater than in 1943. A considerably lower ratio, of about 10 per cent, was indicated for the years 1946 and 1947 and about 8 per cent for 1948 and 1949 when new house-building activity reached peak levels. These data support the belief that major improvements and alterations fluctuate somewhat less violently than new residential construction, although significant fluctuations will still occur. On the basis of this reasoning and the partial data available, a pattern of ratios of major improvements and alterations to new residential construction was assumed for the period 1921 to 1939, in which the lowest ratio—approximating that currently applicable—was applied to the pre-war peak of 1929, with corresponding increases in the ratio for the years involving a smaller volume of new residential construction.

Repairs and Maintenance, Single Dwellings, Owner-Occupied. The repair and maintenance expenditures on owner-occupied single dwellings used here are from the 1941 Housing Census. The estimate results in a repair figure of $29 per unit for the year 1941. The total repair work thus established for owner-occupied single dwellings for 1941 was extended back to 1921 and ahead to 1949 on the basis of an index constructed from the value of domestic disappearance of sixteen types of building materials which are used extensively in repair work on residential buildings, e.g. wallpaper, paint, shingles, and various types of plumbing supplies. This method allows for changes in both volume and value over the period under review. During the inter-war period the trend of repair expenditures based on the above index followed materially the pattern of new residential

construction and major improvements and alterations although with less pronounced fluctuations and preceding by one year the turning-points of 1929 and 1933. The trend became less reliable for the years 1940 and 1941 because with the war a substantial proportion of the materials comprising the index were being used for purposes other than residential repairs. The index was therefore adjusted for these two years on the basis of new residential construction and major improvements and alteration expenditures, assuming that repair expenditures would increase at about the same rate from 1939 to 1940 and from 1940 to 1941. For the period 1942 to 1949 the index showed an increasing trend with a slight decrease in 1943—the peak year of the industrial war effort—and thus appeared to reflect again the pattern of repair expenditures for housing. The data for 1949 are preliminary.

Repairs and Maintenance, Single Dwellings, Tenant-Occupied. Data on repair and maintenance expenditures of single dwellings occupied by tenants were available for the year 1945 from a survey covering about 19,000 rental housing units formerly administered by Wartime Housing Limited and now administered by Central Mortgage and Housing Corporation. In this year repair and maintenance expenditures averaged $56 per unit. This figure was taken to be indicative of the national average of repair and maintenance expenditures for single tenant-occupied dwellings. In using this figure it was borne in mind that Wartime Housing units were new units and, therefore, would require less repairs and maintenance than the average house in Canada. Against this, however, as an offset was the fact that Wartime Houses were kept up better than a number of other houses, particularly in some of the older districts. Also the average repair and maintenance expenditures for Canada would include farm homes which would have lower expenditures than non-farm homes.

The average for 1945 was projected back to 1921 and ahead to 1949 by using the indexes of wholesale prices of building materials and wage rates in the building industry combined on the basis of equal weights. This was done assuming (1) that the volume of repair work would have changed only little in this period for the average rental unit, and (2) that the labour content of repair and maintenance work would be higher than for new residential construction. The product was then taken of the average repair cost per unit and the number of available single rental dwellings to yield repair work on single tenant dwellings in each year.

Repair and Maintenance, Multiple Dwellings. Estimates of repair expenditures of multiple units, mainly large buildings converted into apartment units administered by the Property-Management Division of the Central Mortgage and Housing Corporation, were obtained for the year 1945. The average amounted to $28 annually per unit. This

figure on first sight appears to be low if compared with the figure for average cost for single dwelling units occupied by tenants but it should be remembered that repair costs of buildings comprising multiple dwellings would be much lower per unit than for single houses. It was assumed that this average was representative of repair costs of all multiple dwellings in Canada and it was applied to the number of units in existence in 1945. The resulting unit value figures were then projected backwards to 1921 and ahead to 1949 using the same index as for single dwelling units occupied by tenants, and the value of repair work done each year was similarly computed.

The use of different methods in estimating the value of repairs of owner-occupied and tenant-occupied dwellings yields an owner repair series showing wider fluctations than the tenant repair series. The difference appears justifiable in view of the fact that high vacancies in the thirties would induce landords to keep up repairs and low vacancies in the forties would enable them to hold repairs to a minimum (see also p. 90).

Total Repair and Maintenance Expenditures, 1921-1949. The repair work done for single owner-occupied units, single tenant-occupied units, and multiple units was combined to give total repair work for each year.

Although the estimates on repair and maintenance expenditures to residential buildings are based on the best available information, they can be considered as rough approximations only. Data for 1949 are preliminary.

TABLE 77. GROSS RESIDENTIAL CAPITAL FORMATION AND GROSS ADDITIONS TO RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

Coverage of Gross Residential Capital Formation. This item covers new residential construction, major improvements and alterations to existing housing, and supplementary costs associated with the building of new homes, such as residential land improvement expenses and costs of installed non-movable equipment and payments for services connected with the building of the house. Expenditures foı the acquisition of land, which do not involve the creation of goods or the rendering of services, but represent payments for the transfer of title to an existing piece of property, are excluded from this item (see also Section I).

New Construction and Major Improvements and Alterations. These items are taken from Table 76.

Supplementary House Building Costs. These costs comprise in the main two components: (*a*) Costs of installed non-movable equipment in large rental projects, such as elevator, incinerator and ventilation equipment. To aid in the comparability with data required for the

national accounts movable equipment items such as refrigerators and stoves, which in the national accounts are listed as "consumer durables," are omitted here. (*b*) Payments for professional and related services, such as architectural, financial and legal fees. The basic data on which the value estimates of housing are based, taken from *Manpower and Material Requirements for a Housing Program in Canada*, do not include allowances for these supplementary costs except in the case of furnaces. To avoid duplication the cost of furnaces is in this report included in construction costs and omitted from supplementary house-building costs. This procedure conforms to the practice adopted in the processing of loans under the National Housing Act, 1944. Information on supplementary house-building costs is available from records of the admini-

TABLE XXII

COMPONENTS OF ESTIMATED AVERAGE COSTS OF OWNED AND RENTED DWELLINGS WITH LOANS APPROVED UNDER THE NATIONAL HOUSING ACT, 1944, CANADA, 1948

Item	Owned		Rented	
	Cost $	Per cent	Cost $	Per cent
Construction				
Dwellings	6,918	88.6	5,965	89.2
Garages and Other Buildings Supplementary to Residences	100	1.3	96	1.4
Land Improvements associated with New Residential Construction	78	1.0	68	1.0
Sub-total	7,096	90.9	6,129	91.6
Supplementary Costs				
Installed Non-Movable Equipment[1]	—	—	121	1.8
Service Costs (Architectural, Legal and Financial Fees)	138	1.8	110	1.6
Sub-total	138	1.8	231	3.4
Land				
Acquisition Costs	566	7.3	332	5.0
Total	7,800	100.0	6,692	100.0
Number of Units in Sample	17,173		3,204	

Source: Special compilation by Central Mortgage and Housing Corporation based on operating records of loans approved under sections 4, 4b and 8 of the National Housing Act, 1944.

[1]Excluding cost of furnaces which is included in construction costs.

stration of the National Housing Act, 1944. Data on operations under the National Housing Act, 1944, available for 1948 were used.[1] A special compilation covering 20,377 housing units for which loans were approved in 1948 are shown in the form of averages separately for owned and rented houses in Table XXII.

The ratios shown in Table XXII relate to *total* average costs of both owned and rented dwellings. In using these ratios for the purpose on hand it is more convenient to express supplementary house-building costs in terms of a proportion of construction costs. On this basis supplementary house-building costs represent 1.9 per cent of construction costs for owned dwellings, and 3.8 per cent for rented dwellings. These percentages were applied to the value of new non-farm residential units for the whole period under review to yield a series on supplementary house-building costs. For converted dwellings and new farm dwellings no allowance was made for supplementary building costs, because they are believed to be negligible.

Tests of Estimate of New Residential Construction. The results of a survey of the costs of houses with loans approved under the National Housing Act, 1944, in 1948 can be used as an approximate test of the estimates of construction costs of housing in new structures built in non-farm areas in the same year. As Table XXIII below shows the average estimated cost for both owned and rented dwellings used in this report is slightly higher, 14 per cent and 6 per cent respectively, than the data obtained from National Housing Act records. The main explanation for this appears to be the fact that National Housing Act data are estimates of the outlay likely to be involved in the building of the house made before commencement of construction, while the data used in this study are estimates of what it actually costs to complete the dwellings built. A study in 1943 pointed out that it had been the experience of lending operations under the Dominion Housing Act, 1935, and the National Housing Act, 1938, for actual construction costs to exceed construction costs estimated before commencement of construction by a margin of 5 per cent.[2] With the labour and material shortages of 1948, this margin had widened considerably and differences of from 10 to 15 per cent were quite common. All in all, the estimate of actual construction costs for the *average* new house built in non-farm areas in Canada in 1948 appears to be a reasonable approximation of building conditions prevailing at that time.

Gross Residential Capital Formation. This item combines new construction and major improvements and alterations and supplementary house-building costs shown in the fourth and fifth columns of Table 77.

[1]These data are based on cost estimates supplied by applicants and usually are lower than actual construction costs (see p. 420).

[2]*Labour Value of the Building Dollar*, p. 23.

TABLE XXIII

AVERAGE CONSTRUCTION COSTS OF NEWLY-CONSTRUCTED OWNED AND RENTED DWELLINGS, NATIONAL HOUSING ACT RECORDS, 1948, AND ESTIMATES USED IN THIS REPORT, NON-FARM AREAS, CANADA, 1948

Item	Average Construction Costs $	Time to which Estimate Relates
National Housing Act 1944—Sample		
Owned	7,096	Before commencement of construction
Rented	6,129	
Estimate in this Report—Non-Farm Dwellings		
Single	8,304	After completion of construction
Multiple	6,406	
Owned[1]	8,078	
Rented[1]	6,467	
Difference in Average Construction Costs between these Two Sources—Percentages		
Owned	14	
Rented	6	

[1]Adjusted to correspond with definition of owned and rented used in computing data in the National Housing Act, 1944 sample.

Value of Land Put in Use for Residential Purposes. This item has been estimated separately for owned and rented dwellings (excluding conversions) in non-farm areas on the basis of information available from the special tabulation of records of lending operations under the National Housing Act, 1944, summarized in Table XXII. The proportion of land costs to total costs was changed to a proportion of land costs to construction costs to yield ratios of 8.0 and 5.4 per cent for owned and rented dwellings respectively. If these proportions are extended to include supplementary house-building costs, and expressed as a percentage of overall costs, they are raised to 9.1 per cent and 8.4 per cent respectively. These figures are in line with similar estimates of the ratio of land and supplementary house-building costs to construction costs for dwellings financed under the Dominion Housing Act, 1935, and the National Housing Act, 1938. The cost figures for land and incidentals (the latter term corresponds to supplementary house-building costs) were roughly put at 10 per cent of construction costs.[1] This evidence seems to support the contention that the cost of land acquisitions for new housing tends to rise and fall as construction costs change.

[1]*Labour Value of the Building Dollar*, p. 24.

As far as the period under review is concerned, the *proportion* of land costs to total construction costs is not likely to have varied substantially from year to year although absolute land costs are known to have changed considerably in the last three decades. In line with this reasoning, ratios obtained from the detailed records of lending operations under the National Housing Act, 1944, were applied to the total value of newly constructed dwellings in new structures for the period 1921-1949 separately for owned and rented dwellings, to yield an estimate of the value of land used for new housing construction. No allowance for land costs was made for new dwellings created by the conversion of existing buildings since no new land acquisition is involved. Land on which farm houses are built forms an integral part of the farm as a whole. Unlike building sites in non-farm areas, which may be sold on a lot basis, sites for farm houses are generally not sold separately from the farm as a whole and therefore do not possess any significant value by themselves. However, to insure comparability of the series, a token value of land used for farm housing purposes, amounting to 5 per cent of total farm housing construction costs, was used for each year of the period under review.

Additions to Residential Real Estate. This item is the sum total of residential capital formation and cost of land shown in the sixth and seventh columns of Table 77.

Valuation in Current Dollars. The first half of Table 77 expresses residential capital formation and additions to residential real estate in current dollars, that is, the value prevailing at the time at which construction work is carried out, supplementary house-building expenditures are made and a building site is acquired.

Valuation in Constant Dollars. The second half of Table 77 expresses residential capital formation and additions to residential real estate in constant dollars, that is, it attempts to estimate the *volume* of work carried out, the services and equipment purchased, and the building sites acquired. This is done by eliminating price fluctuations, by the use of price indices in conjunction with current value estimates. Separate indices were used for construction of new dwellings in new structures in non-farm areas, converted dwellings and farm dwellings, as shown in Tables XIX and XXI. The same indices were used for supplementary house building costs and land acquisition costs associated with new dwellings constructed.

TABLE 78. RESIDENTIAL CAPITAL CONSUMPTION AND DEDUCTIONS FROM RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

Destroyed and Damaged Dwellings. This item covers the value of units destroyed or damaged by accidental causes. It excludes the value

of demolished units which result from man-made actions. Demolitions take place when a house reaches the end of its useful life. Or they may occur when the land on which a dwelling is built can be put to a better economic use, e.g. a commercial building replacing a residential building, or a different social use, e.g. a residential building demolished and the site used for a park or playground. Allowances for demolished dwellings which reach the end of their life as a result of physical, economic or social factors are made in the estimate of depreciation on residential dwellings and there is therefore no need to cover this item here.

The estimate of the value of destroyed and damaged houses was based on total residential fire losses, as compiled and supplied by courtesy of the Dominion Fire Commissioner, Ottawa.[1] Since available data on fire losses covered both the value of structures and their contents, an adjustment was made to obtain an estimate of fire losses of structures only. A separate allowance was made to cover storm and water damages. Some of the fire losses would not involve major repairs and alterations, as, for example, a small kitchen fire. Ordinarily, expenditures to make good such minor damages would be listed as repair and maintenance expenditures. Since the concepts of capital formation and capital consumption employed here are exclusive of repair and maintenance expenditures, no allowance for these smaller damages should be included in the estimate of destroyed and damaged dwellings. However, the amount of repair and maintenance expenditures for fire losses included in the series is believed to be small. Further, there is an offsetting item in the form of some damage caused by fire to residential property not being reported to the Dominion Fire Commissioner, who depends for his information on reports by fire marshals.

Depreciation—Estimating Technique. This item attempts to provide an estimate of depreciation of the housing stock in existence at the end of each year for the period under review by distributing the decrease in value of residential capital due to (*a*) physical causes (deterioration) and (*b*) economic causes (obsolescence) over the life of the residential structures. Two decisions are necessary concerning the estimating technique to be used: (*a*) how the decline in value of each dwelling forming part of the national housing stock should be distributed over the actual life of each of those units; and (*b*) how these units should be valued each year to provide a basis against which depreciation can be charged.

Depreciation—Distribution over Time. There are three more commonly known methods of distributing allowances for wear and tear and obsolescence of capital over the life of the asset: (1) a *straight-line*

[1]This approach, which aims at measuring *actual* damages, differs from the method of adopting the *provision* for damages used in business and accounting practice and in some national accounting systems.

method which charges each year a constant proportion of the original value of the asset, (2) a *diminishing balance* method which charges each year a constant proportion of the reduced value of the asset, that is, after allowing for wear and tear and obsolescence that have taken place since the creation of the asset, and (3) a *service-output* method which distributes the charges over the service life of the asset in relation to the returns received from the use of the asset. None of the three methods reflects fully the *actual* wear and tear and decline in value through obsolescence which residential real estate experiences in a *given year* during its useful life. The three methods attempt rather to distribute the anticipated decline in value in some reasonable form over the expected life of the asset.

Of the three methods the straight-line method is most commonly used[1] and is the one applied in this report. In the case of residential structures, the experience has been that reduction in value associated with the passing of time has resulted to a larger extent from wear and tear of the building than from its obsolescence. If a dwelling is well maintained the wear and tear will be distributed with relative consistency over the life, although it may become somewhat greater in later years. Obsolescence is less likely to be so gradual as a decline in value due to wear and tear and in effect will most often occur between the mid-life and life-end of the dwelling. A service-output method is not applicable to housing because when the building is vacant and therefore does not render a service it is still likely to be subject to a decline in value because of wear and tear. The diminishing balance method which in principle reflects quite well the pattern of reduction in value of business equipment caused by wear and tear and obsolescence is a less satisfactory method when used to reflect *actual* wear and tear and obsolescence of

[1]The straight-line method of depreciation has been the method most frequently used in Canadian business accounting practice, in accordance with requirements of Federal income tax provisions. In the 1949 Federal Budget, however, it was announced that the Government was introducing a revision of regulations governing depreciation allowances which would involve "changing from the straight-line method of depreciation to the diminishing balance principle." The impact of these changes was described by the Minister of Finance as follows: "Under the new regulations which my colleague the Minister of National Revenue is proposing, the governing principle will be the amortization of costs of depreciable assets. Incidentally, an effect of this will be to allow for obsolescence hitherto unrecognized under our act. In the second place the rates of write-off will apply to the written-down value of the asset account rather than to the total asset account . . . the rates of depreciation will be appropriately increased having regard to the diminishing base to which they apply. Thirdly, it is proposed to introduce what might loosely be described as a recapture provision. This provision will operate to ensure in effect that the deductions for amortizing the cost of an asset shall not exceed the final proven cost of the asset to the taxpayer. It will call for an adjustment against future write-offs where assets are disposed of after some use. I might add here that the so-called add-back or adjustment will be limited to the written-down value at the end of 1948 regardless of the price realized on disposal of assets in order that there can be no possible claim that under this provision capital gains are being taxed, or that this recapture provision has any retroactive effect." *House of Commons Debates*, March 22, 1949, pp. 1799-1800.

structures, particularly housing. This method results in heavy charges at the beginning of the life of an asset, diminishing charges throughout the remainder of the life with negligible charges towards the end of the life. However, this pattern does not reflect the *actual* occurrence of wear and tear and obsolescence of a house. The actual life pattern of a house is one of little reduction in value because of depreciation in the first ten years of the life, with a gradual decline—except in special circumstances—over the rest of the life and possibly a heavier reduction in value towards the end of the life. In these circumstances it appears that the straight-line method would come closer to the *actual* life pattern of a house than the other two methods mentioned above. The straight-line method distributes the decline in value evenly over the life of the asset. Its shortcoming is that it does not allow for little actual depreciation in the early years of the life and for a probable quickening of wear and tear and obsolescence towards the end of the life of a house. The error would not be high for the *average* dwelling, and since in this report straight-line depreciation is being charged on dwellings of all ages together the error would be minimized still further.

Depreciation—Basis of Valuation. The value of the stock of houses which forms the basis for computing depreciation can be determined on the basis of (*a*) original costs, (*b*) acquisition costs, (*c*) current replacement costs, (*d*) ultimate replacement costs, (*e*) current market value, and (*f*) capitalization of returns value.

Original Costs. These are the costs of creating a dwelling. They include construction cost and supplementary expenses involved in the building of the new house.

Acquisition Costs. These costs are represented by the most recent purchase price paid for a property. The value of the property is determined by supply and demand at the time of the sale depending on market conditions and the general price level. Although value can be determined in that way, the resulting price is frequently arrived at on the basis of inadequate information available to buyers or sellers. The real estate market is generally considered an imperfect market owing to the fact that transactions are not carried out in large numbers at any given time and therefore lack some of the characteristics of the ordinary market on which products of corresponding types and like qualities are being continuously exchanged, and both buyers and sellers have adequate opportunities to familiarize themselves with market conditions. Acquisition costs may vary substantially from original costs, depending on the state of the real estate market, although when the house is newly constructed and sold through other than speculative channels the original and acquisition costs tend to be equal. Acquisition costs are used for determining depreciation in Canadian income tax practice (depreciation

being allowed only for rented property, excluding land and land improvement costs) and are widely used in current business accounting practice.

Current Replacement Costs. These costs reflect the price that would have to be paid to replace currently an existing dwelling including whatever alterations and additions have taken place since the building of the house. This method of valuation is used in this report, for reasons given below.

Ultimate Replacement Costs. These costs reflect the price of a property that would have to be paid to replace an existing dwelling at the end of its life, i.e. when wear and tear and obsolescence have progressed so far that the dwelling has to be demolished. Ultimate replacement costs represent the value of a new type of dwelling at the time the replacement takes place and are not the value of the dwelling at the time of its replacement. Ultimate replacement costs are the concept that business would have to apply as a basis for computing depreciation charges if it wanted to assure maintenance of real capital. Difficulties in estimating the cost of replacing an asset many years hence when replacement becomes necessary have made the adoption of this valuation method for business purposes impractical. An attempt to bring the book value of an asset into line with price changes during its lifetime is sometimes achieved by business through revaluation of the asset. This is sometimes done by annual adjustments to the depreciation reserve account to cover price changes during the year.

Current Market Value. This value is the price at which a dwelling could be currently sold in the open market. Estimates can be made for the whole country by using either a sample of current sales for different types of dwellings or an estimated value set by home owners based on their knowledge of the real estate market. The latter data are available in Decennial Censuses (see p. 432).

Capitalization of Returns Value. This is the present value of an asset based on capitalizing a series of returns expected to be derived from the use of the asset. This concept, while it faces great practical difficulties in implementation, is in theory the most satisfactory because it makes possible observation of changes in the stock of real capital on the basis of the output resulting from the employment of the asset over its life. Applied to rental residential real estate a capitalization of returns value could be computed by finding the present value of anticipated average yearly rentals minus operating expenses when discounted at the going rate of interest. Information available at present is insufficient to estimate reliably net future returns over the long life-span of residential real estate. However, some rough check of the estimates of the value of residential real estate used for rental purposes can be arrived at by

applying a factor generally accepted in real estate practice to rental data available in the Decennial Census.

Depreciation—Method of Valuation Used. As indicated previously, the method of valuation used is a concept of current replacement costs. The advantage of this method lies in the fact that it values physical changes in terms of prices prevailing at the time the changes actually occur. The resulting series of residential capital consumption is comparable with the estimate of gross residential capital formation since the latter series reflects additions to residential capital at the prices prevailing at the time the additions take place.

It bears emphasis that this method of valuation differs from that generally used in accounting and income tax practice where original or acquisition costs usually form the basis for making allowances in the accounts and computing income tax. This study attempts to express capital consumption in terms of prevailing prices instead of in terms of past prices.

Depreciation—Basic Data Required. Three sets of basic data are required to use this concept of depreciation in conjunction with residential real estate: (*a*) life expectancy of the average house in Canada, (*b*) the average age of dwellings in existence in Canada at a given time, and (*c*) a series of replacement values of the housing stock at the end of each year for the period under review.

Life Expectancy of the Average Dwelling. Informed real estate opinion holds that the present life expectancy of the average non-farm home in Canada is 75 years and the average farm home 60 years. This informed judgment is supported by data on the average age of the Canadian house. In the case of the farm home, the average age being 33 years at the end of 1941 would indicate that the average farm dwelling had reached a little more than half of its life span at that time. This seems reasonable since the total number of available farm dwellings had changed only little over the last few decades, 4 per cent between 1921 and 1931 and less than 1 per cent between 1931 and 1941. The situation, however, is different for non-farm dwellings, where comparatively large additions have taken place during recent decades, 35 per cent between 1921 and 1931 and 20 per cent between 1931 and 1941, with the result that the average non-farm dwelling had reached only about three-eighths of its life span by the end of 1941. The above estimates of life expectancy were used for the years 1921 to 1949. Construction methods and the types of dwellings built in this period do not appear to have changed enough to affect significantly the life expectancy of the *average* Canadian house. "Temporary" dwellings constructed during the war comprise a small proportion of the total stock. Further, many of the

Wartime Housing units built were reconditioned and provided with basements after the war to extend their life expectancy.

