STAFF STUDY No. 4

Housing Demand to 1970

by Wolfgang M. Illing

prepared for the
Economic Council of Canada

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HOUSING DEMAND TO 1970

The main objective of this study is to consider the possible level of housing construction under conditions of potential output for 1970. New construction takes place mainly in response to two types of needs — the need to increase the housing stock in relation to expanding population, and the need to maintain the housing stock as a consequence of diverse withdrawals of dwellings from use.

Demographic developments have usually been the key determinants of housing construction in past years. The emerging boom in family formation, as a consequence of the post-war "baby boom", is expected to raise the demand for housing construction to a considerably higher level over the balance of this decade than that recorded in the past four or five years. But higher levels of income, and improvements in security, also mean that more and more individuals, who are not members of families, will be able to purchase or rent separate accommodation. The phenomenon of so-called "nonfamily" households has, in fact, been an important source of housing demand since the middle of the 1950's. Its emergence was influenced also by the general disappearance of housing shortages and the more ready availability of suitable apartments. Similarly, easier supply conditions appear to have facilitated increased "undoubling" of existing families in shared accommodation. These various demographic and related developments, and their relevance to household formation up to 1970, are considered in the first section of this study.

However, additional need for new construction arises from a number of other factors. For example, as the housing stock grows, the number of unoccupied dwellings will also grow (given a certain vacancy rate necessary to facilitate mobility). New construction is also brought about by the need to replace losses to the housing stock. Such losses may be due to accidental causes, or they may be the effect of demolitions associated with shifts in the use of land. Further, movements of households away from low-income areas may also create new demands on the housing stock, and thus encourage new construction. Such household shifts, for example, often result in abandonment of substandard rural dwellings. These additional factors, which indirectly tend to raise the level of new construction, are examined in the second section of this study.

The trend towards the construction of apartments has been marked in the past few years. On the basis of the age structure of new household heads expected to enter

the market in the comming years, and in the light of continued rapid urbanization, the preference for rented accommodation is anticipated to remain strong, resulting probably in some further relative increase of apartment construction. The distribution of new construction between single-detached dwellings and "multiple" dwellings provided the basis for translating the volume figures into dollar values. The valuation of the various components is undertaken in the third section of this study. Some brief comments on the implications of the projected level of housing construction on certain aspects of financing are also made in Section III.

The general technique employed in this study consists in the projection of demographic data to obtain the changes in occupied housing stock by 1970, and the appraisal of certain additional factors which tend to exert indirect influence on the level of construction. Particular emphasis is placed on identifying the direction and extent of the various causal flows in the determination of housing demand.

In a projection of this nature, it would perhaps have been desirable to employ certain functional relationships as, for example, those between new construction and the various determinants which shape its behaviour. However, in the absence of more complete data, especially in the field of housing stock, macro-economic relationships could generally not be employed except in a few limited instances in which such relationships can serve as checks on the projections.

This study is based on two general assumptions: (1) rising levels of income and employment consistent with the achievement of potential output in the Canadian economy,[1/] and (2) government policies, especially those dealing with mortgage regulations, which will remain generally conducive to new residential construction. The possible implications for new residential construction of substantially increased activity in the area of low-rental housing and urban renewal are studied in the fourth section of this study. This additional analysis has resulted in an alternate projection at potential output.

1/ See B. J. Drabble, Potential Output, 1946 to 1970, Staff Study No. 2, Economic Council of Canada, 1964.

I - DEMOGRAPHIC FACTORS

The future course of housing investment will largely be determined by demographic factors, especially those affecting net household formation. Among the principal determinants of net household formation[1] which are analysed and projected in this section are changes in the following:

- net family formation (net sum of marriages, deaths, divorces, and immigrant families);
- undoubling (determined by the ability of already existing families to maintain a separate household);
- nonfamily household formation.

Many of the statistics relevant for the formulation of the estimates for 1970 were available only on the Census basis. These included data on family household formation, nonfamily household formation, and changes in the total stock of housing. It was, therefore, necessary to project these components within the Census framework of dates and concepts. The rate for 1970 was then calculated on the basis of the projected levels prevailing during the two Census periods 1966-71 and 1971-76.

Families and Family Households

Between 1900 and the beginning of the Second World War, average net family formation never exceeded the range of 34,000 to 38,000 per year.[2] The rate of growth in net family formation declined substantially from the early years of the century, when high net immigration was an important factor in the high rates of family formation, to the end of the depression during which severe economic constraints tended to discourage and postpone marriages (see Table 2 below). Net family formation subsequently jumped to over 68,000 per year between 1941 and 1951, partly reflecting earlier postponements, and then rose further to 86,000 during the decade 1951-61, stimulated by a heavy inflow of immigrant families. Net family formation has been lower during the late 1950's and early 1960's, but is now beginning to pick up; in fact, a substantial "take-off" is indicated in the most recent projections available.[3]

The Census defines a family as consisting of husband and wife with or without children, or as one parent living with one or more children. Not every family occupies a separate household. In order to be able to analyse and project net family household

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1/ By Census definition, changes in the occupied housing stock are equal to net household formation.

2/ Measured between Censuses.

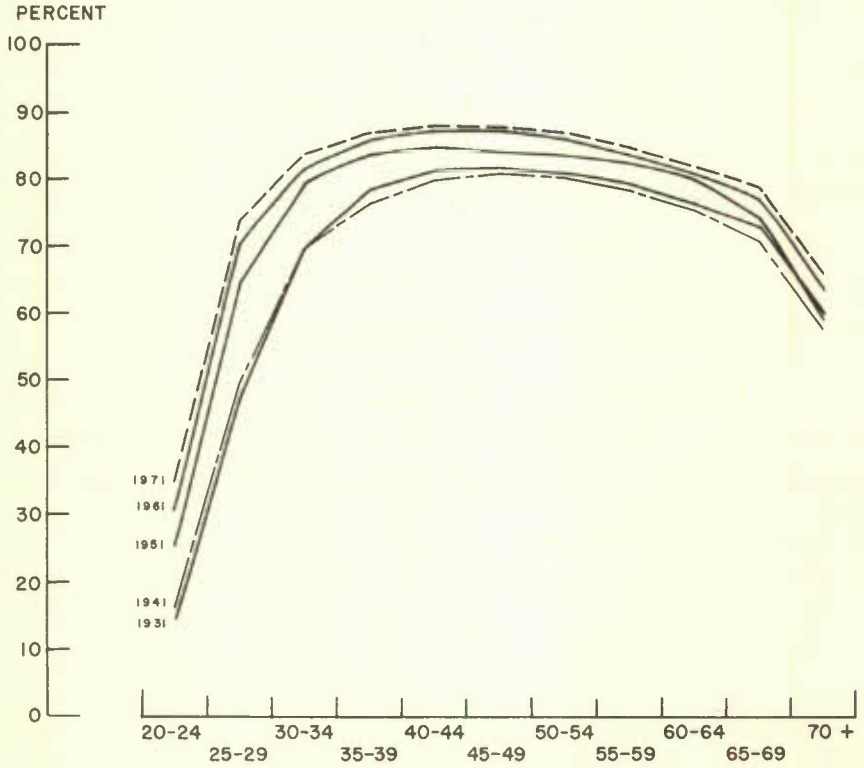
3/ The basic projections of net family formation used in this study were provided by A. Stukel, Economic Research Department, Central Mortgage and Housing Corporation, April 1964.

formation, it is necessary to look first at the determinants of total family formation and, second, at the factors which diminish the number of families in shared accommodation. Briefly, the projections of net family formation were based on the assumption of annual net immigration of 50,000 persons, and a careful appraisal of the changing age structure of the population and of probable mortality rates. Marriages, deaths of married persons, divorces and net family formation due to immigration, were estimated separately to obtain aggregate net family formation (see Table 1).

