STAFF STUDY No. 13

Internal Migration in Canada, 1921-1961

by Isabel B. Anderson

prepared for the

Economic Council of Canada

INTERNAL MIGRATION IN CANADA, 1921—1961

by

Isabel B. Anderson

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CONTENTS

	Page
I – INTRODUCTION	1
Note on Population Groupings	4
II – GENERAL VIEW OF POPULATION GROWTH AND DISTRIBUTION	7
III – NATURAL INCREASE AND NET MIGRATION	21
IV – INTERNAL MIGRATION AND ECONOMIC GROWTH	27
Income Differences and Internal Migration	32
Some Factors Which Affect Mobility	42
Appendix A – REFERENCE TABLES	45
Appendix B – ESTIMATING PROCEDURES	61
Method of Estimating Net Migration	63
Construction of a Consistent Series of Vital Statistics	64
Estimated Population	66
Estimates of Farm and Nonfarm Net Migration for Canada	67
Appendix C – IDENTIFICATION OF URBAN, RURAL FARM AND NONFARM POPULATIONS	71
Urban and Rural Populations	73
Farm and Nonfarm Populations	80
Appendix D – COMPARABILITY OF THE MIGRATION ESTIMATES AND THE ESTIMATES PUBLISHED BY THE DOMINION BUREAU OF STATISTICS	83

TABLES

			Page
Table	1	Percentage Increase in the Population in Canada and the United States, by Census Decades	7
Table	2	Distribution of the Canadian Population, by Province, at Census Dates, 1901 to 1961	9
Table	3	Urban Share of the Population in Each Province, at Census Dates, 1901 to 1961	10
Table	4	Nonfarm Share of the Rural Population in Each Province, at Census Dates, 1921 to 1961	10
Table	5	Total Nonfarm Share of the Population in Each Province, at Census Dates, 1921 to 1961	11
Table	6	Percentage Increase in the Urban Population in Canada and the United States, by Census Decades	12
Table	7	Percentage Increase in the Urban and Rural Population in Each Province, by Census Decades, 1901 to 1961	13
Table	8	Percentage Increase in the Rural Nonfarm, Total Nonfarm and Farm Population in Each Province, by Census Decades, 1921 to 1961	14
Table	9	Distribution of the Farm and Total Nonfarm Population in Canada, by Province, at Census Dates, 1921 to 1961	16
Table	10	Estimated International Net Migration and Internal Farm and Nonfarm Net Migration for Canada, Calendar-Year Intercensal Intervals, 1921 to 1960	17
Table	11	Rate of International and Internal Net Migration for Canada, Calendar-Year Intercensal Intervals, 1921 to 1960	18
Table	12	Rate of International and Internal Net Migration for Canada, Five-Year Intercensal Intervals, 1951 to 1960	18
Table	13	Rate of Intercensal Change and Net Migration for the Population in each Province, Five-Year Intercensal Intervals, 1951 to 1960	19
Table	14	Rate of Intercensal Change and Net Migration for the Urban and Rural Population in Each Province, Five-Year Intercensal Intervals, 1951 to 1960	20
Table	15	Rate of Natural Increase and Net Migration for the Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960	22
Table	16	Rate of Natural Increase and Net Migration for the Urban Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960	24

Page

Table 17 Rate of Natural Increase and Net Migration for the Rural Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960 25

Table 18 Ratio of Farm to Nonfarm Income Per Capita in $19\overline{27}$ and $19\overline{61}$ and Rates of Growth in Farm, Nonfarm and Total Income, $19\overline{27}$ to $19\overline{61}$ 34

Table 19 Nonfarm, Farm and Total Income Per Capita in $19\overline{27}$ and $19\overline{61}$. 35

Table 20 Provincial Ranking Based on Nonfarm, Farm and Total Income Per Capita in $19\overline{27}$ and $19\overline{61}$ 37

Table 21 Percentage Change in Farm, Total Nonfarm, Rural Nonfarm, Urban and Rural Population, 1921 to 1961 38

Table 22 Proportion of the Total Nonfarm Population Living in Rural Nonfarm and Urban Areas in 1921 and 1961 39

Table 23 Average Decennial Rates of Net Migration of the Total, Urban and Rural Population, 1921 to 1940 and 1941 to 1960..... 40

Table 24 Rates of Growth in Nonfarm Income Per Capita, Farm Income Per Capita and Total Income Per Capita, $19\overline{27}$ to $19\overline{61}$ 41

APPENDIX TABLES

Page

Table A1 Population of Canada, by Province, Census Dates, 1901 to 1961 47

Table A2 Urban Population of Canada, by Province, Census Dates, 1901 to 1961 48

Table A3 Rural Population of Canada, by Province, Census Dates, 1901 to 1961 49

Table A4 Rural Farm Population of Canada, by Province, Census Dates, 1921 to 1961 50

Table A5 Rural Nonfarm Population of Canada, by Province, Census Dates, 1921 to 1961 50

Table A6 Total Nonfarm Population of Canada, by Province, Census Dates, 1921 to 1961 51

Table A7 Estimated Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates 51

Table A8 Estimated Urban Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates 52

Table A9 Estimated Rural Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates 52

Table A10 Total Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 53

Table A11 Total Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 53

Page

Table A12 Natural Increase of the Population of Canada by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 54

Table A13 Net Migration of the Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 54

Table A14 Urban Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 55

Table A15 Urban Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 55

Table A16 Natural Increase of the Urban Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960..... 56

Table A17 Net Migration of the Urban Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960..... 56

Table A18 Rural Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 57

Table A19 Rural Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 57

Table A20 Natural Increase of the Rural Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960..... 58

Table A21 Net Migration of the Rural Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960 58

Table A22 Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Rural Farm for Canada 59

Table A23 Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Rural Nonfarm for Canada 59

Table A24 Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Total Nonfarm for Canada 60

Table C1 Urban Population Data under the Various Definitions of Urban Areas 74

Table C2 Population in Incorporated Centres of Less than 1,000 as a Per Cent of the Population of All Incorporated Centres, Canada, by Province, Census Dates, 1901 to 1961..... 75

Table C3 Effect of Change in Definition of Rural and Urban in 1951 Census on Urban Population, for Canada and the Provinces ... 77

Table C4 Components of Urban Areas under the Various Definitions 79

Table C5 Population Growth as a Result of the Intercensal Incorporation of Centres of 1,000 and Over, Canada, by Province, 1921 to 1961 79

Page

Table C6 Population Growth as a Result of the Growth of Incorporated Centres from Less than 1,000 to 1,000 and Over during the Intercensal Period, Canada, by Province, 1921 to 1961 80

Table D1 Fiscal-Year Estimates of Natural Increase and Net Migration of the Total Population of Canada, by Province, for Decennial Intercensal Intervals, 1931 to 1961 86

Table D2 Absolute Difference between the Fiscal-Year and the Calendar-Year Estimates of Natural Increase and Net Migration 87

Table D3 Absolute Difference between the Fiscal-Year and the Adjusted Calendar-Year Estimates of Natural Increase and Net Migration 87

CHART

Population Increase in Canada and the United States, by Region, between Census Years 8

ACKNOWLEDGMENTS

During the summer of 1962 a study of internal migration in Canada was initiated in the Department of Economics and Political Science at the University of Saskatchewan, Saskatoon. It was part of a larger study of Canadian economic growth that had been undertaken by Professor Kenneth Buckley. The data presented in this paper are from the files of Professor Buckley's study for the Banff Business Policies Conference in September 1963. Some of them first appeared in a thesis[1] and later, in Professor Buckley's working paper to the 1963 Banff Conference.[2] Interest of the Economic Council of Canada in the subject has provided the opportunity to rework the migration estimates and to continue other parts of the study of internal migration.

The Banff School of Advanced Management, the University of Saskatchewan and the Economic Council of Canada have provided assistance for this study. Professor Buckley directed it through the initial stages and has provided encouragement throughout. Miss Yoshiko Kasahara of the Dominion Bureau of Statistics has made many helpful comments. Several staff members of the Economic Council have provided guidance in the preparation of this paper and in other parts of the study. The assistance of many people at the Dominion Bureau of Statistics and of others who have expressed interest in the research has been indispensable.

Neither the assistance of these people, nor the fact that this paper is published under the auspices of the Economic Council of Canada implies responsibility for the views expressed; these are entirely the responsibility of the author.

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[1] I.B. Anderson, *Components of Rural and Urban Population Change in Canada, 1921 to 1960*, unpublished, M.A. thesis, University of Saskatchewan, Saskatoon, 1963.

[2] Kenneth Buckley, *Population, Labour Force and Economic Growth*, Working Paper, Vol. 2, Banff Business Policies Conference on Canadian Economic Survival, September 1963.

I – INTRODUCTION

Population changes have been an important factor in Canada's economic development. High rates of population growth have typically been associated with periods of strong growth in domestic output and income. In a country such as Canada, migration has been an important component of population change and, as a result, immigration is widely regarded as an important stimulant to economic activity. Indeed, immigration would appear to stimulate the economy to some degree even if the migrants stay only a short time before going to the United States or returning to their homeland overseas. Thus various interests, particularly those involved in trade and in transportation, have always been advocates of large-scale immigration.[1] In this context, immigration was an important consideration in the discussions and preparations for Confederation. Professor Fowke has pointed out:

> It was no mere coincidence that "agriculture" and "immigration" were linked in the discussions at the Quebec Conference (1864) and were singled out for uniform treatment in the division-of-powers clauses of the British North America Act (1867). Agricultural "progress" had come to be regarded as dependent upon continued immigration, for the progress expected of agriculture was that it should constantly expand and constantly require servicing by commercial, financial, industrial, and transportation interests. . .[2].

From 1867 to 1930, federal agricultural policy was chiefly concerned with agricultural commerce of various kinds. The first and most continuous interest was in immigration and agricultural settlement.[3] This was part of the national policy devoted to establishing a new frontier of investment opportunity which would be commercially and financially based on the Eastern Provinces; this new frontier was to involve the effective occupation of the central plains and the creation of the wheat economy.[4] Hence, for several decades after the middle of the nineteenth century, population growth and settlement were key issues for the development of Canada as a political and economic unit. They continued to be important for expansion of the wheat economy during the decade of the twenties even though "there was no longer any great project of national expansion based on western development" waiting for revival after the First World War.[5]

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[1] Kenneth Buckley, *Population, Labour Force and Economic Growth*, Working Paper, Vol. 2. Banff Business Policies Conference on Canadian Economic Survival, September 1963, p. 22; see also, Vernon C. Fowke, *Canadian Agricultural Policy: The Historical Pattern*, Toronto, The University of Toronto Press, 1947, pp. 121 et seq.

[2] Vernon C. Fowke, *op. cit.*, p. 145.

[3] *Ibid.*, p. 277.

[4] Vernon C. Fowke, *The National Policy and The Wheat Economy*, Toronto, The University of Toronto Press, 1957, p. 282.

[5] *Ibid.*, p. 287.

Regional population growth and redistribution did not lose significance as the wheat economy matured, but new economic patterns and forces emerged which changed the nature and characteristics of regional population trends and migration. During the period from 1921 to 1931 expansion of the wheat economy was overshadowed by expansion of nonagricultural activities; the industries expanding at maximum rates during the inter-war period and "displaying a corresponding ability to absorb and to attract new capital were concentrated in the central provinces and in British Columbia."[1] Referring to the pattern of population movements, Professor Buckley suggests that the direction of movement was determined by the emergence of new growth areas. From large-scale movements to the United States before 1901, the pattern shifted to movements into the Canadian West after the turn of the century, and this was followed by strong movements into Ontario and British Columbia in more recent times. At the same time, within each province, there has been a continuous movement from farm to nonfarm areas which has strengthened the urban and industrial base in varying degrees across the country.[2] Buckley has observed:

> The absolute and relative size of the movement of population from farm to non-farm areas in the central and eastern provinces since Confederation and in the western provinces since the establishment of the wheat economy are the most significant findings of the study of migration. This has been the largest single movement of population over the past forty years. . . . The size of the farm to non-farm movement [by census intervals from 1921 to 1960] was well over double the size of the international movement. . .[3].

Whereas the questions of population growth and redistribution in Canada, for three quarters of a century from the 1850's to the first quarter of the twentieth century, arose from considerations about developing an economy that was separate from the United States, the questions during and after the 1920's increasingly had relevance to changes in the internal structure of the Canadian economy. As the wheat economy matured the structure was changing in other respects and, as this happened, the farm-to-nonfarm shift in population increased and the interprovincial migration emphasized the increasing relative importance of industrial and urban activity in Ontario and British Columbia.

These internal migratory flows were stimulated to a significant degree during the depression years of the 1930's and the war years of the 1940's. During the 1930's, there was a net movement of people out of the country and the rate of internal net migration tended to fall as the rate of economic activity declined. There was also a tendency for the migration from farm to nonfarm areas to slow down, or be reversed, because nonagricultural employment was at a very low level.[4] However, the data on rural out-migration suggests that the farm-to-nonfarm migration, on balance, continued. This was particularly true in the Prairie Provinces and especially in Saskatchewan. Furthermore, the movements out of

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[1] *Ibid.*, pp. 287-8.

[2] Buckley, *op. cit.*, p. 21.

[3] *Ibid.*, p. 18.

[4] D.J. Daly, "Aspects of the Decline in Employment in Canadian Agriculture", *Canadian Journal of Agricultural Economics*, Vol. III, 1955, p. 27.

each of the Prairie Provinces during the 1930's, which involved migration to British Columbia and Ontario, implied a continuation of the internal migratory flows that had begun earlier. It is indeed reasonable that the farm-to-nonfarm shift of population should be stimulated during the 1930's since "no major industry suffered as much as agriculture in the downswing or recovered as slowly, judging by data on national income by industry".[1] It is also reasonable that each of the Prairie Provinces, and in particular Saskatchewan, had out-movements of people since "Wheat was the principal source of deflationary influences in agriculture..."[2] In addition, the low levels of income and the uncertainties that characterized Canadian agriculture during the decade provided a significant stimulus to farm out-migration in the decades to follow, over and above the incentives provided as agricultural production became more capital intensive. During the war years of the 1940's there were also forces conducive to population redistribution. People moved to areas where products for the war effort were being produced and to centres where members of the Armed Forces were being trained; they moved to the East and to the West Coasts and they moved off the farms and back onto the farms.

The structural changes which occurred in the Canadian economy throughout the post-war period have been accompanied by very high rates of internal migration. The population which, historically, had been very mobile, has been further redistributed, both *intraregionally,* with farm out-migration and nonfarm in-migration, and *interregionally* as people moved out of the Atlantic Region and Saskatchewan and into Ontario, British Columbia and Alberta. This reflected marked changes in the industrial structure of the economy, as well as locational changes in the areas of rapid growth in economic activity. As a result of the rapid movement into urban and nonfarm areas, population growth and redistribution in Canada have intensified the economic and social problems of urbanization.

There are interesting similarities and differences in the growth and redistribution of the population in Canada and the United States. Since the first decade of the twentieth century, population growth in Canada has exceeded growth in the United States. In both countries growth in the urban population has exceeded growth in the total population and this implies a shift in the population structure. The rates of migration for the Canadian provinces during the four decades since 1921 were at least as high as, and in many cases higher than, the rates of migration for the American states during a large part of the period from 1870 to 1950. These comparisons are particularly interesting in view of suggestions that the United States population has been more mobile than the population of most other countries.[3] The Canadian population has been at least equally, if not more, mobile.

The study of internal migration in Canada was intended to document, statistically, the pattern and relative magnitude of population movements that have been

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[1] A.E. Safarian, *The Canadian Economy in the Great Depression,* Toronto, University of Toronto Press, 1959, p. 117.

[2] *Ibid.,* p. 119.

[3] See, for example, Everett S. Lee, "Internal Migration and Population Redistribution in the United States", *Population: The Vital Revolution,* ed. Ronald Freeman, Chicago, Aldine Publishing Company, 1964, pp. 123-36.

internal to the Canadian economy and to analyze some of the relationships between internal migration and Canadian economic growth.[1] There is a fund of historical data which can be used to study the changing pattern of the Canadian population. This study is based on census statistics from 1901 to 1961 and, more particularly, from 1921 to 1961. As a result, the time unit is the "intercensal interval", that is, the interval between census years. The paper presents some of the statistics that have been compiled and offers a preliminary analysis of some of the results.

The second section of the paper describes the growth and distribution of the Canadian population since the beginning of the twentieth century. The urban-rural and farm-nonfarm distributions are considered along with the geographic distribution of the population. This section ends with a description of the relative magnitude of farm and nonfarm migration. In the third section redistribution of the Canadian population during the forty-year period from 1921 to 1961 is discussed in some detail; natural increase and net migration of the total, urban and rural population in each province are examined. A final section is devoted to a discussion of the relationship between internal migration and the level and rate of economic activity, and of some specific factors which affect mobility.

The paper includes a series of four appendices. The first presents the basic data. The second is a brief discussion of the method of estimating net migration. The third deals with the way in which the urban, rural, farm and nonfarm populations are identified. The last appendix is a discussion of the comparability of the migration estimates in this paper and those published by the Dominion Bureau of Statistics.

Note on Population Groupings

Throughout this paper urban population includes people living in incorporated cities, towns and villages of 1,000 and over. The rural population comprises the remainder of the total.

Farm population includes people living on farms and involved in agricultural production or sales; the nonfarm population includes the remainder of the rural population if a distinction is made between rural farm and rural nonfarm, or of the total population if a distinction is made between farm and total nonfarm. See Appendix C for a discussion of these definitions.

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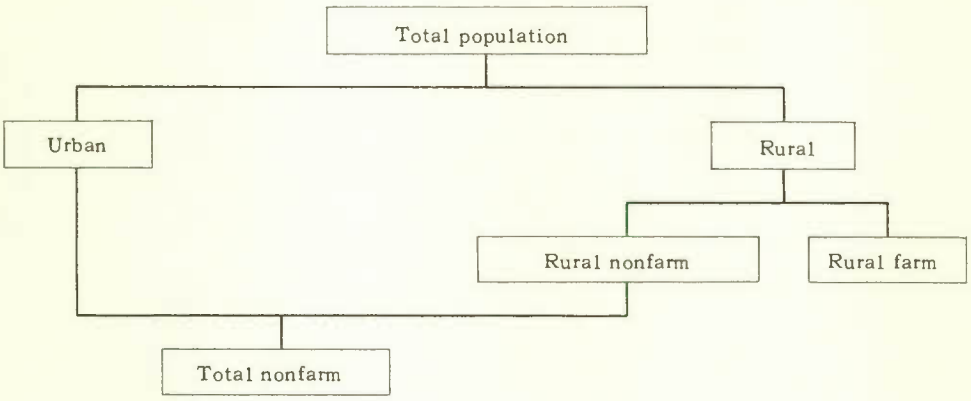
[1] Examples of recent Canadian studies which have dealt with migration are: Nathan Keyfitz, "The Growth of Canadian Population", *Population Studies*, Vol. IV, No. 1, June 1950, pp. 47-63; Dominion Bureau of Statistics, "A Study of Mobility Based on Unemployment Insurance Records", *Canadian Statistical Review*, July 1960; see also *Canadian Statistical Review* for November 1961, January, February and April 1962; Kari Levitt, *Population Movements in the Atlantic Provinces*, Halifax, Atlantic Provinces Economic Council, 1960; A.M. Sinclair, *Internal Migration in Canada, 1871-1951*, unpublished, Ph. D. thesis, Department of Economics, Harvard University, January 1966.

Rural exceeds farm population by the number of people living outside urban areas but not on farms – that is, by the rural nonfarm population. The population groupings are related in the following way:



Hence, shifting from a rural-urban to a farm-nonfarm breakdown involves subtracting rural nonfarm from rural and adding it to urban.

The rural nonfarm population includes people living in areas where hunting and trapping are a major source of income and in small unincorporated communities located in farm areas and in lumbering and mining areas – that is, in areas of resource development. It also includes people living in unincorporated communities located near large urban centres ("urbanized" areas) and in unincorporated fringe parts of large incorporated urban centres ("suburban" areas). In some provinces the rural nonfarm population is largely composed of people living in areas of resource development and in other provinces it is largely composed of people living in suburban or urbanized areas. For example, in 1951, 1956 and 1961, approximately 50 per cent of the rural nonfarm population in Ontario lived in areas like York, Etobicoke and Scarborough; approximately 20 per cent of the rural nonfarm population in Manitoba lived in areas like Fort Garry and St. Vital; approximately 70 per cent of the rural nonfarm population of British Columbia lived in areas like West and North Vancouver, the University Endowment Area, Burnaby and Esquimalt.

II – GENERAL VIEW OF POPULATION GROWTH AND DISTRIBUTION

Population growth in Canada has been rapid during the past several decades and has been accompanied by major movements of population within the country. Redistribution has occurred between farm and nonfarm areas and between rural and urban areas, and it has occurred geographically among the provinces.

Since the beginning of the twentieth century Canadian population growth has been consistently more rapid than growth in the United States. The percentage increments in census decades are compared in Table 1. Although the rate of net immigration[1] differed in the two countries, more significant differences existed in the rate of natural increase.[2] In both countries there was an acceleration in growth during the 1940's and 1950's after a low level during the 1930's, but it was greater in Canada than in the United States and, as a result, the gap between the percentage rates of growth widened.

Table 1

Percentage Increase in the Population
in Canada and the United States by Census Decades

Canada		United States	
1901–11	34	1900–10	21
1911–21	22	1910–20	15
1921–31	18	1920–30	16
1931–41	11	1930–40	7
1941–51	19	1940–50	14
1951–61	30(1)	1950–60	18
1901–61	239(1)	1900–60	136

(1) Includes Newfoundland in the 1951–61 change.

Source: Data for Canada are based on Table A1. Data for United States are from *Population Redistribution and Economic Growth, United States, 1870–1950*, Vol. III, by Hope T. Eldridge and Dorothy Thomas, Philadelphia, The American Philosophical Society, 1964, p. 11, and *Statistical Abstract of the United States, 1965*, (86th edition), U.S. Bureau of the Census, Washington D.C., 1965, p. 13.