Average Age of Dwellings in Existence. The average age of urban dwellings in existence at the end of 1941 was estimated to be 29.5 years. This estimate was based on the age distribution of urban dwellings, as shown in *Housing and Community Planning*, p. 309, adjusted slightly upward to take account of changes in urban-rural boundaries not allowed for in that report and the differences in the census date (June) and the end of the year. The next step was to work backward to arrive at the average age of the urban housing stock in 1921 by taking account of new houses built and dwellings destroyed and demolished in urban areas. Using this method it was found that the average urban dwelling was 22 years of age in 1921. The same age of 22 years was assumed to be representative of the average rural non-farm dwelling in 1921. Adding to this average age new dwellings built in non-farm areas and subtracting destroyed and demolished dwellings yields an average age of 24.2 years for rural non-farm dwellings in 1941. The fact that the average age of rural non-farm dwellings in 1941 is lower than that of urban dwellings reflects the urbanization process which has been going on in recent decades during which building in suburban areas has been proportionately greater than building in the older established central urban areas. The average age of the farm dwelling was estimated to be 18 years in 1921, assuming that the average age of farm dwellings in the more settled parts of Canada would be a little older than urban houses and be considerably lower in the newly settled areas, particularly in the Prairie Provinces, which experienced a substantial inflow of farming population in the two decades preceding 1921. Working forward to 1941 from the 1921 base by adding new farm dwellings built and subtracting farm dwellings destroyed, demolished or abandoned, yields an average age of 32.8 years for the Canadian farm home in 1941.

In making the above estimate certain assumptions had to be made concerning the age of dwellings destroyed and demolished at the time the destruction or demolition took place. It was assumed that the average age of the destroyed dwelling would equal the average age of dwellings in existence at the time the destruction of the dwelling occurred. For demolished dwellings it was assumed that the dwellings had on an average reached the end of their life expectancy. Different systems of weighting were used as between destroyed and demolished dwellings, 1 to 4 for non-farm dwellings and 1 to 1 for farm dwellings to allow for the fact that fire and other complete losses of houses by accidental causes are lighter in non-farm areas than in farm areas.

Replacement Value of Housing Stock. This series was estimated in conjunction with the estimates of residential capital and residential real

estate shown in Table 80. Methods of computation and sources used are described in the notes to this Table.

Computation of Depreciation. The application of the straight-line method of computing depreciation to non-farm dwellings with an average life expectancy of 75 years means charging 1.33 per cent of their replacement cost annually. In the first year of life these costs are the same as acquisition costs but in the years following replacement costs will differ from original costs, not only because of price changes that may have occurred in the meantime but also because major improvements or alterations may have taken place. For dwellings in existence depreciation charges were computed by valuing all units on the basis of replacement costs adjusted for the life already consumed. The depreciation rate was then computed on the basis of the remaining life expectancy of the dwellings, or, to put it in mathematical terms, the rate used was $\frac{100}{\text{remaining life expectancy}}$. This method was used in this report because depreciation could be directly computed from estimates of the housing stock in existence at the end of each year as shown in Table 69. In the case of farm dwellings the same method was used as for non-farm dwellings except for the life expectancy, which was taken as 60 years.

Value of Land Removed from Use for Residential Purposes. This item represents an estimate of the value of land formerly used for residential purposes after the removal of the buildings resulting from either demolition or destruction. After removal of a building the cleared land may be used again either for residential purposes or for other purposes. In computing additions to residential real estate all land on which new residential buildings are erected is included. To assure uniformity of measurement and to avoid duplication it is necessary to include among deductions from residential real estate the residual value of all land resulting from the demolition of residential buildings, irrespective of the use to which land is put following the demolition and destruction of the residential buildings.

Table 69 gives the number of destroyed and demolished units separately for non-farm and farm dwellings. Data on the ratio of land costs to construction costs separately for owned and rented dwellings is available from special National Housing Act tabulations shown in Table XXII. In the Census years 1921, 1931 and 1941, the value of land per unit in existence was estimated by applying separately for owned and rented dwellings the ratios shown in Table XXII to the estimated replacement cost of the housing stock in existence at these dates. The value of land pertaining to demolished or destroyed dwellings was taken to approximate the average value of land for all dwellings in existence at the end of each of the years in the period under review. The average

value of the land was then multiplied by the number of destroyed or demolished units, to yield an estimate of the total value of land removed from use for residential purposes. The resulting series takes account of changes in the value of land since land is expressed by a proportion of replacement costs of dwellings built on these sites which vary over time. The series, however, does not take adequate account of additional increments or declines in value because of changes in location factors. For example, a site formerly used for residential purposes but now used for commercial or industrial purposes may have acquired a higher value. On the other hand, a site left vacant because of its location in a slum district may be worth less and may in fact become a liability to the owner. On balance the factors tending towards an increase in value because of location advantages may exceed those tending in the opposite direction. If this is the case the series shown here is likely to understate somewhat the value of land removed from use for residential purposes.

Deductions from Residential Real Estate. This item is the sum total of residential capital consumption and value of land removed from use for residential purposes shown in the fourth and fifth columns of Table 78.

Valuation in Current Dollars. The first half of Table 78 expresses residential capital consumption and deductions from residential real estate in current dollars, that is, the value prevailing at the time at which dwellings are destroyed or damaged, depreciation is charged and sites become available after demolition or destruction of dwellings.

Valuation in Constant Dollars. The second half of Table 78 expresses residential capital consumption and deductions from residential real estate in constant dollars, that is, it attempts to estimate the *volume* of dwellings destroyed and damaged, depreciation charged and the sites becoming available after demolition or destruction of dwellings. This is done by the use of the same price indices referred to in the notes to Table 77 under "Valuation in Constant Dollars."

TABLE 79. NET RESIDENTIAL CAPITAL FORMATION, NET VALUE OF LAND ADDED TO RESIDENTIAL REAL ESTATE, AND NET CHANGES IN RESIDENTIAL REAL ESTATE, IN CURRENT AND CONSTANT DOLLARS, CANADA, 1921-1949

Net Residential Capital Formation. This item, shown in both current and constant dollars, is arrived at by subtracting residential capital consumption, shown in Table 78, from gross residential capital formation, shown in Table 77. For three years, 1932-1934, net residential capital formation is negative. This means that residential capital increased in the whole period under review except in these three years, when a decline in the *real* capital represented by the housing stock occurred.

Net Value of Land Added to Residential Real Estate. This item, shown in both current and constant dollars, is arrived at by subtracting the value of land removed from use for residential purposes, shown in Table 78, from the value of land put in use for residential purposes, shown in Table 77.

Net Changes in Residential Real Estate. This item, shown in both current and constant dollars, is arrived at by subtracting deductions from residential real estate, shown in Table 78, from additions to residential real estate, shown in Table 77.

TABLE 80. VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, BY AREA, IN CURRENT DOLLARS, CANADA, 1921-1949

Value of Residential Capital, 1921. In arriving at an estimate of the value of residential capital equal to the value of dwellings in existence at the end of 1921, the number of available dwellings was valued separately for urban, rural non-farm and farm dwellings in terms of 1921 construction costs adjusted for the proportion of its life already consumed. An allowance for the latter was made by subtracting 22/75 of the average cost of a non-farm home, with 22 being the average age of the non-farm home in 1921 and 75 the average life expectancy. A similar approach was used for farm homes by applying a factor of 18/60. The number of available dwellings in 1921 came from Table 69, the average construction cost per dwelling for 1921 was computed from Tables 68 and 73. This was increased for supplementary costs, according to the percentages shown in Table XXII. The average age and life expectancy represent the basic material used for Table 78. The resulting estimate of residential capital is likely to understate a little the replacement costs of available dwellings in existence in 1921 because it does not allow for the replacement costs of any major improvements or alterations to the existing stock of dwellings that may have occurred prior to 1921.

Value of Residential Capital, 1922-1949. The procedure adopted to estimate the value of residential capital in 1922 was to *re-value* residential capital in existence at the end of 1921 in terms of 1922 average construction costs, *deduct* depreciation computed as a proportion of the value of residential capital (see p. 429), *deduct* further the value of destroyed and damaged dwellings in 1922 as shown in Table 78, and *add* gross residential capital formation for 1922 as shown in Table 77. The resultant gives the value of residential capital at the end of 1922 in 1922 average prices. A similar procedure was used for succeeding years to yield the series for 1922-1949.

Value of Land Used for Residential Purposes, 1921. The number of available dwellings at the end of 1921 separately for owned and rented dwellings in non-farm and farm areas was available in Table 70. Each of these components was valued separately in terms of 1921 construction

costs. The percentages of land to construction costs shown in Table XXII and a token proportion of 5 per cent for residential farm land were then used to arrive at the value of land used for residential purposes at the end of 1921. The figure shown in Table 80 is a combined total of land used for residential purposes for both ownership and rental.

Value of Land Used for Residential Purposes, 1922-1949. The value of land used for residential purposes at the end of 1921 was *re-valued* in terms of 1922 prices by use of construction cost indices. To this was *added* the value of land put in use for residential purposes in 1922 shown in Table 77 and *deducted* the value of land removed in 1922 from use for residential purposes, as shown in Table 78. The resultant gives the value of land used for residential purposes at the end of 1922 in 1922 average prices. Estimates for the succeeding years were computed by using the same process as for 1922.

Residential Real Estate, 1921-1949. This series was obtained by combining the separate series of non-farm and farm residential capital and value of land used for residential purposes.

Comparison with Census Data. Some check of the estimates of value of residential real estate can be made by reference to data available in the 1941 Census. The Census shows for non-farm dwellings a distribution of the value of owned dwellings based on the owner's judgment and the distribution of the rentals charged for rented units (*Census 1941*, Vol. V, pp. 112 and 117). From this information it was possible to arrive at two estimates of the value of residential real estate for non-farm areas. The first was an unadjusted estimate by computing a rented average value of owned homes and capitalizing average rentals by a factor (120 times monthly rental). In this case the average home in non-farm areas amounted to $2,782. The second and adjusted estimate was arrived at by eliminating token valuation of owned residential property, defined as a house valued at less than $500, and nominal rentals paid, for example, by one member of a family to another, defined as rentals of $10 or less. On this basis the average non-farm dwelling in Canada, including land, was valued at $3,027. Average value of the non-farm dwelling, including land, as estimated in this report was $3,217 in 1941. This is 6 per cent higher than the adjusted Census estimate and 16 per cent higher than the unadjusted Census estimate.

For farm dwellings a 10 per cent sample of the owner's estimate of the value of farm homes was taken in conjunction with the 1941 Census and the results published in preliminary housing bulletin MB 1. According to this bulletin the average farm dwelling was valued at $1,092. This compares with $959, the estimate for the average farm home in 1941 given in this report. The two estimates differ by 12 per cent.

While the valuation methods adopted in this report differ considerably

from those used in the Census, the estimates of the average value of both the non-farm and farm home from the two sources show comparatively minor divergencies.

TABLE 81. VALUE OF RESIDENTIAL CAPITAL AND RESIDENTIAL REAL ESTATE, BY AREA, IN CONSTANT DOLLARS, CANADA, 1921-1949

Re-valuation into Constant Dollars. The series in Table 80 is shown in current dollars. To indicate the changes in volume for the period under review the data shown in this table were transformed into a series of constant dollars separately for non-farm and farm areas by use of construction cost indices described in the notes to Tables 72 and 73.

ESTIMATING METHODS RELATING TO YUKON AND NORTHWEST TERRITORIES (ESTIMATES INCLUDED IN TABLES 6 AND 14).

Reasons for Separate Treatment. Basic data to arrive at estimates of changes in the housing stock in the Yukon and Northwest Territories are scanty and less complete than those available for nine provinces (i.e. excluding Newfoundland). Also, the types of houses built in the Yukon and the Northwest Territories in the pre-war period were to a large extent of a log type, frequently lacking many of the facilities used in conventional home building in other parts of Canada. However, within the last decade there has been a decided trend towards frame house construction of a more expensive type. Further, the life expectancy of houses in these northern areas is much shorter than in other parts of the country mainly because of the greater wear and tear resulting from the type of structure in use and the exigencies of the climate and the greater rate of abandonment. For these reasons it was thought desirable to make separate estimates of the number of dwelling units completed and the gross value of construction work carried out in the northern areas. These estimates are included in the Canadian total shown in Tables 6 and 14.

Dwelling Completions. The only figure on dwellings in existence is available in the 1941 Census when 3,106 units were reported. The only figures available on housing completions are those for houses constructed in the larger municipalities in the Yukon and Northwest Territories from 1945 to 1947 published in the housing bulletins by the Dominion Bureau of Statistics and partial data for 1948 and 1949 provided through the Dominion Bureau of Statistics by courtesy of the Department of Resources and Development, formerly Department of Mines and Resources. A comparison of population changes from 1921 to 1941 and from 1941 to 1949, coupled with the partial data on dwelling construction in the northern regions for recent years, suggests only little change in the stock of housing in the period under review. Gross additions to the housing

stock appear to have taken place at an *average* rate for the period under review of about 100 units per year, varying perhaps from less than 50 units to about 150 units. Most of this gross increase, however, has been offset by the high mortality rate of housing for reasons indicated above. In the light of these considerations the housing stock in the Yukon and Northwest Territories was placed at 2,800 for 1921 and at 2,900 units for 1931. The number of housing units completed was estimated at an average of 100 units per year for the period 1921 to 1949. These estimates would exclude the temporary quarters built during the war period in connection with the building of the Alaska Highway and other war establishments.

Value of Residential Construction Work Carried Out. In view of the changing pattern of houses built in the northern regions a lower average price was used for the period 1921 to 1939 approximating costs of construction of the average farm home in other regions of Canada. For the period 1940 to 1949, where the trend towards frame house construction has become more pronounced, the average price of a non-farm single dwelling applicable to the nine provinces was used. The use of this average price takes account of the fact that in general construction costs in the northern regions are higher than in most other parts of the country.

Estimating Methods Relating to Newfoundland (Estimates Included in Tables 6 and 14)

Although Newfoundland has only been a part of Canada since March 31, 1949, dwelling constructions for that region have been included in the grand total figures for Canadian residential construction for the whole period 1921-1949 so that a complete series may be consistent with future construction data.

Dwelling Completions. Data on total occupied dwellings were available for the years 1921, 1935 and 1945 from the *Census of Newfoundland, 1945* published by the Dominion Bureau of Statistics. The net increase in occupied dwellings between census dates was obtained by subtraction. Since no information was available for vacant units, the net increase of occupied units was taken as the increase in available units, on the assumption that in absolute terms an increase or decrease of vacant units would have added less than 1,000 units over the periods under review. Such a small variation would affect little annual gross additions to the housing stock. Dwellings destroyed, demolished and abandoned were estimated at 2 per cent of the units available at the beginning of each period and the resultant was added to the net increase to obtain the gross increase in dwellings between census dates.

Annual Distribution of Gross Increase. Data on the value of residential building permits issued annually in the City of St. John's were

supplied from the city records for the years 1933 to 1945. Constant dollar estimates were calculated by use of a rough price index which combined the cost of living index for St. John's, published by the Dominion Bureau of Statistics for the years 1938-1945, with the wholesale price of residential building materials in Canada. The latter was used since a high proportion of building materials is imported in Newfoundland from the Canadian mainland. For the period prior to 1938 the price index was kept constant except for an upward adjustment for the years 1933 and 1934 when the value of residential building permits issued in St. John's was almost as high as the value of those issued in 1942.

The gross increase in dwelling units for Newfoundland for the period 1935-1945 was distributed annually by means of the index of constant dollar residential building permits issued in St. John's. For the years 1933-1934 the 1935-1945 estimates were projected by use of the same index. Dwelling completions for the years 1921-1932 were estimated on an increasing scale to agree with the gross increase for the period 1921-1935 and the low increase in occupied dwellings between the previous census dates. For 1946-1949, data are estimates of completions arrived at on the basis of data supplied by the Dominion Bureau of Statistics for the year 1949 (see *Housing in Canada, January, 1950*, p. 25). Completions for 1946-1948 were assumed to be slightly lower than in 1949 because of the stimulus to house-building effected under the National Housing Act, 1944, first applicable to Newfoundland in 1949.

Value of Construction Work Carried Out. Dwelling completions in 1948 were valued on an average at $6,000. This value was based on the average residential building permit issued in St. John's in that year with an additional allowance for the incidence of garages and a downward revision to cover lower construction costs in rural and outlying areas. For the other years under review this price was projected backward to 1921 and forward to 1949 by use of the price index as calculated above. No allowance was made for carry-over of unfinished units since the rough approximation achieved by the estimating method employed did not warrant such refinement.

Major Improvements and Alterations. Data on building permits were available for this item for the City of St. John's for the years 1933 to 1949. These data were revised to cover the whole of Newfoundland by use of the population factor available for 1945. For the years 1921 to 1932 major improvements and alterations were assumed to represent 10 per cent of the value of new residential construction.

TABLE 82. POPULATION AGGREGATES AND CHANGES, CANADA, 1921-1949

Population Estimates. For the period 1921-1940 estimates covering Canada as a whole, including Yukon and Northwest Territories but

excluding Newfoundland, are based on figures shown in *Population of Canada by Provinces, 1921-1949.* The data, which relate to June 1 of each year, are adjusted to December 31 total, assuming even monthly changes during the year. The population estimated for Yukon and Northwest Territories was deducted in order to secure comparability with data published on births, deaths and immigration and on new dwelling construction, as shown in Tables 83 and 84. For the period 1941-1949 total population was obtained by adding the natural increase and total net migration (see below) for each year to the total population for the preceding year. The total population figure thus arrived at for the end of 1949, 13,361,000, differs by .04 per cent from the estimate of 13,356,000 published by the Dominion Bureau of Statistics in the *Daily Bulletin*, March 1, 1950.

Births and Deaths. These data are from reports issued by the Vital Statistics Branch of the Dominion Bureau of Statistics.

Natural Increase. This is the difference between the number of births and the number of deaths.

Actual Increase Less War Bride Arrivals. The actual increase is the natural increase plus net migration (immigration less emigration). For the years 1921 to 1940 this item was calculated as the difference between the yearly population estimates as shown in column 2 of Table 82. For the years 1941 to 1949 direct estimates of emigration were used.

These were based on figures for the number of Canadian immigrants entering the United States during the period as supplied by the Immigration and Naturalization Service of the United States Department of Justice; the number of Canadian immigrants entering the United Kingdom for the period after 1945, as obtained from periodic issues of the *British Board of Trade Journal;* and the number of persons who applied to the Foreign Exchange Control Board for change of status from resident to non-resident with the intention of leaving Canada permanently for 1948 and 1949 (*Housing in Canada, January, 1950*, pp. 31 and 101-102). The resulting data were then subtracted from immigration estimates less the number of war bride arrivals obtained annually from compilations by the Dominion Bureau of Statistics, based on records of the Department of Immigration and Citizenship. The resulting series when added to the natural increase yields actual increase less war bride arrivals.

Net Migration of Married Females Less War Bride Arrivals. This item is the difference between actual increases less war bride arrivals and natural increase.

Estimated Married Female Migrants Less War Bride Arrivals. For the years 1921-1940 this item is taken to be 20 per cent of yearly net migration. The 20 per cent ratio, taken to indicate migrant families, is

supported by both immigration and emigration data currently available. For the period 1939 to 1949 the number of married immigrant females (excluding war bride arrivals for which a special allowance is made), which are the closest approximation to immigrant families, made up 22 per cent of total immigrants (less war bride arrivals). Emigration data are available from a special compilation of persons leaving Canada permanently and applying for a change-in-residence status to the Foreign Exchange Control Board. Such statements are required by emigrants taking funds out of the country. A special compilation made for 1948 and 1949 indicates that approximately 20 per cent of total emigrants included dependent wives, the number of which approximates emigrant families. For the period 1940-1949 estimates of married female immigrants were used as prepared by the Dominion Bureau of Statistics (see above). A similar emigration compilation for 1948 and 1949 based on the Foreign Exchange Control Board applications was used for emigration of married females. Estimated married emigrants for 1940-1947 were calculated as one-fifth of the total emigrants.

War Bride Arrivals. Canadian statistics on marriages do not include marriages of Canadian servicemen abroad during the war years. War bride arrivals of approximately 43,400 during the period 1943 to 1948 were therefore considered as an addition to the net family formation shown for these years. The data were supplied by courtesy of the Department of National Defence.

Married Female Migrants Plus War Bride Arrivals. This item is the sum total of the preceding two items.

TABLE 83. NET FAMILY FORMATION, CANADA, 1921-1949

Net Family Formation, Method of Estimation. Net family formation is the number of new natural families coming into existence in any given year minus the families dissolved in the same year. The estimate shown here is arrived at by deducting deaths to married persons and divorces from marriages, and adding net migration of married females to new marriages during the year. Deaths and divorces do not break up the family in all cases. This may be offset to some extent by the fact that no figures on separations or informal dissolutions of marriages are included in making the estimate. The justification of the method is the very close correspondence of the result with census material for the period 1921 to 1941.

Marriages, Deaths to Married Persons, and Divorces. The data for these items are from the annual reports of the Vital Statistics Branch, Dominion Bureau of Statistics.

Married Female Migrants including War Bride Arrivals. This item is taken from the last column of Table 82.

Apparent Net Family Formation. This item is the sum of marriages and married migrants including war bride arrivals minus the totals of deaths to married persons and divorces.

Adjusted Net Family Formation. According to the Census, the number of families of two or more members (natural families) increased from 1921-1931 by 355,500. The decade change by the unadjusted estimate of net family formation is 354,400. For the period 1931-1941 the Census shows an increase of 376,300, while the apparent net family formation estimate reflects a growth of 385,900. The differences of 1,100 (0.3 per cent) in the 'twenties and 9,600 (2.6 per cent) in the 'thirties were prorated over the series to conform to the Census totals. No comparable adjustments were made for the years 1942 to 1949 because a full adjustment of the estimating methods employed in this report is not possible until after the 1951 Census has been taken. On the basis of this method, the number of families in existence at the end of December, 1949 was 3,153,000. An estimate of the number of families in Canada, excluding Yukon and the Northwest Territories, as of June, 1947 was prepared by the Dominion Bureau of Statistics based on a 2 per cent sample taken in conjunction with the labour force sample survey. The number of families estimated on this basis is given as 3,042,000 (*Estimated Number of Families in Canada, June 1947*, Dominion Bureau of Statistics, Bulletin No. 7-9050, Ottawa, 1948). If this figure is brought to a year-end total as of 1949, and an allowance is made for Yukon and the Northwest Territories to provide a basis for comparison, the two estimates show a difference of 3 per cent. It appears probable that the Dominion Bureau of Statistics estimate of the number of families is a little too high and the estimate presented in this report a little too low, with the true situation being somewhere between these two estimates. This is borne out by a partial check of data on families available from the Prairie Census 1946. However, the differences are not great enough to affect significantly the meaning of the figures presented. A figure of 80,000 for net family formation in 1949 is shown in the *Annual Report, 1949*, Central Mortgage and Housing Corporation, Ottawa, 1950, p. 3. Net family formation in 1949 in Table 83 is shown as 77,000. The difference is explained by the fact that the methods used for measuring emigration directly (see note to Table 82) were developed after the preparation of the earlier estimate, and also by the availability of more recent data on deaths of married persons for the estimate shown in Table 83. The whole series on net family formation for the period 1941-1949 is preliminary, subject to further adjustment following the findings of the 1951 Census.