It was assumed that the trend towards younger marriages would continue, particularly under conditions of persisting declines in unemployment and rises in incomes consistent with the movement towards potential output. Marriage rates appear to be strongly influenced by economic conditions. This applies particularly to the younger age groups which also account for the largest number of marriages. On the other hand, the marital status of the population would exert an influence on marriage rates. For example, the proportion of adult males giving their status as married has been steadily rising, according to succeeding Censuses since 1931 (see Chart 1 and Table A-1). Some 88 per cent of males in the 40-44 age group were married in 1961, compared with only 80 per cent in 1941.

CHART 1

MARRIED MALES AS A PERCENTAGE OF ALL MALES IN AGE GROUP, CENSUS YEARS, 1931-71



Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

There exists, presumably, some upper limit in these proportions for each age group, since there will always be a residual group of unmarried persons. Chart 1 shows that the proportion of married males in each age group has been rising, particularly in the younger age groups. But the decennial increases in these proportions were smaller between 1951-61 than between 1941-51.

Consequently, marriage rates were assumed to continue to rise for the younger ages, but at a slower rate (see Table A-2). Rates for males above 30, and females above 25, would decline since more marriages would have taken place at younger ages. It is further assumed that each marriage represents an addition to the stock of families, and that each death of a married person represents a deduction from the stock of families. (In the strictest sense, this assumption would, to some extent, overstate the additions due to marriages and the deductions due to deaths.)

Divorces reduce the number of families and increase the number of persons in the nonfamily population. The effect of divorces on net family formation has been relatively stable in the 1950's, and it was assumed that this recent trend would continue.

A reconciliation of Census data between 1951 and 1961 implies additions of 1,080,000 persons and 269,300 families due to net immigration -- that is, for every 1,000 permanent immigrant arrivals, 250 new families were established. However, the level of net immigration was higher than is assumed for the period ahead. At the assumed average level of 50,000 net immigration per year, it is estimated that for every 1,000 immigrants, some 270 families would be added, since the inflow of single persons would probably be relatively weaker at the lower rate of net immigration.

Estimates of the principal components of net family formation in Canada from 1951 to 1976 are shown in Table 1.

Table 1

Components of Net Family Formation, 1951-76

(Thousands)

	Marriages	Deaths of Married Persons	Divorces	Net Immigration of Families	Average Annual Net Family Formation(1)
		(5-year totals)			
1951-56	585.2	-280.5	-29.4	148.7	84.6
1956-61	659.0	-310.8	-32.8	120.6	87.0
1961-66	689.4	-335.4	-34.2	41.1	72.0
1966-71	893.7	-383.5	-36.0	68.1	108.2
1971-76	1,051.0	-449.4	-38.0	68.1	126.2

(1) Adjusted to exclude Yukon and Northwest Territories.

Source: Based on data from Dominion Bureau of Statistics and estimates by Central Mortgage and Housing Corporation.

This summary indicates a gradually rising trend in the number of marriages from 1951 to 1966, and a sharply accelerated trend in the latter part of this decade. Between 1966 and 1971, the projections allow for 200,000 more marriages than between 1961 and 1966. On the other hand, immigration accounted for a very substantial proportion of net family formation during the 1950's, but would account for only a relatively small proportion during the years ahead, on the basis of the immigration indicated above. In other words, the post-war "baby boom" is leading to a boom in marriages and family formation after 1966 which will be largely independent of immigration. Even if there were to be no gains in immigrant families whatever between 1966 and 1971, the annual rate of net family formation would still amount to 95,000 -- a rate which is over 30 per cent above the estimated 1961-66 rate.

In recent years, the rate of net family household formation has consistently exceeded the rate of net family formation. This is explained by the fact that an increasing proportion of existing families has been able to establish a separate household. Undoubling of families has become an important source of demand for housing space and it is assumed in this study that recent trends in undoubling will continue. Generally, the rate at which the stock of accommodation-sharing families is reduced depends on income and employment, and the level of rents. The availability of suitable dwellings and subsidized housing also influences the rate of undoubling. But overcrowding in itself will not bring about new housing construction. Rather, this phenomenon must be viewed as an outstanding area of weakness of effective demand, since overcrowding is very heavily concentrated among families in the lowest income categories -- that is, among families having the lowest propensity to spend on housing. Very little doubling-up is voluntary and the constraints imposing this form of housekeeping are usually financial.

The proportion of families maintaining separate dwellings rose from 90 per cent to 94 per cent between 1951 and 1961. The projection used in this study assumes a further rise in this ratio. The percentages assumed for 1966 and 1971 are 95.4 and 96.4 per cent, respectively. The latter ratio implies that in 1971 there would be around 180,000 families living with other family or nonfamily households.

Basic data relating to total families and family households are shown in Table 2 below and Table A-6.

Nonfamily Households

Nonfamily households consist of individuals or groups of persons who occupy separate dwellings. The demand from this source reflects important changes in attitudes and preferences. Such factors as the availability of bachelor apartments, the declining popularity of boarding houses, the growing number of university students, and the desire and ability of older persons (due to improvements in old age security) to maintain households strongly promote these changes.

What have been the most significant features in nonfamily household formation in the past, and particularly in the last ten years? Nonfamily households occupied 13.8 per cent of all dwellings in 1941 and 13.2 per cent in 1956. During this period the annual increase in this type of household formation amounted to some 2 per cent per annum (see Table 2 below), a growth rate below that of net family household formation during this period, and much below the rates of growth which followed in the subsequent periods. The average annual increase in nonfamily households, which had been about 8,000 between 1941 and 1951, and about 12,000 between 1951 and 1956, jumped to 29,000 in 1956-61, and the present rate of increase is estimated to be about 34,000 per year.

A closer look at the age of nonfamily household heads by sex (see Table A-3) shows that half the increase between 1956 and 1961 was due to household formation by females over 55 years old. The balance of the increase was concentrated in three other groups -- males over 55 years, males under 34 years and females under 34 years. In all, some three fifths of new households of this type were set up by persons over 55 years of age, the majority of whom were widowed and often pensioned. The real income of this group in the population is affected not so much by low economic growth and relatively high unemployment, as by changes in pensions, price levels, and asset holdings at retirement, since the majority of these people normally live on fixed incomes. The relatively stable price level over the past decade combined with improvements in pension plans, have undoubtedly had a favourable income effect on this group. This would apply especially to home-owners in the age groups over 65 because of the prevalence of mortgage-free ownership (see Table A-4).

Nonfamily household formation in the other age groups represents a relatively small proportion of the total. Much less is known about households in this category, but the increased availability of suitable small and attractive apartment units, which were constructed since 1958 on a larger scale than ever before, in conjunction with

urban growth and changing preferences, appear to explain this phenomenon to a very large extent. In many ways, supply was able to create its own demand.

The Census divides nonfamily households into one-person and multiple-person households, with and without "lodging" families (see Table A-5). It is significant to note that by far the largest increases since 1951 have been occurring in single-person households, while households with lodging families showed a continued decline.

The phenomenon of nonfamily household formation in Canada has closely paralleled developments in the United States. In the latter country, the ratio of nonfamily household formation to total household formation is now very high, and has major relevance for new residential construction. Between 1956 and 1961, net nonfamily household formation in the United States rose to 355,000 per year, and accounted for over 44 per cent of total net household formation. The comparable rate for Canada was 23 per cent between 1956 and 1961 and is even higher at present.