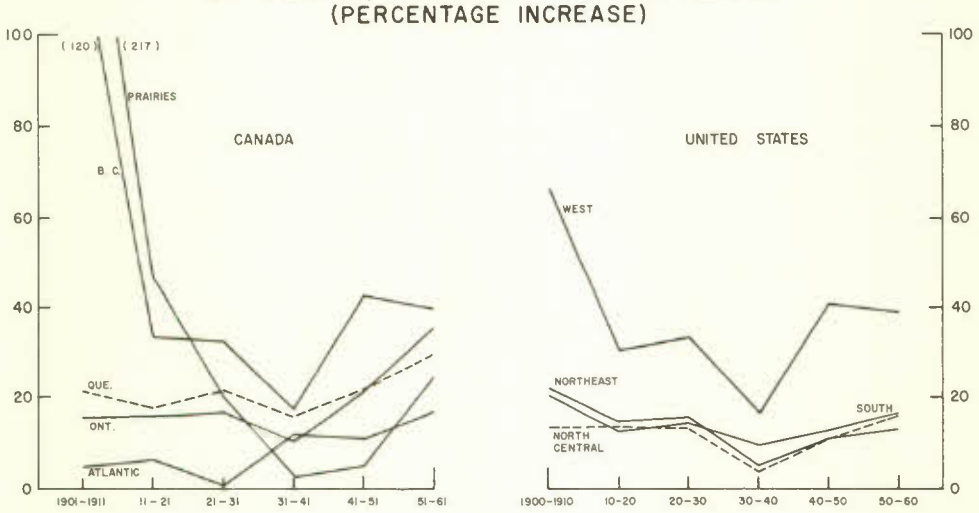
[1] Throughout this paper immigration and emigration refer specifically to international migratory flows – that is, to migratory flows into and out of the country. In contrast, in-migration refers to the movement of people into a province, or a region, and includes immigration and in-movements from other provinces. Similarly, out-migration refers to movements out of a province, including emigration as well as movements to other provinces.

[2] The rate of natural increase is the excess of births over deaths per decade per 1,000 of the population. The population base is the average of the resident population at the beginning and the end of the decade.

There were, of course, different regional rates of population growth within each country. The regional patterns are compared in the chart.[1] Generally, the levels of growth in Canada have been higher than in the United States even though, in the Atlantic Region for the first three decades and in the Prairies during the 1930's and 1940's, growth was lower than in any region in North America. The highest level of growth in the United States was in the West where the pattern of change over time was similar to the pattern for British Columbia although the level was slightly lower in the West. Underlying the regional patterns of growth in Canada shown in the chart, there were notable differences in the patterns for individual provinces in the Atlantic Region[2] and in the Prairies. Growth in the former provinces was low throughout the sixty-year period, but the levels were relatively high in Nova Scotia and New Brunswick during the 1931–41 decade. Within the Prairie Region there were diverse provincial patterns of growth. During the first decade of the century, growth in Saskatchewan was higher than in any other province, but it fell continuously until 1951 and there were absolute declines in the population during the 1930's and 1940's. By the 1920's, growth in Alberta exceeded growth in all the other provinces except British Columbia; it fell below growth in British Columbia, Quebec and Ontario during the 1930's and 1940's, but during the 1950's it exceeded growth in British Columbia by two percentage points. During the same decade, growth in Saskatchewan exceeded growth in only one province – Prince Edward Island.

CHART I

POPULATION INCREASE IN CANADA AND THE UNITED STATES, BY REGION, BETWEEN CENSUS YEARS
(PERCENTAGE INCREASE)



Note: Atlantic includes Newfoundland for 1951-61 only.

Source: See the source for Table 1.

[1] The validity of comparisons of regional growth in the two countries depends upon the comparability of the regional units.

[2] The pattern of population growth over time in the Atlantic Region is affected by the inclusion of Newfoundland for 1951-61.

Table 2

Distribution of the Canadian Population, by Province, at Census Dates, 1901 to 1961
(Percentage share)[1]

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	100	100	100	100	100	100	100	100
Newfoundland	–	–	–	–	–	2	2	2
Prince Edward Island	2	1	1	1	1	1	1	1
Nova Scotia	9	7	6	5	5	4	4	4
New Brunswick	6	5	4	4	4	4	3	3
Atlantic	17	13	11	10	10	12	11	10
Quebec	31	28	27	28	29	29	29	29
Ontario	41	35	33	33	33	33	34	34
Manitoba	5	6	7	7	6	5	5	5
Saskatchewan	2	7	9	9	8	6	5	5
Alberta	1	5	7	7	7	7	7	7
Prairies	8	18	22	23	21	18	18	17
British Columbia	3	5	6	7	7	8	9	9
Yukon and Northwest Territories	1	*	*	*	*	*	*	*

[1] Columns may not add to the totals shown because of rounding.

*Less than one per cent.

Source: Table A1.

Despite the substantial differences in regional and provincial rates of population growth, the Canadian population has remained unevenly distributed and the provincial shares have not changed swiftly or substantially, at least since 1911. Table 2 shows the distribution at eight census dates. Throughout the period since 1911, Ontario and Quebec, together, have contained over 60 per cent of the population, the Prairie Region approximately 20 per cent, the Atlantic Region 10 per cent and British Columbia has contained less than 10 per cent of the population. However, even a small change in the provincial shares implies a substantial shift of the population geographically. Quebec, Ontario, Alberta and British Columbia had relatively high rates of population growth and their share of the population increased. Nova Scotia, New Brunswick, Manitoba and Saskatchewan had low rates of population growth and their share of the population decreased.

Underlying the patterns of growth and provincial redistribution, there have been significant changes in the rural-urban and farm-nonfarm structure of the population. Table 3 shows that between 1901 and 1961 the urban share of the population in Canada rose from 35 per cent to 58 per cent. In every province except British Columbia, the share increased significantly over the sixty-year period. In some provinces and regions, the change was very dramatic. For example, the urban share of the population in Quebec doubled (from 36 to 72 per cent), and in the Prairie Region it almost tripled (from 19 to 55 per cent). Conversely, the rural share of the population declined during the period. The rural population includes residents of nonfarm areas. Table 4 shows that one third of the rural population in Canada in 1921 was classified as nonfarm and that this

proportion increased to 70 per cent in 1961. From 1921 to 1961 in every province there was an increasing portion of the rural population living in nonfarm areas.

Table 3

Urban[1] Share of the Population in Each Province, at Census Dates, 1901 to 1961
(Percentage share)

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	35	42	45	50	51	54	55	58
Newfoundland	–	–	–	–	–	27	32	36
Prince Edward Island	14	16	19	19	22	25	30	32
Nova Scotia	28	37	42	43	45	46	45	47
New Brunswick	23	27	31	31	31	32	35	38
Atlantic	24	31	36	36	38	36	38	41
Quebec	36	44	51	59	60	64	67	72
Ontario	40	50	56	59	60	58	56	57
Manitoba	25	39	39	42	41	46	50	56
Saskatchewan	6	16	17	20	21	30	36	43
Alberta	16	29	30	31	31	46	54	62
Prairies	19	28	28	30	31	41	47	55
British Columbia	46	51	46	55	53	51	49	47
Yukon and Northwest Territories	19	20	–	–	6	10	8	23

[1] Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Source: Tables A1 and A2.

Table 4

Nonfarm Share of the Rural Population in Each Province, at Census Dates, 1921 to 1961
(Percentage share)

	1921	1931	1941	1951	1956	1961
Canada	32	37	44	56	63	70
Newfoundland	–	–	–	94	96	94
Prince Edward Island	15	22	31	37	38	47
Nova Scotia	27	39	54	68	74	79
New Brunswick	28	36	48	58	65	73
Atlantic	26	36	49	69	75	79
Quebec	32	35	38	47	51	56
Ontario	34	43	54	64	72	80
Manitoba	30	37	42	49	52	57
Saskatchewan	24	23	27	31	36	42
Alberta	23	26	30	33	36	43
Prairies	25	27	32	37	41	46
British Columbia	65	67	74	81	85	89

Source: Tables A3 and A5.

The substantial population shift from farm to nonfarm areas during the 1921–61 period is shown in Table 5. By 1961, 87 per cent of the Canadian population was classified as nonfarm. This shift was general throughout the country, but it was most pronounced in the Atlantic and Prairie Provinces and less pronounced in Quebec, Ontario and British Columbia where, even by 1921, a relatively large portion of the population was classified as nonfarm. In 1961, however, Prince Edward Island and Saskatchewan still had significant portions of the population living in farm areas.

Table 5

Total Nonfarm Share of the Population in Each Province, at Census Dates, 1921 to 1961

(Percentage share)

	1921	1931	1941	1951	1956	1961
Canada	63	68	72	80	83	87
Newfoundland	–	–	–	96	98	96
Prince Edward Island	31	37	46	52	57	64
Nova Scotia	58	65	75	82	86	89
New Brunswick	50	56	64	72	77	83
Atlantic	52	59	68	80	84	87
Quebec	67	73	75	81	84	88
Ontario	71	77	81	85	88	91
Manitoba	58	63	66	72	76	81
Saskatchewan	37	39	42	52	59	67
Alberta	46	49	52	64	71	78
Prairies	46	49	53	63	69	76
British Columbia	81	85	87	91	93	94

Source: Tables A1 and A6.

These structural changes in the Canadian population reflect the fact that the urban population has grown much faster than the total population, that the rural population has grown much more slowly than the urban and nonfarm population, and that the farm population has actually declined. Rates of urban growth in Canada and in the United States since the beginning of the twentieth century are shown in Table 6. They have exceeded the rates of total population growth in both countries.[1] At the same time, not only has total population grown faster in Canada than in the United States, but urban growth has been consistently much faster in Canada.

[1] Compare these figures with the corresponding figures in Table 1.

Table 6

Percentage Increase in the Urban Population
in Canada and the United States, by Census Decades

Canada		United States	
1901–11	61	1900–10	39
1911–21	32	1910–20	29
1921–31	30	1920–30	27
1931–41	13	1930–40	8
1941–51	27	1940–50	20
1951–61	42(1)	1950–60	30
1901–61	469(1)	1900–60	315

(1) Includes Newfoundland in the 1951–61 change.

Note: Although there are differences in the definition of urban population, the broad inference from this comparison seems to be valid.

Source: Data for Canada are based on Table A2. Data for the United States are from *Population Redistribution and Economic Growth, United States, 1870–1950*, Vol. III, *op. cit.*, p. 218, and *Statistical Abstract of the United States, 1965, op. cit.*, p. 16.

Percentage increments in urban and rural population in each province during each census decade from 1901 to 1961 are shown in Table 7. Urban growth has been much more rapid than rural growth in every province and in every decade, with the exceptions of Ontario after 1941 and British Columbia after 1931. The rural population, at least after 1921, grew as a result of rapid growth in the population of rural nonfarm areas.[1] Table 8 shows that during the period from 1921 to 1961, growth in the rural nonfarm population was particularly rapid in Ontario in each of the four decades and in British Columbia in the last two decades. The lowest rates of growth have been in the Prairie Provinces. In contrast, the rural farm population – that is, the farm component of the rural population – declined absolutely during the period from 1921 to 1961, almost without exception. At the same time, the *total nonfarm* population grew rapidly as a result of the combined effect of rapid growth in the urban population and very rapid growth in the rural nonfarm population.

There have been significant provincial differences in the rates of growth of urban, rural, nonfarm and farm population. Urban and nonfarm growth – rapid throughout the country – was particularly rapid in Saskatchewan and in Alberta during the 1951-61 decade and was consistently rapid over the whole period in Quebec, Ontario and British Columbia. In contrast, rural growth was very low and there were absolute declines in the rural population in the Atlantic Provinces before 1931, and in the Prairie Provinces after 1931. The decline in the farm population, which was general throughout the country, was particularly rapid in Saskatchewan and in the Atlantic Provinces, but it has also been rapid in Ontario.

[1] In some provinces growth in the rural nonfarm population primarily involved growth in suburban or urbanized areas, but in other provinces it included significant growth in the areas of resource development. See the Note on page 5 for a description of the rural nonfarm population.

Table 7

Percentage Increase in the Urban and Rural Population in Each Province, by Census Decades, 1901 to 1961

	1901–11		1911–21		1921–31		1931–41		1941–51		1951–61[1]	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Canada	61	20	32	15	30	8	13	8	27	10	42	17
Newfoundland	—	—	—	—	—	—	—	—	—	—	68	11
Prince Edward Island	*	- 11	11	- 9	3	- 2	22	4	18	- *	37	- 4
Nova Scotia	42	- 6	22	- 2	2	- 5	18	9	13	10	16	14
New Brunswick	23	1	28	4	6	5	12	12	17	11	37	6
Atlantic	32	- 4	23	- 1	3	- *	16	10	13	9	32	9
Quebec	50	6	35	4	40	3	18	13	31	8	45	2
Ontario	42	- 2	30	2	24	9	13	7	18	26	33	40
Manitoba	185	46	32	32	23	9	2	6	20	- 3	45	- 4
Saskatchewan	1,322	382	60	52	47	17	2	- 4	32	-18	58	- 9
Alberta	828	332	61	56	29	22	10	8	72	- 7	93	- 1
Prairies	357	183	47	48	30	16	4	2	40	-10	68	- 5
British Columbia	141	101	21	47	59	9	12	25	38	48	28	52
Yukon and Northwest Territories	- 67	- 69	—	2	—	10	—	17	149	42	238	28

(1) Includes Newfoundland in the 1951–61 change for Canada and the Atlantic.

* Less than one per cent.

Source: Tables A2 and A3.

Table 8

Percentage Increase in the Rural Nonfarm, Total Nonfarm and Farm Population in Each Province, by Census Decades, 1921 to 1961

	1921–31			1931–41			1941–51			1951–61[1]		
	Rural Nonfarm	Total Nonfarm	Farm	Rural Nonfarm	Total Nonfarm	Farm	Rural Nonfarm	Total Nonfarm	Farm	Rural Nonfarm	Total Nonfarm	Farm
Canada	25	29	1	30	18	- 4	37	30	-11	45	43	-19
Newfoundland..	—	—	—	—	—	—	—	—	—	11	27	13
Prince Edward Island	40	18	- 9	50	35	- 8	17	18	- 8	23	30	-20
Nova Scotia ...	35	11	-20	54	30	-19	36	22	-22	33	23	-26
New Brunswick	37	17	- 7	51	29	- 9	34	26	-11	33	35	-32
Atlantic	36	14	-13	52	30	-13	34	23	-15	25	28	-26
Quebec	11	33	- 1	22	19	8	36	32	- 9	20	40	-15
Ontario	39	27	- 7	32	17	-12	51	27	- 4	74	46	-21
Manitoba	33	26	- 1	21	8	- 3	12	17	-14	13	33	-20
Saskatchewan..	12	28	18	12	7	- 9	-4	14	-23	21	43	-23
Alberta	37	32	18	26	16	2	5	45	-12	28	74	-15
Prairies	25	28	14	19	10	- 4	4	25	-17	20	51	-19
British Columbia....	12	39	4	37	21	*	62	48	7	68	46	-15

[1] Includes Newfoundland in the 1951–61 change for Canada and the Atlantic.

* Less than one per cent.

Source: Tables A4, A5 and A6.

Table 9 shows the provincial distribution of farm and total nonfarm population at six census dates from 1921 to 1961. Throughout the period, Ontario and Quebec, together, contained about half of the *farm* population in Canada, the Prairie Region about one third, the Atlantic Region about 10 per cent and British Columbia 4 per cent. However, there were some notable changes. The shares for Alberta and Quebec increased because the rate of decline in farm population was less rapid than elsewhere. The shares for the Atlantic Provinces, Saskatchewan and, in recent years, Ontario decreased because the decline in farm population was more rapid than elsewhere. Approximately 65 per cent of the *total nonfarm* population in Canada was in Quebec and Ontario during the forty-year period. Another 15 per cent was in the Prairies, and the Atlantic Region and British Columbia each contained about 10 per cent. Alberta and British Columbia both had increasing shares because they had the most rapid growth in total nonfarm population. The shares for the Atlantic Region, Quebec, Manitoba and Saskatchewan declined because growth in the population was lower. The share for Ontario varied and, here, growth in total nonfarm population was moderately rapid.

Provincial differences in population growth, changes in the provincial distribution, and changes in the rural-urban and farm-nonfarm structure of the population can be explained, to a significant degree, by the patterns of migration within Canada. Small, but significant, changes in provincial distribution reflect, in part, different rates of net migration and imply internal migratory flows between provinces, as well as preferences of international migrants for particular provinces. Similarly, changes in the distribution between rural and urban and between farm and nonfarm areas reflect, in part, different rates of net migration in these areas, including both internal and international migration. The statistics presented in this paper do not reveal the origin and destination of migrants. However, it will be shown that some of the basic patterns of intraprovincial and interprovincial migration are clear.

Although Canada has had one of the highest rates of net immigration of any country in the World in the twentieth century, internal net migration has been far greater than international net migration during the forty-year period from 1921 to 1960.[1] Table 10 shows that net immigration was 1.4 million while the net movement out of farm areas was 3.2 million people and the net movement into nonfarm areas was 4.6 million; over 60 per cent of the latter movement was into incorporated centres of 1,000 and over – that is, into urban areas. In other words, for the full forty-year period, internal net migration was more than twice as large as the net movement into Canada. However, it is worth noting that the magnitude of net internal, relative to net international, migration varied substantially between decades.

Source: Tables A13, A17 and A22 to A24 inclusive.

1 In Canada, since 1911, the census enumeration has been made on, or near, June 1. In this paper, intervals which begin and end on June 1 of census years are usually referred to as intercensal intervals and are documented as, for example, the 1951-61 decade. However, the net migration estimates are based on annual, calendar-year vital statistics and on estimated population at the beginning of each census year. The relevant interval is, for example, from January 1, 1951 to December 31, 1960. In this paper it is usually referred to as a "calendar-year intercensal interval" and it is documented as, for example, the 1951-1960 decade.

TABLE 9

Distribution of the Farm and Total Nonfarm Population in Canada, by Province, at Census Dates, 1921 to 1961
(Percentage share)[1]

	Farm						Nonfarm					
	1921	1931	1941	1951	1956	1961	1921	1931	1941	1951	1956	1961
Canada	100	100	100	100	100	100	100	100	100	100	100	100
Newfoundland	—	—	—	1	*	1	—	—	—	3	3	3
Prince Edward Island	2	2	2	2	2	2	*	*	*	*	*	*
Nova Scotia	7	5	4	4	4	4	5	5	5	5	4	4
New Brunswick	6	5	5	5	5	4	4	3	4	3	3	3
Atlantic	14	12	11	11	10	10	9	8	9	12	11	10
Quebec	24	24	27	27	28	28	29	30	30	29	29	29
Ontario	26	24	22	24	25	23	38	37	37	35	35	36
Manitoba	8	8	8	8	8	8	6	6	6	5	5	5
Saskatchewan	15	17	16	14	13	13	5	5	5	4	4	4
Alberta	10	11	12	12	12	13	5	5	5	5	6	6
Prairies	32	36	36	34	33	34	16	16	15	14	15	15
British Columbia	3	3	3	4	4	4	8	8	9	9	10	10

(1) Columns may not add to the totals because of rounding.

* Less than one per cent.

Source: Tables A4 and A6.

Internal net migration was less than twice as large during the 1920's and the 1950's, but it was more than six times larger than international net migration during the 1930's and the 1940's. Furthermore, over three quarters of the net immigration during the forty-year period occurred in the 1951-60 decade and two thirds of the internal net movement occurred during the two decades after 1941. Thus the amount of internal net migration was large even when the amount of international net migration was small.

TABLE 10

Estimated International Net Migration and Internal Farm and Nonfarm Net Migration for Canada,[1] Calendar-Year Intercensal Intervals, 1921 to 1960
(Thousands of people)[2]

	1921-30	1931-40	1941-50	1951-60[3]	1921-60[3]
International[4]	286	- 73	104	1,083	1,400
Internal[5]					
Farm-Nonfarm					
Farm	-472	-592	-925	-1,171	-3,160
Nonfarm	758	519	1,029	2,254	4,560
Urban	621	215	578	1,467	2,882
Rural Nonfarm	137	304	450	787	1,678

(1) Excludes Yukon and Northwest Territories.
(2) Columns may not add to totals shown because of rounding.
(3) Includes Newfoundland in 1951-60.
(4) This is net immigration if it is positive and net emigration if it is negative.
(5) This is net in-migration (including international migration) if it is positive, and it is net out-migration (including international migration) if it is negative.

The *rates* of net migration are shown in Table 11. Internal net migration has been rapid compared with international net migration. During the four decades from 1921 to 1960 net movements into urban and nonfarm areas have been consistently rapid, even with a significant decline in the 1931-40 decade, and the rate has increased since 1941. Net migration out of rural and farm areas has also been consistently rapid and the rate of net migration out of farm areas has increased very substantially.

The analysis of rates of change, throughout the paper, is in terms of decennial data – that is, in terms of average rates of change per decade. Only for the 1950's are comparable migration data available for shorter periods, and then they are available only for the two five-year intervals.[1] Table 12 shows that net immigration to Canada was more rapid in the first half of the 1950's than in the second half.

[1] There are estimates of net migration for each five-year period from 1921 to 1960 for Manitoba, Saskatchewan and Alberta in the files of this study.

Net migration into rural nonfarm and total nonfarm areas was most rapid in the first half of the decade and net migration out of rural and farm and into urban areas was most rapid in the second half of the decade.[1]

TABLE 11

Rate of International and Internal Net Migration for Canada,(1) Calendar-Year Intercensal Intervals, 1921 to 1960
(Number of migrants per decade per 1,000 population)(2)

	1921–30	1931–40	1941–50	1951–60(3)
International	30	- 7	8	68
Internal				
Urban	137	39	88	163
Rural	- 68	- 53	- 81	- 55
Rural Nonfarm	80	139	154	178
Rural Farm	-145	-185	-312	-462
Total Nonfarm	122	68	108	168

(1) Excludes Yukon and Northwest Territories.
(2) This is a decennial crude rate. The population base is the average of the population at the beginning and the end of the interval
(3) Includes Newfoundland in 1951–60.

Source: Tables 10, A7 to A9 inclusive and A21 to A24 inclusive.

TABLE 12

Rate of International and Internal Net Migration for Canada, Five-Year Intercensal Intervals, 1951 to 1960
(Number per quinquennium per 1,000 population)(1)

	1951–55	1956–60
International	39	29
Internal		
Rural	1	- 53
Farm	-177	-279
Nonfarm	88	82
Urban	71	92
Rural Nonfarm	121	61

(1) This is a quinquennial crude rate. The population base is the average of the population at the beginning and the end of the five-year interval.

Source: Tables A7 to A9 inclusive, A13, A17 and A21 to A24 inclusive.

Significant differences also exist between the first and second halves of the 1950's in the provincial patterns of population change and migration. These are

[1] For a set of statistics describing internal migration in Canada during the five-year period from 1956 to 1961, see "Population Sample: General Characteristics of Migrant and Non-Migrant Population", *Census of Canada, 1961*, Vol. IV, Bulletin 4.1-9.

shown in Table 13. Population growth was more rapid in 1951-55 than in 1956-60 for all provinces except Prince Edward Island and New Brunswick. Moreover, in the provinces with net in-migration the rates were generally highest in the first half of the 1950's, while in the provinces with net out-migration the rates were generally highest in the second half of the decade.