TABLE 84. FAMILIES, NON-FAMILY HOUSEHOLDS AND STOCK OF DWELLINGS, CANADA, 1921-1949

Families in Existence. The number of natural families in existence is computed by adding the yearly change shown in the last column of Table 83 to a cumulative figure for December 31, 1921 estimated from Census, 1921 (Volume III, p. 55) assuming even monthly changes.

Non-Family Households Occupying Dwellings—Estimating Method. In order to arrive at non-family households, information on families and households is required for benchmark years. Data available from the Census for 1941 are shown in Table XXIV along with the less comprehensive data available from the 1921 and 1931 Censuses.

TABLE XXIV

NON-FAMILY HOUSEHOLDS AS AT CENSUS DATES, AVAILABLE DATA, CANADA, 1921-1941

Item	Category	1921	1931	1941
	Families			
1	Census Count	2,002	2,419	2,525
2	One person families	208	270	—
3	Actual families (Items 1-2)	1,794	2,149	2 525
4	Lodging families	—[1]	152[2]	192
5	Household families (Items 3-4)	—[1]	—[1]	2,333
	Households			
6	Census Count	1,897	2,275	2,570
7	Subtenant households	—[1]	—[1]	136
8	Total households (Items 6+7)	—[1]	—[1]	2,706
9	Household families (Item 5)	—[1]	—[1]	2,333
10	Non-family households (Items 8-9)	—[1]	—[1]	373

Source: Data for 1921 from the *Census 1921*, Vol. III, pp. x and 55; data for 1931 from the *Census 1931*, Vol. V, pp. 980, 1051 and 1110; and data for 1941 from the *Census, 1941*, Vol. V, p. 7, with additional information on lodging families and subtenant households by courtesy of the Census Branch, Dominion Bureau of Statistics.

[1]Information not available.

[2]Includes subtenant household families.

Non-Family Households, 1941. The number of non-family households for 1941 is estimated by subtracting the number of household families from the total number of households. A household family is a family whose head is also head of a household. This excludes lodging families which are families sharing a dwelling unit with another family or non-family household group. In effect, lodging families are roomers with no

housekeeping facilities. Households include sub-tenant households which are either families or non-family household groups renting accommodation with light housekeeping facilities. They are more akin to households in self-contained premises than to roomers who make no attempt to keep house.

Non-Family Households, 1931. To arrive at the number of non-family households in 1931 on a comparable basis with 1941 several adjustments were necessary:

(*a*) One-person families had to be deducted to arrive at the number of actual families, as defined by the 1941 Census.

(*b*) Figures for lodging families had to be adjusted by subtracting sub-tenant household families to arrive at the same definition of lodging families as was used in 1941.

After examination of 1941 Census data for sub-tenant households, it appears that some 60 per cent of sub-tenant households were made up of families. This ratio is also supported by a study of the relationship between lodging persons and lodging families. By applying 1941 ratios to 1931 it was possible to estimate lodging families and sub-tenant households for 1931, as shown in Table XXV.

Non-Family Households, 1921. No information on the number of lodging families or sub-tenant households was available in the 1921 Census. Comparable data were, however, given on so-called one person

TABLE XXV

NON-FAMILY HOUSEHOLDS AS AT CENSUS DATES, AVAILABLE DATA AND ESTIMATES, CANADA, 1921-1941

(Thousands)

Category	1921	1931	1941
Families			
Total Census Count	2,002	2,419	2,525
One person families	208	270	—
Actual families	1,794	2,149	2,525
Lodging families	73[1]	106[1]	192
Household families	1,721	2,043	2,333
Households			
Census Count	1,897	2,275	2,570
Sub-tenant households	63[1]	77[1]	136
Total households	1,960	2,352	2,706
Household families	1,721	2,043	2,333
Non-family households	239	309	373

[1]Estimated.

families, who are individuals living on their own either in separate dwelling units or with light housekeeping facilities somewhat akin to non-family sub-tenant households. This definition was interpreted somewhat broadly by Census enumerators and there exists a possibility that some roomers are included in the data on one-person families. It is believed, however, that in spite of some enumerating bias the figures are indicative of non-family household formation.

Non-family households in 1921 were estimated by applying the ratios of one-person families in 1921 to 1931 to the estimated number of non-family households in 1931. The figures for lodging families and sub-tenant households for 1921 were estimated by using 1931 ratios (see Table XXV). Because of the tenuous quality of the available material and ratio analyses used, figures for 1921 can only be considered as a rough approximation.

Non-Family Households, 1946 and 1950. Non-family households for 1946 and 1950 were estimated on the basis of sample surveys of occupancy of dwellings in Canada conducted by the Special Surveys Division of the Dominion Bureau of Statistics.

Non-Family Households—Yearly Distribution. Individual years between 1921 and 1950 were interpolated on a straight-line basis between benchmark years. The figures for 1942-1949 are preliminary, to be tested in the light of additional information forthcoming in 1951, the date of the next Census.

Stock of Dwellings. These data are from Table 69.

Total Occupied Dwellings. These data are from Table 69.

C. Explanatory Notes to Tables 85-121

TABLE 85. Expenditures on New Housing, by Source of Funds and Individual Sectors, Canada, 1948 and 1949

Data on direct expenditures by agencies of the Federal Government are from Tables 109, 111, 112, 118, 119, and 120 in Appendix B. Federal Government disbursements on direct loans are from Tables 105, 111 and 115 in Appendix B, and include the Federal share of expenditures under the Canadian Farm Loan Act, 1927, The Veterans' Land Act, 1942, and The National Housing Act, 1944, direct loans only. Federal Government disbursements on joint loans are from Table 114 and cover the Federal Government share of expenditures on dwellings approved for joint loans under The National Housing Act, 1944.

Provincial government disbursements on second mortgages cover advances made under the Housing Development Act, 1948, of the Province of Ontario. The data were provided by courtesy of the Housing Corporation, Province of Ontario.

Disbursements by lending institutions on joint loans cover the lending institution share of expenditures on dwellings approved for joint loans under The National Housing Act, 1944. Data are from Table 115. Lending institution disbursements on government guaranteed loans cover the lending institutions' share of expenditures made for dwellings approved under the rental insurance provisions of The National Housing Act, 1944, other than those for which direct National Housing Act loans were approved. The data were estimated on the basis of information shown in Table 117. Lending institution disbursements on conventional loans cover expenditures by life and fire insurance companies, loan and trust companies, and fraternal societies, on mortgage account, excluding those expenditures already accounted for under one or another form of Federal Government assistance. Total expenditures by lending institutions on residential mortgage loan account were estimated on the basis of data for the amount of gross mortgage loans approved for new residential construction, and the amount of cash disbursements and net and gross loans approved for all real property, as obtained from *Mortgage Lending in Canada, 1948* and *1949*.

Expenditures on dwellings fully financed by owners represent the residual of total overall expenditures and the sum of the preceding items.

Total expenditures are from Table 77 and include land and supplementary house-building costs.

Chartered bank disbursements on Government guaranteed loans cover expenditures by banks under the Farm Improvement Loans Act, 1944 and the home extension provisions of The National Housing Act, 1944. The data are from Tables 113 and 116 in Appendix B.

Credit union disbursements on conventional loans were obtained from *Mortgage Lending in Canada, 1948* and *1949*. These are estimated on the basis of the amount of loans approved as obtained through a continuing survey of credit unions conducted by Central Mortgage and Housing Corporation.

Individual and miscellaneous loan expenditures were estimated on the basis of sample surveys of the principal sources of financing of house-builders, conducted by the Dominion Bureau of Statistics in September of 1948 and 1949.

Owners' equity expenditures in addition to direct Government loans, Government guaranteed loans, and joint loans, are from the same sources as given above for the Federal Government expenditures of these types.

The owners' equity in addition to conventional loans by lending institutions was estimated to represent on an average about half of total expenditures. This average takes account of the fact that institutional loans conventionally amounted to about 60 per cent of the lending value of a property, and that the lending value in post-war years was frequently below actual outlay made to complete the building.

The owners' equity for expenditures on dwellings financed by credit unions was obtained by subtracting loans made by credit unions from the total estimated costs of houses built with credit union mortgage assistance. The average estimated cost of houses built with credit union assistance was taken to equal the average of houses built with conventional institutional financing. Owners' equity of houses built with loans from miscellaneous corporate sources was taken on an average to approximate those of units financed by credit unions. The owners' equity of dwellings financed by individual loans was assumed to be somewhat higher than those financed either by credit unions or by miscellaneous corporate sources, based on information on the size of individual loans as obtained from two sample surveys covering mortgage registrations in the Counties of Carleton, Ontario, and Hull, Quebec (see p. 157).

TABLE 86. DWELLINGS COMPLETED WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949

See Appendix B and notes to Tables 105-120.

TABLE 87. EXPENDITURES ON NEW HOUSING CONSTRUCTION WITH PUBLIC ASSISTANCE, BY TYPE OF ASSISTANCE, CANADA, 1935-1949

See Appendix B and notes to Tables 105-120.

TABLE 88. VALUE OF REAL ESTATE TRANSFERS, ONTARIO, BY MONTH, 1928-1949

Data on the value of real estate transfers on a monthly basis are from the same source as the annual data described in the notes to Table 25.

TABLE 89. NUMBER AND VALUE OF REAL ESTATE TRANSFERS, GREATER TORONTO, BY MONTH, 1921-1949

Number of Real Estate Transfer Deeds Registered. The area comprising the Greater Toronto District is served by three Registry Offices, the York East and West Registry Office, the Toronto and York Land Titles Office, and the Toronto Registry Office. For the years 1921-1949 monthly data on the number of real estate deeds registered were obtained from the local records of the Toronto and York Registry Offices. At the Toronto Land Titles Office annual data only for the years 1926-1948 and monthly and annual data for 1949 were obtained from local records. The annual totals for the period 1921-1925 are estimates based on the number of deeds registered in the York County Registry Office during these years. Examination of the data in later years reveals a close correspondence in the trend of registrations in the three offices. The

annual data for the Toronto Land Titles Office were distributed by month on the basis of the distribution of the number of transfers registered in the Toronto and York Registry Offices, which represented a coverage of 84, 81 and 86 per cent in 1926, 1936 and 1946 respectively, of the total number of transfers registered in the three offices.

Value of Real Estate Transfers. The value of real estate transfers is an estimate based on the amounts of land transfer tax collected in the three offices serving the Greater Toronto District. During the period 1921 to 1949 the tax is 0.2 per cent of the amount of the considerations of all sales involving a transaction of $100 or more. The value of the transfers was computed by multiplying the tax by 500. The data of value of transfers for the three offices are estimates based for the period 1928 to 1949 on the amounts of the transfer tax collected, as obtained from the records of the Controller of Revenue, Department of the Treasury, Ontario Government. For the years 1925 to 1927 monthly data on the amounts of transfer tax collected were obtained from the local records of the three offices. For the years 1921 to 1924 monthly records of tax collected were available from the local records of the York County Registry Office only, and annual figures were obtained from the local records of the Toronto Land Titles Office. Data for the Toronto Registry Office for 1921 to 1924 were estimated in the following manner: the ratio of tax collected at the Toronto Registry Office to the total amount of taxes collected at the three offices in 1925 was computed and weighted by the ratios of the numbers of transfers registered in the Toronto Registry Office to those registered in the three offices for the years 1921 to 1924. The amount of the tax collected at the York Registry Office and the Toronto Land Titles Office was multiplied by the factor for each of the years to obtain the total tax collected at the three offices for the period 1921 to 1924. The annual figure of tax for the years 1922 to 1924 was distributed by month on the basis of the monthly distribution of the number of transfers registered during this period. For 1921 information was available for seven months only and an estimate of the data for the first five months of the year was made on the basis of the seasonal pattern for this year as indicated by the number of transfers. The figures for the years 1921 to 1927 were not consistent with those for later years in that they did not include payments of land transfer tax made directly to the Department of the Treasury. To assure a series comparable over the full period an adjustment was made for the early years on the basis of the coverage factor obtained for 1928, for which year comparable data were available from the local records and those obtained from the Controller of Revenue of the Ontario Government. The difference in coverage between the two series was 9 per cent.

TABLE 90. NUMBER AND VALUE OF REAL ESTATE TRANSFERS, SELECTED PROVINCES, BY MONTH, CANADA, 1949

Compilations are based on original records maintained by Registry Offices in the provinces concerned. In the case of the Maritimes the compilation was based on data of individual transactions originally assembled by Dun and Bradstreet Limited. The data for the Maritimes are published here by courtesy of Dun and Bradstreet Limited.

TABLE 91. NUMBER AND VALUE OF REAL ESTATE TRANSFERS AND POPULATION, BY REGISTRY DIVISION AND TYPE OF AREA, ONTARIO, 1941

Population data are from the same source as the population data described in the notes to Table 26. Real estate transfer data are from the same source as described in the notes to Table 25.

TABLE 92. NUMBER AND VALUE OF REAL ESTATE TRANSFERS, BY TYPE OF AREA, ONTARIO, 1928-1949

Data are from the same source as described in the notes to Table 28.

TABLE 93. SELECTED INDICATORS OF NATIONAL ECONOMIC ACTIVITY, CANADA, 1921-1949

Gross National Product at Market Prices and *Net National Income at Factor Cost*. Data for 1926-1941 are from *National Accounts, Income and Expenditure, 1926-1947*, published by the Dominion Bureau of Statistics. Data for 1942-1949 are from *National Accounts, Income and Expenditure, 1942-1949*.

Exports. These data are from monthly and annual issues of *Trade of Canada—Exports*, Department of Trade and Commerce.

Revenue Freight Carried. Data for 1921-1947 are from annual issues of *Statistics of Steam Railways of Canada*, Dominion Bureau of Statistics. Data for 1948 and 1949 are from monthly issues of *Traffic Reports of Railways of Canada*, Dominion Bureau of Statistics.

Net National Income at Factor Cost (excluding agriculture). This series is the total net national income at factor cost minus net income of farm operators from current farm production. Data for 1926-1941 are compiled from *National Accounts, Income and Expenditure, 1926-1947*. Data for 1942-1949 are from *National Accounts, Income and Expenditure, 1942-1949*.

Exports (excluding agriculture). This series represents total exports minus exports of agricultural food products. The data are compiled from annual and monthly issues of *Trade of Canada—Exports*.

Revenue Freight Carried (excluding agriculture). This series represents total revenue freight carried minus primary agricultural products. Data for 1921-1947 are compiled from annual issues of *Statistics of Steam*

Railways of Canada. Data for 1948 and 1949 are obtained from monthly issues of *Traffic Reports of Railways of Canada.*

Industrial Employment Index. This index is from issues of *Annual Review of Employment and Payrolls in Canada*, published by the Dominion Bureau of Statistics.

TABLES 94-98. DATA SERVING AS TEST MATERIAL, 1921-1949
See notes to Table 99.

TABLE 99. SERIES TO BE TESTED AND SERIES SERVING AS TEST MATERIAL FOR RESIDENTIAL CONSTRUCTION, CANADA, 1921-1949

Number of Dwelling Completions. This series is from Table 67.

Value of New Residential Construction. This series, which covers the value of construction work put in place on new dwellings erected, is from Table 75.

Value of Residential Contracts Awarded. Data are from monthly issues of *The Building Reporter*, published by Hugh C. McLean's Publications, Toronto. The coverage of this series is incomplete for the whole of Canada and not necessarily consistent from year to year, and there is the added disadvantage of possibly varying lags between the dates of contracts awarded and dwelling completions. However, this series has the advantages of yielding a purely residential index, of being available for all years under review and of covering in more recent years a high proportion of dwelling construction in Canada (approximately two-thirds of the total, see also p. 351).

Number of Dwellings for Which Residential Contracts Awarded. These data are from the same source as the value figures mentioned above. The original data show figures on apartment buildings and other dwellings. To arrive at a comparable figure it is necessary to estimate the number of units comprising apartment buildings. This was done by employment of a conversion factor using the method as outlined in *Housing in Canada, January, 1948*, p. 82. This series varies little from the value series. There are some exceptions. The volume series indicates a 1929 peak while the value series indicates a 1928 peak. The volume series indicates a levelling in trend from 1937 to 1938, while the value series indicates a drop. As to the usefulness of the data for test purposes, the qualifications referred to above also apply to this volume series.

Value of Residential Building Permits Issued in 35 Cities. Information on residential building permits issued covering 204 municipalities has been compiled and published by the Dominion Bureau of Statistics since 1940. For prior years data for selected cities were available in the records of the Dominion Bureau of Statistics, but no totals of residential construction building permits issued had previously been compiled. All available records for cities and towns with population of 10,000 and over

were canvassed and it was found that reasonably complete data were available for the period back to 1921 for 35 cities covering 58 per cent of the urban population in 1941. The disadvantages of this series for test purposes are the possibility of varying lags to the time of dwelling completion and the fact that it represents substantially the larger urban areas of Canada. The areas are among the industrialized centres of Canada which are most vulnerable to changing economic conditions and would therefore tend to have greater fluctuations in construction than would Canada as a whole. The main advantage of the series is that it is a purely residential index with a reasonably consistent coverage. The latter has been improved by taking account of changes in the area covered by the municipalities in the period under review.

Dwelling Completions in 25 Cities. This series is based on a survey of local records of housing completions in 41 municipalities comprising 59 per cent of the urban population and 32 per cent of total population in 1941. Data for 1921-1944 were obtained from the respective municipalities, data for 1945-1949 were obtained from issues of *Housing Statistics* and *Housing Bulletin.* The data requested for the earlier period were completion figures contained in municipal assessment records and not the number of dwellings for which building permits had been issued. Twenty-five municipalities covering 43 per cent of the urban population as of 1941 had such information. However, the records were incomplete for some of the back years. As a result the coverage of the 25 cities in the period under review varies in the following manner: 17 cities for 1921-1925, 20 cities for 1926-1929, 21 cities for 1930-1936, 22 cities for 1937-1940, 25 cities for 1941-1949. The series shown in Table 99 is an estimate of completions in these 25 cities based on the trend of available data. The 25 cities include Toronto but not Montreal, for which the only data available are based on building permits issued. Since most of the other cities in the series are considerably smaller, Toronto weighs quite heavily in this series and on several occasions is apt to affect the over-all trend of the series, e.g. 1927, 1935 and 1940. The disadvantages of the series are the possibility of some inaccuracies in the original data and the fact that it represents mainly industrialized urban areas which would tend to fluctuate at times more severely than residential construction in Canada as a whole. However, the series represents a significant portion of total dwellings actually completed and appears to be a useful indicator of the turning points in the residential construction series for Canada.

Rental Index, Advanced One Year. Data are from monthly and annual issues of *Prices and Price Indexes.* This index is based on actual rents paid for similar housing units from one year to the next. It does not vary substantially but it has over the years tended to rise and fall in

direct relation to the number of dwellings constructed the previous year. The index is somewhat rough during the early years under review and insensitive from 1942 to 1949, when rents were subject to government control, but for the bulk of the period, 1926 to 1941, it provides additional evidence for a test of the residential construction series.

Railway Freight Loaded, Tons of Building Materials. These data are from *Monthly Traffic Reports of Railways of Canada.* The materials chosen include lumber (timber, box crate and cooperage material); gravel, sand and crushed stone; lime and plaster; brick and artificial stone; cement; sewer pipe and drain tile. Although influenced also by engineering construction and exports, this index is generally considered a useful indicator of the quantity of building construction being carried out.

Employment in the Building Industry. This series covers the number of employees in the building industry as recorded by firms with 15 or more employees. The data are by courtesy of the Employment and Payroll Statistics Branch of the Dominion Bureau of Statistics. The indexes were obtained from monthly issues of *The Employment Situation Together with Payrolls.* Since the series is confined to reports of large and medium sized construction firms, it provides only partial coverage. This coverage may change as the size of construction firms and the amount of construction work done vary. Since the series does not change necessarily in direct proportion to the amount of work done, it is not a full measure of the volatility of building work done. It does provide, however, an additional check on the reliability of the evidence available. The usefulness of the series as test material increases if account is taken of monthly changes.

Unemployment of Building Workers in Trade Unions. This series is a special compilation based on figures published in monthly and annual issues of *The Labour Gazette,* Department of Labour. It provides a useful supplement and a check on the employment data, particularly if used on a monthly or quarterly basis.

TABLE 100. TESTS OF TURNING POINTS OF FLUCTUATIONS IN RESIDENTIAL CONSTRUCTION, AS ESTIMATED IN THIS REPORT FOR CANADA, 1921-1949

Percentage changes are compiled from the data shown in Table 99.

TABLE 101. TESTS OF AMPLITUDES OF FLUCTUATIONS IN RESIDENTIAL CONSTRUCTION, AS ESTIMATED IN THIS REPORT FOR CANADA, 1921-1949

Percentage changes are compiled from the data shown in Table 99.

TABLE 102. POPULATION, STOCK OF DWELLINGS AND ANNUAL AVERAGE COMPLETIONS PER DECADE, CANADA, SELECTED YEARS, 1867-1949

Population data 1921-1949 are from Table 82. Population data 1881-1911 are from decennial census publications for the respective years. Census data for 1871 were not available for the Territories, and census data for 1861 were not available for British Columbia and the whole of the Prairies. Population figures for Ontario, the Maritimes and Quebec for 1867 were arrived at by interpolation of data available from the 1861-1871 census years. For the Prairies the interpolation was carried out by the use of an Assiniboia estimate for the year 1849 and the Manitoba figure for 1871. For British Columbia the 1867 figure was estimated on the basis of assuming a similar growth from 1867 to 1871 as was indicated for the period 1871 to 1881.

Data on the stock of dwellings 1921 to 1949 are from Table 69. Data for 1881 to 1911 are from decennial census publications. The figure for 1867 was estimated in the same manner as the population figure, with the exception that the 1871 figures for Manitoba and Prince Edward Island were estimated on the basis of population data for 1871 and 1881.

Annual average completions per decade are from Table 104.

TABLE 103. NUMBER OF OCCUPIED DWELLINGS, BY REGION, CANADA, SELECTED YEARS, 1867-1921

Data for 1881 to 1911 are from census publications. Data for 1867 were interpolated by region in the same manner as the total stock of dwelling figures shown for Canada as a whole in Table 102. Data for 1921 are from Table 34 and represent occupied dwellings at the time of the census, not at the end of the year.

TABLE 104. AVERAGE ANNUAL NUMBER OF DWELLINGS CONSTRUCTED PER DECADE, BY REGION, CANADA, 1867-1921

Figures are estimated on the basis of data presented in Table 103 on the assumptions of no appreciable change in vacancies and an allowance for demolished and destroyed dwellings per decade of 5 per cent of total occupied dwellings at the beginning of each decade.

TABLE 105. OPERATIONS UNDER THE CANADIAN FARM LOAN ACT, 1927, LOANS APPROVED AND EXPENDITURES FOR RESIDENTIAL PURPOSES, CANADA, 1935-1949

Data on loans approved for the period 1945 to 1949 were obtained by courtesy of the Canadian Farm Loan Board, Department of Finance.

Figures on the amount of loans approved for the period 1935 to

1944 were estimated on the basis of the 1945 to 1948 ratios of the amount of loans approved for new residential construction and for residential alterations and improvement to the total amount of loans of all types approved, as obtained for 1935 to 1948 from the *Report of the Canadian Farm Loan Board, 1948*, King's Printer, Ottawa, 1948. Estimates for the number of loans approved were made on the basis of the value estimates deflated by the index of farm residential construction costs used elsewhere in this report (see p. 409). Expenditure estimates for new residential construction were made on the basis of the number of loans and the average estimated unit value of farm dwellings used in this study (see p. 408). The ratio of the amount of loans approved to total expenditures for new residential construction was used to estimate the amount of expenditures for alterations and improvement.