The demand for new housing from this source is expected to remain strong between now and 1970. Furthermore, during the first half of the 1960's the strength in demand from this source is helping to offset the temporarily weak demand from net family formation (see Table 2). The projections of new nonfamily households are based on prospective changes in the age structure of the adult population and on the estimated propensities of the various age groups to set up such households. The age groups which supply the largest number of nonfamily household heads, namely those over 55 and those under 35, will provide a growing demand base.

Nonfamily households of individuals or groups of persons by age and sex from 1951 to 1976 are shown in Table A-3. The first panel of this table consists of so-called "headship rates" related to population for each age group. The underlying assumption is that the same rates of increase in "headship rates" would prevail from 1961 to 1966 as were observed between 1956 and 1961, and that the rates of growth in "headship rates" would taper off after 1966.

Total Households

A summary of changes in total households is shown in Table 2. Average annual percentage increases slowed down considerably between 1901 and 1941, reflecting the parallel slow-down in the average growth rates of families. Between the Censuses of

1941 and 1961, however, there was a very large expansion in the number of households. These more rapid increases were initially due to the sharp post-war rise in net family formation, but were subsequently sustained by increases in nonfamily households. The high level of net immigration in the post-war period was also an important contributing factor. In the past three years, net family formation declined to an annual rate of about 60,000 as a consequence of low net immigration and changes in demographic factors. Although annual household data for this period are not available, it is estimated that total household formation did not decline as much as net family formation, partly as a result of further undoubling of existing families, and partly as a result of accentuated nonfamily household formation.

Table 2

Average Annual Increases in Families and Households,

Between Census Years 1901-76

	Families		Family Households		Nonfamily Households		Total Households	
	('000)	(%)	('000)	(%)	('000)	(%)	('000)	(%)
1901-11	34.3	2.8	n.a.	n.a.	n.a.	n.a.	39.1	3.3
1911-21	34.8	2.2	n.a.	n.a.	n.a.	n.a.	35.5	2.3
1921-31	35.5	1.8	n.a.	n.a.	n.a.	n.a.	46.3	2.4
1931-41	37.6	1.6	n.a.	n.a.	n.a.	n.a.	34.6	1.5
1941-51	68.2	2.4	56.4	2.2	8.0	2.0	64.4	2.2
1951-61	85.8	2.3	94.3	2.8	20.5	3.8	114.8	2.9
1961-71	90.1	2.0	95.5	2.2	33.0	4.1	128.5	2.5
1951-56	84.6	2.4	91.7	2.9	12.4	2.6	104.1	2.9
1956-61	87.0	2.2	97.0	2.7	28.6	5.0	125.6	3.0
1961-66	72.0	1.7	77.7	1.9	34.5	4.7	112.2	2.3
1966-71	108.2	2.3	113.4	2.5	31.5	3.5	144.9	2.7
1971-76	126.2	2.4	134.1	2.6	30.6	2.9	164.7	2.7

n.a.: Not available.

Note: Data exclude Yukon and Northwest Territories.

Source: Based on data from Dominion Bureau of Statistics and Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

The increases in total households implied by the projections of family and non-family households are expected to be strong, but are not likely to become as strong as the increases recorded during the 1950's. This point will be taken up again in Section III in connection with the changes in the level of new residential construction.

The growth patterns in family and household formation in Canada have closely resembled those in the United States. Table 3 shows comparisons between the two

countries for the period 1940 to 1976. In the decade of the 1940's, the difference in the rates of household formation between the two countries were very small. During the 1950's, however, Canadian family household formation was twice as high as the American. On the other hand, nonfamily household formation in the United States exceeded that in Canada by a substantial margin during the two decades of the 1940's and 1950's.

The projections for the two countries in Table 3 indicate that Canadian household formation is expected to be relatively higher than the American. This would be due to higher rates in family as well as nonfamily household formation.

Table 3

United States - Canada Comparisons of Increases in Households by Type

(Average annual per cent changes between Census years)

	United States				Canada		
	Family Households	Nonfamily Households	Total Households		Family Households	Nonfamily Households	Total Households
1940-50	2.1	3.0	2.3	1941-51	2.2	2.0	2.2
1950-60	1.4	5.2	1.9	1951-61	2.8	3.8	2.9
1960-65	1.7	4.7	2.2	1961-66	1.9	4.7	2.3
1965-70	1.6	2.5	1.7	1966-71	2.5	3.5	2.7
1970-75	1.7	2.4	1.8	1971-76	2.6	2.9	2.7

Source: United States data based on Table A-7; Canada data based on Table 2.

II - HOUSING INVENTORY AND NEW CONSTRUCTION

Since the net increase in the number of households is defined as the net increase in the occupied housing stock, the preceding household estimates provide a very important element in appraising the volume of new housing construction over the balance of this decade. Briefly, the basic factors influencing the volume of total new housing construction may be traced in the following simplified schematic outline:

Family + nonfamily households = total households

Total households = occupied housing stock

Occupied housing stock + vacancies = total housing stock

Net increase in total housing stock + "other factors"[1/] = units constructed

Households - The causal relationship between net household formation and new construction may be a direct one -- for example, when a new family rents a new apartment or buys a new house; or it may be an indirect one -- for example, when a new family purchases a house from some other family who, in turn, will buy a new house, etc. Similarly the total demand for housing is more strongly sustained if a rising number of people are enabled to continue the maintenance of households, for instance, due to improved pension security.

Vacancies - The number of vacancies in the total housing stock appears likely, over the longer run, to grow roughly in proportion to the growth in the total stock. This assessment is predicated on the concept of a long-term or "frictional" vacancy rate associated with household mobility and transfers of properties. This rate does not take into account short-run deviations as a consequence of temporary overbuilding or underbuilding, since it is assumed that during a longer period, such as the period under consideration in this study, the market would tend in general to equilibrate supply and demand in housing.

Other Factors: (1) Replacements - The allowance for replacement demand is based on the observation that a certain amount of construction is required each year to maintain the existing stock of dwellings (given certain assumption about the rate of vacancies and the level of accommodation-sharing families and persons). The need for replacing dwellings is related to various factors, such as removal due to age,

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1/ This item includes allowances for the construction of new units due to such factors as demolitions, abandonments, accidental losses and net conversions.

demolition as a consequence of shifting land uses, accidental destruction by fire and flood, or abandonment due to migration. However, the causal relationship between removals and new construction is not necessarily a direct one, as is summarized in the following excerpt from Housing and Urban Growth in Canada:[1/]

> There is no theoretical upper limit to the rate of non-farm losses. Given a sufficient rate of new housebuilding, over and above the needs of population growth, the poorer dwellings in the stock would become unmarketable as dwelling space. As permanently vacant accommodation they would no doubt revert to the public in due course for tax default or be sold to private interests to make way for new land uses. In either case they would eventually be demolished. But the demolition would follow their effective removal from the useful housing stock and not bring it about. The accumulation of vacant dwellings, provided they are confined to the dwellings of the poorest quality in the stock, need not inhibit the demand for new housing. Consequently any upper limit to the rate of dwelling unit withdrawals from the housing stock over the next twenty-five years depends on the upper limit of new housebuilding possibilities.

(2) Conversions - Additions to the total inventory of dwelling units may also result from converting existing large dwellings into several smaller units, or from changing a building from non-residential to residential use. Similarly, "deconversions" and shifts of dwellings out of residential use represent deductions from the stock of housing. The net difference between these gross additions and gross removals has significance for the level of new construction. During periods of housing shortage, this net difference would tend to be positive since construction of new housing would tend to be augmented by conversions in order to satisfy the demand for total housing. In the absence of housing shortages, and under conditions of expanding incomes, the demand for converted dwelling units would tend to be weak, and the net residual between conversions and deconversions could be zero or even negative.