TABLE 13

Rate of Intercensal Change and Net Migration for the Population in Each Province, Five-Year Intercensal Intervals, 1951 to 1960
(Number per quinquennium per 1,000 population)[1]

	Intercensal Change		Net Migration	
	1951–55	1956–60	1951–55	1956–60
Canada	136	127	39	29
Newfoundland	142	98	9	–38
Prince Edward Island	23	47	– 68	–38
Nova Scotia	74	60	– 20	–31
New Brunswick	70	74	– 42	–30
Atlantic	85	73	– 23	–33
Quebec	131	128	21	22
Ontario	162	145	77	56
Manitoba	90	79	*	– 6
Saskatchewan	55	46	– 44	–50
Alberta	178	169	62	51
Prairies	112	106	10	4
British Columbia	175	162	100	79

[1] This ia a quinquennial crude rate. The population base is the average of the population at the beginning and the end of the five-year interval.

* The rate is negligible.

Source: Tables A7 and A13.

The quinquennial rates of urban and rural intercensal change and net migration for the 1950's are shown in Table 14. In four of the ten provinces (Nova Scotia, Quebec, Ontario and Manitoba) urban growth was more rapid in 1956-60 than in the first half of the decade and, in the last three of the four provinces, it was supported by higher rates of net in-migration in the 1956-60 interval. In Nova Scotia the higher rate of urban population growth was associated with a rate of net out-migration which was lower than in 1951-55. In the other provinces both urban growth and net in-migration was most rapid in the 1951-55 interval. The patterns of change were more mixed among the provinces for the rural population. In general, however, among the provinces with increasing rural population during the 1950's, the increases were larger in 1951-55 than in 1956-60. There were also more instances of declining rural population in the latter half of the decade as the rates of rural net out-migration generally rose in this period.

TABLE 14

Rate of Intercensal Change and Net Migration for the Urban and Rural Population in Each Province, Five-Year Intercensal Intervals, 1951 to 1960

(Number per quinquennium per 1,000 population) (1)

	Urban				Rural			
	Intercensal Change		Net Migration		Intercensal Change		Net Migration	
	1951–55	1956–60	1951–55	1956–60	1951–55	1956–60	1951–55	1956–60
Canada	162	185	71	92	106	51	1	- 53
Newfoundland	303	219	171	92	74	36	- 58	-105
Prince Edward Island	186	139	94	56	- 38	5	-129	- 80
Nova Scotia	56	87	- 45	- 5	88	37	2	- 54
New Brunswick	165	146	65	51	21	33	- 96	- 77
Atlantic	138	134	32	34	54	33	- 55	- 76
Quebec	178	194	77	92	38	- 24	- 87	-141
Ontario	114	171	36	92	226	111	131	8
Manitoba	166	201	92	123	19	- 60	- 85	-155
Saskatchewan	239	209	142	106	- 36	- 62	-137	-153
Alberta	350	298	229	171	3	- 14	-108	-119
Prairies	263	248	163	141	- 8	- 45	-113	-142
British Columbia	134	115	68	43	217	205	132	111

(1) This is a quinquennial crude rate. The population base is the average of the population at the beginning and the end of the five-year interval.

Source: Tables A8, A9, A17 and A21.

III - NATURAL INCREASE AND NET MIGRATION

Provincial differences in population growth and changes in the provincial shares of population could arise solely from provincial differences in the rate of natural increase. Similarly, changes in the rural-urban structure of population can result from different rates of natural increase in rural and urban areas. Net migration reinforces, offsets, or reverses the patterns of population growth and redistribution that are determined by natural increase.[1]

In Canada, during the period from 1921 to 1960, the natural increase in population was reinforced by net immigration in every decade except 1931-40 and the rate of natural increase was much higher than the rate of international net migration. However, there have been marked differences among the provinces with respect to the extent to which population growth over this period has been reinforced or retarded by migration. Moreover, different rates of net migration have been much more important than different rates of natural increase for determining the provincial differences in population growth. Decennial rates of natural increase and net migration of the total population,[2] for the four decades, are shown in Table 15. In the previous section it was shown that, during the period from 1921 to 1960, three provinces consistently had a high rate of total population growth (British Columbia, Ontario and Quebec) and one province (Alberta) had a high rate of growth during the 1920's and during the 1950's. Table 15 shows that the lowest rates of natural increase were in Ontario and British Columbia, but these provinces had the highest rates of net in-migration. The relatively high rate of total population growth in Quebec was attributable, mainly, to the high rate of natural increase. In Alberta during the first and last decade both natural increase and net in-migration were rapid, but during the 1930's and 1940's a high rate of natural increase was offset by net out-migration. The low rates of population growth in the Atlantic Provinces and Saskatchewan were a result of high rates of net out-migration. In Manitoba the low rate was a result of both a low rate of natural increase and a high rate of net out-migration. Thus Quebec had an increasing share of the Canadian population primarily because of a high rate of natural increase. The share for Ontario and British Columbia increased because of net in-migration; in Alberta it increased because of both natural increase and net in-migration. The share for Saskatchewan, Nova Scotia and New Brunswick decreased because of net out-migration; it decreased for Manitoba because of net out-migration and a low rate of natural growth.

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[1] Natural increase of a population is the excess of births to the resident population over deaths of the resident population; it will also be referred to as natural growth of the population.

[2] References to the "total population" in Canada, and in each province, are made in order to distinguish the combined rural and urban population and the rural and the urban population taken separately.

TABLE 15

Rate of Natural Increase and Net Migration for the Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960
(Number of people per decade per 1,000 population) (1)

	1921–30		1931–40		1941–50		1951–60	
	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration
Canada	140	30	112	- 7	157	8	194	68
Newfoundland	—	—	—	—	—	—	271	- 32
Prince Edward Island	92	-103	106	- 29	164	-142	175	-105
Nova Scotia	99	-113	104	8	171	- 61	185	- 52
New Brunswick	141	- 86	136	- 25	205	- 83	215	- 71
Atlantic	115	-101	117	- 9	184	- 76	214	- 56
Quebec	178	21	148	- 1	198	- 5	215	43
Ontario	109	52	78	22	121	65	175	131
Manitoba	153	- 11	109	- 62	145	- 87	176	- 7
Saskatchewan	185	19	146	-164	158	-234	196	- 95
Alberta	160	61	140	- 46	174	- 18	232	112
Prairies	168	22	133	- 96	160	-114	204	13
British Columbia	82	199	54	114	118	229	159	176

(1) This is a decennial crude rate. The population base is the average of the population at the beginning and the end of the interval.

Source: Tables A7, A12 and A13.

Migration within Canada was not only an important determinant of provincial differences in total population growth. It was also a very important contributing factor to the major changes which occurred in the rural-urban structure of the population. Decennial rates of natural increase and net migration for the urban and the rural population are shown in Tables 16 and 17. The rural rate of natural increase exceeded the urban rate of natural increase, with very few exceptions.[1] Not only were birth rates greater in rural than in urban areas, but death rates were also lower in rural than in urban areas. Because natural growth of the rural population exceeded natural growth of the urban population, the rural-urban structure should have been changing in favour of rural. Yet, urban growth has, in fact, been much more rapid than rural growth throughout the country. This has been, primarily, the result of very rapid migratory movements out of rural areas and into urban areas. In other words, urban net in-migration has, generally, greatly reinforced the natural growth of the urban population. Net migration out of urban areas has been infrequent, occurring only in the Atlantic Provinces in the 1920's and 1940's, in the Prairie Provinces in the 1930's and in Nova Scotia in the 1950's. At the same time, rural net out-migration has, generally, offset the natural growth of the rural population. Net migration into rural areas has been infrequent during this forty-year period, occurring only in Alberta in the 1920's, in Ontario in the 1940's and 1950's, and in British Columbia in each of the four decades from 1921 to 1960.

Furthermore, provincial differences in the rate of net migration into urban areas and in the rate of net migration out of rural areas were important determinants of the provincial differences in urban and in rural population growth. Previously, it was shown that urban growth was consistently rapid in Quebec, Ontario and British Columbia during the period from 1921 to 1960 and it was rapid in Saskatchewan and Alberta during the 1920's and 1950's. Table 16 shows that the rates of natural increase were relatively low, but the rates of net migration into urban areas in Ontario and British Columbia were relatively high. In Quebec in each decade and in Saskatchewan and Alberta in the 1920's and 1950's both natural increase and net in-migration were relatively rapid. The urban population grew more slowly in the Atlantic Provinces as a result of net migration out of, or low rates of net migration into, urban areas and low rates of natural increase in the urban population.

Quebec had a low rate of rural population growth in each of the four decades from 1921 to 1960. Table 16 shows that the rate of natural increase in the rural population was higher in Quebec than in any of the other provinces, but there was a high rate of net migration out of rural areas. After 1931, Saskatchewan had the highest rate of net migration out of rural areas and the highest rate of decline in rural population. In Ontario in the 1940's and 1950's, and in British Columbia in each of the four decades, low rates of natural increase in the rural population were reinforced by net migration into rural areas.

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[1] The urban rate of natural increase exceeded the rural rate in Nova Scotia in each of the four decades, in British Columbia in the 1920's, in Prince Edward Island in the 1940's and in Saskatchewan and Alberta in the 1950's.

Table 16

Rate of Natural Increase and Net Migration for the Urban Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960

(Number of people per decade per 1,000 population) [1]

	1921–30		1931–40		1941–50		1951–60	
	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration
Canada	126	137	89	39	143	88	181	163
Newfoundland	–	–	–	–	–	–	260	253
Prince Edward Island	21	5	71	128	171	-20	175	148
Nova Scotia	110	-86	109	45	189	-62	192	-49
New Brunswick	121	-62	99	8	181	-19	195	114
Atlantic	109	-74	104	37	186	-45	205	65
Quebec	156	180	115	52	170	96	201	169
Ontario	105	111	68	52	117	45	153	130
Manitoba	130	82	65	-42	110	67	150	215
Saskatchewan	154	232	124	-94	157	115	200	242
Alberta	155	100	121	-15	169	350	246	386
Prairies	144	125	99	-47	144	187	205	298
British Columbia	94	364	48	70	107	206	139	109

[1] This is a decennial crude rate. The population base is the average of the urban population at the beginning and the end of the interval.

Source: Tables A8, A16 and A17.

Table 17

Rate of Natural Increase and Net Migration for the Rural Population in Each Province, Calendar-Year Intercensal Intervals, 1921 to 1960
(Number of people per decade per 1,000 population) [1]

	1921–30		1931–40		1941–50		1951–60	
	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration
Canada	153	- 68	136	- 53	173	- 81	212	- 55
Newfoundland	—	—	—	—	—	—	277	-166
Prince Edward Island	108	-129	115	- 71	162	-179	175	-208
Nova Scotia	90	-132	100	- 23	155	- 60	180	- 54
New Brunswick	151	- 96	152	- 40	217	-112	226	-172
Atlantic	118	-116	125	- 36	183	- 96	220	-133
Quebec	206	-173	198	- 76	245	-170	246	-232
Ontario	114	- 27	91	- 21	127	94	204	131
Manitoba	169	- 75	140	- 76	173	-207	203	-244
Saskatchewan	192	- 31	152	-183	159	-354	193	-291
Alberta	163	43	149	- 60	177	-255	216	-228
Prairies	177	- 20	148	-117	169	-282	204	-256
British Columbia	69	23	61	166	129	253	178	239

[1] This is a decennial crude rate. The population base is the average of the rural population at the beginning and the end of the interval.
Source: Tables A9, A20 and A21.

In every province there has been intraprovincial migration between rural and urban areas, but there has also been interprovincial migration between rural areas in one province and urban areas in another as well as between urban areas in different provinces. Unfortunately, the statistics that have been presented do not show the origin and destination of migrants. They show only the net effect of migratory movements – that is, the intra-provincial and interprovincial migration that has occurred on balance. Nevertheless, the broad patterns of migration are clear. There has been rapid migration out of rural areas in the Prairie Provinces, Quebec and the Atlantic Provinces; there has been rapid migration into urban areas in the Prairie Provinces and Quebec, and a low rate of migration into urban areas in the Atlantic Provinces (except in Newfoundland in the 1950's). Intraprovincial migration has been most pronounced in the Prairie Provinces and Quebec, but in the Prairie Provinces both intraprovincial and interprovincial migration were important, while in Quebec the rate of net migration out of, or into, the province was low. Intraprovincial migration was less obvious in Ontario and British Columbia where, even by 1921, the urban population was relatively large. However, in Ontario, in particular, the population shift appears to have continued, even though it was overshadowed by net migratory movements into the province. In the Atlantic Provinces intraprovincial migration was also evident. Interprovincial migration involved migratory movements out of the Atlantic Provinces and Saskatchewan, where net out-migration was rapid, and into Ontario, British Columbia and, in recent decades, into Alberta, where net in-migration was rapid.

Internal migration in Canada has been at least as rapid as internal migration in the United States. Although the provincial rates should be compared with the rates for spatial units in the United States that have comparable economic structures, preliminary comparisons reveal that for three of the four major regions in the United States[1] the rates of net migration for each decade from 1870 to 1950 were less than the provincial rates in Canada for each decade from 1921 to 1960; the rates for the United States region of the West were above the rates for British Columbia. The rates for individual states were often similar but inclined to be lower than the Canadian rates. Some individual states in the South had higher rates of out-migration than the Atlantic provinces. There are very few cases during the period from 1870 to 1950 when any of the states in the West and North Central regions had rates of out-migration as high as the rates in Saskatchewan for the three decades from 1931 to 1960. The rates of migration of Canadian natives were also inclined to be higher than the rates for American natives.

[1] The regions are Northeast, South, North Central and West. The United States data are from *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol. III, *op. cit.*

IV – INTERNAL MIGRATION AND ECONOMIC GROWTH

The relationship between population growth and changes in economic activity is not a new subject nor is it devoid of controversy and documentation. The classical economists observed a close relationship between the two phenomena. Malthus in particular emphasized that population adjustments were related to changes in economic activity. He suggested that population growth would increase when there was growth in output per person while declines in output per person would induce restraints on population growth.

The cause-effect relations between migration and economic activity have been discussed, primarily, in the context of international and interregional comparisons of social and economic conditions. For example, the traditional argument about cause is whether "push" or "pull" factors induce migratory movements. The "push" can come from political disturbances, from relatively low economic or social status, and from various other social and economic conditions within the area of out-movement. The "pull" factors primarily include opportunities for economic and social gain in the area of in-migration. From the point of view of economic analysis, these and more recent discussions have emphasized the importance, for migration, of the presence or lack of economic opportunities. Nevertheless, a precise delineation of the causes is not a simple and straightforward task. Indeed, it is difficult to isolate a single cause of migration at any point in time. One set of causes probably has relevance for only a given period of time and for only one place, and both push and pull factors probably operate with differential relative force over time. In general, changes in population and in economic activity are interdependent phenomena. The latter affect, and are affected by, the former. Generalizations about the chain of cause and effect can be confusing and misleading. It is extremely difficult to isolate, precisely, the links in the phenomena and, even if the links are known, the prime causes of economic population change still must be identified. Because it is not possible to specify the complex relationship between cause and effect of migration, an evaluation of the net gain or loss arising in a specific circumstance of migration is difficult and hazardous.

The size and composition of a country's population is an important determinant of the level and the composition of aggregate output. The supply of human resources for the productive process depends, for example, on the age and sex composition of the population and, "Labor is by far the nation's largest productive resource."[1] The level and structure of aggregate domestic demand depend on the size of the population and on its composition, for example, in terms of marital status and family size. Births, deaths and migration, which result in changes in the size and composition of the population, produce changes in the supply of human resources and in the level and structure of aggregate domestic demand. As a result, they produce changes in the level and composition of aggregate output.

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[1] Edward F. Denison, *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 13, Committee for Economic Development, New York, 1962, p. 35.

Records of population growth, births, immigration and internal migration show patterns of change which are similar to changes in the rate of growth in output.[1] Births and migration increase during periods of rapid economic growth and subside during periods of low rates of growth.[2] Changes in economic activity create changes in the demand for labour. Population changes (growth and redistribution) are, in part at least, a response to this changed demand, and natural increase and migration, in turn, create changes in the demand for commodities. Furthermore, population growth, which results from natural increase and immigration, and population redistribution, which results from differential fertility and mortality rates and from internal migration, essentially involve adjustments to long-term changes in economic activity, and changes in the rates of birth and migration tend to have long-term implications. An increase in the birth rate increases productive capacity through additions to the labour supply only after a minimum of some 15 years. The physical movement of migrants is, of course, a short-term phenomenon. As an adjustment to changes in economic activity, migratory movements can involve shorter term adjustments when, for example, opportunities for employment at home are simply nonexistent or when incentives to move elsewhere are intensified by irregular occurrences. Nevertheless, the main underlying current of adjustment is likely to be relatively long term. Thus population changes, of which migration may be the most important, occur in response to persistent changes in the level of economic activity and in the distribution of economic opportunities; they provide an important adjustment mechanism for realizing the benefits that can come from changes in economic activity; and they are important for sustaining and stimulating economic change.

The most comprehensive study of internal migration and economic growth in the United States was undertaken in 1952 at the Population Studies Center of the University of Pennsylvania under the direction of Professors Simon Kuznets and Dorothy Swaine Thomas. The results of the study were published in three volumes. In the third volume Kuznets reiterated the following general observation which guided the research programme:

> Internal migration and the redistribution of population by residence among various parts of the country are a major way in which people respond to changing economic opportunities emerging in the course of economic growth. Not all internal migration is in response to economic growth; and not all the opportunities emerging in the course of growth require a shift of residence to be converted into realized economic advance. But migration induced by growth that promises greater opportunities has been sufficiently massive in the presently advanced countries to warrant the view that the relation between population redistribution and economic development is an important and indispensable link in the mechanism of modern economic growth.[3]

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[1] See, for example, Moses Abramovitz, *Employment, Growth and Price Levels*, Hearings, Joint Economic Committee, Congress of the United States, Washington, 1959, p. 412.

[2] An analysis of the interrelations between migration and economic opportunity in the United States shows that for the eight decades from 1870 to 1950, net migration "responded positively and significantly to decadal swings in economic activity, increasing in periods of prosperity and falling during depressions". See *Population Redistribution and Economic Growth in the United States, 1870-1950*, Vol. III, *op. cit.*, p. 368.

[3] *Ibid.*, p. xxiii.

Technological progress has been an important source of economic growth; a large portion of the rate of growth in real output has been attributable to it.[1] However, of more specific relevance for population changes, technological change tends to have a selective impact and, as a result, it induces shifts in the productive system. At any given time it affects the methods of production more in some sectors than in others and more in some industries than in others, even though a new technology may eventually be used in the production of several kinds of goods. For example, in recent years, there have been impressive changes in the techniques of production in several industries which originated with developments in electronics and atomic energy. Similarly, technological change affects the structure of demand, for example, by altering the identity of consumer goods or by creating new demand, and, as a result, there are induced changes in the structure of the productive system. Industries which are most favourably affected by technological change grow more rapidly than others just as industries most favourably affected by increased foreign demand grow more rapidly than other domestic industries. The relatively high growth rates raise their contribution to national output and increase their share of the country's productive resources.

Furthermore, apart from technological change, rising per capita incomes increase the demand for some goods more than for other goods and, consequently, induce structural changes in the productive system. As per capita incomes rise, consumption shifts away from commodities with low, and towards commodities with high income elasticity of demand. For example, because the response of demand for agricultural goods to rising per capita incomes is low, the importance of agriculture tends to decline relative to nonagriculture as per capita incomes rise.

The process of economic growth involves, therefore, shifts in the patterns of production in an economy.[2] One of the most pronounced and significant shifts is the decline in the relative importance of agriculture in total economic activity. Over time, agriculture declines both in terms of its contribution to national output and in terms of its utilization of the factors of production. However, significant structural shifts within the nonagricultural sector of the economy are also a concomitant of economic growth. The importance of manufacturing relative to service industries changes and, within these groups, there are changes in the relative importance of individual industries.

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[1] The literature in which this subject is discussed is extensive. One of the most comprehensive single studies on measuring sources of economic growth was done by Edward F. Denison (*op. cit.*). See Table 32, p. 266 in the Denison paper where 32 per cent of the growth rate in total real national income for the period 1929-57 is attributed to an increase in output per unit of input and 68 per cent is attributed to an increase in total inputs or an increase in the total quantity of labour (including an adjustment for quality change), land and capital used in production. In Table 33, p. 270, for the same period, 58 per cent of the growth rate in real national income per person employed is attributed to an increase in output per unit of input and 42 per cent is attributed to an increase in total inputs per person employed.

[2] A summary of the literature on this subject and a development of the ideas are to be found in the introductory comments by Simon Kuznets in *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol. III, *op. cit.*, pp. xxiii-xxxv.

All of these changes imply geographic, sectoral and industrial differences in the rates of economic growth at any point in time and, because different rates of economic activity create differences in economic opportunities, the process of economic growth is characterized by differential effects in the creation of economic opportunities. The nature of population changes and, in particular, the directions of population redistribution are, at least in part, determined by these differences in economic opportunities. Furthermore, the magnitude and relative rapidity of the structural shifts in a modern, technologically advancing economy preclude the possibility that the natural processes of birth and death can play anything but a minor role in the redistribution of population. Rather, for a large part of the industrial world, migration necessarily becomes the main way in which the population can adjust to sectoral, industrial and occupational changes in the economy – that is, to changes in the structure and location of economic activity.[1]

However, population changes are more than just one of the adjustments required in the growth process. Population redistribution helps to sustain and to stimulate economic growth and, as such, it is an important factor in the cumulative nature of the growth process. In particular, migration can affect production in several ways. In a recent study of intra-European migration C.P. Kindleberger makes some observations that are not inappropriate to internal migration:

> When conditions are right, as they seem to have been from 1959 to 1964, large-scale migration can contribute to the best of all economic worlds: rapid growth in the country of immigration, based on unlimited supplies of labour, and rapid growth in the country of origin, where the elimination of excess labour contributes to more effective resource allocation. ...In the receiving country growth is helped by holding wages down, and profits and investment up. In the country of emigration, growth is helped by raising wages and stimulating more effective resource allocation and technological change.[2]

Over and above the stimulating effects which result from the reallocation of resources, migration affects production because it is selective with respect to age, education, occupation and physical capacity, as well as with respect to other characteristics such as marital status and the stage of family formation.[3] The

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[1] *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol. I, *Methodological Considerations and Reference Tables*, by Everett S. Lee, *et. al.*, Philadelphia, The American Philosophical Society, 1957, p. 2.