TABLE 106. OPERATIONS UNDER THE DOMINION HOUSING ACT, 1935, GROSS AND NET LOANS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1935-1942

Net loans approved were obtained from the *Annual Report* of Central Mortgage and Housing Corporation for 1946. Data on gross loans approved were obtained from the records of National Housing Administration, Department of Finance.

Expenditures by the Federal Government were estimated on the basis of the amount of advances obtained from the records of National Housing Administration. Expenditures by lending institutions were estimated as the difference between total advances on mortgage account and advances by the National Housing Administration. Total advances on mortgage account for the whole period 1935 to 1942 were based on the total amount of net loans approved. This sum was distributed by year according to Federal Government advances. Total construction outlay was estimated on the basis of the ratio of loan to construction cost as obtained from *The Labour Value of the Building Dollar*, pp. 17 and 24, applied to the sum of advances by the Federal Government and lending institutions. Expenditures on land were estimated by the similar use of the ratio of the value of land to the value of loan as obtained from the same source, p. 24. Expenditures by borrowers, other than land expenditures, represent the difference between total construction outlay and total expenditures.

The total number of dwellings started and completed for the whole period was based on the number of units for which net loans were approved. This total was then distributed by year according to the total construction outlay series, deflated by the index of non-farm construction costs for new residential structures (see p. 405) to arrive at a series expressing in physical unit terms the amount of work put in place

each year. This physical figure was then lagged by half the estimated completion period to estimate completions. A completion period of 5 months was assumed for 1935-1940, 6 months for 1941, and 7 months for 1942. Starts were estimated on the assumption of a one month lag between approval and start.

TABLE 107. OPERATIONS UNDER THE HOME IMPROVEMENT LOANS GUARANTEE ACT, 1937, LOANS APPROVED, NUMBER OF CONVERSIONS COMPLETED, AND CONVERSION EXPENDITURES, CANADA, 1936-1940

Data on the number and amount of loans approved were obtained from the records of the National Housing Administration. The estimates of the number of conversions involved and the construction outlay on conversions were based on approximate ratios of the number of conversions and conversion expenditures to the total amount of loans approved as obtained through an examination of a sample of original files.

TABLE 108. OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1938, GROSS AND NET LOANS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1938-1947

Net loans approved were obtained from the *Annual Report* of the Corporation for the year 1947. The total amount of these loans was adjusted to correspond to the total amount of advances, obtained as indicated below. Data on gross loans approved were obtained from the records of the National Housing Administration, Department of Finance.

Expenditures by the Federal Government were estimated on the basis of advances obtained from the records of the National Housing Administration. Expenditures by lending institutions were estimated as three times the Federal Government's share, in accordance with the provisions under Part 1, Section 4 of the Act. Total expenditures were calculated as the product of a statistical factor and the sum of Federal Government and lending institution expenditures. The statistical factor represents the ratio of loan to total cost as obtained from *The Labour Value of the Building Dollar*, pp. 17 and 24. Expenditures on land were estimated in the same fashion on the basis of the ratio of the value of land to total construction, obtained from the same source, p. 24.

The total number of dwellings started and completed through the whole period was based on the number of dwellings for which net loans were approved. This total was then distributed by year according to total construction outlay, deflated by the index of non-farm construction costs for new residential structures (see p. 405) to arrive at a series expressing in terms of physical unit the amount of work put in place each year. This physical figure was then lagged by half the estimated com-

pletion period to estimate completions. A completion period of 5 months was assumed for 1938-1940, 6 months for 1941, 7 months for 1942, 8 months for 1943 and 1944, 9 months for 1945, and 11 months for 1946. Starts were estimated on the assumption of a one month lag between approval and start.

TABLE 109. DIRECT HOUSING OPERATIONS FOR WAR WORKERS AND VETERANS BY WARTIME HOUSING LIMITED AND CENTRAL MORTGAGE AND HOUSING CORPORATION, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1941-1949

Data on dwellings, total expenditures and housing expenditures were obtained from the records of Wartime Housing Limited and Central Mortgage and Housing Corporation. Expenditures on land were estimated on the basis of the ratio of land value to the total value of projects under management in March, 1948, as obtained from *Public Accounts of Canada, 1948*, King's Printer, Ottawa, 1948.

TABLE 110. CONSTRUCTION OPERATIONS UNDER THE VETERANS' LAND ACT, 1942, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1946-1949

Data were obtained by courtesy of the Research and Statistics Division of the Department of Veterans Affairs. The distribution of total construction outlay between new housing and repairs and other services was estimated on the basis of the corresponding ratios for the amounts of money approved. The veterans' share of expenditures was estimated on the basis of the ratio of the veterans' share of outlay to total outlay over the whole period 1946 to 1949.

TABLE 111. HOME EXTENSION GUARANTEE OPERATIONS UNDER THE APPROPRIATIONS ACT, NO. 2, 1942, LOANS APPROVED, CONVERSIONS CONSTRUCTED, AND EXPENDITURES, CANADA, 1942-1944.

The total number and amount of loans approved and the number of conversions involved were obtained from the records of Central Mortgage and Housing Corporation. The annual distribution was established on the basis of fiscal year data obtained from *Public Accounts of Canada* for the years 1942 and 1943. Expenditures were estimated as the product of the number of conversions constructed and the average estimated cost of conversions for each year.

TABLE 112. OPERATIONS UNDER THE HOME CONVERSION PLAN, NUMBER OF CONVERSIONS COMPLETED AND EXPENDITURES, CANADA, 1943-1946

Data on expenditures were estimated on the basis of data obtained from *Public Accounts of Canada* for the years 1944 to 1947. Figures for

housing units completed were estimated on the basis of the records available in Central Mortgage and Housing Corporation. Completion dates were assumed to coincide with dates of tenant occupancy.

TABLE 113. OPERATIONS UNDER THE FARM IMPROVEMENT LOANS ACT, 1944, LOANS APPROVED FOR NEW RESIDENTIAL CONSTRUCTION AND IMPROVEMENT, AND EXPENDITURES, CANADA, 1944-1949

Data on loans approved were obtained from the Supervisor, The Farm Improvement Loans Act, Department of Finance. The number of dwellings constructed represents the number of loans approved for new residential construction.

Total expenditures for new residential construction were estimated as the product of the number of dwellings involved and the average cost of a farm house as indicated on p. 408. Total expenditures for residential improvement were estimated on the basis of the amount of loans approved and the ratio of the amount of loans approved to estimated total expenditures for new residential construction.

TABLE 114. CONSTRUCTION OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1945-1949

Data on expenditures are from Table 115. Data on dwellings started and completed 1947 to 1949 were obtained from the *Annual Report* of Central Mortgage and Housing Corporation for the respective years. Dwellings started for 1945 and 1946 were estimated on the assumption of a three months' lag between loan approval and the commencement of construction. Total starts for 1945, 1946 and 1947, completions for 1947, and the number of units under construction at the end of 1947 available in the Corporation's *Annual Report* yielded the total number of completions for 1945 *and* 1946. This two-year total was then distributed according to expenditures on construction.

TABLE 115. LENDING OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, GROSS AND NET LOANS APPROVED AND EXPENDITURES, BY TYPE OF LOAN, CANADA, 1945-1949

Data on loans approved were obtained from the *Annual Report* of the Corporation for the years 1946 to 1949 and supplementary data from the records of the Corporation. Expenditures were estimated on the basis of advances on mortgage account, the Federal Government component of which was obtained from the records of Central Mortgage and Housing Corporation. The amount of outlay by lending institutions was calculated as three times the Federal Government component in the case of joint loans, since advances under the Act as amended in December,

1949—which allows for changes in the Federal share—had not been made by the end of 1949 pending agreement between Central Mortgage and Housing Corporation and the lending institutions concerned.[1] The amounts estimated to have been disbursed on construction costs and land, over and above the amount of loan, were calculated on the basis of the known ratios of loan to total costs and loan to land costs, for loans approved in the respective years.

TABLE 116. HOME EXTENSION LOAN GUARANTEE OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, LOANS APPROVED, AND EXPENDITURES, CANADA, 1946-1948

Data on loans approved and the number of dwellings involved are from the records of Central Mortgage and Housing Corporation. Total expenditures were estimated as a product of the number of conversions involved and the average estimated cost of conversion (see p. 407).

TABLE 117. RENTAL INSURANCE OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, PROJECTS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1948 AND 1949

Data on projects approved were obtained from the records of Central Mortgage and Housing Corporation. The number of dwellings started were estimated on the assumption of a one-month lag between approval and start and a seven-month lag between start and completion. Expenditures were estimated as a product of the average unit cost of dwellings approved and total completions plus one-third of the excess of starts over completions. Land expenditures were estimated on the basis of ratios of land to total expenditures for rental projects approved for loans under the National Housing Act, 1944.

TABLE 118. OPERATIONS UNDER THE EMERGENCY SHELTER REGULATIONS, NUMBER OF CONVERSIONS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1945-1949

Data are from the records of Central Mortgage and Housing Corporation. Total expenditures were estimated on the basis of the known amount of Federal Government grants and the ratio of Federal grants to total cost as derived from an examination of records of projects approved under the plan.

TABLE 119. HOUSING OPERATIONS OF THE DEPARTMENT OF NATIONAL DEFENCE, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1946-1949

[1]See Order-in-Council, P.C. 3066 dated June 26, 1950.

Data were obtained in part by courtesy of the Joint Service Accommodation Committee, Department of National Defence, and in part from the records of Central Mortgage and Housing Corporation.

TABLE 120. DIRECT HOUSING OPERATIONS BY FEDERAL GOVERNMENT DEPARTMENTS, NUMBER OF DWELLINGS CONSTRUCTED AND EXPENDITURES, CANADA, 1946-1949

Data are based on information obtained from the *Public Accounts of Canada* for the years 1946 to 1948. For 1949 the data were estimated on the basis of funds voted by Parliament.

TABLE 121. OPERATIONS UNDER THE DOUBLE DEPRECIATION PLAN FOR RENTAL HOUSING PROJECTS, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1947-1950

Estimates of the number of dwellings started were made on the assumption of a one-month lag between approval and start and a lag of eight months in 1947 and seven months in 1948 to 1950 between start and completion. Expenditures were estimated as the product of the average unit cost of dwellings approved in each year and the number of dwellings completed plus one-third of the excess of starts over completions. The amount of land expenditures was estimated on the basis of ratios for projects approved.

TABLE 122. OPERATIONS UNDER THE DOUBLE DEPRECIATION PLAN FOR RENTAL HOUSING, PROJECTS APPROVED, CANADA, 1947-1950

Data are from the records of Central Mortgage and Housing Corporation.

Section Thirteen

TESTS OF ESTIMATES

Tests of the basic estimates of the volume of residential construction are desirable for two reasons:

(1) Except for the latter part of World War II, the estimates presented here follow the trend of other indicators reflecting general economic activity, although with significant variations in amplitude. This experience is not fully shared in other industrially advanced countries.

(2) It has been suggested earlier (*a*) that the likely error of using selected building material indicators as trend would not be sufficiently great to affect the trend of new residential construction as distinct from non-residential new construction and total repair and maintenance construction (see p. 384), and (*b*) that variations in construction costs of houses can be approximated by use of an index of wholesale prices of residential construction materials, wage rates of construction labour and to some extent allowances for changes in efficiency (see p. 401). The justification for this is the claim that variations in construction methods and materials used and small declines in the average size of dwellings resulting in a possible reduction in real construction costs would tend to be offset by an improvement of facilities and amenities created (e.g. an oil furnace replacing a coal furnace, an electric stove replacing a coal or gas stove).

The test of the trend and amplitudes of changes in the volume of residential construction represents in effect a test of the behaviour of gross residential capital formation since residential construction including new construction and major improvements and alterations represents the major element, 98 per cent, while the remaining 2 per cent is made up of non-movable equipment and supplementary house building costs.

The suggestions mentioned under point 2 above have been discussed in the preceding text but some elaboration is desirable of the thesis mentioned under point 1.

High and Low Points of the Series

This study covers a 29-year period during which there occur four high points of activity (1923, 1929, 1937 and 1941) and four

low points (1924, 1933, 1938 and 1943), omitting the starting and ending points of series. It may be more than coincidence that the high and low points of residential construction activity during the pre-war period appear to tie in closely with turning points of total economic activity,[1] as indicated by gross national product estimates, particularly after eliminating the effect of agriculture whose output in part depends on non-economic factors (e.g. the weather), the value of exports, industrial employment reported in ten major industries, and total tons of railway freight loaded (see Table 93 in Section 10).[2] As was to be anticipated, the outbreak of World War II interfered with the similarity in trend apparent for the pre-war period. Since the major portion of the country's resources had to be devoted to military purposes and fewer resources remained available for civilian tasks including the construction and improvement of housing, residential construction work declined after 1941 for the next two years while total economic activity climbed upwards (see Figures 21 and 22).

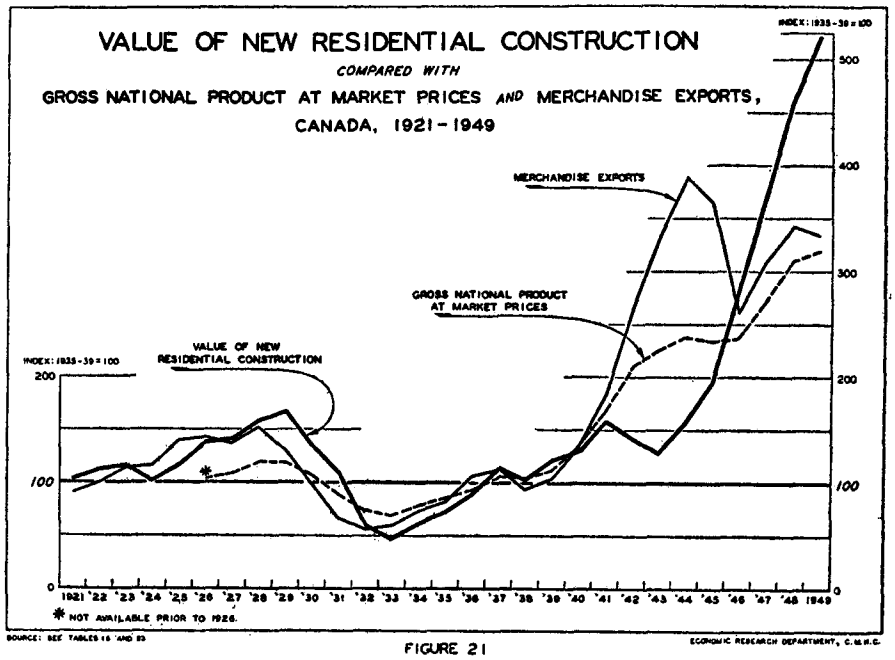
"Long" and "Short" Cycles

The period covered in this report, 29 years including six years of major war, is too short a time to make any categorical statements about the volume of residential construction and its relationship to total economic activity, levels of employment and income, and prices. However, there exists a considerable amount of economic literature abroad which speaks of "long" building or construction cycles as distinct from "shorter" business cycles, implying and demonstrating that fluctuations of building and construction appear to be of longer duration than fluctuations of general economic activity.[3] These conclusions are based on

[1]It bears emphasis that in terms of amplitudes the swings of new residential construction including major improvements and alterations are somewhat wider, with increases in times of buoyant economic activity taking place at a somewhat slower pace than downward movements in times of declining levels of employment and income.

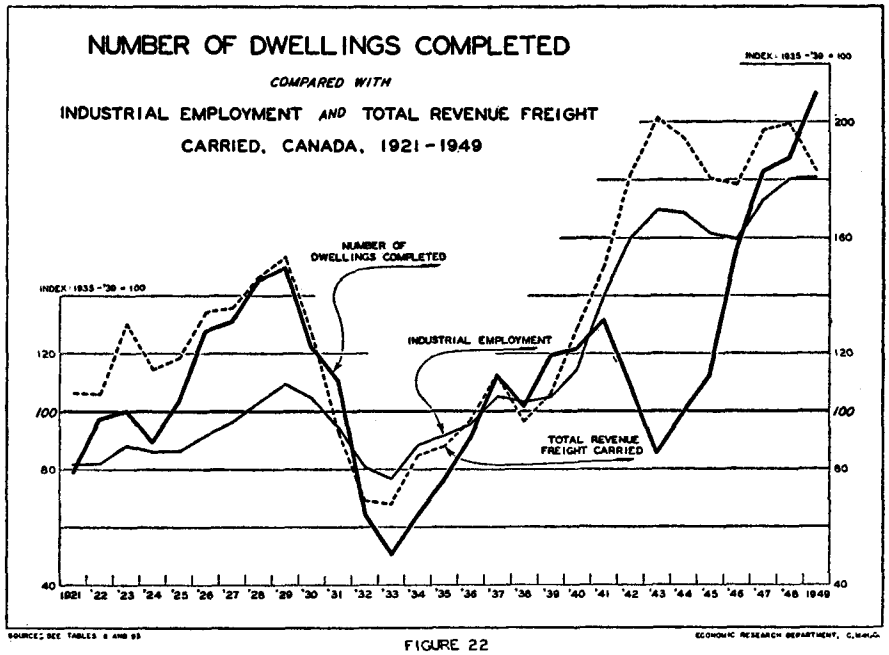
[2]"In so far as the level of new building is dependent on fluctuations in the relationship of incomes to costs, one might expect changes in building activity to be roughly simultaneous with, though because of their wide amplitude not parallel to, changes in general business; and indeed this appears to be commonly the case. In the United States, however, evidence has been found of the existence of a longer cycle of business activity with a duration of 15-20 years." *Economic Stability in the Post-War World*, League of Nations, Geneva, 1945, p. 60. "Evidence of the existence of a cycle in residential building is limited almost exclusively to the United States . . . Apparently some traces of a long building cycle could be observed (in some European countries) in the nineteenth century." But "towards the end of that century and in the twentieth century . . . other tendencies connected with the general industrial cycle dominated the housing market." *The Dynamics of Business Cycles*, by Jan Tinbergen and J. J. Polak, Chicago, 1950, p. 95.

[3]Summarizing the research work of a number of investigators between 1930 and 1940 the following observation is made: "It appears that the building cycle averages



SOURCE: SEE TABLES 16 AND 23 ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

FIGURE 21



SOURCES: SEE TABLES 8 AND 23 ECONOMIC RESEARCH DEPARTMENT, C.M.H.C.

FIGURE 22

observations covering much longer periods than the data assembled in this report. It would therefore be premature to assert that Canadian experience, available only for a limited period, is evidence for the fact that there are countries and periods where construction and building work and general economic activity follow broadly similar trends. Such a statement would only be possible if it were supported by (*a*) a number of observations including estimates of types of construction other than residential building and covering a much longer period than is covered in this report, and (*b*) a thorough analysis of the reasons *why* building and construction activity should *or* should not follow trends of general economic activity. In the present state of knowledge about Canadian economic fluctuations, only a qualified and tentative observation can be made. If Canadian data were available for a longer period, such as are available in the United Kingdom and the United States, they might well bring out shorter swings within longer swings in the volume of residential building activity. Such a pattern could possibly be read into the data assembled for the last twenty-nine years but any conclusion reached would still be based on a relatively short space of time and could not be taken by itself as evidence of the *recurrence* of "long" building cycles in Canada.

For this study the observations on the behaviour of building and construction activity in other countries have important research implications. They make it necessary to examine as critically and test as thoroughly as can be done in the light of available data the main residential construction estimates presented in this report.

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somewhere between 17 and 18 years in length, or almost precisely twice the length of the major business cycle." *Fiscal Policy and Business Cycles*, Alvin H. Hansen, New York, 1941, p. 20. Supporting this observation are the results of a comprehensive survey undertaken by the research staff of the National Bureau of Economic Research: "Building construction (in the United States) is characterized by long cycles of remarkably regular duration. They run usually from about 15 years to 20 years; they are clear-cut in outline and attain enormous amplitudes, and are paralleled by long cycles in other real estate processes." *Measuring Business Cycles*, Arthur F. Burns and Welsley C. Mitchell, National Bureau of Economic Research, New York, 1946, pp. 418-420. Testing American experience in the light of European experience additional evidence is cited to support the "long" cycle. The building industry in the United States, another investigation finds, "has extremely violent fluctuations with cycles which are usually 18 years long . . . apparently the building cycles in Europe are somewhat longer than, and not always coincident in time with, those in the United States." *World Prices and the Building Industry*, George F. Warren and Frank A. Pearson, New York, 1937, pp. 159 and 126. The latter conclusion is also supported by European authors. Sir William Beveridge speaks of British building cycles of 22 years duration. This cycle, he observes, is somewhat longer than its American counterpart, which measures "seventeen to eighteen years, or about twice the length of the major business cycle." *Full Employment in a Free Society*, Sir William Beveridge, London, 1944, p. 307.

Method of Testing

Definite evidence of the reliability of the estimates of new dwellings completed annually could only be obtained by an actual count. Such a series is not available in Canada for the whole period under review. As indicated previously, a complete count is only available for urban centres with population of 5,000 or over, with sample areas in other localities, for the years commencing 1945 (see p. 347). However, it was possible to assemble eight independent series which were indicative of the amount of new residential construction as tests of the reliability of the series estimated in this report. These test series include the following sets of data:

(1) Value of residential contracts awarded;
(2) Number of dwellings for which residential contracts were awarded;
(3) Value of residential building permits issued in thirty-five municipalities;
(4) Number of dwellings completed in twenty-five municipalities;
(5) Rental index, advanced one year;
(6) Tons of railway freight of building materials loaded;
(7) Number of employees in the building industry;
(8) Unemployment among construction workers in trade unions.

The series to be tested were the basic series for volume and value of residential construction:

(1) Total number of dwellings completed;
(2) Value of new residential construction work carried out.

The above ten series (those serving as test material and those to be tested) are shown on an annual basis in terms of absolutes in Table 99. The usefulness of the tests would be increased considerably if all the series were available on a monthly basis. This is not the case. However, monthly data are available for some of the series and they are used in this report where appropriate to throw additional light on the subject of inquiry (see Tables 94 to 98 in Section 10).