The Components of New Construction to 1970

The following is a more detailed discussion of vacancies and the other factors for which allowances must be made, in addition to the previously estimated demographic factors, in projecting housing construction to 1970.

The vacancy rate[2/] of the Canadian housing stock has been steadily increasing during the post-war years. It may be assumed that vacancies were initially low because

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1/ A brief from Central Mortgage and Housing Corporation to the Royal Commission on Canada's Economic Prospects, 1956.

2/ Included in this rate are only vacant dwellings intended for permanent residence.

of widespread housing shortages. The number of vacancies was estimated to have risen to some 165,000 units by 1961, which represented about 3.5 per cent of the housing stock. This ratio is estimated to have increased further to about 3.9 per cent in 1963. In comparison, the rates for 1928 and 1929 were estimated to amount to some 4.0 per cent.

The assumed vacancy rate underlying the estimate for 1970 is 4.0 per cent of the total housing stock. This is a rough allowance for the long-term or "frictional" vacancy rate associated with future mobility of households. The assumption of the 4 per cent vacancy rate is related to an anticipated continuation of high family mobility. For example, family allowance data indicate that, on average, Canadian families in this category change residence once every four years.[1/]

The slightly higher vacancy rate, together with the increasing housing stock, imply a stock of some 245,000 vacant dwelling units in 1970. Thus, in addition to new construction needed for the growth of family and nonfamily households, an allowance was made for an average annual rate of construction of between 6,000 and 7,000 units to 1970 (see Table 4).

Table 4

Housing Stock, Census Years 1951-76

(Thousands of units)

1. Size of Housing Stock	1951	1956	1961	1966	1971	1976
Total housing stock	3,511	4,061	4,734	5,345	6,099	6,958
Per cent vacant	2.6%	3.0%	3.5%	4.0%	4.0%	4.0%
Vacant housing stock	90	120	165	215	245	280
Occupied housing stock	3,421	3,941	4,569	5,130	5,854	6,678
2. Changes in Housing Stock Due to:	**1951-56**	**1956-61**	**1961-66**	**1966-71**	**1971-76**	
	(Average annual change in thousands of units)					
Net household formation	104	126	112	145	165	
Family households	92	97	78	113	134	
Nonfamily households	12	29	34	32	31	
Increases in vacancies	6	9	10	6	7	
Total net increase in housing stock	110	135	122	151	172	

Note: Data exclude Yukon and Northwest Territories. Vacancies and total stock figures are estimates including only dwellings intended for permanent residence.

Source: Based on data in Table A-6, and estimates by Economic Council of Canada.

Very little is known about the quantity of construction due to factors other than those accounted for by net household formation and the change in vacancies. A reconciliation between changes of housing stock and number of units completed from

1/ See Central Mortgage and Housing Corporation, Canadian Housing Statistics, 1963, Table 88.

1951-61 implies (1) sizeable net additions to the housing stock from sources other than new construction (e.g., conversions of large one-family residences into several smaller apartments, etc.); and (2) some degree of undercounting of starts and completions. In the absence of more complete statistics, the magnitude of housing demand due to other factors is extremely difficult to assess, but it is likely that it may be very strong during the next decade. The following are some of the considerations which were taken into account in the formulation of the estimates.

Net Replacements. (1) Accidental losses. These would be due mainly to complete or partial destruction by fire, but also due to other unpredictable hazards, such as hurricanes or floods. Fire losses of nonfarm residential property amounted to some 33 million dollars in 1961.[1/] A breakdown of lost units by age is not available, but fire losses are presumably largely concentrated in the old housing stock. Although fire protection may be assumed to improve, the exposure to fire risk will also increase with a growing housing stock. The assumption is made that fire losses will increase in proportion with the housing stock.

(2) Farm abandonments. Census data indicate that the number of farm households declined by 10,600 per year from 1951-56, and by 25,500 per year from 1956-61. A portion of this decline probably reflects the redesignation of the same households from farm to nonfarm status, but there were undoubtedly large movements off farms resulting in abandonment and adding to net increases in housing demand elsewhere. It may be assumed that mainly older dwellings are abandoned in such shifts. Movements off farms are likely to continue, but it is assumed that such abandonments will become relatively less important as a share of total housing stock.

(3) Nonfarm removals. Withdrawal of dilapidated nonfarm housing may occur by public action, such as condemnation, or it may be brought about by private initiative, such as rural nonfarm abandonments associated with migration to urban areas, or such as urban land assembly and clearance by private builders for purposes of constructing office or apartment buildings. Other removals are related to the erection of public works such as buildings, streets and express highways; they may also be related to slum clearance, urban renewal, or land assembly and clearance for low-rental housing. The factors determining nonfarm withdrawals, especially those in larger urban centres, are not necessarily the

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1/ Fire losses of farm properties amounted to some 13 million dollars in 1961, but these are not broken down between farm residential and other losses.

age of the housing stock, but mainly the need for, or prospect of, more efficient land use. Nevertheless, it may be assumed that such removals are also concentrated very largely on the older portions of the housing stock. It is estimated that total nonfarm removals will be very significant in the years ahead. However, they would largely be the consequence of new construction rather than the immediate cause. The ultimate determinant would be the rate of absorption of higher-standard newly built dwellings in suitable locations. Under conditions of rising employment and increasing real incomes, such as postulated under the movement of the economy towards potential output by 1970, the demand for higher-standard dwellings will undoubtedly be strong.

In fact, the increases in incomes associated with the attainment of potential output would be an important stimulating factor in net replacements, and a likely upward tendency in the average size and quality of new homes. Chart 15, p. 47 in the First Annual Review of the Economic Council[1/] indicates that the increases in output per person from 1963 actual to 1970 potential would be more rapid than anything experienced since the Second World War. A similar acceleration in personal disposable incomes per capita would also emerge, with an increase of more than 20 per cent by 1970 referred to in the Review.[2/] Some United States studies on housing demand suggest a high long-term income elasticity of demand for housing.[3/] Although no comparable studies have yet been made for Canada, these are suggestions of the possibilities for housing in the period ahead. Although this is an important factor for other aspects of housing demand, it is relevant here for the changing circumstances for net replacements. The estimates here imply a higher level of net replacements in the period ahead than are implied by the statistics for the 1951 to 1961 period, and the higher levels of income are expected to be important in such a change.

Total net replacements, comprising all above elements, are assumed to amount to 26,000 per year from 1961-66, 32,000 from 1966-71 and 43,000 from 1971-76. This is based on the following quantitative relationships between net replacements, housing construction and housing stock:

1/ Economic Council of Canada, Economic Goals for Canada to 1970, Ottawa, Queen's Printer, 1964.

2/ Ibid., p. 62.

3/ See Margaret G. Reid, Housing and Income, Chicago and London, University of Chicago Press, 1962; and Richard F. Muth, "The Demand for Nonfarm Housing", The Demand for Durable Goods, Arnold C. Harberger, ed., University of Chicago Press, 1960.

Table 5

Net Replacements as a Percentage of Housing Stock and New Construction, 1961-76

	1961-66	1966-71	1971-76
		(Per cent per year)	
Net replacements as percentage of beginning stock (1)	0.55	0.60	0.70
Net replacements as percentage of new units constructed	17.5	17.6	20.1

(1) In the United States, "net removals" for 1960-70 are projected at 0.85 per cent per year of the 1960 housing stock -- that is, at about 500,000 units per year. This rate is based on the experience recorded during 1957-59. "Net removals" are defined to include demolitions, net conversions and mergers, and all other losses to the housing stock such as abandonments and accidental destruction (see L. Jay Atkinson, "Long-Term Influences Affecting the Volume of New Housing Units", Survey of Current Business, November 1963).