[2] C.P. Kindleberger, "Emigration and Economic Growth", *Banca Nazionale Del Lavoro Quarterly Review*, No. 74, September 1965, p. 253.

[3] There are several studies in which the characteristics of migrants are described. For example, see *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol III, *op. cit.*, pp. xxxi-xxxv and Part One, Chapter VI; Rashi Fein, "Educational Patterns in Southern Migration", *The Southern Economic Journal*, Vol. 32, July 1965, pp. 106-24, reprinted by The Brookings Institution, Washington, D. C., 1965; Micha Gisser, "Schooling and the Farm Problem", *Econometrica*, Vol. 33, No. 3, July 1965, pp. 582-92; Yoshiko Kasahara, "Internal Migration and the Family Life Cycle: Canadian Experience over the 1956-1961 Period", paper presented to the United Nations World Population Conference in Belgrade, Yugoslavia, 1965, unpublished; Everett S. Lee, "Internal Migration and Population Redistribution in the United States", *op. cit.*, pp. 128ff.

selectivity of migration may have effects which increase per capita income.[1] Rates of migration tend to be high for people in their twenties and, after the age of thirty, they decrease as age increases. In fact, "internal migrants are typically young adults in the ages of greatest productivity and of greatest reproductivity",[2] Education tends to increase the propensity to migrate. The best-educated group has the highest rate of migration and college-educated people tend to dominate the long-distance migratory movements. Furthermore, professional and semi-professional workers are more mobile than people in other occupational groups.[3] Population redistribution also affects consumption expenditure. The movement of people out of agriculture and into nonagriculture increases the demand for agricultural products, for the output of service industries and for urban development and residential construction in nonfarm areas.

Differences in income levels and rates of income growth reflect the geographic and industrial differences in economic opportunities that are created in the process of economic growth. Geographic differences in income levels and rates of income growth are created, industrial differences are created within the nonagricultural sector and differences are created between the agricultural and nonagricultural sectors of the economy. In so far as migration and, more generally, population changes occur in response to differences in economic opportunities and are an adjustment factor in this response, they tend to narrow the income differences. However, population redistribution is only one of the factors which affect relative income levels. For example, the differential impact of technological change implies that income differences are created by industrial, sectoral and geographic differences in productivity gains and these may persist even though there is extensive redistribution of the population. Furthermore, in so far as population changes stimulate economic growth and, as a result, induce differences in productivity gains, they can create income differences. Whether or not income differences actually narrow as population redistribution occurs depends on the balance of forces that tend to narrow, and the forces that tend to widen, the differences.[4]

In view of the foregoing discussion there are, therefore, three essential points in an analysis of the chain of interdependent links between economic growth and population growth and redistribution. First, it is important to investigate the causes of differences in economic opportunities and, thus, why there are different rates

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[1] The possibility that there may be some disadvantageous economic and social effects of population migration has been considered important enough to warrant attention, particularly in analyses of the implications of out-migration for the development of a particular region. Migration out of the Maritime and Prairie provinces has given rise to concerns about the problems of migration and regional economic growth. See, for example, *Third Annual Report* of the Manitoba Economic Consultative Board, Winnipeg, Manitoba, March 1966, and *Toward a Strategy for the Economic Development of the Atlantic Provinces*, The Atlantic Provinces Economic Council, Halifax, Nova Scotia, October 1965.

[2] Everett S. Lee, *op. cit.*, p. 128.

[3] *Ibid.*, p. 129.

[4] In the United States during the period from 1870 to 1950, "Only in measures relating to agriculture (income levels as well as labor force proportions) did the states either become more divergent or manifest relative stability rather than converging toward national averages." See *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol. III, *op. cit.*, p. 322.

of economic growth in various sectors, in various industries within a sector and in various geographic areas in the economy. In this paper these differences are taken as given and income data are used as proxy for their existence. Second, it is necessary to analyze the patterns of change in the population that have been involved in the adjustment mechanism. Third, it is necessary to examine the contribution that population growth and redistribution have made to sustaining and stimulating economic growth. This paper, however, is not intended to explore and analyze these issues in any depth. It is primarily devoted to the presentation of a set of statistical estimates of the amount and the rate of internal migration in Canada during the forty-year period from 1921 to 1961. A comprehensive analysis of the kind suggested above would require a wider range of statistical material,[1] much of which is not available on a consistent and historical basis. A minimum of additional information for migration alone would require estimates of the age, sex and birthplace of migrants.[2] However, in view of the patterns of internal migration that have been suggested in this paper, it is possible to point out some of the factors which have influenced the direction of the flows and to suggest some of their effects. The patterns of migration are first discussed in terms of aggregate measures of income differences between agriculture and nonagriculture and among provinces. This is followed by a brief discussion of some of the factors which are important for determining the degree of mobility of the population.

Income Differences and Internal Migration

Migration in Canada, during the forty-year period from 1921 to 1961, was related to differences in economic opportunity. Population movements between farm and nonfarm areas and between rural and urban areas have included intraprovincial migration in response to more economic opportunities in nonfarm and urban than in farm and rural areas in each province, and they have included interprovincial migration in response to more economic opportunities in nonfarm and urban areas in some provinces than in others. Internal differences in the level of income per capita and in the rate of growth in income reflect the differences in economic opportunity.

There have been marked differences within each province between the levels of farm and nonfarm income per capita and between the rates of growth in farm and

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[1] For example, in the United States study, migration was related to state and regional differences in labour force, production and income. The analysis shows:

> ... whereas states and regions have differed in growth rates and thus, to some extent, have shifted rank positions from census to census, the most noteworthy development during the period under consideration has been the increasing similarity among states: in age-sex-specific labor force participation rates, in nonagricultural proportions in general, and in proportions in each of the major nonagricultural industries; in manufacturing output per capita, and in certain manufacturing characteristics; and in income per capita and service income per worker ...

See *ibid.*, p. 322.

[2] There are completed migration estimates of the Canadian native population in rural and urban areas in the files of this study. They supplement estimates for the total population in each province presented in Kenneth Buckley, "Historical Estimates of Internal Migration in Canada", *Papers*, Canadian Political Science Association Conference on Statistics, 1960, Toronto, University of Toronto Press, 1962, pp. 1-37.

nonfarm income. The farm-nonfarm per capita income differentials in $19\overline{27}$ and $19\overline{61}$ and the rates of growth in income between $19\overline{27}$ and $19\overline{61}$ are shown in Table 18.[1] Farm income per capita was much less than nonfarm income per capita in both $19\overline{27}$ and $19\overline{61}$. At the national level, farm income per capita was equivalent to only two fifths of nonfarm income per capita. The largest difference was in the Maritimes[2] where farm income per capita was only 20 per cent of nonfarm income per capita and the smallest difference was in Saskatchewan where farm income per capita was more than 70 per cent of nonfarm income per capita. The disparities have persisted for more than three decades for which comparable data are available. Indeed, between $19\overline{27}$ and $19\overline{61}$, there was a measurable increase in farm income per capita relative to nonfarm income per capita only in Ontario, although the differential narrowed slightly in Manitoba and British Columbia. It widened in Prince Edward Island, Saskatchewan and Alberta and remained unchanged in Nova Scotia, New Brunswick and Quebec. At the same time, in every province, the average annual rate of growth in total nonfarm income was much greater than the average annual rate of growth in total farm income. The difference was much more than 3 percentage points in every province except Manitoba where it was almost 3 percentage points.

There were, therefore, important economic incentives within each province, both in terms of differences in the level of income per capita and in terms of differences in the rate of growth in income, for migratory movements out of farm and into nonfarm areas. Furthermore, the farm-nonfarm per capita income differential persisted between $19\overline{27}$ and $19\overline{61}$ in every province except Ontario, in spite of a tendency for it to narrow. The farm population was declining while the nonfarm population was increasing in every province. The proportion of the labour force engaged in agriculture has dropped sharply during the current century in Canada – a trend that has existed in most of the industrial countries throughout the present century – and output per man in agriculture has increased faster than output per man in nonagriculture.[3] However, the tendency for the demand for agricultural products to increase by relatively small amounts as real incomes rise has been an important factor contributing to the persistent or widening gaps between farm income per capita and nonfarm income per capita. In addition, the tendency for agricultural productivity to increase more rapidly than nonagricultural productivity has been combined with a relatively low price elasticity of demand for agricultural products.

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[1] In this section $19\overline{27}$ refers to the average of income in 1926, 1927 and 1928 per member of the estimated 1927 population and $19\overline{61}$ refers to the average of income in 1960, 1961 and 1962 per member of the 1961 population. Farm and nonfarm income per capita was calculated using farm and nonfarm population respectively.

[2] The "Maritimes" includes Prince Edward Island, Nova Scotia and New Brunswick and the "Atlantic" includes the Maritime provinces and Newfoundland.

[3] I.F. Furniss has shown that for the period from 1935 to 1960 "The average annual percentage increase in Gross Domestic Product per man in agriculture has been 4.6 per cent since 1935 compared with a rise of just over two per cent in the manufacturing industries", and "farm incomes from farming have risen at a faster rate than the average incomes of the employed nonfarm labour force as a whole in the same period". See "Productivity of Canadian Agriculture, 1935 to 1960: A Quarter Century of Change", *Canadian Journal of Agricultural Economics*, Vol. XIII No. 2, 1964, pp. 49-50.

TABLE 18

Ratio of Farm to Nonfarm Income Per Capita in $\overline{1927}$ and $\overline{1961}$ and Rates of Growth in Farm, Nonfarm and Total Income, $\overline{1927}$ to $\overline{1961}$
(Income in current dollars)

	Farm income per capita as a percentage of nonfarm income per capita		Growth in farm income	Growth in nonfarm income	Growth in total income
	$\overline{1927}$	$\overline{1961}$	$\overline{1927}$ to $\overline{1961}$	$\overline{1927}$ to $\overline{1961}$	$\overline{1927}$ to $\overline{1961}$
			(Average annual percentage change)		
Canada	41	41	2.0	5.8	5.5
Newfoundland	—	14	*	*	*
Prince Edward Island	35	27	.8	5.2	4.0
Nova Scotia	18	19	.3	5.0	4.8
New Brunswick	19	18	.5	5.2	4.8
Atlantic	21	20	.5	5.0	4.8
Quebec	24	23	2.4	5.8	5.8
Ontario	36	44	2.5	6.0	5.8
Manitoba	38	41	2.0	4.8	4.5
Saskatchewan	75	71	1.2	5.0	3.5
Alberta	65	57	2.0	6.8	5.5
Prairies	62	58	1.6	5.5	4.5
British Columbia	43	47	3.2	6.5	6.2
Arithmetic average	39	39*	1.8	5.5	5.0

* Newfoundland is excluded because it was not part of Canada before 1949.

Note: Total income is based on the National Accounts definition of personal income, in current dollars, but excludes military pay and allowances and transfer payments. Farm income, in current dollars, includes wages to hired farm labour and net income to farm operators from farm production; nonfarm income is the remainder of total income. Returns to both farm and nonfarm unincorporated business include returns to capital as well as labour.

Farm income excludes income to farm operators from nonfarm sources. In the Atlantic Provinces, in British Columbia and in Quebec income from nonfarm sources such as logging and fishing has been an important source of income. This has been illustrated for the year 1958 in a paper presented by J. M. Fitzpatrick and C. V. Parker to the 35th Annual Meeting of the Canadian Agricultural Economics Society in June 1965. It is unlikely that the relative levels of farm and nonfarm income which are implied by the data in Table 18 above would be significantly changed if the farm income figures were adjusted to include the income from nonfarm sources.

A three-year average of the incomes centred on 1927, per member of the 1927 population, and of incomes centred on 1961, per member of the 1961 population, were used. Use of these data is indicated by reference to $\overline{1927}$ and $\overline{1961}$. The 1927 population was estimated. The Yukon and Northwest Territories have been excluded throughout.

Source: Wages to hired farm labour are from the *Quarterly Bulletin of Agricultural Statistics*, quarterly, Agriculture Division, Dominion Bureau of Statistics. All other income data are from the *National Accounts*, annual, Dominion Bureau of Statistics. The population data are from Tables A1, A4 and A6.

Migratory movements between farm and nonfarm areas and between rural and urban areas were also related to provincial disparities in the level of income per capita and in the rate of growth in income. Interprovincial migration from farm areas

in one province to nonfarm areas in another province was influenced by the difference between farm income per capita in the area of out-migration and nonfarm income per capita in the area of in-migration. Similarly, it was influenced by the difference between the rates of growth in farm and nonfarm income in different provinces.

The levels of nonfarm, farm and total income per capita in each province in 1927 and 1961 are shown in Table 19. Although farm income per capita in the Maritimes was equivalent to only 20 per cent of nonfarm income per capita in the region, it was only a little more than 10 per cent of nonfarm income per capita in Ontario, British Columbia and Alberta. Farm income per capita in Saskatchewan was equivalent to over 70 per cent of nonfarm income per capita in the province, but it was less than 60 per cent of nonfarm income per capita in Ontario and British Columbia and it was just over 60 per cent of nonfarm income per capita in Alberta. Between 1927 and 1961, the farm-nonfarm per capita income differential between provinces widened slightly. Compared to 1927 farm income per capita in Saskatchewan was an even smaller proportion of nonfarm income per capita in Ontario, British Columbia and Alberta in 1961. Similarly, the farm-nonfarm per capita income differential widened for the Maritimes compared to Ontario, British Columbia and Alberta.

Table 19

Nonfarm, Farm and Total Income Per Capita in 1927 and 1961

(Income in current dollars)

	Nonfarm income per capita		Farm income per capita		Total income per capita	
	1927	1961	1927	1961	1927	1961
Canada	538	1,524	219	619	431	1,411
Newfoundland	–	791	–	115	–	765
Prince Edward Island	406	1,049	143	285	234	774
Nova Scotia	422	1,081	77	204	292	982
New Brunswick	432	1,025	84	183	271	885
Atlantic	425	986	89	201	278	888
Quebec	479	1,354	116	307	373	1,225
Ontario	597	1,773	213	785	499	1,688
Manitoba	575	1,565	216	644	436	1,393
Saskatchewan	516	1,393	385	992	435	1,260
Alberta	576	1,588	374	904	471	1,440
Prairies	557	1,531	343	881	446	1,374
British Columbia	572	1,681	248	793	520	1,630
Arithmetic average	508	1,390*	206	566*	392	1,253*

* Newfoundland is excluded because it was not part of Canada before 1949.

Source: See the source for Table 18.

At the same time, the average annual rate of growth in farm income in the Maritimes was 4.5 percentage points less than the average annual rate of growth in nonfarm income in the region, but it was 5.5 percentage points less than the rate of nonfarm income growth in Ontario and 6.3 percentage points less than the rate of nonfarm income growth in Alberta (Table 18). In Saskatchewan there was an internal difference of 3.8 percentage points, but the rate of farm income growth in Saskatchewan was 4.8 percentage points less than the rate of nonfarm income growth in Ontario and 5.6 percentage points less than the rate of nonfarm income growth in Alberta.

There were, therefore, marked and persistent economic incentives between provinces, and not just within each province, for migratory movements out of farm and into nonfarm areas. However, there were also persistent economic incentives to move between nonfarm and between farm areas in different provinces. The provincial disparities in the level of income per capita persisted over the entire period from 1926 to 1962[1] and the provincial rankings by income per capita were much the same at the beginning and the end of the period. The relative levels of farm and nonfarm income per capita in $19\overline{27}$ and $19\overline{61}$ were generally the same as the relative levels of nonagricultural and of agricultural labour productivity during the period

[1] Some of the factual evidence and reasons for the provincial disparities in the level of income per capita are discussed in other recent studies by the Economic Council. See Economic Council of Canada, *Second Annual Review: Towards Sustained and Balanced Economic Growth*, Ottawa, Queen's Printer, December 1965, pp. 97-141; S.E. Chernick, *Interregional Disparities in Income*, Staff Study No. 14, and Frank T. Denton, *An Analysis of Interregional Differences in Manpower Utilization and Earnings*, Staff Study No. 15.

Referring to the period from 1926 to 1962, R.M. McInnis states that "The general impression drawn from the figures ... is one of long-term stability in relative levels of income of the five regions." Later in his paper he concludes that there has been neither convergence nor divergence of regional incomes in Canada since 1920-21. See "Notes on a Study of Regional Income Differentials in Canada" (unpublished paper, Queen's University, February 1965), p. 4 and p. 26. Jeffrey G. Williamson has shown that "Canada does not reveal any significant trend towards either divergence or convergence during the thirty-five year period, 1926-60, for which regional income data are available". See "Regional Inequality and the Process of National Development: A Description of the Patterns", *Economic Development and Cultural Change*, Vol. XIII, Number 4, Part II, July 1965, p. 30.

The coefficients of variation based on the levels of per capita income in each province in $19\overline{27}$ and $19\overline{61}$ are:

	Total Income Per Capita	Nonfarm Income Per Capita	Farm Income Per Capita
Unweighted average			
$19\overline{27}$	25.51	14.57	52.91
$19\overline{61}$	24.18	19.28	53.53
Weighted average			
$19\overline{27}$	17.63	11.71	42.92
$19\overline{61}$	17.52	14.69	46.23

Note: Newfoundland was excluded.

from 1945 to 1953.[1] Table 20 shows the provincial rankings by nonfarm income per capita, by farm income per capita and by total income per capita. In both 1927 and 1961, Ontario had the highest and the Atlantic Provinces the lowest level of nonfarm income per capita. Within the group of provinces which were between the two extremes, Saskatchewan and Quebec remained in the lower two rank positions. The level of nonfarm income per capita in British Columbia improved relative to the levels in Alberta and Manitoba although nonfarm income per capita was similar in the three provinces.

Table 20

Provincial Ranking Based on Nonfarm, Farm and Total Income Per Capita in 1927 and 1961

	Rank based on nonfarm income per capita		Rank based on farm income per capita		Rank based on total income per capita	
	1927	1961	1927	1961	1927	1961
Newfoundland	–	10	–	10	–	10
Prince Edward Island	9	8	6	7	9	9
Nova Scotia	8	7	9	8	7	7
New Brunswick	7	9	8	9	8	8
Quebec	6	6	7	6	6	6
Ontario	1	1	5	4	2	1
Manitoba	3	4	4	5	4	4
Saskatchewan	5	5	1	1	5	5
Alberta	2	3	2	2	3	3
British Columbia	4	2	3	3	1	2

Note: The provincial rankings based on the 1927 and 1961 data were much the same in each year from 1926 to 1962 with the exception of Saskatchewan where farm income has been a large component of total income and where, as a result, there have been substantial year-to-year variations in total income. However, an examination of the annual data shows that these terminal year rank positions for Saskatchewan occurred most frequently throughout the period.

Source: Table 19.

The three provinces with the highest levels of nonfarm income per capita in 1961 (Ontario, British Columbia and Alberta) had the three highest rates of growth in nonfarm income (compare Tables 18, 19 and 20). The provinces with the lowest levels of nonfarm income per capita in 1961 had relatively low rates of growth in nonfarm income (Atlantic provinces). Furthermore, although Quebec had a low level

[1] By calculating productivity per unit of labour in nonagriculture and in agriculture in each of the five regions for each year from 1945 to 1953, W.J. Anderson has shown that Ontario and British Columbia had the two highest levels of nonagricultural labour productivity. The Prairie Region had the third highest, Quebec had the fourth highest and the Maritime Region had the lowest level of productivity per unit of nonagricultural labour. The highest levels of agricultural labour productivity were in the Prairies and British Columbia. Ontario had the third highest, Quebec the fourth highest and the Maritimes the lowest level of productivity per unit of agricultural labour. See W.J. Anderson, "Productivity of Labour in Canadian Agriculture", *The Canadian Journal of Economics and Political Science*, Vol. XXI, No. 2, May 1955, Tables VI and VIII, pp. 235-6.

of nonfarm income per capita, it had a relatively high rate of growth in nonfarm income. As a result, there were economic incentives to remain in, or to move into, the province, even though higher levels of nonfarm income per capita existed in every province west of Quebec.

Saskatchewan, Alberta and British Columbia had the three highest levels of farm income per capita in both 1927 and 1961. The provinces which improved their relative position in terms of farm income per capita (Ontario and Quebec) had relatively high rates of growth in farm income. The Atlantic provinces had the lowest levels of farm income per capita and the lowest rates of growth in farm income. In spite of the highest level of farm income per capita, the rate of growth in farm income was relatively low in Saskatchewan. The nature of agricultural production changed significantly as the industry became much more highly capitalized and as labour could, therefore, be released from the productive process. Furthermore, there have been extreme year-to-year variations in the level of farm income in the province. There were, therefore, economic incentives within farm areas in the province which were conducive to out-migration, but, because the level of farm income per capita was higher than in any other province, the most favourable economic alternatives were in nonfarm areas. In contrast, migrants out of farm areas in the Atlantic provinces had more favourable economic alternatives in farm areas in other provinces as well as in nonfarm areas both within and outside the region.

Table 21

Percentage Change in Farm, Total Nonfarm, Rural Nonfarm, Urban and Rural Population, 1921 to 1961

	Decrease in farm	Increase in total nonfarm	Increase in rural nonfarm	Increase in urban	Increase in rural
Canada	31	181	229	163	52
Prince Edward Island	38	143	201	103	- 2
Nova Scotia	63	116	275	57	29
New Brunswick	48	156	265	89	38
Maritimes	54	133	266	70	30
Quebec	17	192	121	214	27
Ontario	38	175	384	119	105
Manitoba	33	113	104	117	8
Saskatchewan	36	121	44	210	-16
Alberta	9	285	131	367	22
Prairies	27	167	86	221	2
British Columbia	5	260	321	214	208

Note: Newfoundland is excluded because it was not part of Canada before 1949.

Source: Tables A2 to A6 inclusive.

The estimates of net migration, which were discussed in previous sections of the paper, show that the main thrust of the migratory movements in Canada, during the period from 1921 to 1961, was out of farm and rural areas and into nonfarm and urban areas. Table 21 shows that the farm population declined most rapidly

in the Maritimes, Ontario and Saskatchewan. At the same time, the nonfarm population grew most rapidly in Alberta, British Columbia, Quebec and Ontario. Table 22 shows that a significant portion of the total nonfarm population lived in rural nonfarm areas. The rural nonfarm population grew most rapidly in Ontario and British Columbia and it grew relatively rapidly in the Maritimes. As a result, Ontario and the Maritimes had relatively high rates of growth in the rural population even though the farm population declined more rapidly than in the other provinces. Similarly, rural population growth in the Maritimes was much faster than in the Prairies even though the Maritimes rate of decline in farm population was twice the rate in the Prairies. Conversely, urban population growth was more rapid in the Prairies than in the Maritimes.