In addition to the statistics assembled, individual producers of building materials were questioned as to their sales and inventory experiences at various turning-points of the residential construction pattern. Such opinions, which in part are based on the company's business experience and in part on the judgment of entrepreneurs

TABLE 99

SERIES TO BE TESTED AND SERIES SERVING AS TEST MATERIAL FOR RESIDENTIAL CONSTRUCTION, CANADA, 1921-1949

Year	Series to be Tested		Series Serving as Test Material							
	Number of Dwellings Completed 000	Value of New Residential Construction $ Mill	Residential Contracts Awarded Value $ Mill	Residential Contracts Awarded Dwellings 000	Residential Building Permits Issued in 35 cities $ Mill	Dwellings Completed in 25 Cities 000	Rental Index[1] Advanced one Year	Railway Freight Loaded, Building Materials Mill Tons	Employment in the Building Industry 000	Unemployment of Building Workers in Trade Unions Per Cent
1921	34.1	140.8	76.7	17.0	53.5	7.0	109.8	8.4	29.2	20.2
1922	42.3	153.8	104.2	22.1	67.8	8.9	112.6	10.6	28.2	13.4
1923	43.4	159.1	97.6	20.3	59.6	9.7	113.1	13.3	31.3	11.6
1924	38.7	138.9	91.2	19.2	56.5	9.3	113.1	11.3	33.5	17.9
1925	44.7	159.9	96.5	20.6	60.0	8.0	111.7	12.2	36.7	14.9
1926	55.2	189.5	109.6	22.8	66.1	10.1	110.3	13.6	46.4	12.7
1927	56.8	194.0	124.9	26.7	67.6	8.2	113.0	14.3	51.2	13.4
1928	62.9	217.7	139.2	27.0	77.0	12.0	115.3	15.3	52.7	10.9
1929	64.7	229.1	128.9	29.7	65.0	13.2	118.2	16.5	63.7	13.2
1930	53.0	185.0	93.3	23.5	50.5	7.6	115.0	13.2	63.1	30.5
1931	47.8	150.2	81.7	21.0	43.7	7.5	105.7	9.5	49.1	45.4
1932	28.1	82.6	28.9	9.1	12.2	4.0	95.0	4.7	25.5	62.1
1933	21.9	65.2	23.9	8.7	7.0	1.7	89.7	3.7	18.1	66.7
1934	27.7	84.7	30.6	10.4	8.1	1.8	90.6	5.0	22.5	61.2
1935	32.9	99.8	36.4	12.2	13.3	1.7	92.6	5.0	26.1	49.9

TABLE 99

SERIES TO BE TESTED AND SERIES SERVING AS TEST MATERIAL FOR RESIDENTIAL CONSTRUCTION, CANADA, 1921-1949
Continued

Year	Series to be Tested		Series Serving as Test Material							
	Number of Dwellings Completed 000	Value of New Residential Construction $ Mill	Residential Contracts Awarded Value $ Mill	Residential Contracts Awarded Dwellings 000	Residential Building Permits Issued in 35 cities $ Mill	Dwellings Completed in 25 Cities 000	Rental Index[1] Advanced one Year	Railway Freight Loaded, Building Materials Mill Tons	Employment in the Building Industry 000	Unemployment of Building Workers in Trade Unions Per Cent
1936	39.3	122.9	42.9	14.4	14.8	3.0	96.1	5.9	26.1	38.2
1937	48.6	156.4	56.2	19.3	15.1	3.2	99.3	8.3	28.3	29.1
1938	44.0	140.9	55.0	20.2	16.7	3.3	100.0	5.9	28.3	34.3
1939	51.7	165.8	67.5	23.9	19.5	4.5	102.4	6.5	29.2	31.1
1940	52.6	178.8	67.7	22.5	35.6	3.9	105.4	10.2	39.3	20.1
1941	56.9	218.2	92.4	30.4	43.8	6.3	107.2	10.9	65.7	11.5
1942	47.3	195.0	79.3	30.0	33.9	5.1	107.4	11.6	74.2	7.8
1943	36.9	176.1	79.1	29.9	32.3	4.8	107.8	10.6	75.5	3.7
1944	42.9	214.5	131.2	38.3	53.4	5.4	108.0	10.6	44.9	2.7
1945	48.6	268.7	196.0	49.4	69.5	7.4	108.6	11.0	47.9	1.8
1946	67.2	390.2	213.1	41.3	117.8	7.5	112.4	12.6	68.6	1.8
1947	79.2	506.1	197.2	38.1	104.8	12.0	116.3	14.7	89.7	3.2
1948	81.2	628.7	373.1	66.2	160.7	13.1	118.5	15.5	100.6	4.8
1949	91.0	715.6	464.3	72.5	187.0	17.0	.....	13.9	115.1	8.8

[1]Base: 1939 = 100.

of what happened in the whole residential construction field, provide valuable supplementary qualitative evidence as to the appropriateness of the estimates presented in this report.[1]

Separate tests are made below for the turning-points of the residential series and for the amplitude of fluctuations indicated in the series. Details as to the sources of the test series, their reliability and comparability with residential construction estimates presented in this report are outlined in Section 12.

Tests of Turning-Points

The two series to be tested followed the same pattern insofar as all turning-points were concerned. They were therefore tested together as the "residential series". The turning-points to be tested were those indicated in Table 99, four high points—1923, 1929, 1937, and 1941, and four low points—1924, 1933, 1938, and 1943. The percentage changes taking place at the time of the turning-points for the ten series are summarized in Table 100.

Test 1: Value of Residential Contract Awards. This series had high points preceding by one year those for the residential series of 1923 and 1929 but it followed the same trend for the other high points, for the four low points, and for all other cases except 1947, in which year the contracts awarded showed a decline. In view of the time lag from contract awarded until dwelling completion it seemed plausible that for some cases the contract awarded series would have peaks preceding the residential series. A lag of five months, the average completion time for a dwelling, was applied to monthly contract awarded data in order to approximate dwelling completions. This new series had peaks for the years 1923, 1928, 1937 and 1941, thus supporting the trend of the residential series for all years except 1929 and 1947. The 1947 residential data were already established by the actual count methods and the results of estimates were the best obtainable for the country as a whole. The probable cause of the drop in the contract awarded series in this year was the extremely high volume of contracts which were awarded in 1946 but could not be completed, with the usual time lag, and had to be carried forward for one or even two years. The best indication of this is the average time required to complete a house, which amounted to 11 months in 1946 compared with 5 months before the war and 8 months in 1947. A similar

[1]The Building Material Priorities Officer of the Department of Trade and Commerce assisted greatly in canvassing building material producers. Several companies helpfully went through their old records of the 'twenties and the 'thirties as a check on their experiences in the past.

TABLE 100

TESTS OF TURNING-POINTS OF FLUCTUATIONS IN RESIDENTIAL CONSTRUCTION AS ESTIMATED IN THIS REPORT FOR CANADA, 1921-1949 (per cent changes)

Series	Turning-Points 1923-24			Turning-Point 1929		Turning-Point 1933		Turning-Points 1937-38			Turning-Point 1941		Turning-Point 1943	
	1922-23	1923-24	1924-25	1928-29	1929-30	1932-33	1933-34	1936-37	1937-38	1938-39	1940-41	1941-42	1942-43	1943-44
Series to be Tested														
Number of Dwelling Units Completed	+ 3	−11	+16	+ 3	−18	−22	+26	+24	− 9	+18	+ 8	−17	−22	+16
Value of New Residential Construction Work Carried Out	+ 3	−13	+15	+ 5	−19	−21	+30	+27	−10	+18	+22	−11	−10	+22
Series Used as Tests														
Value of Residential Contracts Awarded	− 6	− 7	+ 6	− 7	−28	−17	+28	+31	− 2	+23	+36	−14	..	+66
Number of Dwellings for Which Contracts were Awarded	− 8	− 5	+ 7	+10	−21	− 4	+20	+34	+ 5	+18	+35	− 1	..	+28
Value of Residential Building Permits Issued in 35 Cities	−12	− 5	+ 6	−16	−22	−43	+16	+ 2	+11	+17	+23	−23	− 5	+65
Number of Dwellings Completed in 25 Municipalities	+ 9	− 4	−14	+10	−42	−58	+ 6	+ 7	+ 3	+36	+62	−19	− 6	+13
Rental Index, Advanced One Year	..	..	− 1	+ 3	− 3	− 6	+ 1	+ 3	+ 1	+ 2	+ 2	..	..	..
Tons of Railway Freight Loaded of Building Materials	+25	−15	+ 8	+ 8	−20	−21	+35	+41	−29	+10	+ 7	+ 6	− 9	..
Number of Employees in the Building Industry	+11	+ 7	+10	+21	− 1	−29	+24	+ 8	..	+ 3	+67	+13	+ 2	−41
Percentage of Unemployment among Construction Workers in Trade Unions	−13	+54	−17	+21	+131	+ 7	− 8	−24	+18	− 9	−43	−32	−53	−27

case of over-contracting is likely to have existed in the peak construction period of the late 'twenties, when residential contracts awarded increased rapidly towards the end of 1927 and continued high until the middle of 1929. Thus the contract awarded series does not provide any evidence actually contradictory to the residential series even in the variant years of 1929 and 1947 (see Figure 23).

Test 2: Number of Dwellings for which Residential Contracts were Awarded. This series was used as a supplement to Test 1. It is a preferable series insofar as it is directly indicative of the volume of residential construction but for the fact that it is necessary to estimate the number of units in multiple projects (see p. 446). For the most part the series followed the pattern of the value of residential contract awarded series and tended to confirm the reliability of the residential series as indicated in Test 1. In three cases there were different turning points, indicating a decrease in the size of the units, as in 1929 and 1940, or a falling price level, as in 1938. Further analysis into the monthly data, however, tended to confirm Test 1 even for these cases (see p. 463).

Test 3: Value of Residential Building Permits Issued in Thirty-five Municipalities. This series agreed with the residential series for all peaks except 1923 and 1929, for all low turning points except 1938, and for all other years except 1947. When monthly data were lagged five months the resulting series agreed with the residential series for all years except 1929 and 1947. The reason for a drop in residential building permits in 1929 and 1947 would be an unusual piling up in 1928 and 1946, similar to the situation outlined for residential contracts awarded (see Figure 23).

Test 4: Number of Dwellings Completed in Twenty-five Municipalities. This series tended to agree in major trends with the series being tested although it had a more jagged movement with several minor drops as between adjoining years. The major trend agreed with all four high points under review but only two of the low points. Variance occurred for 1924 and 1938—this test series continued down to 1925 and flattened instead of dropping from 1937 to 1938. Whether this variance was due to minor trends in particular localities could not be established. No monthly data were available and an analysis of individual cities showed about half of them following the trend established for this series while the other half followed the pattern of the residential series. On the whole this test series gave additional evidence for the residential series as estimated for all turning-points except the low points of 1924 and 1938. For these points the evidence suggests that the impact

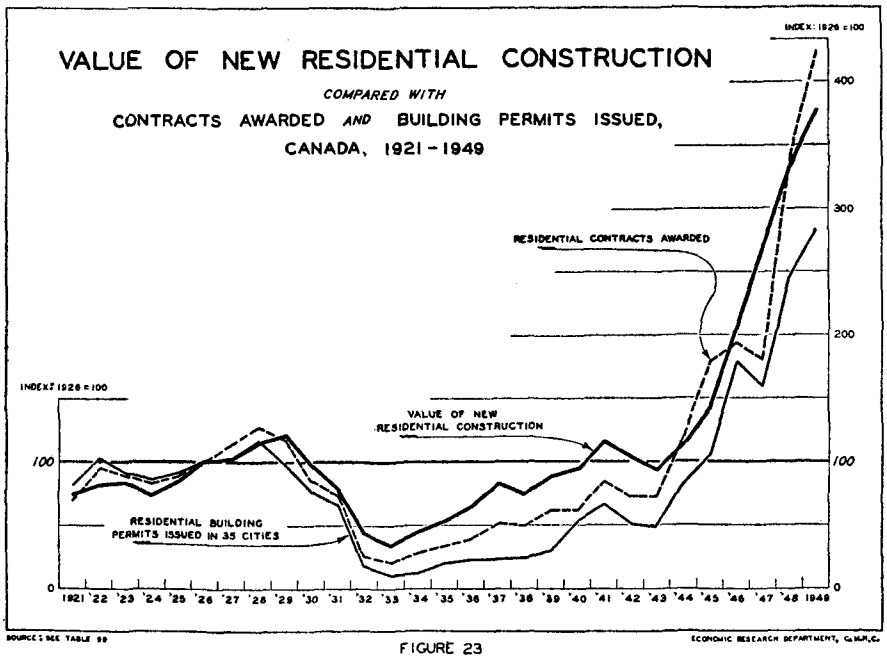

FIGURE 23

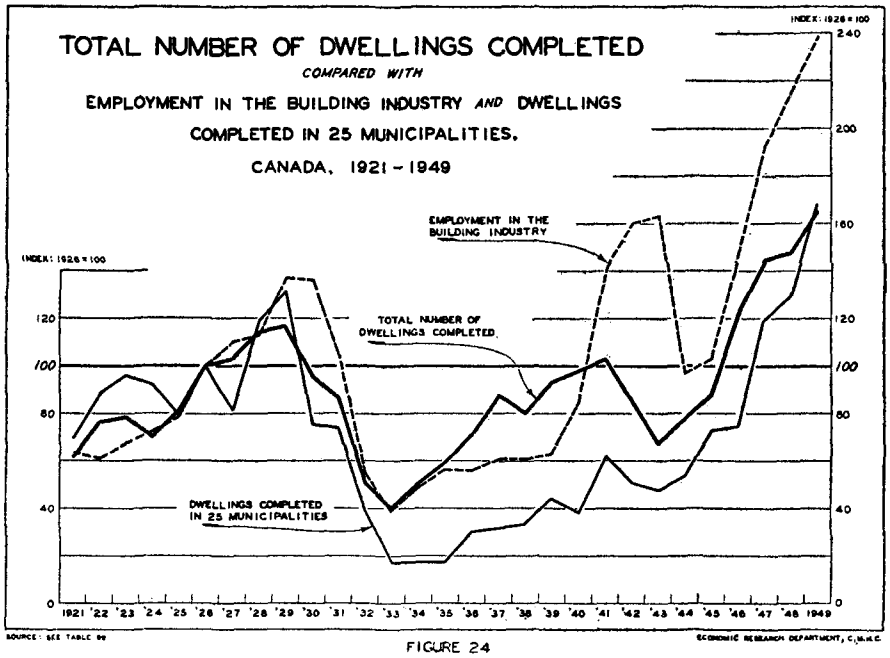

FIGURE 24

of local conditions can cause the trend of a series with partial coverage to differ from that which appears to be a national trend.

Test 5: Rental Index Advanced One Year. Comparison of the trend of the volume of new residential construction with the rental index of the following year shows a high correlation (.96) for the period 1926 to 1941. The same correlation is not evident for the earlier period 1921 to 1925, probably due to lack of refinement in the data. Nevertheless, the changes in the rental index in this early period are not sufficiently significant to suggest a different trend for the series tested here. Both the volume of new residential construction and the rental level depend, among other things, on disposable income. Apparently rental levels are more resistant to change of disposable income than new residential construction and hence the lag of one year in the pattern of this index. For the period 1926 to 1941 the rental index supports peaks in 1929, 1937 and 1941 and a low in 1933. It does not indicate a low point for 1938 but it does show a levelling off in the upward trend for that year. In view of the one-year lag in the movement of the rental index it is likely that with a decline in building activity of only one year the rental index while starting down would also be affected by the return of the upswing. The final result of a one-year drop in the income level would be a flattening in the rental index, as was the case following the apparent building decline for the year 1938. For the years 1942 to 1949 rents were under government control and could not be used as a test for the residential series.

Test 6: Tons of Railway Freight of Building Materials Loaded. This series, an indicator of general building activity, tests the residential series insofar as by following the same trend it would reduce the possible bias which might result from the use of materials for non-residential purposes included in the residential material index. It is this index which is being used for the yearly distribution of intercensal data. The series agreed with all turning-points of the residential series from 1921 to 1941. However, in 1942 when the volume of war construction was high this series continued to expand even though the amount of residential buildings decreased. The heavy volume of non-residential construction during the war years made this series inapplicable as a means of testing residential construction activity, for the period 1942 to 1945.

Test 7: Number of Employees in the Building Industry. As stated previously (p. 448), this series is not a sensitive indicator of construction activity when used as an annual series. However,

analysis of monthly data would indicate peak construction points for the years 1923, 1929 and 1937 and low points occurring sometime during the years 1924, 1933 and 1938. With the outbreak of the war this series cannot be used as an indicator of residential construction as it becomes heavily weighted with non-residential types of construction (see Figure 24).

Test 8: Unemployment among Construction Workers in Trade Unions. This series continues to verify two of the construction peaks—1923 and 1937—and three of the low points—1924, 1933 and 1938. The annual data indicate a high point in 1928 but analysis of monthly data indicates a steady increase in construction up to June, 1929, with the lowest unemployment on record for the building industry occurring during the first five months of 1929. The increase in unemployment began in June, 1929 but was gradual until towards the end of the year when it became sufficiently heavy to weight the average for the year 1929 above that of the previous year. However, the pattern as outlined above would tend to confirm a peak building year for 1929. The unemployment of construction workers series also varied from the residential series being tested in that it indicated a low year in 1927. Further analysis of the series showed a heavy increase in the number of workers covered by reporting trade unions, which could have resulted in an increased percentage appearing to be unemployed during this year. The series becomes insensitive to residential construction during the war years and appears to vary again from the apparent construction trend during the post-war years. The latter would be caused by a heavy increase in the number of workers covered which would more than offset the increase in construction activity and result in an increasing percentage being unemployed. This situation appears to be similar to that prevailing in the late 'twenties.

Summary of Turning-Point Tests

The peak 1923 was supported by seven of the test series with one series (the rental index) remaining insensitive. No contradictory evidence appeared.

The low point 1924 was supported by six of the series serving as test material. The rental index remained insensitive and the number of dwelling completions in selected municipalities indicated a possible continuance of the downtrend for another year. However, this suggestion for a further decline in residential activity was not supported by any other evidence.

The peak 1929 was supported by six of the series serving as test material. The value of residential contracts awarded and residential building permits issued could be interpreted either to support or not to support the peak.

The low point 1933 was supported by all eight of the test series.

The peak 1937 was supported on the upswing by all eight of the test series.

The low point 1938 was supported by six of the test series with one series neutral (rental index) and another possibly suggesting a continuing upswing (number of dwellings completed in twenty-five municipalities).

The peak 1941 was supported on the upswing by all eight test series and was indicated as an actual peak by four series which were not rendered insensitive as tests of residential construction because of wartime conditions. No contradictory evidence appeared.

The low point 1943 was supported by all four of the test series which were not rendered insensitive as a result of war conditions.

All series used as test material must be grouped against the limitation of these series and their comparability with estimates of total residential construction in Canada. No one series by itself can be taken as definite evidence to support the trend of the residential construction series presented in this report. However, taken as a group the supplementary data available seem to substantiate the turning-points of the housing estimates.

Tests of Amplitudes of the Residential Trend

The tests for the amplitudes of the fluctuations in the residential series are less definite than the tests for the turning-points, but they are sufficiently concrete to give an impression. The method used is a comparison of the proportionate change from one turning-point to another as indicated by the various test series and by the series to be tested. Percentage changes between turning-points are shown in Table 101. These percentages reflect the change between the actual turning-points of each test series whether these series have turning-points preceding, coinciding with or following the residential series.

It was necessary to divide the tests into volume and value indicators. The residential volume series varied in amplitude from the value series, being more volatile than the complete value series, which included major improvements and alterations

TABLE 101

TESTS OF AMPLITUDES OF FLUCTUATIONS IN RESIDENTIAL CONSTRUCTION AS ESTIMATED IN THIS REPORT FOR CANADA, 1921-1949

(Per cent changes)

Series	Increase 1921-23	Decrease 1923-24	Increase 1924-29	Decrease 1929-33	Increase 1933-37	Decrease 1937-38	Increase 1938-41	Decrease 1941-43	Increase 1943-49
Volume Series									
Number of Dwelling Units Completed	+27	−11	+67	−66	+122	− 9	+ 29	−35	+147
Number of Dwellings for Which Contracts were Awarded	+30	−13	+55	−71	+122	− 5[1]	+ 50	− 2	+142
Number of Dwellings Completed in Selected Municipalities	+39	−18	+65	−87	+ 88	−[2]	+ 91	−24	+254
Tons of Railway Freight of Building Materials Loaded	+58	−15	+46	−78	+124	−29	+ 85	−[2]	+ 31
Number of Employees in the Building Industry[3]	+15	−[2]	+74	−72	+ 56	..	+132	−32	+ 52
Value Series									
Value of New Residential Construction Work Carried Out	+13	−13	+65	−72	+140	−10	+ 55	−19	+306
Value of Residential Contracts Awarded	+36	−12	+53	−81	+135	− 2	+ 68	−14	+487
Value of Residential Building Permits Issued in 35 Cities	+27	−17	+36	−91	+116	− 3[1]	+162	−26	+479
Rental Index Advanced One Year	+ 3	−[2]	+ 5	−24	+ 11	−[2]	+ 7	−[2]	−[2]

[1]Decline not apparent from annual data, therefore data lagged five months.
[2]Not applicable.
[3]Figures on percentage of unemployment of building workers in trade unions do not lend themselves readily to measure amplitudes of construction activity because of their negative character.

and repair and maintenance work, and less volatile than the series pertaining only to the value of work constructed on new dwellings. It would have been desirable to test the complete value series but since the available testers were more directly related to new structures, only the value of new construction work performed series was subjected to the test.

Test of Amplitudes of Volume Series

The basic series to be tested was the number of dwelling units completed.

The series serving as test material included:

(1) The number of dwellings for which residential contracts were awarded;

(2) The number of dwellings completed in twenty-five municipalities;

(3) Tons of railway freight of building materials loaded;

(4) Number of employees in the building industry.[1]

Period 1921-1923. Two of the test series had increases similar to the series being tested. Tons of railway freight of building materials loaded increased much more and number of employees in the building industry increased much less. The variance in the latter two series was probably the result of the significant decline in activity which occurred in 1921 following very high activity in the immediate post-World War I period. On the whole the tests indicated that the rise in the residential series was reasonable.

Period 1923-1924. The test series fell by approximately the same amount as the series being tested.

Period 1924-1929. The rise indicated by all test series approximated that of the series being tested.

Period 1929-1933. The proportionate decrease in the residential series was slightly less but comparable with the decreases indicated by all of the test series.

Period 1933-1937. Two of the test series increased in the same proportion as the residential series. The other two test series increased somewhat less, but this lower increase was offset by the fact that these two series did not decline from 1937 to 1938 and also rose more sharply than the other available series from 1938 to 1941. Thus, over this longer period the extent of the

[1]The series of percentage of unemployment among construction workers in trade unions does not lend itself readily as a test of the amplitude of changes in the volume of construction because of its negative character.

increase for the residential series which showed a break in the increase in 1937-1938 appeared reasonable.

Period 1937-1938. Only two of the test series decreased in this period. The contracts awarded series dropped slightly and the railway freight series much more. Possibly other types of construction decreased more than housebuilding during this year. If that were so it would appear that the residential building material index used in this report for annual distribution of census data had not been affected too significantly by non-residential types of construction.

Period 1938-1941. The two test series without the decline in 1938 rose by a substantially higher proportion than the series being tested, more than offsetting the smaller increase during the period 1933-1937. The two test series with a decline in 1938 also showed proportionately greater increases than the residential series. On the whole the evidence of the test series indicated that the residential series understated moderately the increase in the number of dwelling units built in this period. However, in view of the method used for estimating annual dwelling completions and the probable degree of accuracy of the intercensal data, no large adjustment could be made for the period 1938-1941 without notably changing the magnitudes of the series for the periods already tested. Considering all evidence available, the probable error in the amplitude of fluctuations in the residential series did not appear large enough to warrant any further adjustment.

Period 1941-1943. For this period two of the test series had decreases similar to the series being tested, one was not applicable, and the other—the series based on contracts awarded—had a much smaller decrease. Further analysis showed that there was a much larger increase in the value of residential contracts awarded than in the units involved and that prices in general were gradually increasing over the same period. No reason was apparent for the conflicting evidence indicated by the two residential contracts awarded series at this time. However, since there appeared to be some peculiar influence in the series of the number of dwellings for which residential contracts were awarded during the period 1941-1943, the variance in decline from that of the residential series was not considered to represent concrete evidence contradicting findings of the series being tested.

Period 1943-1949. One of the test series, the number of dwellings for which contracts had been awarded, rose to the same extent as the residential series. The number of dwellings completed in twenty-five municipalities rose considerably more. This

is not surprising since this series relates to industrialized urban areas, where high incomes and great concentration of population made for persistent housing demand. The tons of railway freight loaded of building materials did not rise proportionately since this series did not have an equivalent low point in 1943 from which to expand. Also a decline in the export of lumber noticeable in 1949 over 1948 would not be without impact on the number of tons loaded. Finally, the number of employees in the building industry showed a more moderate increase than the series to be tested. One possible explanation would be the shift from war construction in 1943 to residential construction in 1949.