Source: Based on estimates by Economic Council of Canada.

The estimates of these annual removal rates are probably too conservative in view of the age structure and condition of the housing stock. Over 30 per cent of the 1961 inventory of housing was built before 1920 -- that is, some 1.39 million dwellings. Table A-8 shows that 1.16 million of these consisted of nonfarm units, and 547,000 were located in the 17 metropolitan areas. Similarly, some 255,000 units were in need of major repair in 1961 (see Table A-9) Other Census data indicate that over one fifth of all housing was without piped-in water, or without exclusive use of flush toilet, bath or shower. It may be assumed that dwellings in poor condition, or dwellings without proper sanitary facilities, belonged largely to the oldest portions of the housing stock.

Important conclusions may be drawn from the estimated replacements in relation to the age structure of the housing stock. It is assumed, for the moment, that all withdrawals, including accidental losses, rural abandonments and urban demolitions, would be exclusively concentrated on the housing stock built before 1920. At the replacement rate estimated for the decade 1961-71, it would take until the year 2009 to withdraw this old housing stock. Towards the end of this period, the minimum age of the remaining dwellings in this category would be 90 years, and their average age even higher. However, withdrawals are not exclusively restricted to the oldest buildings, and the time period necessary to replace the oldest housing stock at the estimated replacement rates would therefore be even longer. It should therefore be stressed

that the rates of replacement estimated in this study should be considered minimum rates which will have to be increased substantially in future years. Although no reconciliation between the annual estimates can be made, these estimates of net replacements are drastically higher than seem to be suggested for the period 1951-61.

Net Conversions. It is assumed that additions to the housing stock from conversion will be equalled by "deconversions" during the period under consideration. The additions to the housing stock by conversion may be broken down into "structural" and other conversions. The structural type is extensive enough to involve measurable capital expenditures which are included in the valuation of new residential construction. This type of conversion amounted to about 3,600 per year between 1956 and 1961, and the same annual rate was assumed for 1961-76.

Given the assumptions for "other factors", net change in households and increase in vacancies, annual rates of new construction are estimated to amount to 183,000 units for 1966-71 and 215,000 units for 1971-76. The rate of construction for the twelve-month span which falls approximately on 1970 was obtained by log-linear interpolation between 1963 and the average level between the two Census periods 1966-71 and 1971-76. The annual rate implied for 1970 amounts to approximately 190,000 units (see Table 6).

Table 6

Construction of New Housing Units, 1966-76

(Thousands of units)

	Net Change in Total Housing Stock (1)	Other Factors (2)	Construction of New Housing Units (3)	
	(5-year total)	(5-year total)	(5-year total)	(Annual rate)
1961-66	611	130	741	148
1966-71	754	161	915	183
1971-76	859	216	1,075	215
1963				135
1970				190

(1) Includes net household formation and increases in vacancies.

(2) Comprises allowances for demolitions, abandonments, accidental losses, and net conversions other than the annual allowance for 3,600 "structural" conversions described above.

(3) "Construction" represents an expression in which housing starts are given one-third and housing completions two-third weights (National Accounts usage).

Source: Based on estimates by Economic Council of Canada.

Construction by Area and Type

The distribution of construction may be estimated on the basis of the physical condition and adequacy of the housing stock in relation to population growth in the various locations. Due to the decline in the farm population, the construction of nonurban dwellings will probably remain static. Population growth is expected to be much more rapid in urban areas, and particularly in the larger cities in which levels of income are also higher in relation to other areas. The estimates in Table 7 suggest that by 1970 over 68 per cent of the population is expected to live in urban centres with populations of 5,000 or over. Moreover, the replacement demand in urban areas, therefore, will be much stronger, and thus construction will be located there to a much larger extent than would be indicated by relative population growth alone.

Table 7

Population in Urban Centres with 5,000 Population and Over
(Percentage of total population)

1951	52.3
1956	56.7
1961	61.9
1966	65.2
1970	68.2

Source: Table A-10 in Statistical Appendix.

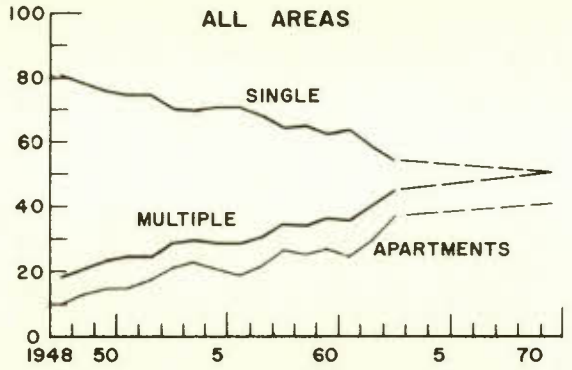
The results of the projections indicate that by 1970 between 85 and 90 per cent of all new residential construction will be located in urban centres having over 5,000 population.

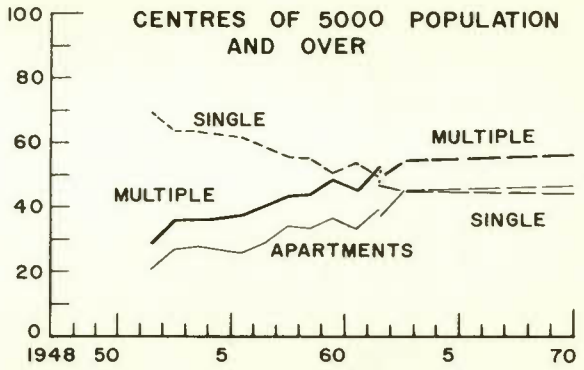
The trend towards relatively more apartment construction has been striking since the early 1950's. In fact, by 1963 more "multiples" than "singles" were built in urban areas of 5,000 population and over, as shown in Chart 2. This trend is assumed to continue to 1970 in the urban areas, but at a somewhat more moderate rate. Among the factors which have helped to account for it, and which will continue to be important in the future, are the following:

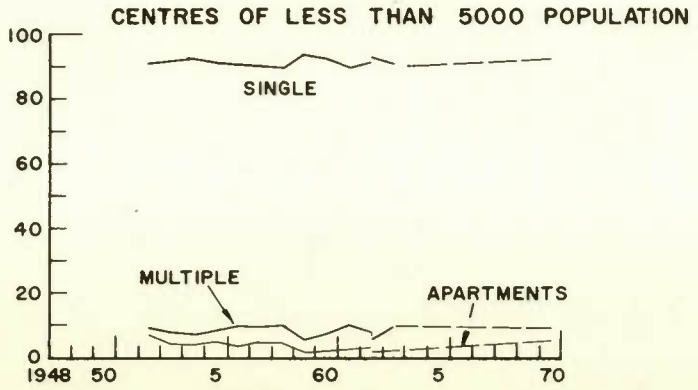
- Demographic factors. There will be an increased rate of new family formation, and new younger family household heads will, for income and other reasons, tend to accentuate the demand for rentals. Table A-4 indicates that, at the 1961 Census, the proportion of household heads renting rather than owning was substantially higher in the younger age groups than in the older. Also, non-family households will continue to play an important role in housing demand. The demand of younger nonfamily household heads tends to be heavily concentrated on rented space in apartments or other multiple units.