Table 22

Proportion of the Total Nonfarm Population Living in Rural Nonfarm and Urban Areas in 1921 and 1961

	1921			1961		
	Total nonfarm population	Proportion in rural nonfarm	Proportion in urban	Total nonfarm population	Proportion in rural nonfarm	Proportion in urban
	('000's)	(per cent)	(per cent)	('000's)	(per cent)	(per cent)
Canada	5,502	28	72	15,916	33	67
Newfoundland	–	–	–	440	63	37
Prince Edward Island	28	39	61	67	49	51
Nova Scotia	302	27	73	654	47	53
New Brunswick	194	38	62	498	54	46
Atlantic	524	32	68	1,660	54	46
Quebec	1,577	24	76	4,608	18	82
Ontario	2,072	21	79	5,702	37	63
Manitoba	352	32	68	749	31	69
Saskatchewan	280	54	46	619	36	64
Alberta	271	35	65	1,042	21	79
Prairies	903	40	60	2,410	28	72
British Columbia	426	43	57	1,536	51	49

Source: Tables A3, A5 and A6.

The rates of net migration, which were shown in previous sections of the paper, are summarized in Table 23. There were migratory movements out of rural areas in every province except Ontario and British Columbia where there were particularly significant movements into rural nonfarm areas. Rural out-migration was most rapid in Quebec and the Prairies and it was relatively rapid in the Maritimes. During the first two decades (1921-40) the Maritime rate of rural out-migration was comparable to the rate for the Prairies, but during the two decades from 1941

to 1960, the Prairie rate was double the Maritime rate. Urban in-migration was most rapid in Quebec and British Columbia and it has been rapid in the Prairies since 1941. Interprovincial migration included movements out of the Maritimes and Saskatchewan and into Ontario, British Columbia and, in the two recent decades, into Alberta.

Table 23

Average Decennial Rates of Net Migration of the Total, Urban and Rural Population, 1921 to 1940 and 1941 to 1960

(Number of migrants per 1,000 population)

	Total		Urban		Rural	
	1921–40	1941–60	1921–40	1941–60	1921–40	1941–60
Canada	12	38	88	126	- 65	- 68
Prince Edward Island	-66	-123	67	64	-100	-194
Nova Scotia	-52	- 56	-20	-55	- 78	- 57
New Brunswick	-55	- 77	27	48	- 68	-142
Maritimes	-55	- 66	-18	10	- 76	-114
Quebec	-10	19	116	132	-125	-201
Ontario	37	98	81	88	- 24	113
Manitoba	-36	- 47	20	141	- 75	-226
Saskatchewan	-73	-164	69	179	-107	-322
Alberta	8	47	42	368	- 8	-241
Prairies	-37	- 51	39	242	- 69	-269
British Columbia	157	202	217	158	95	246

Source: Tables 15, 16 and 17.

Differences in the level of income per person, in the rate of growth in income and, therefore, in economic opportunities have been important factors determining the patterns of migration within Canada and these, in turn, have been a major determinant of the internal differences in population growth. Persistent disparities in the level of income per person, which have been shown by the data presented earlier, imply similar rates of growth in income per person. Table 24 shows the average annual rates of growth in nonfarm, farm and total income per capita in each province during the period from 1927 to 1961. Within each province there has been very little difference in the rates of growth in farm and nonfarm income per capita. They differed by not more than one percentage point in any province and there was no difference in the average rates. One percentage point indicates a significant difference in rates of economic growth; relatively, however, the difference in the rates of growth in farm and nonfarm *income* were overwhelmingly large. Among the provinces there was little difference in the rates of growth in nonfarm income per capita and total income per capita. The range of difference for farm income per capita was three times larger than the range for nonfarm income per capita, but the range for total income per capita was similar to the range for nonfarm income per capita which was less than three quarters of one percentage point. In comparison,

the range of difference for the rates of growth in nonfarm, farm and total income were greater (Table 18).

Table 24

Rates of Growth in Nonfarm Income Per Capita, Farm Income Per Capita and Total Income Per Capita, 1927 to 1961
(Income in current dollars)

	Growth in nonfarm income per capita 1927 to 1961	Growth in farm income per capita 1927 to 1961	Growth in total income per capita 1927 to 1961
	(Average annual percentage change)		
Canada	3.2	3.2	3.5
Prince Edward Island	2.8	2.0	3.5
Nova Scotia	2.8	3.0	3.5
New Brunswick	2.5	2.2	3.5
Maritimes	2.8	2.5	3.5
Quebec	3.0	3.0	3.5
Ontario	3.2	4.0	3.8
Manitoba	3.0	3.2	3.5
Saskatchewan	3.0	2.8	3.2
Alberta	3.0	2.8	3.2
Prairies	3.0	2.8	3.2
British Columbia	3.2	3.5	3.5
Arithmetic average	3.0	3.0	3.5

Note: Newfoundland is excluded because it was not part of Canada before 1949.
Source: See the source for Table 18.

Relatively small differences in the rate of growth in income per person between provinces and between farm and nonfarm areas, and persistent disparities in the level of income per person, imply that each province and both farm and nonfarm areas participated in the growth in income in Canada during the period from 1926 to 1962. Furthermore, different rates of population growth in the provinces and in farm and nonfarm areas have been a major determinant of the relative rates of growth in income per person. The patterns of migration have been the essential factor determining the relative rates of growth in population. Thus internal migration has been an important positive factor in the long-term persistence of internal differences in the level of income per person and in the distribution of the growth in income among provinces and between farm and nonfarm areas.[1]

[1] R.A. Easterlin has pointed out that in the United States during the period from 1870 to 1950 migratory movements were conducive to a narrowing of income differences: "... on balance, the direction and magnitude of internal and international migration ... was such as to significantly alter the relative rates of growth of labor supply in the various regions in a direction that ... would have made for convergence of relative income levels." See *Population Redistribution and Economic Growth, United States, 1870-1950*, Vol. II, *Analyses of Economic Change*, by Simon Kuznets *et. al.*, Philadelphia, The American Philosophical Society, 1960, p. 172.

Some Factors Which Affect Mobility

Social, cultural and economic conditions of various kinds can initiate migration, but there are many, more factors which affect the degree to which people respond to an initial stimulus to move. For example, age, education, marital status and family size affect mobility. The forces which influence the decision to migrate are essentially related to the costs and benefits of moving and include both economic and noneconomic factors. Each individual judges the net gain of moving on the basis of his own personal assessment of the relevant factors; these factors clearly vary between individual situations and over time.

During the decade of the 1930's when rates of economic activity were low and employment opportunities were limited throughout the country, economic incentives to migrate still existed, particularly in areas where employment opportunities did not exist. Under these conditions, the most important factors determining the cost-benefit differential arise from considerations of moving out of areas where there are no employment opportunities and into areas where there are, at least, a limited number of employment opportunities. During periods when economic activity is generally higher, the most important factors determining the cost-benefit differential arise from considerations of alternative employment and economic opportunities at home and alternative employment and economic opportunities elsewhere.

The cost of moving, for example, depends on transportation, the transfer of home ownership, financing requirements during the period of transition, the acquisition of new skills through retraining, the possible transfer of pension and welfare plans and the uncertainties and risks of moving. The risk of moving generally depends on the availability and accuracy of information and, particularly, it depends on the certainty of employment after moving, and on the availability of educational, community and residential facilities elsewhere. Alternatively, the benefits of moving depend on the availability of relatively more employment opportunities, of relatively higher income and of relatively better educational, community and housing facilities elsewhere. There are both economic and noneconomic costs and benefits of moving and there are both real and purely monetary costs and benefits of moving. The migrant must be convinced that the costs are offset by the benefits. Furthermore, if the migrant finances the move he must rely on past savings, on current income or on future income, and if information facilities are limited he accepts the risks, or reduces them by personal contact and inquiry. However, the interaction between population redistribution and economic growth and, in particular, the reallocation of human resources in response to changes in demand and production techniques are restricted by the existence of a cost-benefit differential. Referring to resource mobility, Denison has pointed out that:

> The equilibrium allocation of resources is constantly changing. This is partly because the resources themselves change – workers gain in experience and skill or lose vigor with age, ... It is also because the demand for resources shifts as a result of changes in the patterns of final demand and in productive techniques, of the rise and fall of firms, of inventions, of changes in the supply of the factors of production, and of a host of other influences; most of these are inherent in the process of economic growth itself. Output can be increased (1) if economical means can be found to speed the movement

of employed resources as changes occur in the equilibrium allocation and (2) if unemployment of resources during the transition can be reduced.[1]

Migratory movements between areas of alternative economic opportunities are increased in a number of ways which, directly or indirectly, increase the anticipated benefits relative to the anticipated costs of moving. As the level of education of the population increases, the average person becomes more aware of, and alert to, sources of information concerning the alternatives available to him.[2] The risks and uncertainties of moving may be reduced by employer procedures for recruiting and promoting employees and by specific private and government policies for education, for training and retraining programmes and for the transfer of pension, health and other welfare plans. They may also be reduced with accurate and readily available information provided by private and by national government employment services with facilities for the exchange of labour market information throughout the country. The financial costs of moving may be mitigated if the migrant qualifies for unemployment insurance and special employer and government grants or loans. In general, effective manpower policies facilitate population redistribution and the adjustment of the labour force to changes in the structure of the economy.

Education was mentioned above as a factor affecting mobility. Population movements are facilitated by a rising level of education of the population and, in particular, of the labour force. It is not merely a question of university trained people migrating or people migrating to acquire university education and specialized training and employment. Mobility is increased as members of the labour force acquire skills, professional training and education of all kinds. Within the urban sector of the economy, the existence of a high level of manpower skills and training enhances the mobility of the nonfarm labour force. A study for the United States has shown that farm out-migration will similarly be accelerated by more schooling in farm areas.[3] This effect is only partly the result of a higher level of employment flexibility obtained through the acquisition of skills. It also arises because the individual acquires, through education, a knowledge of alternative employment opportunities.

Population mobility which accompanies advancing levels of education can benefit both the area of in-migration and the area of out-migration. There are direct economic gains for the receiving region if the trained manpower is absorbed into existing employment opportunities, but there are also gains for the losing region if there is unemployment or underemployment of the labour force. In this situation out-migration can increase output and income per person. The provision of educational facilities within the region results in gains as problems of inefficient use of the labour force are solved, in part, by out-migration.[4] It also results in indirect gains as the out-migration of skilled manpower stimulates economic growth in other areas which is reflected in increased demand for the products of the region of out-migration. Thus in the absence of adequate employment opportunities, and assuming the existence of "spread effects" through interregional relationships,

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[1] Edward F. Denison, *op. cit.*, p. 201.

[2] *Ibid.*, p. 202.

[3] Micha Gisser, *op. cit.*, p. 582.

[4] *Loc. cit.*

expenditure on education in an area of out-migration can have real economic, as well as social, benefits for that region. As noted earlier, however, migration out of a relatively lagging region will tend to be concentrated in the younger and better-educated groups of the population whose retention in the region would provide a potential for growth in per capita output and income. The benefits, to the region, of out-migration and larger investments in education are less clear under these conditions.

Foreign-born people in a country tend to be more mobile than the native population, largely because a major change of residence is an experience of their lifetime. In addition, people who are first-generation natives tend to be more mobile because of the experience of their parents. The migratory movements of Canadian natives have generally been in the same direction as the movements of the combined Canadian and foreign-born population although the rates of migration for Canadian natives have been less than the rates for the whole population.[1] Nevertheless, the native-born population in Western Canada tends to be more mobile than the native-born population in the East. Canadian-born people in the East are often native to several generations of family residence and mobility tends to be reduced because it is more difficult to make major changes of residence which disrupt the traditional family home. In Western Canada, on the other hand, the people who are now in the age group where the probability of migration is highest are, at most, second-generation Canadians and, even if they are more than second-generation, it is likely that their parents were born in Eastern Canada. As a result, there has been an environmental conditioning to the idea of migration.

The fact that foreign-born population and their descendants are more mobile has two important implications. Once foreign-born people have decided to undertake major changes of residence it is not difficult to condition the direction of their movements within the receiving country and, therefore, to influence their initial settlement. This has been an important factor for population growth and redistribution in Canada in the past and it continues to be significant. However, if the initial economic advantages of settlement are not sustaining it is likely that the settlers, or their children, will eventually move to areas or industries where there are more economic opportunities.

[1] These observations are based on estimates in the files of this study. The estimates were made by using census data on nativity of the Canadian population to compare the place of birth and the current place of residence.

APPENDIX A

REFERENCE TABLES

Table A1

Population of Canada, by Province, Census Dates, 1901 to 1961

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	5,371,315	7,206,643	8,787,949[1]	10,376,786	11,506,655	14,009,429	16,080,791	18,238,247
Newfoundland	–	–	–	–	–	361,416	415,074	457,853
Prince Edward Island	103,259	93,728	88,615	88,038	95,047	98,429	99,285	104,629
Nova Scotia	459,574	492,338	523,837	512,846	577,962	642,584	694,717	737,007
New Brunswick	331,120	351,889	387,876	408,219	457,401	515,697	554,616	597,936
Atlantic	893,953	937,955	1,000,328	1,009,103	1,130,410	1,618,126	1,763,692	1,897,425
Quebec	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	4,055,681	4,628,378	5,259,211
Ontario	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542	5,404,933	6,236,092
Manitoba	255,211	461,394	610,118	700,139	729,744	776,541	850,040	921,686
Saskatchewan	91,279	492,432	757,510	921,785	895,992	831,728	880,665	925,181
Alberta	73,022	374,295	588,454	731,605	796,169	939,501	1,123,116	1,331,944
Prairies	419,512	1,328,121	1,956,082	2,353,529	2,421,905	2,547,770	2,853,821	3,178,811
British Columbia	178,657	392,480	524,582	694,263	817,861	1,165,210	1,398,464	1,629,082
Yukon and Northwest Territories	47,348	15,019	12,300	13,546	16,942	25,100	31,503	37,626

[1] Includes 485 members of the R.C.N. whose province of residence is not known.

Source: *Census of Canada, 1961*, Bulletin 1.1–10, Table 6 and Bulletin 7.1–1, Table 1.

Table A2

Urban[1] Population of Canada, by Province, Census Dates, 1901 to 1961

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	1,867,260	3,007,576	3,977,064	5,160,901	5,853,603	7,511,539	8,842,206	10,631,641
Newfoundland	—	—	—	—	—	97,614	132,029	164,478
Prince Edward Island	14,955	14,970	16,669	17,183	20,969	24,685	29,342	33,909
Nova Scotia	127,179	180,797	219,652	223,215	262,394	296,935	315,506	343,922
New Brunswick	76,641	94,043	120,192	126,781	141,366	165,928	196,409	227,518
Atlantic	218,775	289,810	356,513	367,179	424,729	585,162	673,286	769,827
Quebec	595,616	892,024	1,203,698	1,683,400	1,986,644	2,602,276	3,116,395	3,784,603
Ontario	879,793	1,252,207	1,630,800	2,015,665	2,269,266	2,687,710	3,010,017	3,564,988
Manitoba	63,657	181,251	239,221	294,491	299,316	358,857	424,242	519,894
Saskatchewan	5,592	79,502	127,622	187,121	190,738	251,018	319,672	395,868[2]
Alberta	11,851	109,936	177,170	227,882	250,605	430,088	612,523	828,243[2]
Prairies	81,100	370,689	544,013	709,494	740,659	1,039,963	1,356,437	1,744,005
British Columbia	82,834	199,833	242,040	385,163	431,262	593,834	683,501	759,461
Yukon and Northwest Territories[3]	9,142	3,013	—	—	1,043	2,594	2,570	8,757[4]

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

(2) These figures differ from those recorded in the Census; see the notes to this table, below.

(3) Obtained as a residual.

(4) This figure is composed of 5,031, which was the population of Whitehorse in 1961, and 3,726 which was the population of one centre in the size group 1,000—4,999. See the note to this table, below.

Source: *Census of Canada, 1961,* Bulletin 7.1—2, Table 2.

NOTE: In the 1961 Census there are two inconsistencies which are related to the population of incorporated centres of 1,000 and over. The figures for Saskatchewan and Alberta in Table A2 are not the same as figures that are given in the Census. In 1961 the city of Lloydminster had a population of 5,667; 2,733 people were living in Saskatchewan and 2,944 were living in Alberta. The Census, in data for the population of incorporated centres of 1,000 and over, reported that the entire population of Lloydminster was attributable to Saskatchewan, but in data for the total population of Saskatchewan, the Alberta residents of Lloydminster were excluded. In order to have Tables A2 and A3 additive and consistent with Table A1 it was necessary to raise the reported Alberta population in incorporated centres of 1,000 and over by 2,944 and to lower the reported Saskatchewan population by the same amount. The adjustment provided 1961 figures for the two provinces that are consistent with figures that are given in the official publications of the Canadian vital statistics.[1]

The second inconsistency is related to the 1961 figure for the Yukon and Northwest Territories in Table A2. For this area, the 1961 Census reported more people living in incorporated centres of 1,000 and over than in all incorporated centres, regardless of their size.[2] Footnote (4) in Table A2 notes the fact that the figure is inconsistent with other data on urban population that are in the 1961 Census.

[1] See *Vital Statistics, 1963,* Table 57, p 64,

[2] Compare the last column in Table A2 with the last column in Table 12, *Census of Canada, 1961,* Bulletin 1.1-7, p. 12-2.

Table A3

Rural[1] Population of Canada, by Province, Census Dates, 1901 to 1961

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	3,504,055	4,199,067	4,810,400	5,215,885	5,653,052	6,497,890	7,238,585	7,606,606
Newfoundland	—	—	—	—	—	263,802	283,045	293,375
Prince Edward Island	88,304	78,758	71,946	70,855	74,078	73,744	69,943	70,720
Nova Scotia	332,395	311,541	304,185	289,631	315,568	345,649	379,211	393,085
New Brunswick	254,479	257,846	267,684	281,438	316,035	349,769	358,207	370,418
Atlantic	675,178	648,145	643,815	641,924	705,681	1,032,964	1,090,406	1,127,598
Quebec	1,053,282	1,113,752	1,156,812	1,191,262	1,345,238	1,453,405	1,511,983	1,474,608
Ontario	1,303,154	1,275,085	1,302,862	1,416,018	1,518,389	1,909,832	2,394,916	2,671,104
Manitoba	191,554	280,143	370,897	405,648	430,428	417,684	425,798	401,792
Saskatchewan	85,687	412,930	629,888	734,664	705,254	580,710	560,993	529,313
Alberta	61,171	264,359	411,284	503,723	545,564	509,413	510,593	503,701
Prairies	338,412	957,432	1,412,069	1,644,035	1,681,246	1,507,807	1,497,384	1,434,806
British Columbia	95,823	192,647	282,542	309,100	386,599	571,376	714,963	869,621
Yukon and Northwest Territories	38,206	12,006	12,300	13,546	15,899	22,506	28,933	28,869

(1) Rural population includes people living outside incorporated cities, towns and village of 1,000 and over.

Source: Tables A1 and A2.

TABLE A4

Rural Farm[1] Population of Canada, by Province, Census Dates, 1921 to 1961

	1921	1931	1941	1951	1956	1961
Canada	3,272,694	3,289,140	3,152,449	2,827,660	2,687,060	2,284,717
Newfoundland	–	–	–	15,456	10,097	17,404
Prince Edward Island	60,983	55,478	51,067	46,757	43,112	37,592
Nova Scotia	221,501	177,690	143,709	112,135	96,995	82,712
New Brunswick	193,606	180,214	163,706	145,771	126,240	99,835
Atlantic	476,090	413,382	358,482	320,119	276,444	237,543
Quebec	783,695	777,017	838,861	766,910	745,739	651,362
Ontario	861,276	800,960	704,420	678,043	670,647	533,752
Manitoba	258,508	256,305	249,599	214,435	202,163	172,553
Saskatchewan	477,325	564,012	514,677	398,279	360,651	306,594
Alberta	317,446	375,097	383,964	339,955	327,539	289,658
Prairies	1,053,279	1,195,414	1,148,240	952,669	890,353	768,805
British Columbia	98,354	102,367	102,446	109,919	103,877	93,255

(1) For 1921, 1931 and 1941 the 1941 definition of farm is relevant; for 1951, 1956 and 1961 the 1951 definitions of rural and farm are relevant. See Appendix C for a discussion of the definitions.

Source: The figures for 1921 are estimates based on data from *Census of Canada, 1921*, Vol. III, Table 2 and Vol. V, Table 1, and *Census of Canada, 1931*, Vol. V, Table 57 and Vol. VIII, Table 1, p. xxvii. The other data are from *Census of Canada, 1931*, Vol. VIII, Table 21; *Census of Canada, 1941*, Vol. VIII, Table 28; *Census of Canada, 1951*, Vol. I, Table 21; and for the 1956 and 1961 figures the adjustment to the 1951 definition of rural farm was made on the basis of data from *Census of Canada, 1961*, Bulletin 1.1-7, Table 13.

TABLE A5

Rural Nonfarm[1] Population of Canada, by Province, Census Dates, 1921 to 1961

	1921	1931	1941	1951	1956	1961
Canada	1,525,406	1,913,199	2,484,704	3,647,724	4,522,592	5,293,020
Newfoundland	–	–	–	248,346	272,948	275,971
Prince Edward Island	10,963	15,377	23,011	26,987	26,831	33,128
Nova Scotia	82,684	111,941	171,859	233,514	282,216	310,373
New Brunswick	74,078	101,224	152,329	203,998	231,967	270,583
Atlantic	167,725	228,542	347,199	712,845	813,962	890,055
Quebec	373,117	414,245	506,377	686,495	766,244	823,246
Ontario	441,586	615,058	813,969	1,231,789	1,724,269	2,137,352
Manitoba	112,389	149,343	180,829	203,249	223,635	229,239
Saskatchewan	152,563	170,652	190,577	182,431	200,342	219,775
Alberta	93,838	128,626	161,600	169,458	183,054	216,987
Prairies	358,790	448,621	533,006	555,138	607,031	666,001
British Columbia	184,188	206,733	284,153	461,457	611,086	776,366

(1) Rural nonfarm population is the remainder of the rural population (which includes people living outside incorporated cities, towns and villages of 1,000 and over), after the rural farm population has been identified. The relevant rural farm population data are presented in Table A4.

Source: Tables A3 and A4.