Summary of Amplitude Tests of the Volume Series. In general, the test series indicated that the amplitude of the fluctuations of the residential volume series was not incompatible with other related construction series.

Test of Amplitudes of the Value Series.

The basic series to be tested was the value of residential construction work carried out on new units.

The series serving as test material included

(1) Value of residential contracts awarded;

(2) Value of residential building permits issued in thirty-five municipalities;

(3) Rental index, advanced one year. The variations in this index are much smaller in amplitude than the other residential series but a rough check on the proportionate changes in the residential series can be obtained by multiplying by eight the percentage changes in the rental index.

Tests similar to those given for the volume series were applied to the value series. For all periods under review the amplitude of the residential series was close to that indicated by the test series. However, the testing for the value series differed from the volume series in that for most of the periods under review all test series had changes which varied in the same direction from the residential series. When this factor was studied in conjunction with the volume series it appeared that there might be some bias in the residential value series due to the prices used for valuation. The assumption used in this report was that the changes in the size of residential unit over the period under review would tend to be offset by increased facilities (see p. 401). This assumption appears reasonable for the complete period under review but when applied to specific parts of the period the test series would indicate

that in the years 1924-1938 the average value of new units being constructed, in constant dollars, was tending to drop—possibly because of smaller units—and from 1938 to 1949 this average was tending to rise—possibly with an increased number of one-storey units and/or an increase in the standard of living facilities. However, the test series did not indicate a large error. The differences that appeared to exist would be further minimized if the test series available were to reflect a larger number of dwellings built in rural areas.

Conclusion

In summary, the test data assembled support fairly well the trend of residential construction estimates and the amplitudes of the fluctuations as shown in this report. In coming to this conclusion the limitations of both the series to be tested and the data available for testing should be borne in mind, since none of the series *by itself* can be considered as *conclusive* and *final* evidence for one or the other observation. But taken together their usefulness increases and makes it possible for the investigator to gain impressions of the likely behaviour of residential building activity in the period under review. The fact that the eight independent test series on the whole—with some exceptions at particular points—support the trend and amplitudes of changes in building activity arrived at by the use of an entirely different set of basic data supports the observation, made previously, that while the estimates presented here are subject to a margin of error, the error is small enough that the series will reflect major trends in house building.

Appendices

SUPPLEMENTARY DATA

Appendix A—Housing Statistics, 1867-1921
Appendix B—National Housing Legislation—Operations, 1918-1949

Appendix A

HOUSING STATISTICS, 1867-1921

This study is primarily concerned with the period 1921-1949. Some passing reference has been made to the Canadian housing situation in earlier periods. The further back in time an investigator attempts to go in assembling economic statistics the less information he has available, and his conclusions become correspondingly more tenuous. They may finally be based on such scanty data as to represent no more than impressions, what appears to be numerical evidence becoming, if the data go back for a century, quantities of uncertain value. Definitions, enumerating techniques, quality of recording and computing, all vary over time. Even the most conscientious investigator will find that no amount of digging into old records will ever give him complete assurance of the full comparability of data over long periods of time. All one can hope to accomplish is to assemble a set of data and estimates which are mutually consistent at a point of time and over a period, that can be tested by other indicators, and last but not least, that make sense. It is this aspect in particular which makes it advisable for the user of data covering long periods of time to remain skeptical of the quality of numerical evidence until convinced that the evidence is reasonable, for it must be remembered that what makes sense to one investigator may be less convincing to another. The careful user will therefore always remember that the possible margin of error in any set of data and estimates increases as the period of time is extended.

The foregoing is designed to caution the reader that housing statistics for the period 1867 to 1921 should be treated with reserve. It has been stressed earlier (see Section 11) that all data and estimates for the period 1921-1949 are subject to a number of limitations and shortcomings, some of which may be overcome as a result of further investigations, while others will remain because an event that has occurred in the past and was unrecorded cannot be fully reconstructed in relation to the time of its occurrence. Although the housing estimates for years prior to 1921 are based substantially on Canada's most comprehensive statistical records, the Decennial Censuses, they must still be considered as less firm than data available for more recent years. However, they appear to be satisfactory enough to provide a background of events leading up to 1921, and to give perspective to the analysis of the housing situation in the most recent decades.

The essential data on housing and population for the period 1867 to 1921 are assembled in Table 102 and are set against the data for the more recent period of 1921 to 1949 discussed in previous sections. More detailed information showing provincial breakdowns will be found in Tables 103 and 104. A brief description of the sources of data is given in pp. 449 ff.

TABLE 102

POPULATION, STOCK OF DWELLINGS AND ANNUAL AVERAGE COMPLETIONS PER DECADE, CANADA, SELECTED YEARS, 1867-1949

Year	Population 000	Stock of Dwellings 000	Annual Average Completions per Decade [1]	Persons per Dwelling	Annual Average Completions per Decade per 1,000 Population[1]
1867	3,441	553	—	6.2	—
1881	4,324	790	24	5.5	5.6
1891	4,734	874	15	5.4	3.2
1901	5,324	1,038	21	5.1	4.0
1911	7,192	1,475	49	4.9	6.8
1921	8,852	1,909	47	4.6	5.3
1931	10,441	2,358	48	4.4	4.6
1941	11,572	2,693	40	4.3	3.5
1949	13,361	3,125	62	4.3	4.6

[1]There are two exceptions to the annual average per decade. From 1867 to 1881 the figures shown reflect the annual average of a fourteen-year period, and from 1941 to 1949 an eight-year period.

TABLE 103

NUMBER OF OCCUPIED DWELLINGS, BY REGION, CANADA, SELECTED YEARS, 1867-1921

(Thousands of Units)

Region	1867	1881	1891	1901	1911	1921
Maritimes	109	140	152	162	176	198
Quebec	168	213	247	291	351	417
Ontario	256	356	407	445	545	670
Prairies	3	24	31	82	297	429
British Columbia	1	10	20	37	77	124
Canada	537	743	857	1,018	1,446	1,838

TABLE 104

AVERAGE ANNUAL NUMBER OF DWELLINGS CONSTRUCTED PER DECADE, BY REGION, CANADA, 1867-1921

(Thousands of Units)

Region	1867-1881[1]	1881-1891	1891-1901	1901-1911	1911-1921
Maritimes	4	1	2	2	3
Quebec	6	4	6	8	9
Ontario	11	7	6	13	15
Prairies	2	2	5	22	15
British Columbia	1	1	2	4	5
Canada	24	15	21	49	47

[1]Covers a fourteen-year period.

Appendix B

NATIONAL HOUSING LEGISLATION—OPERATIONS, 1918-1949

This appendix summarizes the provisions and operations of fifteen housing measures undertaken by the Canadian Government between 1918 and 1949. It provides some of the details on which the general conclusions of the purpose and effect of Federal Government aid in the housing field, discussed in Section 4, are based. Loans approved, gross and net, amounts guaranteed, expenditures made, and number of units built under each of the various housing schemes sponsored by the Federal Government, are shown in Tables 105 to 121 in this appendix. The aggregate impact of these provisions is summarized in Tables 19, 20, 22 and 23 in Section 4, and in Tables 85 to 87 in Section 10. Most of these data are based on the records of Federal Government agencies administering the appropriate housing provisions. Where incomplete data were available estimates were made. The reader interested in the method of estimation is referred to the Notes to Tables 105 to 121 in Section 12.

Inter-Governmental Housing Loans, 1918

Historically, loans represented the first approach of the Canadian Government in housing legislation. In 1918, under the War Measures Act, the Federal Government by Order-in-Council P.C. 2997 appropriated $25 million for the purpose of financing house construction. The money was to be loaned to the provinces at 5 per cent and amortized over 20 years. The provinces in turn were to make loans to municipalities on a 25 per cent participation basis. The greater part of this money was taken up and some 6,000 houses[1] were built under the provisions, 4,600 of them in the years after 1920.

Canadian Farm Loan Act, 1927

The Canadian Farm Loan Act, 1927, provided for Federal Government mortgage loans to farmers for periods up to 25 years at a rate of interest sufficient to cover expenses of administration and pay the interest costs of funds used. Loans are authorized for a variety of purposes, including the payment of debt, the purchase of livestock and implements, and the erection or repair of farm buildings including housing.

[1]An annual distribution of these buildings completed for the period 1921 to 1924 was estimated for use in Table 22. The estimates were based on the amount of advances each year out of the original Federal fund of $25 million.

The Act continued in operation at the end of 1949. The extent of residential operations under the Act for the period 1935 to 1949 is shown in Table 105.

Dominion Housing Act, 1935

The Federal Government first moved into the field of housing legislation as such, on a continuing basis, with the passage of the Dominion Housing Act, 1935. The Act authorized the Minister of Finance to "enter into contract with an approved lending institution or local authority" to assist in making loans for the construction of new housing units. The Act further authorized approved lending institutions to lend on the security of a first mortgage made in the joint favour of the Minister and the lending institution an amount up to 80 per cent of the cost of construction or appraised value of a new house or housing project, whichever was lower. The Federal Government share of the loan took the form of an advance to the lending institution of an amount up to 20 per cent of the cost of construction or appraised value of the house. The terms of the advances and loans, fixed by Regulation, were as follows. The Federal advance to the lending institution was at a 3 per cent rate of interest. The joint loan to the borrower was at 5 per cent, amortized over a maximum of 20 years.

The Act offered assistance to borrowers in three respects. First, it lowered the equity requirements of a prospective home-owner or home builder. Under conventional lending practices a borrower would seldom obtain first mortgage credit to cover more than 60 per cent of the lending value of a house. Under the joint loan provisions of the Act a maximum of 80 per cent was available. Secondly, it lowered the rate of interest payable by the borrower. Thirdly, it lengthened the amortization period. Under conventional real estate lending practices of the 'twenties and first half of the 'thirties residential loans were seldom available at interest rates as low as 5 per cent, and amortization was not often extended beyond 10 years. The Act was superseded by the National Housing Act, 1938. Operations under the Act are covered in Table 106.

Home Improvement Loans Guarantee Act, 1937

The Home Improvement Loans Guarantee Act, 1937, provided for Federal Government guarantees to the chartered banks and other approved lending agencies against loss on loans made for the improvement or extension of residential property. The limit of the guarantee in respect of any bank was 15 per cent of total loans of this type made by that bank. The guarantee was authorized in respect of loans aggregating not more than $50 million. This amount had been loaned by the end of 1940 and the provisions of the Act lapsed. Operations under the Act are shown in Table 107.

TABLE 105

OPERATIONS UNDER THE CANADIAN FARM LOAN ACT, 1927, LOANS APPROVED AND EXPENDITURES FOR RESIDENTIAL PURPOSES, CANADA, 1935-1949

Year	Loans Approved			Expenditures	
	New Residential Construction		Alterations and Improvements	New Residential Construction	Alterations and Improvements
	Number	Amount $000	$000	$000	$000
1935	469	177	64	662	239
1936	436	170	62	635	232
1937	147	62	23	232	86
1938	173	70	25	263	94
1939	171	70	26	262	97
1940	102	45	16	167	60
1941	63	32	12	118	44
1942	35	20	7	74	26
1943	36	23	8	86	30
1944	42	28	10	105	38
1945	58	52	11	151	32
1946	57	48	25	154	80
1947	57	49	18	175	64
1948	62	58	66	222	252
1949	86	148	73	317	156
Total	1,994	1,052	446	3,623	1,530

NATIONAL HOUSING ACT, 1938

The National Housing Act, 1938, superseded the Dominion Housing Act of 1935. It represented an attempt to broaden Government aid to house building and to overcome some of the difficulties of operations under the Dominion Housing Act.

The National Housing Act was in three parts. Part I represented a re-enactment of the Dominion Housing Act of 1935, with new provisions designed to benefit low income home-owners and extend the advantages of the Act to smaller and more remote areas not lying within the ordinary ambit of operations of the lending institutions. The joint loans under the Act except in the case mentioned below were limited to 80 per cent of the lending value of the house, that is to say, 80 per cent of the cost of construction including land or the appraised value of the house, whichever was lower. In cases where the lending value of the house was $2,500 or less, a joint loan up to 90 per cent could be granted. This special feature

TABLE 106

OPERATIONS UNDER THE DOMINION HOUSING ACT, 1935, GROSS AND NET LOANS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1935-1942

Year	Gross Loans Approved			Net Loans Approved			Expenditures					Number of Dwellings	
	Number of Loans	Number of Dwellings	Amount $000	Number of Loans	Number of Dwellings	Amount $000	By Federal Government $000	By Lending Institutions $000	By Borrowers		Total Excluding Land $000	Started	Completed
									Land $000	Other $000			
1935	75	99	525	73	97	514	6	17	3	7	30	81	3
1936	650	934	4,445	550	788	3,778	880	2,523	425	1,063	4,466	738	674
1937	1,426	1,961	8,066	1,311	1,817	7,524	1,609	4,613	857	2,776	8,998	1,732	1,365
1938	1,220	2,301	8,120	1,149	2,197	7,803	2,244	6,432	1,086	2,712	11,388	2,165	2,004
1939	....	....	....	....	....	....	296	848	143	357	1,501	183	752
1940	....	....	....	....	....	....	36	103	11	43	182	....	92
1941	....	....	....	....	....	....	2	6	1	3	11	....	8
1942	....	....	....	....	....	....	1	3	1	1	5	....	1
Total	3,371	5,295	21,156	3,083	4,899	19,619	5,074	14,545	2,527	6,962	26,581	4,899	4,899

was designed to stimulate low cost housing. In respect to areas normally outside the field of operations of accredited lending institutions the Act allowed special loss guarantee provisions to the lending institutions making joint loans in such areas, and authorized separate payments to the lending institutions to cover extra expenses incurred in placing such loans.

Part II of the Act provided for Federal Government loans to limited-dividend corporations and local authorities for the construction of low rental housing at 1½ and 2 per cent interest rates respectively. This part of the Act was not used. The advent of World War II interrupted projects which were reaching the construction stage. The provisions under Part II of the Act expired in 1940.

TABLE 107

OPERATIONS UNDER THE HOME IMPROVEMENT LOANS GUARANTEE ACT, 1937, LOANS APPROVED, NUMBER OF CONVERSIONS COMPLETED AND CONVERSION EXPENDITURES, CANADA, 1936-1940

Year	Loans Approved		Number of Conversions Completed	Conversion Expenditures $000
	Number	Amount $000		
1936[1]	3,159	1,198	90	144
1937	30,772	12,052	909	1,446
1938	28,077	11,516	869	1,381
1939	36,042	14,706	1,103	1,765
1940	27,670	10,488	787	1,259
Total	125,720	49,960	3,758	5,995

[1]The Home Improvement Loans Guarantee Act came into force in March, 1937, but its provisions covered loans made after October 15, 1936.

Part III of the Act provided for tax compensations from the Federal Government to home-owners building in approved municipalities where lots were provided for $50 or less. This part of the Act was used little and like Part II expired in 1940.

The Act was succeeded by the National Housing Act, 1944. Operations under Part I of the National Housing Act, 1938, are covered in Table 108.

WARTIME AND VETERANS' LOW RENTAL HOUSING PROGRAM, 1941 AND 1944

The Federal Government first entered the direct housing field for other than its employees in early 1941, when the spurt given to the

urbanization trend by the development of war industry and growth of virtually new industrial centres combined to create a serious housing congestion in many urban communities. In February, 1941, a crown company, Wartime Housing Limited, was created by Order-in-Council under the Department of Munitions and Supply, and charged with the task of providing low rental housing accommodation for workers engaged in war industry in crowded urban centres. Wartime Housing Limited operated on the basis of agreements with municipalities whereby the municipalities provided land and Wartime Housing Limited erected the rental houses. The Government was authorized to make payments to the municipalities in lieu of taxes. Rentals were fixed at what were considered low levels, from $22 to $32 monthly, depending on the size and location of houses.

In May, 1944, the mandate of Wartime Housing Limited was altered to provide for housing for the families of servicemen, and this new plan continued in the post-war period as a veterans' low rental housing program.

Late in 1947 a new basis was arranged for the agreements with municipalities in respect of veterans' low rental housing. Under the new municipal agreement the Federal Government undertook to pay the costs of land improvement in excess of $600 per unit. The annual payments authorized to municipalities in lieu of taxes were raised to $70, $75 and $80 per unit for 4, 5 and 6 room units respectively. Under the earlier provision the maximum annual payment was set at $30 per unit. The new arrangements provided for basements in the houses and rather more variation of exterior finish than had been possible under the original plan. Generally monthly rentals were established not to exceed $37.50 per unit.

As of January 1, 1947, Wartime Housing Limited came under the supervision of Central Mortgage and Housing Corporation and continued to operate as the construction arm of the Corporation.

By a statute coming into force on June 30, 1948, the charter of Wartime Housing Limited was surrendered and the company's assets transferred to the Central Mortgage and Housing Corporation which, under the same provision, was empowered to own housing projects and conduct direct housing construction operations on its own account. The construction jobs of Wartime Housing Limited continued under the Construction Division of Central Mortgage and Housing Corporation.

With the execution of municipal agreements drawn up in 1949 the Veterans' Rental Housing Program is coming to an end in 1950. Operations under the arrangements for the period 1941 to 1949 are presented in Table 109.

TABLE 108

OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1938, GROSS AND NET LOANS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1938-1947

Year	Gross Loans Approved			Net Loans Approved			Expenditures					Number of Dwellings	
	Number of Loans	Number of Dwellings	Amount $000	Number of Loans	Number of Dwellings	Amount $000	By Federal Government $000	By Lending Institutions $000	By Borrowers		Total Excluding Land $000	Started	Completed
									Land $000	Other $000			
1938	1,304	1,837	6,522	1,198	1,697	6,001	329	987	165	246	1,562	1,381	245
1939	4,549	6,367	20,308	4,315	5,973	19,028	3,680	11,040	1,840	2,760	17,480	5,660	4,264
1940	5,228	6,073	17,886	4,897	5,621	16,620	4,539	13,617	2,270	3,404	21,560	5,545	6,045
1941	4,693	4,693	14,619	4,370	4,323	13,428	3,565	10,695	1,783	2,673	16,933	4,349	4,847
1942	1,368	1,368	4,176	1,138	1,093	3,151	2,007	6,021	1,004	1,505	9,533	1,338	2,638
1943	1,752	1,752	5,335	1,721	1,721	5,422	806	2,418	403	605	3,829	1,633	1,319
1944	1,823	1,823	6,215	1,393	1,393	4,826	937	2,811	469	702	4,450	1,394	890
1945	36	36	131	−407	−407	−1,368	812	2,436	406	609	3,857	114	706
1946	....	....	....	....	....	....	86	258	43	65	409	....	399
1947	....	....	....	....	....	....	16	48	8	12	76	....	61
Total	20,753	23,949	75,192	18,625	21,414	67,108	16,777	50,331	8,391	12,581	79,689	21,414	21,414

Veterans' Land Act, 1942

The Veterans' Land Act, 1942, was passed with the principal purpose of assisting veterans to engage in agriculture as a full-time or part-time occupation. One of its incidental purposes was to aid veterans in obtaining housing accommodation near the larger urban centres. The Act empowered the Minister of Veterans Affairs to purchase land and make improvements on it with a view to selling the properties so developed to suitably qualified veterans. Under the terms of sale, the veteran must pay to the Veterans' Land Act Administration not less than 10 per cent of the entire cost of land, improvements and any building materials purchased by the Administration up to $6,000 plus any excess of this cost over $6,000. In general the sale price to the veteran in addition to the above down payment required, equals two-thirds of the total outlay of the Administration. This amount may be amortized over a maximum of 25 years at 3½ per cent per annum. Similar provisions are available to veterans wishing to establish themselves in commercial fishing enterprises rather than farming. The Act also authorizes the Minister to make grants not exceeding $2,320 to veterans settling on approved Federal or provincial lands or to Indian veterans settling on Indian Reserve lands.

While all housing construction outlay under the Veterans' Land Act formally represents direct Federal Government participation in the housing field, the operations under the sub-division plan were publicly initiated as well. Land was purchased and houses erected under this plan on the initiative of the Administration without prior application for assistance from specific veterans. This plan was undertaken immediately following the war in anticipation of a heavy demand for small holdings and housing accommodation in areas adjacent to urban centres.

Activity under other types of projects generally waited on applications for assistance from interested veterans and was in this sense privately initiated. Furthermore, while the form of the agreement between the Administration and the veteran stipulated that the property involved be Crown owned and the improvements be undertaken by the Crown, in actual fact the veteran made most of the operating arrangements. For this reason it is probably more appropriate to consider the assistance rendered under the non sub-division part of the Act as Government financial assistance rather than direct Government house building.

This measure continued in operation at the end of 1949. Arrangements as far as they cover housing are summarized in Table 110.

Home Extension, 1942

Under the Appropriations Act No. 5, 1942, the Federal Government provided for guarantees to lending institutions similar to those provided

TABLE 109

DIRECT HOUSING OPERATIONS FOR WAR WORKERS AND VETERANS, BY WARTIME HOUSING LIMITED AND CENTRAL MORTGAGE AND HOUSING CORPORATION, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1941-1949

Year and Type of Project	Number of Dwellings		Expenditures				
			Construction			Land	Total
	Started	Completed	Housing $000	Other[1] $000	Total $000	$000	$000
War Workers' Rental Housing							
1941	—[2]	1,666	7,863	2,638	10,501	189	10,690
1942	—[2]	7,635	21,721	8,235	29,956	473	30,429
1943	—[2]	6,326	16,938	12,769	29,707	440	30,147
1944	—[2]	1,196	4,014	3,602	7,616	127	7,743
1945	—[2]	46	278	33	311	2	313
Sub-total	16,869	16,869	50,814	27,277	78,091	1,231	79,322
Veterans' Rental Housing							
1944	—[2]	395	844	756	1,600	27	1,627
1945	—[2]	1,510	9,283	1,084	10,367	75	10,442
1946	6,133	6,997	34,314	2,052	36,366	174	36,540
1947	6,709	5,421	26,701	1,857	28,558	57	28,615
1948	8,199	6,934	49,180	4,082	53,262	122	53,384
1949	4,866	7,804	38,366	5,220	43,586	173	43,759
Sub-total	32,742	29,061	158,688	15,051	173,739	628	174,367
War Workers' and Veterans' Rental Housing							
1941	—[2]	1,666	7,863	2,638	10,501	189	10,690
1942	—[2]	7,635	21,721	8,235	29,956	473	30,429
1943	—[2]	6,326	16,938	12,769	29,707	440	30,147
1944	—[2]	1,591	4,358	4,358	9,216	154	9,370
1945	—[2]	1,556	9,561	1,117	10,678	77	10,755
1946	6,133	6,997	34,314	2,052	36,366	174	36,540
1947	6,709	5,421	26,701	1,857	28,558	57	28,615
1948	8,199	6,934	49,180	4,082	53,262	122	53,384
1949	4,866	7,804	38,366	5,220	43,586	173	43,759
Total	49,611	45,930	209,502	42,328	251,830	1,859	253,689

[1]Item includes mainly land improvements and special buildings. [2]Annual distribution of starts not available up to 1946.