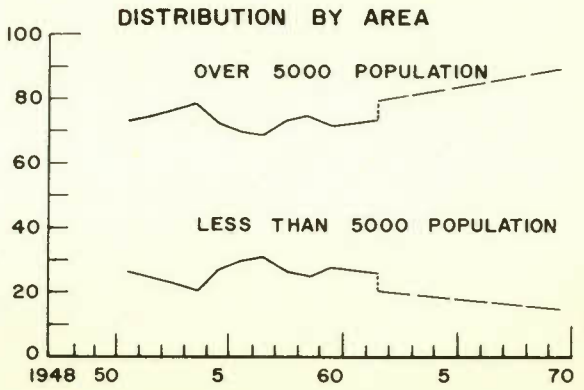
CHART 2

PERCENTAGE DISTRIBUTION OF NEW CONSTRUCTION BY AREA AND TYPE









Source: Based on Tables A-11 to A-13.

- Social trends. These are more difficult to quantify. However, there are tendencies for people to move back to the cities from single dwellings in the suburbs, or not to move to single dwellings in the suburbs at the same rate as in the past. This may reflect, among other things, a certain disenchantment with life in the suburbs, as well as the recently greater availability of attractive apartment space and the rejuvenation of some down-town areas.
- Cost of financing. An impetus towards relatively more rapid rate of construction than during the 1950's within cities may result from the observed narrowing of the differentials in terms between conventional and National Housing Act mortgages. During the 1950's, the National Housing Act stimulated the construction of single dwellings, mainly in suburbs, not exceeding a certain size and value. The relatively more favourable NHA mortgage terms therefore largely accelerated the relative growth of suburbs as compared with "nonsuburb" city areas. However, as differentials in terms narrow, it may be assumed that there would emerge relatively more incentives to buy or to rent conventionally financed housing. Further, implementation of proposals by the Royal Commission on Banking and Finance[1/] to permit participation of a wider range of financial institutions in conventional mortgage financing, and to permit increases in loan-to-value ratios, may facilitate to a much larger extent the transfer of existing properties, particularly in those city areas where rejuvenation or rehabilitation is possible.

The following array summarizes the projected distribution of new construction by area and type for around 1970.[2/]

Table 8

Percentage Distribution of New Housing Construction at Potential Output, by Area and Type, 1970

Type \ Area	Centres of 5,000 Population and Over	Other	Total
Single detached	38.4	11.6	50.0
Multiple units	48.9	1.1	50.0
(Of which apartments)	(40.5)	(0.5)	(41.0)
Total	87.3	12.7	100.0

Source: Tables A-11 to A-13.

1/ Report of the Royal Commission on Banking and Finance, Queen's Printer, Ottawa, 1964.

2/ This projection is largely a judgment about the future distribution of new construction. However, it should be noted that shifts in this projected distribution would tend to have only marginal effects on the aggregate dollar value of new residential construction.

On the basis of an estimate for new construction of some 190,000 units in 1970, it may be further estimated that about 166,000 would be built in urban centres, and the balance, or some 24,000, in other areas. About half of all units, or some 95,000, would consist of multiples, and almost all of these would be built in urban areas.

III - NEW RESIDENTIAL INVESTMENT

Before considering the level of residential investment implied by the attainment of potential output by 1970, it should be emphasized that the level has been rather low over the last five years. This is not only in relation to experience in other countries, but also in comparison with past performance in Canada.

Housing Construction in Other Countries

Canada's performance with respect to housing construction during the past decade is low compared with that of other industrialized countries. The growth in total population and more especially in urban population, which was more rapid than in most other developed countries, was not accompanied by a commensurately rapid increase in residential construction. If the number of housing units constructed is compared to the relative increase in population over the period from 1950 to 1960, Canada's low position in relation to other countries is striking (see Table 9).

Table 9

Population Growth and Housing Construction,

Selected Countries, 1950-60

Country	Housing Constructed per 1,000 Increase in Population
United Kingdom	1,549
Sweden	1,337
Germany (F.G.R.)	994
Belgium	941
Denmark	807
Finland	751
Italy	795
France	567
Netherlands	578
Switzerland	625
United States	477
Australia	385
Canada	298

Source: Based on data from United Nations.

Housing starts per 1,000 population increase in Canada's metropolitan areas over the same period were only some 10 per cent higher than those for the country as a whole. Montreal experienced one of the highest ratios of construction to population growth, namely 375.[1/] Even for the highest city in Canada, it only approached that of Australia, the second lowest country in Table 9.

1/ Average of Census periods 1951-56 and 1956-61.

A not dissimilar picture emerges from international comparisons of residential construction as a proportion of total output (see Table 10), or in other terms (see Table 11).

Table 10

Residential Investment as a Percentage of Total Output, Selected Countries (1)

	1953-57	1958-62
Switzerland	5.1	6.2
Italy	5.1	5.8
Belgium	4.7	5.6
Sweden	5.2	5.3
Germany (F.G.R.)	5.1	5.2(2)
France	4.2	4.7
United States	4.4	4.6
Canada	4.8	4.4
Netherlands	4.4	4.4
United Kingdom	3.3	2.9

(1) Based on expenditures in current prices.

(2) 1958-60.

Source: Organization for Economic Co-operation and Development.

Table 11

International Comparisons of Housing Investment

	Annual Number of Dwellings Constructed (1)		Investment, 1960 (Converted to $U.S.)		
	Total	Per 1,000 Inhabitants	Total	Per Capita	Per Dwelling
	(Thousands)	(Number)	($ Million)	($)	($)
Germany (F.G.R.)	515	9.7	3,825	72	8,500
Sweden	71	9.4	615	82	9,000
Switzerland	48	8.9	605	113	12,000
United States	1,405	7.8	22,572	126	13,300
Netherlands	84	7.3	503	44	6,000
Canada	127	7.1	1,501	83	11,500
France	318	7.0	2,350	51	7,400
Italy	297	6.0	1,762	36	6,100
United Kingdom	301	5.7	2,137	41	7,000
Belgium	51	5.6	610	67	11,600

(1) Average for years 1959, 1960 and 1961.

Source: Based on data from Dominion Bureau of Statistics, United Nations, and Organization for Economic Co-operation and Development.

The reasons for Canada's relatively low position in these comparisons are not altogether clear. As far as the United States is concerned, about 10 per cent more dwellings per 1,000 population have been built there, at an average value of about 15 per cent more per dwelling (see Table 11). The share of residential investment in total output has been about 15 per cent higher than in Canada in recent years. Some of the major factors contributing to these differentials appear to have been higher real incomes and easier financing arrangements in the United States. Also involved have been a higher level of replacements in the United States and more extensive urban renewal. The comparatively higher residential building in the European countries appears to have been promoted by large pent-up demands for better housing, more active urban rebuilding (at least during the early part of the decade in the war-torn cities), relatively rising housing standards, stronger government participation in housing programmes, and buoyant economic conditions.

New Residential Construction After the Second World War

The initial impetus to housing demand in Canada after the Second World War stemmed from mainly two sources. First, the accumulated backlog in demand had to be satisfied. Second, the increase in net family formation was very strong. Up until the early 1950's, the rate of construction barely kept pace with additions to families. But from about 1954 to 1958, the rate of construction exceeded net family formation, mainly in response to institutional and policy changes which facilitated residential mortgage financing. The share of new residential construction in total output continued to climb during the entire period after the Second World War up to 1958, with the exception of two cyclical interruptions. Between 1946 and 1958, real Gross National Product increased by 4.0 per cent annually, while new residential construction (in constant 1949 dollars) increased by 7.5 per cent. In 1958, the share reached its highest level during the entire post-war period.