Table A6

Total Nonfarm[1] Population of Canada, by Province, Census Dates, 1921 to 1961

	1921	1931	1941	1951	1956	1961
Canada	5,502,470	7,074,100	8,337,264	11,156,669	13,362,228	15,915,904
Newfoundland	–	–	–	345,960	404,977	440,449
Prince Edward Island	27,632	32,560	43,980	51,672	56,173	67,037
Nova Scotia	302,336	335,156	434,253	530,449	597,722	654,295
New Brunswick	194,270	228,005	293,695	369,926	428,376	498,101
Atlantic	524,238	595,721	771,928	1,298,007	1,487,248	1,659,882
Quebec	1,576,815	2,097,645	2,493,021	3,288,771	3,882,639	4,607,849
Ontario	2,072,386	2,630,723	3,083,235	3,919,499	4,734,286	5,702,340
Manitoba	351,610	443,834	480,145	562,106	647,877	749,133
Saskatchewan	280,185	357,773	381,315	433,449	520,014	618,587
Alberta	271,008	356,508	412,205	599,546	795,577	1,042,286
Prairies	902,803	1,158,115	1,273,665	1,595,101	1,963,468	2,410,006
British Columbia	426,228	591,896	715,415	1,055,291	1,294,587	1,535,827

[1] Total nonfarm population includes the "urban" and the "rural nonfarm" population; it is the remainder of the total population after the rural farm population has been identified. The relevant rural farm population data are presented int Table A4.

Source: Tables A2 and A5 or Tables A1 and A4.

Table A7

Estimated Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates

	1920	1930	1940	1950	1955	1960
Canada	8,678,140	10,292,440	11,437,080	13,859,680	15,889,980	18,046,860
Newfoundland	–	–	–	356,800	411,220	453,800
Prince Edward Island	89,000	88,000	95,000	97,160	99,420	104,160
Nova Scotia	520,640	513,420	574,220	640,900	689,960	732,800
New Brunswick	385,060	407,160	454,900	514,320	551,640	594,220
Atlantic	994,700	1,008,580	1,124,120	1,609,180	1,752,240	1,884,980
Quebec	2,334,960	2,853,420	3,309,320	4,019,460	4,581,380	5,209,860
Ontario	2,904,180	3,412,680	3,770,780	4,544,660	5,346,620	6,183,500
Manitoba	603,280	695,380	729,160	772,640	845,380	915,280
Saskatchewan	745,240	914,020	897,680	832,420	879,740	920,800
Alberta	578,340	721,920	793,480	928,080	1,109,560	1,314,780
Prairies	1,926,860	2,331,320	2,420,320	2,533,140	2,834,680	3,150,860
British Columbia	517,440	686,440	812,540	1,153,240	1,375,060	1,617,660

Note: Tables A7, A8 and A9 may not be consistent because of rounding. See Appendix B for a discussion of the estimating procedure.

Source: Estimates based on Table A1.

Table A8

Estimated Urban[1] Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates

	1920	1930	1940	1950	1955	1960
Canada	3,932,933	5,125,635	5,826,049	7,442,648	8,752,201	10,533,952
Newfoundland	–	–	–	96,420	130,848	163,052
Prince Edward Island	16,735	17,175	20,968	24,380	29,389	33,768
Nova Scotia	218,222	223,407	260,826	296,308	313,472	342,023
New Brunswick	119,285	126,445	140,680	165,591	195,392	226,166
Atlantic	354,242	367,027	422,474	582,699	669,101	765,009
Quebec	1,190,149	1,670,717	1,974,333	2,580,175	3,085,548	3,750,097
Ontario	1.613.828	2,004,312	2,260,202	2,658,136	2,978,404	3,536,128
Manitoba	236,457	292,434	299,250	357,216	422,052	516,458
Saskatchewan	125,526	185,519	191,211	251,350	319,438	394,125
Alberta	174,074	224,845	249,913	425,087	605,332	817,764
Prairies	536,057	702,798	740,374	1,033,653	1,346,822	1,728,347
British Columbia	238,657	380,781	428,666	587,985	672,326	754,371

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Note: Tables A7, A8 and A9 may not be consistent because of rounding. See Appendix B for a discussion of the estimating procedure.

Source: Estimates based on Table A2.

Table A9

Estimated Rural[1] Population of Canada, by Province, 1920 to 1960, December 31 Prior to Census Dates

	1920	1930	1940	1950	1955	1960
Canada	4,745,207	5,166,805	5,611,031	6,417,032	7,137,779	7,512,908
Newfoundland	–	–	–	260,277	280,311	290,677
Prince Edward Island	72,281	70,832	74,005	72,750	70,016	70,375
Nova Scotia	302,430	290,022	313,362	344,540	376,444	390,718
New Brunswick	265,813	280,737	314,127	348,610	356,176	367,970
Atlantic	640,524	641,591	701,494	1,026,177	1,082,947	1,119,740
Quebec	1,144,720	1,182,630	1,335,280	1,439,740	1,496,200	1,460,255
Ontario	1,290,147	1,408,278	1,510,923	1,886,759	2,368,235	2,647,323
Manitoba	366,848	402,962	429,836	415,363	423,300	398,810
Saskatchewan	619,860	728,581	706,198	580,859	560,193	526,577
Alberta	404,328	497,115	543,411	502,913	504,224	497,046
Prairies	1,391,036	1,628,658	1,679,445	1,499,135	1,487,717	1,422,433
British Columbia	278,780	305,648	383,889	565,221	702,680	863,157

(1) Rural population includes people living outside incorporated cities, towns and villages of 1,000 and over.

Note: Tables A7, A8 and A9 may not be consistent because of rounding. See Appendix B for a discussion of the estimating procedure.

Source: Estimates based on Table A3.

TABLE A10

Total Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	2,380,801	2,274,567	3,126,020	4,416,815	2,076,276	2,340,539
Newfoundland	–	–	–	140,176	65,506	74,670
Prince Edward Island	18,353	20,007	25,169	26,967	13,599	13,368
Nova Scotia	114,849	117,266	165,099	186,712	91,228	95,484
New Brunswick	105,726	106,482	148,738	165,316	82,482	82,834
Atlantic	238,928	243,755	339,006	519,171	252,815	266,356
Quebec	824,808	786,213	1,066,398	1,341,835	642,615	699,220
Ontario	693,806	643,552	912,111	1,407,746	644,304	763,442
Manitoba	152,468	134,405	175,075	218,648	106,606	112,042
Saskatchewan	213,140	193,896	201,017	237,998	117,768	120,230
Alberta	155,499	162,809	215,139	340,034	155,434	184,600
Prairies	521,107	491,110	591,231	796,680	379,808	416,872
British Columbia	102,152	109,937	217,274	351,383	156,734	194,649

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

Table A11

Total Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	1,052,311	1,057,040	1,164,233	1,312,800	631,459	681,341
Newfoundland	–	–	–	30,204	14,632	15,572
Prince Edward Island	10,238	10,352	9,387	9,379	4,613	4,766
Nova Scotia	63,825	60,650	61,399	59,316	29,008	30,308
New Brunswick	49,719	47,975	49,195	46,076	22,878	23,198
Atlantic	123,782	118,977	119,981	144,975	71,131	73,844
Quebec	361,844	328,505	339,198	349,913	171,344	178,569
Ontario	349,631	364,994	408,333	470,730	223,574	247,156
Manitoba	53,021	56,786	66,066	70,337	33,874	36,463
Saskatchewan	59,801	61,519	64,099	66,499	32,736	33,763
Alberta	51,383	56,721	65,285	79,281	37,634	41,647
Prairies	164,205	175,026	195,450	216,117	104,244	111,873
British Columbia	52,849	69,538	101,271	131,065	61,166	69,899

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

Table A12

Natural Increase of the Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	1,328,490	1,217,527	1,961,787	3,104,015	1,444,817	1,659,198
Newfoundland	–	–	–	109,972	50,874	59,098
Prince Edward Island	8,115	9,655	15,782	17,588	8,986	8,602
Nova Scotia	51,024	56,616	103,700	127,396	62,220	65,176
New Brunswick	56,007	58,507	99,543	119,240	59,604	59,636
Atlantic	115,146	124,778	219,025	374,196	181,684	192,512
Quebec	462,964	457,708	727,200	991,922	471,271	520,651
Ontario	344,175	278,558	503,778	937,016	420,730	516,286
Manitoba	99,447	77,619	109,009	148,311	72,732	75,579
Saskatchewan	153,339	132,377	136,918	171,499	85,032	86,467
Alberta	104,116	106,088	149,854	260,753	117,800	142,953
Prairies	356,902	316,084	395,781	580,563	275,564	304,999
British Columbia	49,303	40,399	116,003	220,318	95,568	124,750

Note: Natural increase is the excess of births over deaths during a period.
Source: Tables A10 and A11.

Table A13

Net Migration of the Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

(Thousands of people*)

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	285.8	- 72.9	104.0	1,083.2	585.5	497.7
Newfoundland	–	–	–	- 13.0	3.5	- 16.5
Prince Edward Island	- 9.1	- 2.6	- 13.6	- 10.6	- 6.7	- 3.9
Nova Scotia	- 58.2	4.2	- 37.0	- 35.5	- 13.2	- 22.3
New Brunswick	- 33.9	- 10.8	- 40.1	- 39.3	- 22.3	- 17.1
Atlantic	-101.3	- 9.2	- 90.8	- 98.4	- 38.6	- 59.8
Quebec	55.5	- 1.8	- 17.1	198.5	90.6	107.8
Ontario	164.3	79.5	270.1	701.8	381.2	320.6
Manitoba	- 7.3	- 43.8	- 65.5	- 5.7	(1)	- 5.7
Saskatchewan	15.4	-148.7	-202.2	- 83.1	- 37.7	- 45.4
Alberta	39.5	- 34.5	- 15.2	125.9	63.7	62.3
Prairies	47.6	-227.1	-283.0	37.1	26.0	11.2
British Columbia	119.7	85.7	224.7	244.1	126.2	117.8

* Columns may not add to the totals shown because of rounding.
(1) Negligible.
Source: Tables A7 and A12.

TABLE A14

Urban[1] Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	1,072,783	978,051	1,578,141	2,412,580	1,103,365	1,309,215
Prince Edward Island	–	–	–	42,956	19,304	23,652
Nova Scotia	3,119	3,802	6,565	8,178	3,996	4,182
Newfoundland	50,034	51,078	80,592	89,316	44,666	44,650
New Brunswick	31,284	27,274	43,385	55,295	26,096	29,199
Atlantic	84,437	82,154	130,542	195,745	94,062	101,683
Quebec	410,954	378,944	594,329	882,671	404,453	478,218
Ontario	381,345	337,067	539,000	770,658	358,668	411,990
Manitoba	54,825	40,385	65,277	104,529	46,702	57,827
Saskatchewan	35,397	35,706	52,816	91,558	39,683	51,875
Alberta	47,948	47,941	84,833	198,861	82,724	116,137
Prairies	138,170	124,032	202,926	394,948	169,109	225,839
British Columbia	57,877	55,854	111,344	168,558	77,073	91,485

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

TABLE A15

Urban[1] Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1955–60
Canada	501,379	492,483	636,358	788,715	372,384	416,331
Newfoundland	–	–	–	9,206	4,266	4,940
Prince Edward Island	2,765	2,452	2,690	3,087	1,506	1,581
Nova Scotia	25,828	24,640	27,836	28,072	13,754	14,318
New Brunswick	16,473	14,095	15,617	17,109	8,028	9,081
Atlantic	45,066	41,187	46,143	57,474	27,554	29,920
Quebec	187,333	170,136	207,168	247,431	117,730	129,701
Ontario	191,380	191,970	251,120	296,203	141,399	154,804
Manitoba	20,458	21,128	29,226	39,034	17,681	21,353
Saskatchewan	11,421	12,321	18,114	27,038	12,130	14,908
Alberta	17,111	19,304	27,827	46,068	20,541	25,527
Prairies	48,990	52,753	75,167	112,140	50,352	61,788
British Columbia	28,610	36,437	56,760	75,467	35,349	40,118

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

Table A16

Natural Increase of the Urban[1] Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	571,404	485,568	941,783	1,623,865	730,981	892,884
Newfoundland	–	–	–	33,750	15,038	18,712
Prince Edward Island	354	1,350	3,875	5,091	2,490	2,601
Nova Scotia	24,206	26,438	52,756	61,244	30,912	30,332
New Brunswick	14,811	13,179	27,768	38,186	18,068	20,118
Atlantic	39,371	40,967	84,399	138,271	66,508	71,763
Quebec	223,621	208,808	387,161	635,240	286,723	348,517
Ontario	189,965	145,097	287,880	474,455	217,269	257,186
Manitoba	34,367	19,257	36,051	65,495	29,021	36,474
Saskatchewan	23,976	23,385	34,702	64,520	27,553	36,967
Alberta	30,837	28,637	57,006	152,793	62,183	90,610
Prairies	89,180	71,279	127,759	282,808	118,757	164,051
British Columbia	29,267	19,417	54,584	93,091	41,724	51,367

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Note: Natural increase is the excess of births over deaths during a period.

Source: Tables A14 and A15.

Table A17

Net Migration of the Urban [1] Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

(Thousands of people*)

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	621.3	214.8	578.4	1,467.4	578.6	888.9
Newfoundland	–	–	–	32.9	19.4	13.5
Prince Edward Island	.1	2.4	– .5	4.3	2.5	1.8
Nova Scotia	– 19.0	11.0	– 17.3	– 15.5	– 13.7	– 1.8
New Brunswick	– 7.6	1.1	– 2.8	22.4	11.7	10.6
Atlantic	– 26.6	14.5	– 20.6	44.0	19.8	24.2
Quebec	256.9	94.8	218.7	534.7	218.6	316.0
Ontario	200.5	110.8	110.1	403.5	103.0	300.5
Manitoba	21.6	– 12.4	21.9	93.7	35.8	57.9
Saskatchewan	36.0	– 17.7	25.4	78.2	40.5	37.7
Alberta	19.9	– 3.6	118.2	239.9	118.1	121.8
Prairies	77.6	– 33.7	165.5	411.8	194.4	217.4
British Columbia	112.8	28.5	104.7	73.3	42.6	30.7

* Columns may not add to the totals shown because of rounding.

(1) Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

Source: Tables A8 and A16.

Table A18

Rural (1) Births in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	1,308,018	1,296,516	1,547,879	2,004,235	972,911	1,031,324
Newfoundland	–	–	–	97,220	46,202	51,018
Prince Edward Island	15,234	16,205	18,604	18,789	9,603	9,186
Nova Scotia	64,815	66,188	84,507	97,396	46,562	50,834
New Brunswick	74,442	79,208	105,353	110,021	56,386	53,635
Atlantic	154,491	161,601	208,464	323,426	158,753	164,673
Quebec	413,854	407,269	472,069	459,164	238,162	221,002
Ontario	312,461	306,485	373,111	637,088	285,636	351,452
Manitoba	97,643	94,020	109,798	114,119	59,904	54,215
Saskatchewan	177,743	158,190	148,201	146,440	78,085	68,355
Alberta	107,551	114,868	130,306	141,173	72,710	68,463
Prairies	382,937	367,078	388,305	401,732	210,699	191,033
British Columbia	44,275	54,083	105,930	182,825	79,661	103,164

(1) Rural population includes people living outside incorporated cities, towns and villages of 1,000 and over.

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

Table A19

Rural(1) Deaths in Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	550,932	564,557	527,875	524,085	259,075	265,010
Newfoundland	–	–	–	20,998	10,366	10,632
Prince Edward Island	7,473	7,900	6,697	6,292	3,107	3,185
Nova Scotia	37,997	36,010	33,563	31,244	15,254	15,990
New Brunswick	33,246	33,880	33,578	28,967	14,850	14,117
Atlantic	78,716	77,790	73,838	87,501	43,577	43,924
Quebec	174,511	158,369	132,030	102,482	53,614	48,868
Ontario	158,251	173,024	157,213	174,527	82,175	92,352
Manitoba	32,563	35,658	36,840	31,303	16,193	15,110
Saskatchewan	48,380	49,198	45,985	39,461	20,606	18,855
Alberta	34,272	37,417	37,458	33,213	17,093	16,120
Prairies	115,215	122,273	120,283	103,977	53,892	50,085
British Columbia	24,239	33,101	44,511	55,598	25,817	29,781

(1) Rural population includes people living outside incorporated cities, towns and villages of 1,000 and over.

Source: *Vital Statistics*, annual, 1921 to 1960 and estimates for 1921 to 1943.

Table A20

Natural Increase of the Rural[1] Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	757,086	731,959	1,020,004	1,480,150	713,836	766,314
Newfoundland	–	–	–	76,222	35,836	40,386
Prince Edward Island	7,761	8,305	11,907	12,497	6,496	6,001
Nova Scotia	26,818	30,178	50,944	66,152	31,308	34,844
New Brunswick	41,196	45,328	71,775	81,054	41,536	39,518
Atlantic	75,775	83,811	134,626	235,925	115,176	120,749
Quebec	239,343	248,900	340,039	356,682	184,548	172,134
Ontario	154,210	133,461	215,898	462,561	203,461	259,100
Manitoba	65,080	58,362	72,958	82,816	43,711	39,105
Saskatchewan	129,363	108,992	102,216	106,979	57,479	49,500
Alberta	73,279	77,451	92,848	107,960	55,617	52,343
Prairies	267,722	244,805	268,022	297,755	156,807	140,948
British Columbia	20,036	20,982	61,419	127,227	53,844	73,383

(1) Rural population includes people living outside incorporated cities, towns and villages of 1,000 and over.

Note: Natural increase is the excess of births over deaths during a period.
Source; Tables A18 and A19.

TABLE A21

Net Migration of the Rural[1] Population of Canada, by Province, Calendar-Year Intercensal Intervals, 1921 to 1960
(Thousands of people*)

	1921–30	1931–40	1941–50	1951–60	1951–55	1956–60
Canada	-335.5	-287.7	-474.3	-384.3	6.9	-391.2
Newfoundland	–	–	–	- 45.8	- 15.8	- 30.0
Prince Edward Island	- 9.2	- 5.1	- 13.2	- 14.9	- 9.2	- 5.6
Nova Scotia	- 39.2	- 6.8	- 19.8	- 20.0	.6	- 20.6
New Brunswick	- 26.3	- 11.9	- 37.3	- 61.7	- 34.0	- 27.7
Atlantic	- 74.7	- 23.9	- 70.2	-142.4	- 58.4	- 83.9
Quebec	-201.4	- 96.2	-235.6	-336.2	-128.1	-208.1
Ontario	- 36.1	- 30.8	159.9	298.0	278.0	20.0
Manitoba	- 29.0	- 31.5	- 87.4	- 99.4	- 35.8	- 63.6
Saskatchewan	- 20.6	-131.4	-227.6	-161.3	- 78.1	- 83.1
Alberta	19.5	- 31.2	-133.3	-113.8	- 54.3	- 59.5
Prairies	- 30.1	-194.1	-448.3	-374.5	-168.2	-206.2
British Columbia	6.8	57.2	119.9	170.7	83.6	87.1

* Columns may not add to the totals shown because of rounding.

(1) Rural population includes people living outside incorporated cities, towns and villages of 1,000 and over.

Source: Tables A9 and A20.

Table A22

Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Rural Farm for Canada[1]
(Thousands of people*)

	Population	Births	Deaths	Natural increase	Net migration
1920	3,236.7				
1921–30		907.8	405.6	502.2	– 472.5
1930	3,266.4				
1931–40		871.9	409.0	462.9	– 591.7
1940	3,137.7				
1941–50		900.7	326.7	574.0	– 924.6
1950	2,787.2[2]				
1951–60		856.9	222.7	634.2	–1,171.3
1960	2,265.1				
1951–55		459.8	118.5	341.3	– 483.4
1955	2,660.2				
1956–60		397.1	104.2	292.8	– 687.9

* There may be differences in the totals shown because of rounding.

(1) Excludes Yukon and Northwest Territories.

(2) This figure excludes Newfoundland. The population of Newfoundland was 15,155; the total for Canada then becomes 2,802.3 thousand. The latter total was used to calculate net migration for 1951–55 and 1951–60.

Note: The estimated rural farm plus the estimated rural nonfarm population of Newfoundland is equal to the estimated rural population.

Source: Based on estimates of population, births and deaths in the files of this study.

Table A23

Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Rural Nonfarm for Canada[1]
(Thousands of people*)

	Population	Births	Deaths	Natural Increase	Net Migration
1920	1,508.5				
1921–30		400.2	145.4	254.8	137.0
1930	1,900.4				
1931–40		424.6	155.5	269.1	303.9
1940	2,473.3				
1941–50		647.2	201.2	446.0	450.3
1950	3,369.6[2]				
1951–60		1,147.4	301.4	846.0	787.1
1960	5,247.8				
1951–55		513.1	140.6	372.5	490.3
1955	4,477.5				
1956–60		634.2	160.8	473.5	296.8

* There may be differences in the totals shown because of rounding.

(1) Excludes Yukon and Northwest Territories.

(2) This figure excludes Newfoundland. The population of Newfoundland was 245,122; the total for Canada then becomes 3,614.7 thousand. The latter total was used to calculate net migration for 1951–55 and 1951–60.

Note: The estimated rural farm plus the estimated rural nonfarm population of Newfoundland is equal to the estimated rural population.

Source: Based on estimates of population, births and deaths in the files of this study.

Table A24

Population December 31 Prior to Census Dates, Births, Deaths, Natural Increase and Net Migration, Calendar-Year Intercensal Intervals, 1921 to 1960, Total Nonfarm for Canada[1]

(Thousands of People*)

	Population	Births	Deaths	Natural increase	Net migration
1920	5,441.4				
1921–30		1,473.0	646.7	826.2	758.3
1930	7,026.0				
1931–40		1,402.6	648.0	754.6	518.8
1940	8,299.4				
1941–50		2,225.3	837.6	1,387.8	1,028.7
1950	10,715.8[2]				
1951–60		3,559.9	1,090.1	2,469.9	2,254.5
1960	15,781.7				
1951–55		1,616.5	513.0	1,103.5	1,068.9
1955	13,229.7				
1956–60		1,943.4	577.1	1,366.4	1,185.6

* There may be differences in the totals shown because of rounding.

[1] Excludes Yukon and Northwest Territories.

[2] This figure excludes Newfoundland. The population of Newfoundland was 341,542; the total for Canada then becomes 11,057.4 thousand. The latter total was used to calculate net migration for 1951–55 and 1951–60.

Source: Based on estimates of population, births and deaths in the files of this study.