TABLE 110

CONSTRUCTION OPERATIONS UNDER THE VETERANS' LAND ACT, 1942, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1946-1949

Type of Project and Year	Number of Dwellings		Expenditures						
			Federal Government		Veterans' Share		Total		
	Started	Completed	New Housing $000	Repair and Other Services $000	New Housing $000	Repair and Other Services $000	New Housing $000	Repair and Other Services $000	Total $000
Small Holdings, Sub-division Projects[1]									
1946[2]	2,673	2,290	14,740	2,601	....	....	14,740	2,601	17,341
1947	....	379	2,240	828	....	....	2,240	828	3,068
1948	....	4	10	812	....	....	10	812	822
1949	....	....	....	218	....	....	....	218	218
Sub-total	2,673	2,673	16,990	4,459	....	....	16,990	4,459	21,449
Other Projects									
1946[2]	2,121	239	2,199	2,715	89	36	2,288	2,751	5,039
1947	1,963	1,599	8,583	3,261	348	43	8,931	3,304	12,235
1948	1,884	1,928	9,012	2,274	366	30	9,378	2,304	11,682
1949	1,982	1,561	11,894	992	482	13	12,376	1,005	13,381
Sub-total	7,950	5,327	31,688	9,242	1,285	122	32,973	9,364	42,337
All Projects									
1946[2]	4,794	2,529	16,939	5,316	89	36	17,028	5,352	22,380
1947	1,963	1,978	10,823	4,089	348	43	11,171	4,132	15,303
1948	1,884	1,932	9,022	3,086	366	30	9,388	3,116	12,504
1949	1,982	1,561	11,894	1,210	482	13	12,376	1,223	13,599
Total	10,623	8,000	48,678	13,701	1,285	122	49,963	13,823	63,786

[1]Land expenditures for sub-division projects amounted to $1,273,000 in 1946, $115,000 in 1947, and $126,000 in 1948.
[2]Activity prior to 1946 consisted mainly of land and building material acquisition for future operations.

under the Home Improvement Loans Guarantee Act of 1937, for loans for the purpose of home extension only. Guarantees were made under this provision up until August, 1944. Operations under the plan are shown in Table 111.

TABLE 111

HOME EXTENSION GUARANTEE OPERATIONS UNDER THE APPROPRIATIONS ACT, NO. 5, 1942, LOANS APPROVED, CONVERSIONS CONSTRUCTED, AND EXPENDITURES, CANADA, 1942-1944

Year	Loans Approved		Number of Conversions Constructed	Expenditures $000
	Number	Amount $000		
1942	21	42	39	66
1943	28	53	53	98
1944	8	18	18	35
Total	57	113	110	199

HOME CONVERSION PLAN, 1943

Early in 1943, to alleviate further wartime housing congestion in the larger urban centres with a minimum use of construction resources, the Federal Government embarked upon the Home Conversion Plan. The plan is embodied in a series of Orders-in-Council authorizing the Minister of Finance to acquire by lease large dwellings suitable for conversion into self-contained apartments. Under these orders properties were leased from the owners for 5 years with the Minister having the privilege of renewing the lease for a further three or five year period. The dwelling units created by conversion were let to tenants at rents established by the Wartime Prices and Trade Board. Construction operations under the plan were completed by the end of 1946. Relevant data are shown in Table 112.

FARM IMPROVEMENT LOANS ACT, 1944

The Farm Improvement Loans Act, 1944, was passed to provide indirect financial assistance for farmers seeking intermediate credit for the improvement and development of their farms. Under the Act the Federal Government guarantees to banks the amount of loss sustained in respect of approved loans up to 10 per cent of the aggregate principal amount of such farm improvement loans made by any one bank. A loan may not exceed $3,000, and the maximum rate of interest is set at 5 per cent per annum. Amortization up to 10 years is authorized.

TABLE 112

OPERATIONS UNDER THE HOME CONVERSION PLAN, NUMBER OF CONVERSIONS COMPLETED AND EXPENDITURES, CANADA, 1943-1946

Year	Number of Conversions Completed	Construction Expenditures $000
1943	36	508
1944	1,209	2,703
1945	778	1,498
1946	76	218
Total	2,099	4,927

Operations under the Act continued at the end of 1949. Statistics of operations under the Act are contained in Table 113.

TABLE 113

OPERATIONS UNDER THE FARM IMPROVEMENT LOANS ACT, 1944, LOANS APPROVED FOR NEW RESIDENTIAL CONSTRUCTION AND IMPROVEMENT, AND EXPENDITURES, CANADA, 1945-1949

Year	Loans Approved				Expenditures		
	New Residential Construction		Residential Improvements		New Residential Construction $000	Residential Improvements $000	Total $000
	Number	Amount $000	Number	Amount $000			
1945	232	259	246	145	605	339	944
1946	375	408	351	237	1,014	589	1,603
1947	387	488	448	333	1,191	813	2,004
1948	328	448	524	434	1,172	1,135	2,307
1949	434	637	904	791	1,598	1,985	3,583
Total	1,756	2,240	2,473	1,940	5,580	4,861	10,441

NATIONAL HOUSING ACT, 1944

The National Housing Act, 1944, is called "an Act to Promote Construction of New Houses, the Repair and Modernization of existing Houses, the Improvement of Housing and Living Conditions, and the

Expansion of Employment in the Post-War Period."[1] The Act is in six parts. Part I of the Act is concerned with housing for home-owners, Part II with housing for rental purposes, Part III with rural housing, Part IV with home extension and home improvement, Part V with housing research and community planning, and Part VI is general. The following account summarizes the provisions of the Act as at the end of 1949.

Under the home ownership part of the Act, three main types of financial assistance are provided.

1. Section 4, Sub-section 2, of the Act authorizes the Central Mortgage and Housing Corporation to enter into contracts with approved lending institutions for the purpose of making joint loans to individual prospective home owners or to builders constructing houses for sale to individual home-owners. The maximum amount of joint loan is set at 80 per cent of the lending value of the house with the proviso that no joint loan may exceed $8,500. The lending value means the cost of construction of a dwelling plus land cost, or the appraised value of the house and land, whichever is lower. The Central Mortgage and Housing Corporation may make a direct loan in addition to the basic joint loan which may amount to one-sixth of the joint loan. This additional loan is conditional upon the purchase price of the house, or its cost, being, in the opinion of the Corporation, fair and reasonable. Loans are made at 4½ per cent rate of interest per annum with a maximum amortization period of 30 years. The portion of the joint loan provided by the Corporation may not exceed 25 per cent. This amount is advanced to the lending institution at 3 per cent rate of interest per annum.

2. Section 4, Sub-section 3, provides for joint loans to co-operative housing organizations. The provisions contemplate two types of co-operatives: one where the co-operative association is formed for building purposes only, with the intention that when the project is completed each member of the co-operative will own a home; and the other where the co-operative association will continue as such both during and after construction. In the case of the building co-operative the legislation provides for a blanket joint loan of 80 per cent of the lending value of the whole project, with the provision that upon transfer of each house to a member the additional one-sixth direct Corporation loan may be made to such member. In the case of the continuing co-operative, a joint loan of 80 per cent is made in the first instance, with provision for the additional one-sixth loan to be made to the co-operative if each member undertakes to be responsible for his share of any deficiency in the event of foreclosure.

[1] *The National Housing Act, 1944*, Office Consolidation, 1949, King's Printer, Ottawa, p. 3.

3. Section 4B of the Act provides for joint loans to builders erecting houses for sale primarily to veterans at a price not in excess of an amount fixed by contract with the builder. Under this provision the Federal Government is committed to purchase any unsold house from the builder one year after completion at an agreed price.

Part II of the Act provides assistance to stimulate the construction of rental housing in Canada.

1. Section 8 authorizes joint loans to individuals for the construction of rental housing similar to those for ownership housing except that the additional one-sixth direct Corporation loan is not applicable.

2. Section 9 of the Act authorizes the Federal Government to make direct loans to limited dividend corporations for the purpose of assisting in the construction of low rental housing projects. Loans under this section bear interest at 3 per cent per annum, are limited in amount to 90 per cent of the lending value of the project, and may be amortized over not more than 50 years.

3. Section 9A of the Act authorizes the Corporation to make direct loans to borrowers engaged in mining, lumbering, logging or fishing, to assist in the construction of low or moderate cost housing projects to be situated near the operations of the borrower. Such loans bear interest at the rate of 4 per cent per annum, may not exceed 80 per cent of the lending value of the project, and may be amortized over not more than 15 years.

4. Section 11 of the Act guarantees to life insurance companies investing their funds in approved low or moderate cost rental housing projects or to holding companies or housing corporations formed by life insurance companies, an annual return on the cost of such rental projects of 2½ per cent per annum.

5. Section 11A provides for guarantee to lending institutions of 2½ per cent per annum on approved investments in the purchase and improvement of land to be used for residential housing developments.

6. Section 8A of the Act contains provisions for the Rental Insurance Plan. Under this Plan builders or owners of approved rental housing projects are given a guarantee of an annual amount of rentals calculated to provide amortization charges on an 85 per cent mortgage, property operating and maintenance expenses, and a minimum net return of 2 per cent on the owners' investment in the project. The builder or owner of the project in turn pays an annual rental insurance premium based on the amount of rentals guaranteed and the term of the guarantee, which may run for 10, 20 or 30 years. Section 8B of the Act authorizes approved lending institutions to make loans up to 85 per cent of the estimated cost of rental insurance projects, at annual interest rates not to exceed 4¼ per cent, for a period up to 20 years.

7. Section 12 authorizes the Corporation to make grants to aid municipalities in acquiring and clearing land suitable as a location for low or moderate cost rental housing projects. Such land is to be sold, when developed, to a limited dividend housing corporation or a life insurance company which has agreed to construct thereon a rental housing project. The maximum amount of grant authorized for a particular site is limited to half the amount by which the cost of acquisition and clearance exceeds the sale price of the cleared and developed site.

Part III of the National Housing Act is concerned with rural housing. Section 14 provides that joint loans may be made to assist in the construction of housing on farms. The rate of interest is set at 4½ per cent. The term of the loan is limited to 20 years. The amount of loan where a farm is not encumbered may not exceed the least of: $5,000; the cost of building the house in question; two-thirds of the appraised value of the farm. Where the farm is encumbered, the amount of loan may not exceed the least of: $8,000; the cost of building the house in question plus the amount necessary to discharge encumbrance; two-thirds of the appraised value of the farm.

Part IV of the Act provides loan guarantee assistance for the purpose of facilitating the extension and improvement of existing homes. Under Section 17, the Federal Government undertakes to pay the loss sustained by a bank or approved installment credit agency in connection with loans made for home improvements or extension up to 5 per cent of the total amount of such loans made by the agency. The amount of the loans in the case of home extension are limited to $3,750 for the first housing unit to be added, plus $1,250 for each additional housing unit to be added. In the case of home improvement, the amount of loan may not exceed $2,500 for a single family unit and an additional $1,250 for every other unit in the case of a multiple family dwelling. The term of the loan may not exceed 5 years and the rate of interest 5 per cent per annum. As at the end of 1949 the home improvement section of the Act had not been generally proclaimed.

Part V of the Act authorizes the Federal Government to undertake, encourage and participate in economic, social, architectural and technical research relating to housing and community planning.

Part VI of the Act is of a general nature. It includes, however, two special provisions of broad significance, direct lending (Section 31A), and joint projects (Section 35). Section 31A authorizes Central Mortgage and Housing Corporation to make direct loans on the same terms and conditions as provided in respect to joint loans, where borrowers are unable to obtain joint loans usually because of location in a rural area beyond the orbit of normal lending institution operations.

TABLE 114

CONSTRUCTION OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, NUMBER OF DWELLINGS STARTED AND COMPLETED AND EXPENDITURES, CANADA, 1945-1949

Year	Number of Dwellings		Expenditures					
					By Borrowers			
	Started	Completed	By Federal Government $000	By Lending Institutions $000	Land $000	Other $000	Total $000	Total Excluding Land $000
1945	3,920	1,226	1,177	3,531	606	1,355	1,961	6,063
1946	10,337	4,906	6,981	11,985	1,862	5,284	7,146	24,250
1947	10,943	8,846	25,966	28,548	7,065	15,047	22,112	69,561
1948	15,417	11,939	19,104	46,467	6,647	23,182	29,829	88,753
1949	21,511	21,740	41,044	81,840	12,223	47,913	60,136	170,797
Total	62,128	48,657	94,272	172,371	28,403	92,781	121,184	359,424

TABLE 115

LENDING OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, GROSS AND NET LOANS APPROVED AND EXPENDITURES, BY TYPE OF LOAN, CANADA, 1945-1949

Year and Type of Loan[1]	Gross Loans			Net Loans			Expenditures				
	Number of Loans	Number of Dwellings	Amount $000	Number of Loans	Number of Dwellings	Amount $000	By Federal Government $000	By Lending Institutions $000	By Borrowers		Total Excluding Land $000
									Land $000	Other $000	
1945											
Joint Loans[2]	5,142	5,695	23,832	4,838	5,387	22,511	1,177	3,531	606	1,355	6,063
1946											
Joint Loans											
For Home Ownership	8,039	8,039	36,897	6,951	6,951	31,803	3,396	10,187	1,271	3,909	17,492
For Rental	356	1,548	6,383	356	1,427	5,825	599	1,798	224	690	3,087
Sub-total	8,395	9,587	43,280	7,307	8,378	37,628	3,995	11,985	1,495	4,599	20,579
Direct Loans											
For Rental	34	3,455	18,355	34	3,449	18,323	2,986	....	367	685	3,671
Joint and Direct Loans											
For Home Ownership	8,039	8,039	36,897	6,951	6,951	31,803	3,995	11,985	1,271	3,909	19,889
For Rental	390	4,989	24,738	390	4,876	24,148	2,986	....	591	1,375	4,361
Total	8,429	13,028	61,635	7,341	11,827	55,951	6,981	11,985	1,862	5,284	24,250
1947											
Joint Loans											
For Home Ownership	9,848	10,229	51,503	8,276	8,655	43,789	7,995	23,985	4,233	9,434	41,414
For Rental	620	2,224	9,073	531	2,026	8,330	1,521	4,563	805	1,795	7,879
Sub-total	10,468	12,453	60,576	8,807	10,681	52,119	9,516	28,548	5,038	11,229	49,293
Direct Loans											
For Home Ownership	72	72	321	72	72	320	....	....	....	....	....
For Rental	9	209	812	7	180	791	16,450	....	2,027	3,818	20,268
Sub-total	81	281	1,133	79	252	1,111	16,450	....	2,027	3,818	20,268
Joint and Direct Loans											
For Home Ownership	9,920	10,301	51,824	8,348	8,727	44,109	7,995	23,985	4,233	9,434	41,414
For Rental	629	2,433	9,885	538	2,206	9,121	17,971	4,563	2,832	5,613	28,147
Total	10,549	12,734	61,709	8,886	10,933	53,230	25,966	28,548	7,065	15,047	69,561

LENDING OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, GROSS AND NET LOANS APPROVED AND EXPENDITURES, BY TYPE OF LOAN, CANADA, 1945-1949—*Continued*

Year and Type of Loan[1]	Gross Loans			Net Loans			Expenditures				
	Number of Loans	Number of Dwellings	Amount $000	Number of Loans	Number of Dwellings	Amount $000	By Federal Government $000	By Lending Institutions $000	By Borrowers Land $000	By Borrowers Other $000	Total Excluding Land $000
1948											
Joint Loans											
For Home Ownership	16,152	17,173	92,518	14,624	15,577	86,279	13,276	39,828	5,332	19,070	72,174
For Rental	624	3,204	14,172	565	2,845	12,721	2,213	6,639	882	3,179	12,031
Sub-total	16,776	20,377	106,690	15,189	18,422	99,000	15,489	46,467	6,214	22,249	84,205
Direct Loans											
For Home Ownership	152	187	837	139	174	783	619	....	74	160	853
For Rental	10	217	1,103	9	230	4,728	2,996	....	359	773	4,128
Sub-total	162	404	1,940	148	404	5,512	3,615	....	433	933	4,981
Joint and Direct Loans											
For Home Ownership	16,304	17,360	93,355	14,763	15,751	87,062	13,895	39,828	5,406	19,230	72,953
For Rental	634	3,421	15,274	574	3,075	17,449	5,209	6,639	1,241	3,952	15,800
Total	16,938	20,781	108,629	15,337	18,826	104,511	19,104	46,467	6,647	23,182	88,753
1949											
Joint Loans											
For Home Ownership	18,553	19,265	110,790	17,042	17,595	101,978	24,822	74,468	9,876	38,713	138,003
For Rental	489	2,624	11,796	467	2,210	9,922	2,458	7,372	978	3,833	13,663
Sub-total	19,042	21,889	122,586	17,509	19,805	111,900	27,280	81,840	10,854	42,546	151,666
Direct Loans											
For Home Ownership	395	522	2,494	368	4,583	25,087	12,575	....	1,251	4,903	17,478
For Rental	278	6,341	35,037	258	492	2,373	1,189	....	118	464	1,653
Sub-total	673	6,863	37,532	626	5,075	27,460	13,764	....	1,369	5,367	19,131
Joint and Direct Loans											
For Home Ownership	18,948	19,787	113,284	17,410	22,178	127,065	37,398	74,468	11,127	43,616	155,481
For Rental	767	8,965	46,834	725	2,702	12,295	3,647	7,372	1,096	4,297	15,316
Total	19,715	28,752	160,118	18,135	24,880	139,360	41,044	81,840	12,223	47,913	170,797

[1]Joint loans for home ownership may be under sections 4, 4B, or 14 of the Act; joint loans for rental under section 8; direct loans for home ownership under section 31A; direct loans for rental under sections 31A, 9, or 9A.

[2]Breakdown between rental and home ownership not available.

Section 35 provides that the Federal Government and any province may undertake housing developments jointly. The capital and operating costs, profits, and losses on such undertakings are to be shared 25 per cent by the province and 75 per cent by the Federal Government.

Operations under the National Housing Act, 1944, to the end of 1949 are summarized in four tables in this appendix. Table 114 covers overall construction operations on dwellings for which loans were approved. Table 115 covers lending operations and construction expenditures, by type of loan, for the same dwellings. Table 116 provides data on activity under the home extension loan guarantee provisions, and Table 117 covers operations under the rental insurance provisions of the Act.

TABLE 116

HOME EXTENSION LOAN GUARANTEE OPERATIONS UNDER THE NATIONAL HOUSING ACT, 1944, LOANS APPROVED AND EXPENDITURES, CANADA, 1946-1948

Year	Loans Approved			Expenditures	
	Number of Loans	Number of Conversions	Amount $000	By Borrowers $000	Total $000
1946	25	48	76	26	102
1947	11	16	31	7	38
1948	3	4	7	4	11
Total	39	68	114	37	151

EMERGENCY SHELTER PROGRAM, 1944

The Emergency Shelter Program was designed to provide temporary rental housing accommodation to relieve the marked congestion of the immediate post-war period. The Emergency Shelter Regulations, beginning with Order-in-Council P.C. 9439 of December 19, 1944, and including subsequent amendments, authorized the Federal Government to determine the disposition of buildings suitable for conversion into dwelling units. By Order-in-Council P.C. 7502, December 28, 1945, the administration of the regulations was passed to Central Mortgage and Housing Corporation. Under the plan the Federal Government provided financial assistance to municipalities and universities for the conversion of available buildings into temporary dwelling units, and in addition made surplus Crown buildings available for this purpose. The rental units were administered by the municipalities or other agencies concerned. In December, 1948, the Emergency Shelter Regulations were revoked. Construction operations are covered in Table 118.

TABLE 117

RENTAL INSURANCE PROJECTS UNDER THE NATIONAL HOUSING ACT, 1944, PROJECTS APPROVED, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1948 AND 1949

Year and Type of Project	Projects Approved			Number of Dwellings		Expenditures		
	Number	Number of Dwellings	Estimated Cost $000	Started	Completed	Construction $000	Land $000	Total $000
All Projects								
1948	36	1,988	14,485	2,200	400	6,964	322	7,286
1949	118	7,720	53,868	6,400	4,511	34,220	1,654	35,874
Projects with Conventional Loans[1]								
1948	30	1,768	13,123	1,200	200	3,781	175	3,956
1949	52	3,446	23,685	3,200	2,300	17,046	824	17,870
Total—All Projects	154	9,708	68,353	8,600	4,911	41,184	1,976	43,160

[1]Excludes those projects for which direct National Housing Act loans were approved.

TABLE 118

OPERATIONS UNDER THE EMERGENCY SHELTER REGULATIONS, NUMBER OF CONVERSIONS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1945-1949

Year	Number of Conversions		Expenditures		
	Started	Completed	By Federal Government $000	By Municipalities and Universities $000	Total $000
1945	1,499	1,051	....	1,184	1,184
1946	5,655	4,642	2,284	2,628	4,912
1947	2,838	3,751	2,249	1,150	3,399
1948	320	860	444	227	671
1949	....	8	4	2	6
Total	10,312	10,312	4,981	5,191	10,172

CENTRAL MORTGAGE AND HOUSING CORPORATION ACT, 1945

The Central Mortgage and Housing Corporation Act, 1945, established the Central Mortgage and Housing Corporation as the agency of the Federal Government primarily responsible for housing operations. The Corporation was initially set up to administer the National Housing Act, 1944, and subsequently took over the operation of the Emergency Shelter Regulations, the Home Conversion Plan and Wartime Housing Limited, as well as the execution of Department of National Defence Armed Service Married Quarters Program and the administration of various types of residential real estate owned by the Federal Government, such as the Deep River Atomic Energy Project.

ARMED SERVICE MARRIED QUARTERS PROGRAM, 1946

The Armed Service Married Quarters Program of the Department of National Defence was initiated in 1946 with a view to providing rental housing for permanent members of the armed services and employees of the Defence Research Board and their families. The construction operations for the 1949 program were placed under the administration of the Central Mortgage and Housing Corporation. The program was continuing at the end of 1949. The extent of residential building activity is indicated in Table 119.

TABLE 119

HOUSING OPERATIONS OF THE DEPARTMENT OF NATIONAL DEFENCE, NUMBER OF DWELLINGS STARTED AND COMPLETED, AND EXPENDITURES, CANADA, 1946-1949

Construction Agency and Year	Number of Dwellings Started			Number of Dwellings Completed			Expenditures		
	Permanent	Temporary	Total	Permanent	Temporary	Total	Permanent $000	Temporary $000	Total $000
Department of National Defence									
1946	60	190	250	....	....	....	20	19	39
1947	481	824	1,305	18	438	456	522	522	1,044
1948	1,807	174	1,981	363	643	1,006	10,845	636	11,481
1949	391	2	393	1,704	31	1,735	13,732	17	13,749
Sub-total	2,739	1,190	3,929	2,085	1,112	3,197	25,119	1,194	26,313
Central Mortgage and Housing Corporation									
1949	2,764	....	2,764	20	....	20	11,505[1]	....	11,505[1]
Total	5,503	1,190	6,693	2,105	1,112	3,217	36,624	1,194	37,818

[1]Includes a small amount expended for land.

Housing for Federal Government Employees, 1946

Table 120 covers housing construction for the period 1946 to 1949 undertaken by Federal Government departments, particularly those responsible for transport and Indian affairs, in the course of their normal activities. Many of these houses are built in outlying areas for employees of the departments. It bears emphasis that this type of house building has been carried on prior to 1946. Although detailed records of these earlier operations are not available, Federal Government house building

TABLE 120

Direct Housing Operations by Federal Government Departments, Number of Dwellings Constructed and Expenditures, Canada, 1946-1949

Year	Number of Dwellings[1]		Expenditures $000
	Started	Completed	
1946	23	2	187
1947	33	41	797
1948	79	67	1,575
1949	141	141	2,772
Total	276	251	5,331

[1]Excludes a number of houses built on Indian reserves.