Over the subsequent period 1959-63, new residential construction declined at an average rate of 2.8 per cent per year. In fact, since 1960 its share in total output has not exceeded 3.5 per cent. This is a lower proportion than had existed at any time over the past four decades except during the depression of the 1930's and the Second World War. Even in terms of absolute expenditure, 1963 was still below the 1955-58 average. In the absence of sizeable net immigration of families, and also as a reflection of only slowly advancing numbers of marriages, net family formation declined during the years 1959-63, averaging no more than 60,000 during the past three years. This drop has undoubtedly had a major restraining influence on the demand for new

housing. What has apparently prevented an even further decline in demand than could have been expected on the basis of the sharp reduction in net family formation, has undoubtedly been the demand-sustaining developments of undoubling of existing families, substantial increases in nonfamily household formation, and the upswing in replacement demand resulting from centre-town apartment and office construction, from the abandonment of rural dwellings, and from the manifestly growing desire for higher-quality housing.

The sluggish growth of total output during this period, accompanied by rising levels of unemployment and very moderate increases in per capita income, has also had a restraining influence on the construction of new housing, as well as on the sale of existing homes. In contrast to the experience of the depression of the 1930's, there has been no collapse of real estate values, and few mortgages have been foreclosed.

Residential Expenditure to 1970

Regarding Canada's residential investment potential for 1970, it now remains to assemble the component cost estimates based on the volume estimates in the preceding sections of this study. Table 12 summarizes the valuation of the various components, and a detailed breakdown of the various cost assumptions is shown in Table A-14. The unit cost components, expressed in real terms, were assumed to rise slightly. There are reasons to believe that a number of offsetting tendencies may prevent most unit costs in construction from rising too rapidly over this period (this is meant to apply to cost pressures due to quality improvements, and not to those emanating from rising prices). Included among the factors which may continue, as in the past, to hold down costs, are new materials, improving methods and techniques, rising productivity in the construction industry, growing specialization by builders, and competitive pressures. An explicit allowance for some higher standards was made by assuming that the average size of a single-detached dwelling would increase by about 100 square feet (1,250 to 1,350 sq.ft.). This implies increases of about 1 per cent each year in the unit value per dwelling from 1963 to 1970. Similarly, an allowance was made for an annual increase of about 1 per cent in the unit value per multiple dwelling. Separate projections based on past relationships were made for major alterations, improvements and supplementary costs (see Table A-15).

Table 12

Valuation of New Residential Construction, 1963 and 1970

	1963	1970
	(Millions of dollars)	(Millions of 1963 dollars)
Expenditure on:		
Single-detached dwellings	1,005	1,411
Multiple dwellings	550	930
Conversions	8	13
New housing construction	1,563	2,354
Major alterations and improvements	87	139
Supplementary costs	63	104
New residential construction	1,713(1)	2,597

(1) Includes residential investment of $8 million by federal government departments.

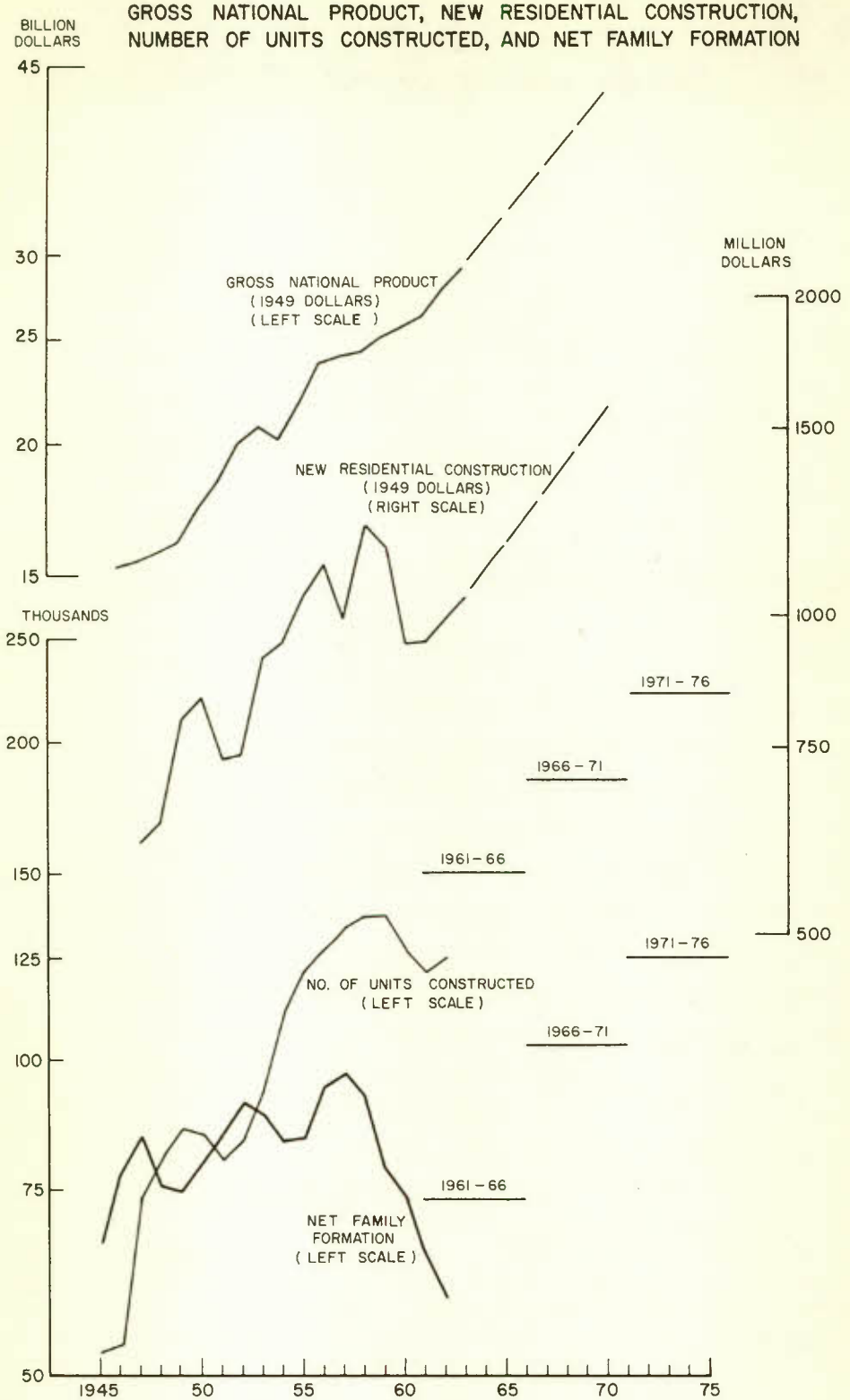
Source: Table A-14.

On the basis of these estimates, new residential construction may be expected to rise to about $2.6 billion (in 1963 dollars) in 1970. This amounts to an annual rate of growth of 6.2 per cent. This is somewhat higher than the projected growth rate of 5.5 per cent per year for output to potential in 1970.[1/] Under these conditions, the share of new residential construction in Gross National Product would not increase as rapidly as during certain past periods when the rate of growth of housing construction exceeded that of total output by a substantially larger margin. Although this share is relatively low at present, it reflects the current underlying demand conditions. The expansion in housing demand (see Table 13) between now and 1970, although fairly vigorous, will probably not assume the proportions of the annual increases which prevailed during certain periods after the Second World War in order to fulfill anticipated requirements. Despite the expected strength in net family and household formation, the 1963-70 period differs from that of the earlier post-war period on two basic counts: (1), there exist no substantial backlogs in effective demand for housing; (2) although the anticipated rate of net family and household formation is high by historic standards, it is still relatively lower than the rates which prevailed after the Second World War (see Charts 3 and 4).