APPENDIX B

ESTIMATING PROCEDURES

Method of Estimating Net Migration

The estimates of migration that are presented in this paper were made by using one of the residual methods of estimating interregional migration.[1] The method derives figures for net migration only, and past recorded data on population and on the flow of births and deaths are required to make the estimate. The population data were obtained from the Canadian census publications and, as a result, the estimates of net migration are for intercensal intervals. The birth and death statistics were obtained from the annual publications of the Canadian vital statistics. The excess of the number of births over the number of deaths during an interval is the natural increase of the population during the interval. For any region, for an interval, the actual, or observed, population at the beginning of the interval plus the natural increase of the population during the interval is the "expected population" at the end of the interval. Any discrepancy between expected and actual population at the end of the interval is net migration into (or out of) the region during the interval. Estimates of net migration were made for the Canadian, Atlantic and Prairie aggregates as well as for each individual province. The Yukon and Northwest Territories were excluded because the relevant data were incomplete and Newfoundland was included only for the 1951–61 interval because the relevant data were not available in the vital statistics publications before 1949 or in the census publications before 1951.

The accuracy of the estimates depends on the statistics of population, births and deaths. In particular, it depends on the enumeration coverage in the censuses and upon the accuracy of recording the vital statistics. For example, when estimating migration, the appropriate natural increase figure is the excess of births over deaths of the *original population* – that is, of the population living in the area at the beginning of the interval. However, procedures for compiling the vital statistics do not differentiate births and deaths to the original population and births and deaths to migrants. The statistics include births to, and deaths of, in-migrants – that is, people who were not part of the original population; they exclude births to, and deaths of, out-migrants – that is, people who were part of the original population. To the extent that there were births to in-migrants and deaths of out-migrants during the interval, the amount of out-migration will be inflated and the amount of in-migration deflated. To the extent that there were births to out-migrants and deaths of in-migrants during the interval, the amount of out-migration will be deflated and the amount of in-migration will be inflated. For

[1] This method was selected because it has the advantage of permitting the estimation of urban and rural interregional migration. Another residual method involves the application of survival ratios to population data and deriving estimates of net migration by age and sex. However, survival ratios, particularly for the urban and rural population in each province, are not available. Interregional migration can also be estimated by using census data on birthplace and residence of the population. Estimates of this kind for Canada have been prepared for the native population in each province (Kenneth Buckley, "Historical Estimates of Internal Migration in Canada", *op. cit.)* and for the native population in rural and urban areas in each province (unpublished). The latter estimates involve each of the four census definitions of urban areas. For a concise discussion of the various methods of estimating interregional migration see Walter Isard, *Methods of Regional Analysis*, Cambridge, Massachusetts, The Massachusetts Institute of Technology Press, 1960, pp. 54-64.

any area, the smaller the amount of migration, the greater the likelihood that this kind of error will be small.

Furthermore, the method gives only migration numbers. This is a basic defect of the method and it is common to all residual techniques for estimating migration. It is not possible to determine the origin of the in-migrants or the destination of the out-migrants because the estimates only imply that a certain number of people have, on balance, gone into or come out of an area – that is, they are estimates of *net* migration.[1] Therefore, with the method, it is possible to find a relatively small net movement of people into an area while the amount of in-migration and out-migration is very large. Similarly, it is possible to find a relatively small amount of net migration into an area while the amount of migration within the area is very large.

Construction of a Consistent Series of Vital Statistics

Two out of the three sets of statistics required for the estimates of net migration involve vital statistics data. In Canada, this information is published annually and the record is remarkably complete. Very early in the compilation of birth, death and marriage statistics, the registration area included all the provinces and the provincial registration of these vital processes was co-ordinated by the Dominion Bureau of Statistics. The annual series is complete from 1926 to the present not only for births and deaths of the total population, but also for births and deaths of the urban and rural components of the population in each province. Furthermore, throughout the period, the rural-urban breakdown has been based on the same definition of urban areas.[2] Few adjustments in the published data were required before they could be used for estimating net migration.

The Dominion Bureau of Statistics began publishing the vital statistics in 1921. Quebec was not included in the registration area until 1926,[3] Newfoundlnad was not included until 1949 and the Yukon and Northwest Territories were not included until 1956.[4] The total number of births to residents of Quebec for the years 1921 to 1925 was estimated by assuming that the relationship between Roman Catholic births and total Quebec births in 1926 was the same in each year from 1921 to 1926 and that there was no change in the number of Roman Catholic births from 1925 to 1926.[5] On this basis the Roman Catholic births were extended to full coverage to provide an estimate of total Quebec births for the years 1921 to 1925.

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[1] *Ibid.*, p. 56.

[2] Urban population includes people living in incorporated cities, towns and villages of 1,000 and over.

[3] Vital statistics for Quebec were compiled within the province up until 1926; this registration was reasonably complete as early as the latter part of the nineteenth century. See M.C. Urquhart and K.A.H. Buckley, eds., *Historical Statistics of Canada*, Toronto, The Macmillan Company of Canada Ltd., 1965, p. 30.

[4] However, beginning in 1924, total births and deaths in the Yukon and Northwest Territories were given in an appendix table in each publication, but they were not classified by urban and rural.

[5] Kenneth Buckley, files, study for the Banff Business Policies Conference, September 1963, Department of Economics and Political Science, University of Saskatchewan, Saskatoon.

The estimates of total deaths of Quebec residents for the years 1921 to 1925 were made on the basis of the New Brunswick death rates. An index of these rates for 1921 to 1926 was applied to the 1926 Quebec death rate and the resulting Quebec death rates were applied to the Quebec population in each year to obtain total deaths to residents of the province for each year from 1921 to 1925.

From the beginning of the national registration of vital statistics until 1944, births and deaths in Canada and in the provinces were registered by place of occurrence. Beginning in 1944 births were registered by the place of residence of the mother and deaths were registered by place of residence of the decedent. Thus, prior to 1944, the total number of births that occurred in Ontario, for example, in any year could have included births to women who were normally resident in Quebec, the United States or elsewhere. As a result, an increase in the Ontario population, based on published birth statistics, would have been inflated. On the other hand, population increase in Ontario could have been understated by births in Quebec to Ontario residents. Registration of births and deaths by place of occurrence had more serious implications for measuring the natural increase in urban and rural population than for measuring the natural increase in total population. In any province, to the extent that women living in rural areas go to hospitals in urban areas for maternity care, the number of urban births would be inflated while the number of rural births would be deflated. It was, therefore, desirable to adjust the urban and rural vital statistics to a residence base. This was done by excluding births (deaths) to non-residents of the province and to non-residents of urban areas. Rural births by place of residence of the mother and rural deaths by place of residence of the decedent were obtained as a residual.

For each year from 1926 to 1943 inclusive, there were data for the total number of births (deaths) to non-residents of each province and the total number of births (deaths) to residents was obtained by subtraction. For the years 1921 to 1925 the births (deaths) to non-residents were estimated. The number of births (deaths) to non-residents was not large in any province for any year from 1926 to 1943 and it was relatively stable during the period. Therefore, it was assumed that the average number of births (deaths) to non-residents from 1926 to 1929 was representative for the years 1921 to 1925. The error in this assumption could not have been large for any of the provinces. In Ontario, for example, even if there was an error of ten per cent in the assumed number of births to non-residents, it would imply an error of only about one tenth of one per cent in the estimate of births to provincial residents. In fact, the error in the assumption is likely to be much less than one per cent for births and even less for deaths.

The number of births (deaths) to residents of urban areas in each province was then estimated for each year from 1926 to 1943.[1] Beginning in 1926 there were data for the number of births (deaths) occurring in incorporated centres of 5,000 and over and the number of births (deaths) to residents of these centres.[2] The number of the births (deaths) occurring in incorporated centres of 1,000 to 4,999 was obtained by subtracting the number occurring in incorporated centres of 5,000 and over from the number occurring in all incorporated centres. The ratio of resident to

[1] Urban areas include incorporated cities, towns and villages of 1,000 and over.

[2] See, for example, *Vital Statistics, 1926*, Table 6, pp. 14-16 and Table 23, pp. 130-2.

occurring births (deaths) in incorporated centres of 5,000 and over was calculated for each province. It was assumed that this ratio also applied to incorporated centres of 1,000 to 4,999 and the ratios were applied to the number of births (deaths) occurring in these centres to obtain the number of births (deaths) to residents of incorporated centres of 1,000 to 4,999. The number of births (deaths) to residents of urban areas in each province was then obtained by addition.

The validity of these estimates rests on the assumption that the proportion of rural residents who seek medical care in small urban centres is the same as the proportion seeking care in larger urban centres, or it rests on the assumption that more rural residents seek medical care in small than in large urban centres while the differential is offset by the number of people from small urban centres who go to large centres for medical care. The applicability of the assumptions differs among the provinces. In provinces where there are few, widely separated, large urban centres and numerous small urban centres, the implied error would tend to be large; the estimate of resident births (deaths) in rural areas would tend to be understated and for urban areas, it would tend to be overstated. For any one province, it is difficult to determine the extent of the error implied by the assumption.

The estimate of births and deaths to residents of urban and rural areas for each year from 1921 to 1925 was made by extrapolating the proportion of total resident births (deaths) in each year from 1926 to 1943, that were accounted for by births (deaths) to residents of urban areas. Where a trend in the proportion was discernible, it was assumed that it was the same for the period 1921–25. If there was no trend the 1926 proportion was used for each of the prior years. In most cases, the proportion was relatively stable over a number of years. The births (deaths) to rural residents were obtained by subtraction.

Together, these adjustments to the vital statistics provide annual data from 1921 to 1960 for births and deaths to residents of each province and of urban and rural areas in each province. Decade flows of the natural additions and subtractions to population were obtained by adding the annual figures. Similarly, the quinquennial flows were obtained by addition. The flows are from the first day of one census year to the first day of the following census year.

Estimated Population

With a consistent annual series of births and of deaths from 1921 to 1960 and the census population statistics it was possible to estimate net migration during each intercensal interval from 1921 to 1961. However, the intercensal interval appropriate to the birth and death statistics began and ended on January 1 of successive census years, but the intercensal interval appropriate to the population statistics began and ended on June 1 of successive census years. The intervals had to be the same before the estimates of net migration could be made. Because monthly data for urban and rural births and deaths were incomplete,[1] it was decided that the estimates of net migration should give the number of migrants during a

[1] Monthly data for urban and rural births are available only for the years 1930 to 1951 inclusive and for urban and rural deaths they are available only for the years 1940 to 1951 inclusive.

period which began and ended on January 1 of successive census years. Therefore, estimates of the population on January 1 of every census year were required. The errors involved in an estimate of population were likely to be smaller than the errors involved in an estimate of monthly vital statistics. The estimates of population for January 1 of a census year, or for December 31 of the year prior to a census enumeration, are presented in Tables A7 to A9. All the tables on natural increase and net migration give data for the interval which begins and ends on January 1 of successive censuses. These intervals are referred to as "calendar-year intercensal intervals" in order to distinguish them from the intercensal interval which extends from June 1 to June 1.

The estimates of total population of Canada, by province, were made by assuming that the population increased (or decreased) at a uniform rate during the twelve months from June 1 of the year prior to a census year to June 1 of a census year. Five twelfths (41.9 per cent) was subtracted from the census population if there was an increase during the twelve months, and added to the census population if there was a decrease. This gave the population as of December 31 of the year prior to the census date. For the estimated urban and rural population, the ratio of the urban and rural components to the total population in census years was applied to the estimated total population. Thus, the assumptions underlying these estimates were that natural increase occurs at a uniform rate, and that migrants arrive, or leave, at a uniform rate each month during the year prior to June 1 of a census year. Existing data indicate that there is a seasonal pattern, particularly in births and in migration. A quantification of the urban and rural patterns for each province and over time is not possible. However, there is evidence that the error implied by the assumption that five twelfths of the net increase (decrease) in population occurred during the first five months of a census year, would be negligible.[1]

Estimates of Farm and Nonfarm Net Migration for Canada

In 1958, for the first time, the vital statistics publications in Canada reported births, deaths and the 1956 population of "selected urbanized areas". These areas, by definition, did not qualify for inclusion in the urban areas, but a large and urbanized population was attributable to them. The data were prepared for each year after 1958 for the provinces of Ontario, Manitoba and British Columbia where significant portions of the rural population included people living in unincorporated urban areas. For example, the selected urbanized areas included Brantford, York and others in Ontario, Fort Garry, West Kildonan and St. Vital in Manitoba and the district municipalities of Burnaby, North Vancouver and Chilliwack, as well as others, in British Columbia. Altogether, the sample accounted for 50 to 60 per cent of the total rural nonfarm population of Canada in 1956. Estimates of farm and nonfarm net migration in Canada, for each intercensal interval from 1921 to 1961, were made by assuming that these selected urbanized areas provided a sufficient sample of the rural nonfarm population in the country and that the birth and death rates of the areas were representative of the rural nonfarm rates. It is difficult to determine

[1] I.B. Anderson, *Components of Rural and Urban Population Change in Canada, 1921 to 1960*, unpublished, M.A. thesis, University of Saskatchewan, Saskatoon, 1963, pp. 2-99 to 2-102

the accuracy of these assumptions since there seems to be no alternative method of making migration estimates for the rural nonfarm population of Canada.[1]

The sample first had to be used to estimate rural nonfarm births and deaths in census years. The birth and death rates in the special urbanized areas, by province (Ontario, Manitoba and British Columbia), for 1958, 1959 and 1960 were estimated by interpolating the population between 1956 and 1961. The population in 1956 and 1961 had to be adjusted to account for those parts that had been incorporated during the interval. The population in the growing townships was taken as a sample for both 1956 and 1961 and the percentage increase of this "growth sample" was applied to the population of the total urbanized area as reported for 1956. This type of adjustment was necessary for Ontario because, in some cases, only parts of urbanized areas had become incorporated. In Manitoba and British Columbia the incorporations involved whole urbanized areas and it was not difficult to determine the corresponding 1961 population. Given the population of the urbanized areas in each of the provinces in 1956 and 1961, it was assumed that the growth rate was uniform over the five-year period and the 1958, 1959 and 1960 populations were estimated by straight line interpolation.

It was then necessary to construct an index that could reasonably be used to extrapolate the birth and death rates of the urbanized areas which were available. The base of this index was an average of the rates for the three years 1958 to 1960. The average of the national rates for 1958 to 1960 was determined from existing data and indexes of the national birth and death rates for census years from 1921 to 1956 were constructed. These indexes were applied to the average rates for the urbanized areas and, thus, for Ontario, Manitoba and British Columbia the birth rates and death rates of the selected urbanized areas were available for census years, on the assumption that they moved in the same way as the national rates and that the relative differentials remained unchanged.

If the sample is representative of the rural nonfarm population in Canada then the birth and death rates of the sample population will be very similar to the rates for the rural nonfarm population. On the assumption that the sample was representative, the extrapolated birth and death rates were applied to the rural nonfarm population of the appropriate provinces. In this way the rural nonfarm births and deaths for the three provinces, in all census years, were determined. The total of the rural nonfarm births and deaths for the three provinces were then used as a sample of the rural nonfarm births and deaths in Canada. Based on the coverage of the Canadian rural nonfarm population that is provided by the Ontario, Manitoba and British Columbia rural nonfarm population, their births and deaths were extended to full coverage and the national rural nonfarm births and deaths were obtained for census years. In order to estimate these national births and deaths for 1960, the rates for the total of the three provinces in 1960 were applied to the national rural nonfarm population for 1960, given by adjusting the 1961 census rural nonfarm population to December 31, 1960. With these estimates of rural nonfarm births and deaths for

[1] The information for making the estimates was extracted from Table 7 of the 1958, 1959 and 1960 *Vital Statistics;* information on the population of the urbanized areas is available, for 1956, in the vital statistics reports and, for 1956 and 1961, in the 1961 *Census of Canada,* Bulletin 1.1-10, Table 6.

census years the rural farm births and deaths for Canada in census years were determined by the difference between the total rural births and deaths and the estimated rural nonfarm births and deaths; for 1960 the same calculation was made by using the total rural births and deaths derived from Table 7 of the 1960 *Vital Statistics*.

Thus, the total rural births and deaths in Canada were available annually from 1921 to 1960 from published sources and the rural farm and rural nonfarm births and deaths had been estimated for census years from 1921 to 1956 and for 1960. From these data it was possible to determine the portion of total rural births and deaths, in census years and in 1960, that was accounted for by rural farm births and deaths. The corresponding *annual percentages* for census years and 1960 were estimated by a straight line interpolation to give the annual percentage of rural births and deaths that were involved in the rural farm births and deaths. The method of straight line interpolation seems reasonable in view of the relative constancy of the percentage distribution until 1941 and a uniform rate of decline in subsequent census intervals. The annual percentages for the rural farm births (deaths) were then applied to the annual total rural births (deaths) and the annual estimate of rural farm births and deaths was obtained. The rural nonfarm births (deaths) were obtained as a residual.

In order to provide the necessary population figures for the farm and nonfarm migration estimates, the rural population on December 31, prior to census dates for Canada, (given in Table A9) was used as a base. The percentage distribution of the total rural population of Canada at census dates between the rural farm and rural nonfarm components was applied to the rural population in Canada on December 31 prior to each census year. This gave the rural farm and rural nonfarm population of Canada on December 31 prior to each census date.

Given the basic population, birth and death statistics, it was possible to estimate the rural farm and rural nonfarm net migration in Canada for the calendar-year intercensal intervals from 1921 to 1960. The statistics for the urban population in Canada which were comparable to the information provided for the rural farm and the rural nonfarm population were taken from Tables A14 to A17 inclusive. The sum of the rural nonfarm and urban data provided the estimates of net migration of the total nonfarm population.

APPENDIX C

IDENTIFICATION OF URBAN, RURAL FARM AND NONFARM POPULATIONS

Urban and Rural Populations

The most important methodological question in an analysis of the urban and rural population in Canada relates to the definition of urban areas. A change in the definition results in a reclassification of the population between urban and rural areas. Throughout this paper the urban population includes people living in incorporated cities, towns and villages of 1,000 and over, and the rural population is the remainder of the total population. This has been the basis of the urban-rural breakdown in the Canadian vital statistics since 1921 and the estimates of net migration, which are presented in the paper, are based on the vital statistics data.

It is, nevertheless, possible to have five different sets of statistics which describe urban population in Canada. Each set is based on a different definition of an urban area; four of the definitions have been used in census enumerations in Canada and the other has been used in the compilation of vital statistics. As a result, five different sets of statistics may be used to describe the growth of urban population. Because net migration is a component of population growth, a fully articulated study of internal migration could include more than one set of estimates of urban (and rural) net migration. The usefulness of estimates of urban and rural net migration which are based on the vital statistics and presented in this paper, depends on whether the vital statistics definition of urban areas produces representative figures for growth in the "urban" and the "rural" population. Alternative methods of estimating net migration, which are based solely on census data, involve the use of different (census) definitions of urban areas.

For each census prior to 1951 (1871 to 1941 inclusive) urban areas were defined in the same way. In 1951 they were redefined and the definition was modified in both 1956 and 1961. Taking the census and vital statistics definitions together, the extent to which the respective populations can be compared depends on whether it is possible to obtain information, for more than one census year, on the number of people living in urban areas as they were defined under any one definition. Table C1 shows what data are available for this purpose. The first column gives the year of enumeration and the other five columns indicate the various definitions of urban areas. For example, for 1951 there are data for the number of people living in urban areas as defined in the Vital Statistics, in each census prior to 1951, in the 1951 Census and in the 1956 Census. The longest historical series for urban population is based on the census definition which was used prior to 1951.[1] The vital statistics definition can be used to describe the urban population in each census year from 1901 to 1961.

Both the vital statistics and 1941 definitions of an urban area were based on the distinction between incorporated and unincorporated population centres. For all census years,

> . . . prior to the 1951 Census, the population residing within the boundaries of incorporated cities, towns and villages, regardless of size, was classified as urban and the remainder as rural.[2]

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[1] This definition will also be referred to as the "1941 definition".

[2] *Census of Canada, 1951,* Vol. I, p. xv.

Table C1

Urban Population Data under the Various Definitions of Urban Areas

Census Year	Definition of urban areas used in the				
	Vital Statistics	Census in			
		1941	1951	1956	1961
1871/81/91		x			
1901	x	x			
1911	x	x			
1921	x	x			
1931	x	x			
1941	x	x			
1951	x	x	x	x	
1956	x	x		x	
1961	x	x		x	x

However, each province has its own laws for the incorporation of population centres. As a result, there is not a uniform classification of the population throughout Canada and, over time, there are likely to be differences between provinces in the number of centres incorporated. Indeed,

> . . . under the terms of the British North America Act, the right to make laws in relation to municipal institutions is assigned exclusively to the legislatures of the provinces.[1]

In some provinces, a relatively large portion of the urban population has included residents of small incorporated centres. At the same time in other provinces, relatively large numbers of people have been residents of large unincorporated centres and unincorporated parts of larger cities, and these people, according to the 1941 definition of urban areas, were included with the rural population. Thus, provincial comparisons require special attention if the 1941 definition of urban areas is used for an historical description of the urban population in each province. For example, Table C2 shows the proportion of the urban population in each province (as segregated by the 1941 definition of urban areas) living in incorporated centres of less than 1,000 people. Although the proportion for Canada was rather small (four to eight per cent), in any one year the percentages varied considerably among the provinces. For most of the provinces the proportion varied between one and ten per cent during the 60 years from 1901 to 1961, but it has been consistently high for the Prairies, and for Saskatchewan in particular. In 1901, over 60 per cent of the urban population in Saskatchewan resided in the small incorporated centres and even in 1961 these centres accounted for one quarter of the urban population in the province.

Furthermore, if changes in the urban and rural population are used as a proxy for structural changes in the economy and, in particular, for structural changes in

[1] *Census of Canada, 1931,* Vol. I, p. 163. In this Census there is a detailed description of the various incorporation laws and procedures: see pp. 163 ff in the volume cited, as well as Vol. II, p. 139.

nonagriculture and agriculture, the urban and rural population should be classified according to the industrial activity of the people. In other words, an analysis of the urbanization process and of the patterns of internal urban and rural migration may provide an indication of structural shifts in economic activity in the broadly classified nonagricultural and agricultural sectors of the economy, even though much more information on population would be required for more industrial detail. For this purpose the urban population should include people who are involved in nonagricultural productive activity and the rural population should include people who are involved in the production of agricultural commodities. However, a classification of the urban and rural population that is based on the 1941 definition of urban areas means that in Saskatchewan, for example, many of the people living in small incorporated centres and involved in agricultural activity have been included in the urban population. In Ontario and British Columbia, where many of the urbanized areas surrounding large cities have been unincorporated, large numbers of people have been involved in nonagricultural activity, but they have been included in the rural population. Indeed, under the 1941 definition of urban areas, a rather large, and growing, portion of the rural population has been urbanized in terms of industrial activity, while a growing number of people involved in agricultural and primary productive activity have been residents of urban areas.