TABLE 121

Operations Under The Double Depreciation Plan for Rental Housing Projects[1], Number of Dwellings Started and Completed and Expenditures, Canada, 1947-1950

Year	Number of Dwellings		Expenditures		
	Started	Completed	Construction $000	Land $000	Total $000
1947	183	—	528	17	545
1948	138	240	1,833	76	1,909
1949	66	110	858	51	909
1950	96	133	709	32	741
Total	483	483	3,928	176	4,104

[1]These data cover only those projects without loans under the National Housing Act, 1944 or Rental Insurance guarantees.

TABLE 122

OPERATIONS UNDER THE DOUBLE DEPRECIATION PLAN FOR RENTAL HOUSING, PROJECTS APPROVED, CANADA, 1947-1950

Year	With Loans under the National Housing Act, 1944			With Rental Insurance Guarantees			With Double Depreciation Only			Total		
	Number of Projects	Number of Dwellings	Estimated Cost $000	Number of Projects	Number of Dwellings	Estimated Cost $000	Number of Projects	Number of Dwellings	Estimated Cost $000	Number of Projects	Number of Dwellings	Estimated Cost $000
1947	22	151	760	0	....	....	6	219	1,783	28	370	2,543
1948	26	253	1,753	1	40	247	14	112	1,157	40	405	2,910
1949	18	611	4,152	79	2,501	17,028	16	66	695	96	2,656	18,174
1950	58	1,822	13,038	67	2,222	16,346	2	86	469	74	2,411	17,173
Total	124	2,837	19,703	147	4,763	33,621	38	483	4,104	238	5,842	40,800

activity of this kind was very limited before the war and would hardly approach 100 units in any one year.

Double Depreciation Provisions, 1947

Tables 121 and 122 cover activity under the Double Depreciation Provisions of the Income War Tax Act, as amended in March, 1947. Under the amendments accelerated depreciation charges were authorized for a period of 10 years for rental housing projects approved by Central Mortgage and Housing Corporation up to the end of 1949. Applications were approved and executed in 1950 for projects which were begun prior to the end of 1949. This accounts for the inclusion of 1950 data in Tables 121 and122.[1]

[1]In addition to housing measures taken by the Federal Government, various housing schemes were sponsored by provincial governments. Among these the Ontario second mortgage provisions and the Quebec interest subsidy program may be of interest. Under The Housing Development Act, 1948 (12 George VI, Chapter 44, *Statutes of The Province of Ontario*) 15,082 second mortgage loans, affecting an equal number of dwellings and involving a total amount of $16.5 million, were approved between May, 1948, and March, 1950, when operations under the Act came to an end (see also *Housing in Canada, April, 1949*, p. 13 and *April, 1950*, pp. 14-15 and 53). Under an Act to Improve Housing Conditions in The Province of Quebec (12 George VI, Chapter VI, *Statutes of The Province of Quebec*) interest subsidy commitments were made in respect of 3,864 dwellings between January, 1948, when operations commenced, and March, 1950, involving an interest subsidy commitment on the part of the provincial government of $5.7 million (see also *Housing in Canada, January, 1950*, pp. 15 and 54).

INDEX

INDEX

ABANDONED DWELLINGS, 63, 64, 382–3, 392, 393–5
Acquisition costs, 425
Advisory Committee on Reconstruction, 47, 53, 259
Age of housing, 46–9, 359, 428
Agreements for sale, 133
Agriculture, 165, 167, 169, 185
Alberta, 168, 170, 178, 185
Annexation of suburbs, 87
Apartments: *see* Multiple dwellings *and* Contracts awarded
Appendix to the Budget, 1949–1950, 77
Architects, fees of, 257, 259, 419
Armed services, married quarters program, 110, 123, 124, 500

BANKS, 111
Beveridge, Sir William, 459
Births and housing pressure, 207–8
Borrowing, personal, 232, 290–1
Bosley, W. H., 134
Brantford, 173
British Columbia, 137, 148, 161, 168-9, 170, 171, 176, 178, 182–3, 188–90, 192, 193, 362–6, 369
Budget, Federal Government, 124:
  speech on, Oct. (1945), 262
Builders:
  owners as, 67
  profits, 403–4
  size of firms, 402
  speculative, 67, 106
  sub-contractors, 402
Building cycles, 457–9. *See also* Completions, fluctuations
Building materials:
  car loadings, 182, 184, 185, 373
  domestic disappearance of, 383–5
  index of prices, 401–2
  multiple dwellings, 87
  priorities, 119
  shortages, 58, 119
Building methods:
  changes, 404
  prefabrication, 401
Building permits:
  comparison with residential construction, 465, 473
  number of dwellings, 351–2
  value, 354
Burns, Arthur F., 459

CALGARY, 171, 173
Canada: 1867–1939, 58
Canadian Association of Real Estate Boards, 101
Canadian Farm Loan Act (1927), 110, 117, 123, 449–50, 480
Capacity for house building, 238–46
Capital consumption: *see* Residential capital consumption
Capital formation: *see* Residential capital formation
Capitalization of returns, 426
Car loadings, materials, 182, 184, 185, 373
Census:
  dwellings:
    number, 378–80
    value, 426
  families, 439–41
  households, 439–41
  non-family households, 439–41
Central Mortgage and Housing Corporation, 118, 452, 492–3, 500
Children, effect on housing pressure, 207–8
Cities, major, 171–2, 175
Completion period, 412–13
Completions:
  British Columbia, 168–9, 171
  estimates:
    methods, 347–8, 378–93
    tests, 460–73
  farm and non-farm, 70–1, 172, 386–8
  fluctuations, 56–9
  government, 124
  localities, 171–2
  Maritimes, 163–4, 170
  net family formation, 200–2
  Ontario, 166–7, 170
  per capita, 169–72, 239, 372
  Prairies, 167–8, 170

Quebec, 165–6, 170
regions, 163–9, 170, 371
type of dwelling, 65–70, 172–5
urban, 171–2
value, 83–9, 91, 400–11
Construction:
building, 250
engineering, 250
man-hours per year, 256–62
work carried out:
new residential, 250–1
See also New residential construction *and* Residential construction, work carried out
Contractors: *see* Builders
Contracts awarded:
comparison with residential construction, 463–5, 471
number of dwellings, 350–1
value, 354
Conversions, 70, 87, 118, 388–9
Costs:
acquisition, 425
construction, 100–2, 218, 222, 403–5, 420
and demand, 218–20, 225
equipment, 90, 418–19
house, average (1949), 98
land, 171, 421–2
multiple dwellings, 408
owning and renting, 220–1
replacement, 100–1, 426
service, 90, 418–19
single dwellings, 407–11
supplementary, 90, 418–20
Credit: *see* Housing, financing, *and* Legislation on housing
Credit unions, 107, 111, 113
Curtis Report: see *Housing and Community Planning*
Cycle, building, 457–9. *See also* Completions

DEMAND FOR HOUSING:
backlog, 193–4
British Columbia, 193
effective, 196, 206, 214–16, 246–7
and locality, 160
measurement, 196, 204–8
and net family formation, 206–8
Ontario, 193
Quebec, 194
regional, 193–4
replacement, 63, 64
and volume of building, 58
Department of Finance, 403
Department of National Revenue, 211, 222
Department of Reconstruction and Supply, 52, 87, 137
Department of Trade and Commerce, 36, 138
Depreciation:
accelerated or double, 119, 504
amount, 92–4
concept:
accounting, 426
economic, 40–1, 426
taxation, 425–6
estimating methods, 40, 356–7, 423-9
national accounts method, 40. *See also* National Accounts
Depression (1930's), 75–6, 81, 100, 168, 192, 194, 197, 199, 202
"Developments in Canada's Housing Program," 122, 221, 247
Disposal of Crown Buildings, 137
Dominion Housing Act (1935), 117, 123, 420–1, 450, 481
Dominion-Provincial Conference on Reconstruction, 36, 262
Doubling-up, 194, 206
Dun and Bradstreet, 134
Dun's Bulletin, 134
Dwellings:
abandoned, 63, 64, 382–3, 392, 393–5
damaged, 92, 423
defined, 34
demolished, 63, 64, 92, 382–3, 392, 393–5, 423, 428
farm:
age, 47, 428
completions, 70–1, 86–7, 172, 408–11
persons per dwelling, 190
quality, 71, 192
stock, 50, 175
life expectancy, 46, 49, 62–3, 427
multiple:
completions, 65–70, 87, 172–5, 392–3, 408
demand, 65–7
proportion of, 172–5
rural non-farm:
age, 47, 428
completions, 86–7
persons per dwelling, 190, 374
stock, 50, 175

single:
completions, 65–70, 87, 172–5, 392–3, 407–11
demand, 65, 67–8
sales, 52
stock:
age, 46–9, 359, 428
defined, 34–5
estimating method, 393–9
growth, 63–5, 161–3, 197
location, 49–50, 161–3, 359
owner-occupied, 51, 397–9
and population, 44–6, 162, 196–9
rural non-farm, 49–50
quality, 49, 163, 202, 204
tenant-occupied, 51, 397–9
valuing, method, 38
temporary, 70, 89, 399, 411–12
urban:
age, 47, 428
completions, 86–7
stock, 50
vacant, 50–6, 79–82, 380, 390–1, 395–6
See also Completions, Starts
Dynamics of Business Cycles, 457

EDMONTON, 171, 173
Efficiency in house building, 404–5
Emergency shelter program, 70, 110, 115, 119, 498
Emigration, 436–7
Employment:
construction workers, 467–8, 471
effect of house building on, 254–8, 260–2
industrial, 186
Employment and Income, White Paper (1945), 262
Encouragement to Industrial Expansion, 52, 414
Equipment, costs of, 90, 418–19
Equity of owners, 114, 232–6, 375, 443
Estimates:
basic, 267–89
qualifications, 347–9
tests, 446–8

FAMILIES:
defined, 39
expenditures, 220–2
formation: *see* Net family formation
without homes of their own
British Columbia, 192
Canada, 81, 191–2, 199, 203–4, 374
Maritimes, 191–2, 194
Ontario, 191–3
Prairies, 192
Quebec, 192, 194
regional, 191–4, 374
Farm dwellings: *see* Dwellings, farm
Farm Improvements Loans Act (1944), 110, 118, 453, 490
Federal Reserve Board, 215
Federal Reserve Bulletin, 215
Filtering process, 208–14, 375
Financial Post, 101
Firestone, O. J., 122, 196, 403, 420, 421
Fiscal Policy, 459
Forced sales, 101, 104–5, 133, 146, 156
Fort William, 173
Full Employment, 459

GOVERNMENT:
Federal:
budget, 124
departments, 502
See also Legislation on housing *and* Public assistance to house building
municipal, 119, 122–3, 484–5, 498
provincial, 119–20, 122–3, 480, 498, 504
Gross national expenditure, 41–2, 240, 251, 376–7. *See also* National accounts
Gross national product, 31, 240, 243–5. *See also* National accounts

HALIFAX, 173, 181
Hamilton, 173, 180, 181
Hansen, A. H., 459
Higgins, B. H., 53
Home Conversion Plan (1943), 118, 452–3, 490
Home Extension Plan (1942), 118, 487–90
Home Improvement Loans Guarantee Act (1937), 118, 451, 481
Home ownership: *see* Housing, owner-occupied
House of Commons Debates, 77, 262, 424
House-building:
capacity, 238–46
efficiency, 404–5
initiation of, 106
international comparisons, 71–6
and manufacturing investment, 175–82
non-traditional, 155
and regional economic growth, 182–6

Household:
defined, 439
non-family, 39, 199, 204, 206, 439–41
Housing:
expenditures, competition for consumer's dollar, 216–20
financing, 106–31, 229, 232–6:
by owner, 290–1
sources, 106, 107
flow, tie-in with national accounts, 40–3, 251–4; *see also* Residential capital formation
location of, 160, 359
need, 119–22, 196, 203
owner-occupied, 52–6, 65, 67–9, 116, 174, 397–9
problem of the future, 246–7, 263
shortage:
war-engendered, 202
post-war, 203–4
substandard, 47, 204
tenant-occupied, 52–6, 65–7, 69, 174, 178–9, 397–9
See also Age of housing; Demand for housing; Dwellings, stock; Legislation on housing; Market for housing; Population; Quality of Housing; Repair and maintenance
"Housing Need and Housing Demand," 122, 196
Housing and Community Planning (Advisory Committee on Reconstruction), 47, 50, 71, 82, 100, 188, 199, 238, 247, 350
Housing and Community Planning (McGill University, pub.), 262
Housing and Employment, 59
Howe, Hon. C. D., 109, 117

IMMIGRATION, 199, 200, 436–7
Importance of Construction Industry, 259
Improvements and alterations, 89–90, 250–1, 415–16
Income:
and demand for housing, 206–7
effect of house building, 258–62
fluctuations, 31
personal, 183, 185, 242, 374
proportion spent on housing, 71, 216–17, 221
and purchases under N.H.A., 222–9
Industrial expansion and house building:
by region, 175–82, 189
Initiation of housing:
private, 107, 110, 113
public, 107, 123, 124
Instability of Employment, 59
Integrated Housing Plan, 119
International Labour Office, 59
Investment:
domestic gross, 251
durable physical assets, 250–1
gross, 251
gross home, 251
policies, 107–8, 260–3
real estate, 77–105
Investment and Inflation, 36, 109, 138, 145, 242, 243, 250, 257
Investment Outlook, 1950, 138, 178, 215

KINGSTON, 173
Kitchener, 171, 173

LABOUR:
index of wages, 402–3
mobility, 52
shortages, 58
for single dwellings, 87
Labour Value of Building Dollar, 403, 420, 421
Land:
costs, 171, 421–2
put in use in 1949, 96
removed from residential use, 429
sales of lots, 148, 155
scarcity, 87, 171
value, 77, 98, 421–2, 431–2
Landlord, decision to invest, 65–7. *See also* Housing, tenant-occupied
Legal fees, 257, 259, 419
Legislation on housing:
effect, 123–8
history, 117–23, 480–504
philosophy, 116–17
provincial, 504
schedule of measures, 129–31
summary, 477–504
Lending institutions, 111, 442, 492–3
Life insurance companies: *see* Lending institutions
London, 173, 180, 181
Lots, sales of, 148, 155

MAINTENANCE: *see* Repair and maintenance
Man-hours, 256–62
Manitoba, 168, 170, 176, 178, 183, 185
Manpower and Material Requirements, 87, 100, 219, 255, 403, 404
Mansur, D. B., 122, 211, 247
Manufacturing:
  expansion, 175–83
  investment, 175–82, 373
Maritimes, 137, 161–4, 170, 183, 188–9, 191–2, 194
Market for housing, 103–5, 139, 196, 208
Marriages, 199, 437
Materials: *see* Building materials
McGill University, 262
Measuring Business Cycles, 459
"Meeting Canada's Housing Needs," 109, 117
Metropolitan areas, 87, 171–2, 175, 179, 390
Minister of Finance, 424
Mitchell, Wesley C., 459
Mobility of population, 160
Montreal, 165–6, 171, 173, 174, 175, 181, 188, 189, 194
Mortgages:
  defaults, 82
  first and second, 232
  occasioned by sales, 157–8
  See also Credit unions; Housing, financing; Lending institutions
Multiple dwellings: *see* Dwellings, multiple
Municipal governments and housing legislation, 117, 118, 122, 123

NATIONAL ACCOUNTS, 41–2, 216, 240–3, 251–4
National Housing Act (1938), 118, 420–1, 451, 482
National Housing Act (1944), 110, 118, 119, 120, 122, 222–9, 419–21, 453–4, 491–4
Need for housing: *see* Housing, need
Net capital formation: *see* Residential capital formation
Net family formation:
  adjusted for changes in birth rate, 207–8
  and completions, 58, 199–203
  and effective demand for housing, 206–7
  fluctuations, 199–200
  rate, 199–202, 206, 437–8
Net residential capital formation: *see* Residential capital formation
New Brunswick, 170, 176, 179, 183
New residential construction:
  estimating, method, 412–15
  fluctuations, 89, 90, 111, 250
  and other construction, 242, 248, 250
  and total output, 240–2, 250–4
  total per capita, 239
  See also Residential construction
Newcomb, Robinson, 207
Newfoundland, 44, 77, 89, 434–5
Northwest Territories, 44, 56, 77, 89, 433–4
Nova Scotia, 170, 176, 178, 183

OBSOLESCENCE: *see* Residential capital, obsolescence
Ontario, 137, 141, 146–7, 148, 149, 161–2, 166–7, 170, 176, 178, 182–3, 188–90, 192, 193, 504
Ottawa, 173, 181, 193
Owner financing: *see* Housing, financing
Owner-occupied housing: *see* Housing, owner-occupied
Owners' equity, 114, 232–6, 375, 443
Ownership of dwellings:
  private, 115
  public, 115, 123

PEARSON, FRANK A., 459
Persons per dwelling:
  British Columbia, 188–9, 193
  Canada, 197, 204, 374
  farm, 190, 374
  Maritimes, 188–9, 194
  non-farm, 190, 374
  Ontario, 188–9, 193
  Quebec, 188–9, 194
  regional, 188–90, 374
Polak, J. J., 457
Population:
  British Columbia, 169, 183, 193
  Canada, 436–7
  and housing growth, 58, 162, 165, 167–72, 185–6, 197
  Maritimes, 164, 194
  mobility, 140, 160
  movement off the farms, 186, 190
  non-farm, 74
  Ontario, 167
  Prairies, 168, 185, 192
  Quebec, 165

and stock of dwellings, 44–6, 161–3, 186, 196–9
Prairies, 137, 161–2, 167–8, 170, 185, 188–90, 192
Price controls, 101, 103
Price of residential real estate, 53, 98–105
Prince Edward Island, 170, 178, 179
Priorities, building materials, 119
Productivity, 243–4
Proposals of the Government of Canada, 262
Provincial governments and housing legislation, 117, 119, 122–3
Public assistance to house building:
growth and history, 109, 117–27
guarantees, 123, 124, 126
loans, 109, 110, 123, 124
Public Investment and Capital Formation, 36
Public ownership of housing: *see* Ownership

QUALITY OF HOUSING:
capital consumption, 92–4
references on, 195
relation to shelter requirements, 162–3
standard of conveniences, 401
Yukon and North-west Territories, 433
See also Age of housing
Quebec, 137, 145, 148, 161–2, 165–6, 170, 174, 176, 178, 182–3, 188–9, 192, 194, 504
Quebec City, 173, 181

REAL ESTATE INDUSTRY, 137–40
Real estate, residential: *see* Residential real estate
"Real Estate Sales on the Way Down," 101
Rearmament, effect on house building, 263
Recession (1921, 1924, 1938), 53, 69
Regina, 173
Regional economic growth, 182–6
Rent:
ability to pay, 220–1
index, advanced one year, 467, 468, 469, 473
relation to disposable income, 216–17
willingness to pay, 218–20
Rent control, 52, 179, 217–18
Rental housing: *see* Housing, tenant-occupied
Rental Insurance Plan, 119, 126, 493
Repair and maintenance 40, 89–90, 250–1, 416–18
Replacement, 47, 49, 64, 89, 202:
costs, 100–1, 426
value, 98, 100, 104
Report of Royal Commission on Prices, 100, 261
Residential capital:
consumption:
definition, 37
fluctuations, 92
methods of estimating, 422–30
relation to national accounts, 41–2
value, 92
defined, 33, 36
formation, 36, 41, 42, 90–2, 94, 418–22:
net, 37, 94–5, 430
non-farm, 285–6
obsolescence, 92, 424
value, 90, 431
Residential construction work carried out:
estimates:
methods, 415–18
tests, 473–4
fluctuations, 31, 89
and total construction, 31
total defined, 40
and total output, 31, 251–4
See also New residential construction
Residential real estate:
additions and deductions, 96
defined, 32, 38
non-farm, 285–6
price, 53, 98–105
in use, 79–82
not in use, 79–82
value, 77–9, 98–100:
method of valuing, 98
replacement, 98, 100
volume, 77–9
Resources devoted to house building, 171, 237–8, 245
Royal Commission on Dominion-Provincial Relations, 58
Royal Commission on Prices, 100, 261
Rural non-farm areas:
defined, 47–9
persons per dwelling, 190

ST. CATHARINES, 173
Saint John, 173, 181

Sales of real estate resulting in mortgages, 157–8. *See also* Transfers of real estate
Saskatchewan, 168, 170, 178, 179, 185
Saskatoon, 173
Savings:
  as source of equity, 229, 232–6
  total personal, 114
Seasonal variations:
  house building, 59–62, 395
  monthly data, 61, 152–3, 296–303, 309–44
  transfers of real estate, 147–8
Sequence and Timing of Economic Events, 53
Service costs, 90, 418–19
Settlement of new areas, 162–3
Shared accommodation, 81, 191–2, 193, 203, 206, 211
Shelter, 163. *See also* Emergency shelter program
Sherbrooke, 173
Single dwelling: *see* Dwellings, single
Size of dwellings, 400–1
Slum housing, 47, 204
Standard of living accommodation:
  age of dwellings, 49
  families without homes of their own, 191–4, 199, 203–4, 374
  farm, 71, 190
  location, 190
  persons per dwelling, 44–6, 188–90, 197
  quality of housing stock, 202
  regional, 186–94
Starts:
  non-farm, 70–5
  relation to volume of construction, 413
  seasonal pattern, 59–62
  by type of initiation and source of financing, 109–13
  United States, 71–6
Stock of dwellings: *see* Dwellings, stock
Subsidized housing: *see* Housing, need: Veterans' rental housing program; Wartime Housing Limited
Suburbs, annexation of, 87
Sudbury, 173
Supplementary buildings, 77

Taxation Statistics, 1949, 211
Taxation Statistics, 1950, 222
Three Rivers, 173
Tinbergen, J., 457
Title to property, 132–3
Toronto, 143, 148, 171, 175, 179–80, 193, 443–4
Transfer tax, 134
Transfers of real estate:
  actual sales, 133, 137, 156
  by area, 148–51
  British Columbia, 137, 148, 362–6, 369
  and completions, 139, 146
  data in Registry and Land Titles offices, 134–7, 158, 362–9
  definition, 132
  fluctuations, 142–3, 146–7
  forced sales, 101, 104–5, 133, 146, 156
  Maritimes, 137, 362–6
  nominal sales, 132–3, 137, 156
  number, 137, 141, 143, 146, 362–70
  Ontario, 137, 141, 146–7, 148, 149, 362–70
  per capita, 137, 151
  Prairies, 137, 362–6
  Quebec, 137, 145, 148, 362–70
  residential, 140–1, 362–70
  seasonal variations, 147–8
  value, 137, 146–7, 148, 155, 362–70
  voluntary, 133
Turnover of real estate, 140–1

URBAN AREAS:
  defined, 390
  incorporations, 381–2
Urban dwellings: *see* Dwellings, urban
Urbanization, 52, 71, 167, 175, 186, 189, 428
United Kingdom, 71–6, 238, 360, 457–9
United States, 71–6, 238, 360, 457–9

VACANT DWELLINGS: *see* Dwellings, vacant
Vancouver, 169, 171, 175
Veterans' Land Act (1942), 110, 118, 452, 487
Veterans' rental housing program, 119, 122, 123, 124, 484
Victoria, 169, 179
Volume of house building: *see* Completions, Residential construction *and* Starts

WAGE CONTROLS, 101
Wage rates, 402–5, 409–11
War and housing shortage, 76, 202
War brides, 200, 437

War Measures Act (1914), 480
Warren, Norge F., 459
Wartime Housing Limited, 118–19, 484–5
Wear and tear, 92, 424
Weather, effect on life expectancy of houses, 48–9, 433. *See also* Seasonal variations, house building
Weekly Sales Report, 134
Windsor, 180
Winnipeg, 168
Winters, R. H., 123, 243
World Prices and Building Industry, 459

YUKON, 44, 56, 77, 89, 433–4