Table C2

Population in Incorporated Centres of Less than 1,000 as a Per Cent of the Population in All Incorporated Centres, Canada, by Province, Census Dates 1901 to 1961

	1901	1911	1921	1931	1941	1951	1956	1961
Canada	7.3	8.1	8.6	7.4	6.4	5.4	4.8	3.9
Newfoundland	–	–	–	–	–	6.5	4.8	5.0
Prince Edward Island	–	–	12.7	15.7	13.8	10.6	21.9	22.0
Nova Scotia	1.7	2.9	3.3	3.6	1.9	0.3	0.5	0.5
New Brunswick	0.8	5.5	3.4	1.7	1.4	0.9	1.1	0.6
Atlantic	1.3	3.6	3.8	3.6	2.4	2.0	2.7	2.7
Quebec	8.9	7.7	9.0	7.2	5.8	4.6	3.8	3.0
Ontario	6.0	5.7	4.4	3.8	3.0	2.4	2.0	1.5
Manitoba	9.6	9.5	8.6	6.8	7.0	6.7	5.9	4.8
Saskatchewan	60.8	39.5	41.7	35.7	35.4	32.3	28.8	25.0
Alberta	36.1	20.1	20.5	18.2	18.3	11.9	9.6	7.4
Prairies	21.4	21.0	22.7	19.9	19.8	16.4	14.0	11.4
British Columbia	8.1	1.9	2.2	2.4	2.7	3.4	2.7	2.9
Yukon and Northwest Territories	–	22.0	–	100.0	42.0	28.3	30.0	(1)

(1) The 1961 Census reports, for the Yukon and Northwest Territories, more people living in incorporated centres of 1,000 and over than in all incorporated centres, regardless of size.

Source: *Census of Canada, 1961*, Bulletin 7.1–2, Table 2.

Beginning in 1931, the Dominion Bureau of Statistics began to provide a breakdown of the rural population into the rural farm and rural nonfarm components. In addition, the definition of urban areas was changed for the 1951 Census. This

was an attempt to include people in the growing unincorporated suburban areas in the urban population and to exclude people in small unincorporated centres. Thus,

> . . . In the 1951 Census the aggregate size of population rather than provincial legal status was the main criterion for the rural-urban definition.
>
> . . . The urban population in 1951 includes all persons residing in cities, towns and villages of 1,000 and over, whether incorporated or unincorporated, as well as the population of all parts of census metropolitan areas. The 1951 rural-urban definition has the advantage of creating a uniform line of demarcation between the rural and urban population across Canada. This was not obtained formerly because of the varying laws of incorporation among provinces.[1]

Previous definitions omitted the

> . . . highly "urbanized" unincorporated parts of metropolitan centres which happened to lie just outside the city limits, as well as certain places of over 1,000 population that had not sought incorporation as a city, town or village.[2]

This definitional change resulted in a rather significant increase in the urban population in Canada in 1951 compared to the population under the 1941 definition of urban areas. Table C3 shows the effect of the 1951 definitional change for each province. The net increase for Canada was over 600 thousand people. This involved an increase of more than 800 thousand by including the metropolitan fringe areas, an increase of more than 200 thousand by including other unincorporated places of over 1,000 people and a decrease of a little more than 400 thousand people by excluding incorporated places of less than 1,000 people. The largest portion of the net increase for Canada was attributable to Ontario and British Columbia while the urban population in Saskatchewan, in Alberta, in Quebec and in Prince Edward Island declined. The definitional change between 1941 and 1951 was the most significant of all the changes. Furthermore, as a result of the post-war adjustments, the 1941-51 intercensal period included significant changes in the growth and distribution of the urban population in Canada.

In 1956 the definition of urban areas was modified. In the 1956 Census it was stated that:

> The definition of rural and urban for the 1956 Census was substantially the same as that used in the previous Census of 1951. Briefly, the 1956 Census definition specified that all cities, towns and villages of 1,000 and over, whether incorporated or unincorporated, as well as all parts of census metropolitan areas and other major urban areas were to be classified as urban, and the remainder as rural. The difference from 1951 is that the fringe parts of other major urban areas were included with the rural in the earlier census.[3]

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[1] *Census of Canada, 1951,* Vol. I, p. xv.

[2] *Ibid.,* Vol. X, p. 33.

[3] *Census of Canada, 1956,* Bulletin 1-7, inside front cover.

TABLE C3

Effect of Change in Definition of Rural and Urban in 1951 Census on Urban Population, for Canada and the Provinces
(Thousands of people)[1]

Urban Population	Canada	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon & Northwest Territories
1951 population (using 1941 definition)	7,941	104	28	298	167	2,729	2,753	384	371	488	615	4
Add --												
Metropolitan area parts not otherwise urban ..	851	15	—	33	28	52	445	81	—	8	189	—
Unincorporated places over 1,000..	266	42	—	15	22	43	118	—	1	11	11	3
Subtract --												
Incorporated places under 1,000.....	430	7	3	1	2	127	65	26	120	58	21	1
1951 population (using 1951 definition).....	8,628	155	25	245	215	2,697	3,251	440	252	450	793	5

(1) The census figures have been rounded.

Note: A similar statement might be obtained for rural population.

Source: Reproduced from *Census of Canada, 1961*, Bulletin 7.1–2, p. 2–2.

As a result, the 1956 definition raised the 1951 total urban population by approximately 189 thousand people compared to the total under the 1951 definition of urban areas. In Ontario alone the increase was about 125 thousand while there was no change for Manitoba and Saskatchewan and little change for Alberta. Furthermore, the 1956 definitional change resulted in a net increase of 876 thousand in the 1951 total urban population compared to the total under the 1941 definition of urban areas. The largest portion of this increase was attributable to a net increase of almost 623 thousand in Ontario.

In 1961 the definition of urban areas was again modified. For the census in that year,

> The definition of rural and urban for the 1961 Census was substantially the same as that used in 1956. Briefly, the 1961 definition specified that all cities, towns, and villages of 1,000 and over, whether incorporated or not, were classed as urban as well as the urbanized fringes of (a) cities classed as metropolitan areas, (b) those classed as other major urban areas, and (c) certain smaller cities, if the city together with its urbanized fringe was 10,000 population or over. The remainder of the population was classed as rural. The main differences from 1956 result from the exclusion of any non-urbanized fringes within metropolitan areas, and the inclusion of urbanized fringes adjoining those smaller cities covered in (c) above.[1]

As a result of this change the 1961 total urban population decreased by almost 272 thousand people compared to the total under the 1956 definition of urban areas. The population fell in most provinces, but the largest declines were in Ontario (118 thousand) and British Columbia (67 thousand), while there was no change in the urban population of Saskatchewan and of Prince Edward Island.

Five component parts of urban areas can be distinguished if the five definitions of urban areas are compared. The appropriateness of any one definition, at any point in time, depends on the location of the urban population with respect to the components. Table C4 shows the components which were included under each definition. An analysis of urban population growth in Canada is, essentially, an analysis of the growth of the population in each of the component parts of urban areas. The population which is delineated by the vital statistics definition of urban areas is included under each of the census definitions, but its growth represents population growth in only one of the component parts of urban areas – that is, in incorporated centres of 1,000 and over. The estimates of urban net migration which were presented in Section III of the paper show the net number of people moving into these centres. Population growth in the incorporated centres of less than 1,000, in the unincorporated centres of 1,000 and over, in the census metropolitan areas and in the "other" urban areas was shown by the growth in rural nonfarm population. Net migration into the rural nonfarm areas in each province was included with the rural net migration, but a separate national estimate was made of net migration into rural nonfarm areas.

[1] *Census of Canada, 1961,* Bulletin 1.1-7, inside front cover.

TABLE C4

Components of Urban Areas under the Various Definitions

Definitions	Incorporated		Unincorporated of 1,000 and Over	Census Metropolitan Areas	Other(1)
	Less than 1,000	1,000 and Over			
Vital Statistics.....		x			
Census					
1941.....	x	x			
1951.....		x	x	x	
1956.....		x	x	x	x
1961.....		x	x	x	x

(1) This component is defined differently in 1956 and 1961.

Table C5

Population Growth as a Result of the Intercensal Incorporation of Centres of 1,000 and Over, Canada, by Province, 1921 to 1961

	1921–31	1931–41	1941–51	1951–61	1951–56	1956–61
Canada	34,450	33,573	135,500	324,338	113,795	210,543
Newfoundland	–	–	–	23,429	9,629	13,800
Prince Edward Island	–	–	–	5,374	2,792	2,582
Nova Scotia	–	–	–	–	–	–
New Brunswick	–	2,463	4,583	12,371	12,371	–
Atlantic	–	2,463	4,583	41,174	24,792	16,382
Quebec	26,712	23,224	68,784	158,356	49,029	109,327
Ontario	3,962	7,886	1,137	24,018	7,271	16,747
Manitoba	2,462	–	14,567	66,943	19,561	47,382
Saskatchewan	–	–	–	1,659	1,659	–
Alberta	–	–	15,582	16,161	3,685	12,476
Prairies	2,462	–	30,149	84,763	24,905	59,858
British Columbia.....	1,314	–	30,847	16,027	7,798	8,229
Yukon and Northwest Territories	–	–	–	–	–	–

Source: *Canada Year Book, 1933*, Table 30, pp. 135–9; *Canada Year Book, 1943–44*, Table 40, pp. 127–30; *Canada Year Book, 1952–53*, Table 6, pp. 131–6; *Canada Year Book 1957*, Table 10, pp. 126–32; *Canada Year Book, 1963–64*, Table 9, pp. 163–9.

Finally, because the vital statistics definition of urban areas includes only incorporated centres of 1,000 and over, during any intercensal interval, growth in the urban population will include the increase which is a result of the incorporation of centres of 1,000 and over and it will include the increase which is a result of growth in incorporated centres from less than 1,000 to 1,000 and over. Tables C5 and C6 show that it is reasonable to assume that this particular kind of increase in the urban population, perhaps with some lag, has approximately

kept pace with population growth in incorporated centres of 1,000 and over. In the statistics in Section III these particular elements of growth are included as migration into urban areas and out of rural areas and, therefore, Tables C5 and C6 show the extent to which the migration estimates are affected by intercensal incorporation of centres 1,000 and over and by the growth of incorporated centres of less than 1,000 people.

Table C6

Population Growth as a Result of the Growth of Incorporated Centres from Less than 1,000 to 1,000 and Over during the Intercensal Period, Canada, by Province, 1921 to 1961

	1921–31	1931–41	1941–51	1951–61	1951–56	1956–61
Canada	69,468	59,084	137,423	198,719	116,004	82,715
Newfoundland	–	–	–	12,655	11,458	1,197
Prince Edward Island	–	–	1,068	–	–	–
Nova Scotia	1,011	4,325	4,214	–	–	–
New Brunswick	–	–	1,000	12,170	–	12,170
Atlantic	1,011	4,325	6,282	24,825	11,458	13,367
Quebec	34,542	27,349	52,365	71,176	40,232	30,944
Ontario	13,577	18,610	21,332	25,808	12,656	13,152
Manitoba	3,147	1,129	9,854	3,160	1,065	2,095
Saskatchewan	9,564	1,344	10,792	32,824	25,953	6,871
Alberta	6,408	2,324	24,165	20,314	10,386	9,928
Prairies	19,119	4,797	44,811	56,298	37,404	18,894
British Columbia	1,219	2,960	10,039	20,612	14,254	6,358
Yukon and Northwest Territories	–	1,043	2,594	–	–	–

Source: See the sources for Table C–5.

Farm and Nonfarm Populations

From the 1931 Census, for the first time, the rural population could be separated into the farm and nonfarm components. The possibility of obtaining a reasonable estimate of the 1921 rural farm (and rural nonfarm) population was investigated because the estimates of urban and of rural net migration in this study began with the 1921-31 interval. The number of people per rural household in each province in 1921 and 1931 could be obtained from census data. There were also data, for both years, for the number of occupied farms in each province. Farm population data, which were comparable for both years, were obtained by multiplying the number of people per rural household and the number of occupied farms. The ratios of 1921 to 1931 which were based on these data were applied to the rural farm population in 1931, as it had been reported in the 1931 Census, and this provided an estimate of the rural farm population in each province in 1921 which was comparable to the rural farm population that had been observed in the 1931 census enumeration.

The accuracy of the estimate depends upon the validity of one basic assumption. It was assumed that, on average, the number of people per household on each occupied farm was the same as the number of people per rural household. This would appear to be a reasonable assumption at least for 1921 and 1931. The rural farm population was a relatively large component of the total rural population in all provinces as late as 1941. Regardless of how the rural population was defined, the rural farm population was less than 50 per cent of the total rural population in only three provinces and, of these, only one province (British Columbia) had less than 45 per cent of the total rural population living in farm areas in 1941. Therefore, it seems reasonable that the 1921 estimate of rural farm population shows, in all but one province (British Columbia), more than 50 per cent of the rural population attributable to farm areas.

In each census the rural farm population was identified by farm residence, and farms were defined in terms of size, value and volume of production or sales, and location. The rural nonfarm population was the difference between the rural population and the rural farm population. The same definition of a rural farm was used in the censuses for 1931 and 1941; in 1951 it was changed, and it was changed again in 1956 and in 1961.

In the 1931 and the 1941 census enumeration the farm operator was asked to state the total number of people living on the farm. In addition, in 1941, members of the household who were in Active Service or with a Reserve unit away from the household were considered as part of the farm population.[1] The definition of the farm was as follows:

> . . . A farm, for census purposes is all the land located in one municipality which is directly farmed by one person conducting agricultural operations, either by his own labour or with the assistance of members of his household or of hired employees. . . . . In order to be reported as a farm, such land must be of one acre or more in extent and have produced in 1940 agricultural products to the value of $50 or more, or be under crops or employed for pasture in 1941.[2]

In 1951, the definition of a farm was changed to the following:

> . . . A farm for census purposes, is a holding on which agricultural operations are carried out and which comprises:
>
> (i) three acres or more in size, or
>
> (ii) from one to three acres in size with agricultural production in 1950 amounting to $250 or more.[3]

The data presented in Table A4 are based on these two definitions of a farm. The figures for 1921, 1931 and 1941 are based on the definition which was used in 1931 and 1941; the figures for 1951, 1956 and 1961 are based on the definition in the 1951 Census. The 1956 and 1961 figures were converted to the 1951 definition by applying the growth, during 1951-56 and 1956-61, of the rural farm population, based on the 1956 definition, to the 1951 rural farm population, based on the 1951

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[1] *Census of Canada, 1941,* Vol. VII, p. xxii.

[2] *Ibid.,* p. xx.

[3] *Census of Canada, 1951,* Vol. II, p. xi.

definition of rural farm areas. This still leaves a discontinuity between the 1921, 1931 and 1941 figures on the one hand, and the 1951, 1956 and 1961 figures on the other. A comparison of the two definitions shows that the 1951 rural farm population is understated in terms of the 1941 definition. Therefore, growth in the rural farm population during the 1941-51 interval is understated and, conversely, growth in the rural nonfarm and in the total nonfarm population is overstated. The estimates of farm and nonfarm net migration for Canada are also affected. However, if the rural farm population for Canada is put on a consistent definition for each census year from 1921 to 1961, whether this is the 1941 or the 1951 definition, the definitional differences involve less than two per cent of the population figures for any of the census years. An error of two per cent in the 1951 rural farm population of Canada implies an error of approximately six per cent in the 1941-51 estimates of the rate and magnitude of net migration out of rural farm areas which are shown in Tables 11 and A22.

APPENDIX D

COMPARABILITY OF THE MIGRATION ESTIMATES AND THE ESTIMATES PUBLISHED BY THE DOMINION BUREAU OF STATISTICS

Estimates of net migration of the total population in each province for each intercensal interval from 1931 to 1961 have been published by the Dominion Bureau of Statistics. They show the net number of migrants during the interval between June 1 of successive census years. These "fiscal-year estimates" are reproduced in Table D1 for the three decades from 1931 to 1961. The estimates of net migration of the total population which were presented in Section III of this paper ("calendar-year estimates") show the number of migrants during the interval between January 1 of successive census years. The two sets of estimates show different amounts of net migration for each province during each decade from 1931 to 1961. The absolute differences between the two sets of results are shown in Table D2.

There are two reasons for the discrepancies, if it is assumed that both the fiscal-year and the calendar-year estimates of net migration were made by using the same annual data of births and deaths. First, compared to the fiscal-year estimates, the calendar-year estimates have five more months at the beginning and five fewer months at the end of the decade interval. Second, the calendar-year estimates of net migration include errors which arise from adjusting the census population figures. In contrast, the fiscal-year estimates were based on the reported census population data. In theory the fiscal-year and calendar-year estimates of net migration could be reconciled by simply changing the timing of the interval for the calendar-year estimates and, therefore, some adjusted calendar-year estimates of net migration were prepared.

Adjusted calendar-year estimates of net migration of the total population in each province for each decade from 1931 to 1961 were prepared by using the reported census population data and by adjusting the decade flows of births and deaths that had been used initially. Similar adjusted estimates for the urban and rural population were not prepared because the relevant monthly vital statistics data were not complete. The adjusted birth and death flows began on June 1 of one census year and ended on May 31 of the following census year. The absolute difference between the latter estimates and the fiscal-year estimates of natural increase and net migration are shown in Table D3. A comparison of Tables D2 and D3 shows that all of the discrepancy between the calendar-year and the fiscal-year estimates of natural increase and net migration for the 1951-61 decade, most of the discrepancy for the 1931-41 decade and less than 50 per cent of the discrepancy for the 1941-51 decade can be explained by the difference in timing in the two series.

The remaining discrepancies between the calendar-year and the fiscal-year estimates of natural increase and net migration are a result of differences in the annual data of births and deaths that were used. For the period prior to 1944 the fiscal-year estimates of natural increase and net migration were based on the published vital statistics,[1] but the calendar-year estimates were based on adjusted vital statistics data. In other words, for the years prior to 1944, the published birth and death statistics were adjusted to a residence base before the calendar-year estimates of net migration were made. After 1943, the annual birth and death statistics were the same for the two estimates of natural increase and net migration, with the exception that the fiscal-year estimates of natural increase for 1941-51

[1] *Census of Canada, 1951*, Vol. X, Table VII, footnote 2, p. 41.

included deaths which were not included in the published data. The fiscal-year estimates for the decade were made after the deaths of 36,000 members of the Armed Forces were included and prorated for the provinces.[1] This adjustment was necessary because the members of the Armed Forces were included in the 1941 Census, but it was not made for the calendar-year estimates of natural increase and net migration. As a result, in Table A13 the 1941-50 estimates of net in-migration are inflated and the estimates of net out-migration are deflated by the amounts shown in Table D3. For example, in Table A13 the amount of net migration into Ontario is approximately 5 per cent too high. The amount of net migration out of Quebec is approximately 25 per cent too low, but in the other provinces where there was net out-migration the estimates are too low by 5 per cent or less. For Canada the 1941-50 estimates of net immigration in Table A13 are inflated by approximately one third.

Thus, the calendar-year and the fiscal-year estimates of natural increase and net migration of the total population in each province can be completely reconciled. Furthermore, in spite of the discrepancies in the amount of net migration, and in the rate of net migration, both sets of estimates show similar patterns and rates of net migration over successive census intervals.[2]

TABLE D1

Fiscal-Year Estimates of Natural Increase and Net Migration of the Total Population of Canada, by Province, for Decennial Intercensal Intervals, 1931 to 1961

	Natural Increase			Net Migration		
	1931–41	1941–51	1951–61	1931–41	1941–51	1951–61
Canada(1)	1,221,347	1,969,756	3,139,164	-94,874	163,444	1,077,128
Newfoundland	–	–	110,996	–	–	-14,559
Prince Edward Island	9,681	15,802	17,621	-2,672	-12,420	-11,421
Nova Scotia	57,268	103,512	128,293	7,848	-38,890	-33,870
New Brunswick	59,359	99,904	119,461	-10,177	-41,608	-37,222
Quebec	459,211	736,058	998,300	-1,991	-12,259	205,230
Ontario	278,488	505,034	953,493	77,484	304,853	685,057
Manitoba	78,083	107,510	149,690	-48,478	-60,713	-4,545
Saskatchewan	131,752	135,106	172,324	-157,545	-199,370	-78,871
Alberta	106,405	150,303	265,195	-41,841	-6,971	127,248
British Columbia	41,100	116,527	223,791	82,498	230,822	240,081

(1) Excludes Yukon and Northwest Territories.

Source: *Canada Year Book, 1957–58*, Table 3, p. 120; *Census of Canada, 1951*, Vol. X, Table II, p.13; *Census of Canada, 1961*, Bulletin 7.1-1, Table III, pp.1-7.

[1] *Loc. cit.*

[2] The calendar-year and fiscal-year estimates of net migration were also compared for the 1951-56 interval.

TABLE D2

Absolute Difference between the Fiscal-Year and the Calendar-Year Estimates of Natural Increase and Net Migration

	Natural Increase			Net Migration		
	1931–41	1941–51	1951–61	1931–41	1941–51	1951–61
Canada	3,820	7,969	35,149	21,987	59,431	6,037
Newfoundland	–	–	1,024	–	–	1,587
Prince Edward Island	16	20	33	17	1,202	833
Nova Scotia	652	188	897	3,664	1,870	1,626
New Brunswick	852	361	221	590	1,485	2,118
Quebec	1,503	8,858	6,378	183	4,801	6,752
Ontario	70	1,256	16,477	2,058	34,751	16,767
Manitoba	464	1,499	1,379	4,639	4,816	1,126
Saskatchewan	625	1,812	825	8,828	2,808	4,248
Alberta	317	449	4,442	7,313	8,283	1,301
British Columbia	701	524	3,473	3,203	6,125	4,021

Source: Derived from Tables D1, A12 and A13.

Table D3

Absolute Difference between the Fiscal-Year and the Adjusted Calendar-Year Estimates of Natural Increase and Net Migration

	Natural Increase			Net Migration		
	1931–41	1941–51	1951–61	1931–41	1941–51	1951–61
Canada	2,490	34,266		2,490	34,266	
Newfoundland	–	–		–	–	
Prince Edward Island	16	374		16	374	
Nova Scotia	124	2,037	(no dif-	124	2,037	(no dif-
New Brunswick	468	1,242	ference)	468	1,242	ference)
Quebec	808	4,507		808	4,507	
Ontario	869	13,837		869	13,837	
Manitoba	662	3,138		662	3,138	
Saskatchewan	610	2,928		610	2,928	
Alberta	599	2,914		599	2,914	
British Columbia	50	3,289		50	3,289	

Source: Derived from Table D1 and estimates in the files of this study.

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