1/ See B.J. Drabble, op. cit.

CHART 3

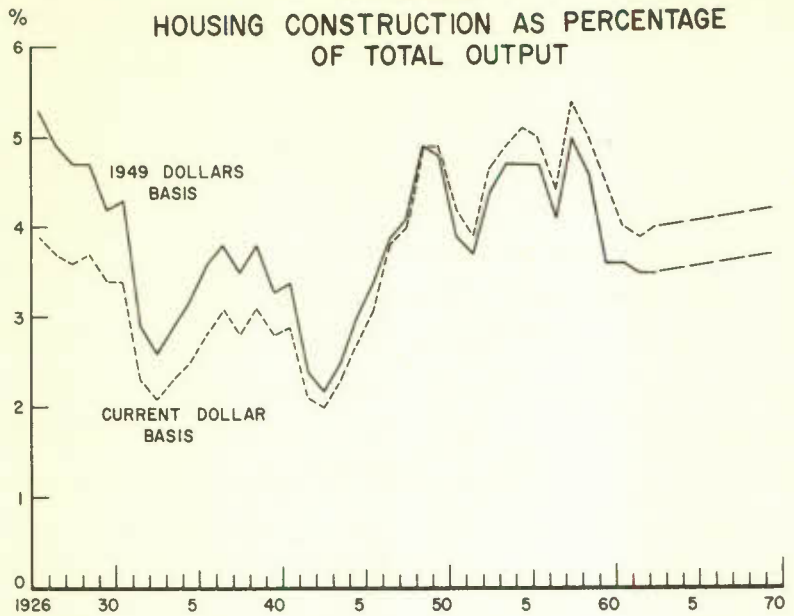
GROSS NATIONAL PRODUCT, NEW RESIDENTIAL CONSTRUCTION, NUMBER OF UNITS CONSTRUCTED, AND NET FAMILY FORMATION



Note: Data for Net Family Formation and Number of Units Constructed are smoothed by a three-year moving average for 1946-62. The levels for 1961-76 represent annual averages for Census periods. Gross National Product and New Residential Construction are unsmoothed annual data from 1946-63, connected to the projected level in 1970 by a straight line.

Source: Based on data from Dominion Bureau of Statistics, Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

CHART 4



Source: Based on data in Table A-16, and estimates by Economic Council of Canada.

Table 13

New Residential Construction as a Percentage of Gross National Product, 1963 and 1970

	1963	1970
1. Gross National Product		
Annual increase, Volume (%)		5.5
Index of volume	100.0	145.4
GNP in millions of 1949 $	29,380	42,730
GNP in millions of 1963 $	43,007	62,557
2. New Residential Construction		
Annual increase, Volume (%)		6.2
Index of volume	100.0	152.1
New residential construction, millions of 1949 $	1,033	1,571
New residential construction, millions of 1963 $	1,705	2,597
3. New Residential Construction as Per Cent of GNP		
Based on 1949 dollar series	3.5	3.7
Based on 1963 dollar series	4.0	4.2

Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

It will be helpful at this stage to summarize the implications of these projections of new residential construction for financing. New residential construction is far more dependent on external financing than is business investment. (External financing means funds borrowed from financial institutions and the capital market as a supplement to the funds provided by the individual or corporation making the capital expenditure.) In fact, the gross demand for mortgage funds has been a major factor in the total demand for funds in the past.[1/] In the period ahead, the estimates provide for an increase in residential construction both in total and in relation to GNP from the levels of the early 1960's. However, Table 2 earlier indicates that the rate of increase in both family and nonfamily households will still fall short of the increases from 1951 to 1961. Chart 4 also indicates that housing construction will still be relatively smaller in relation to total output than prevailed from 1948 to 1958. This suggests that the extent of mortgage financing will also be relatively smaller than in the past. Furthermore, the amortization of past mortgages will provide a growing source of funds to the financial institutions, but this would still fall far short of the large absolute amount of new financing that would emerge. Although a large amount of mortgage financing of new residential construction is implied by these estimates of new residential construction, this would still constitute a relatively smaller share of national savings and GNP than prevailed in much of the 1950's. An area of greater uncertainty is the amount of financing that could emerge if the mortgage financing arrangements on existing homes were to continue to move towards the easier down payment, interest rate and repayment provisions that prevail for new construction.

An alternate assumption at potential output is based on more effective government participation in low-rental housing, as discussed in Section IV of this study in greater detail. If, for example, the over-all addition to residential expenditure due to increased government contributions amounted to about $200 million by 1970, the growth rate of total housing expenditure would be raised to 7.3 per cent per annum, and the share of housing in total output would amount to 4.5 per cent. This increased figure could not be considered high in relation to certain periods in the past, or in relation to the experience of many other industrialized countries. Yet, it should be emphasized that this alternate higher performance in Canada by 1970 postulates a significant departure from past low-rental housing activity.

1/ J. V. Poapst, The Residential Mortgage Market, Working Paper prepared for the Royal Commission on Banking and Finance, (Ottawa: The Queen's Printer, 1962), pp. 21 - 37.

IV - GOVERNMENT ASSISTANCE TO HOUSING

As emphasized in the early part of this study, the preceding analysis is predicated upon a number of important assumptions. Among these is the assumption that there would be no major change in government policy during the next few years. This assumption must be qualified. A substantial portion of the housing market is influenced directly or indirectly by government policy. Corresponding with constitutional powers, the contribution of the federal government is mainly economic (mortgage insurance, rates and regulations), and that of the junior governments is mainly of an administrative and planning nature (urban growth, welfare, utilities, community services, etc.). Generally, the various levels of government are concerned with efforts to raise the quality of housing through minimum standards such as the National Building Code, the regulations under the National Housing Act, and the subdivision regulations and building by-laws of provinces and municipalities. Local governments also have powers to condemn housing which is unsafe or unsanitary.

Some of the more important general measures by which, under the terms of the National Housing Act administered by Central Mortgage and Housing Corporation, the federal government may influence the housing market, consist in underwriting of mortgage investments of approved lenders for the construction of new housing for sale or for rent, the stipulation of down-payment requirements, and the establishment of maximum amounts for loans, loan-to-value ratios, mortgage interest rates, and terms of amortization. CMHC may also guarantee home improvement loans made by banks to home owners. It is assumed that the application of these measures, which are basically of a general nature, will be continued in the period ahead.

However, an <u>alternate</u> assumption might be considered postulating a significantly increased response to the federal <u>direct assistance</u> programmes by local governments with respect to low-rental housing and urban renewal. Although existing federal legislation with regard to low-rental housing and urban renewal has been considered fairly adequate, it has produced relatively little response up to the present. For example, during 1963, approval under federal-provincial agreements was given to 864 low-rental units. In total, about 12,000 such units have been built under this programme since its inception in 1949, and 9,000 of these receive operating subsidies. With respect to urban renewal, municipalities made use of a total of only $3.2 million in 1963 for the purpose of acquiring and clearing blighted or substandard areas under the

federal cost-sharing arrangements. The principal barriers against more extensive use of these programmes appear to have been institutional ones, particularly at the municipal level. But recently a few developments have emerged which may point to an accelerated pace of action. These are found in new legislation, in the streamlining of government machinery, and also in certain apparent changes in attitudes. A number of legislative changes designed to improve such responses were introduced in June 1964: 1/

> The federal government will pay one half of the cost of preparatory urban renewal studies, and also one half of the capital cost of the actual works, including land acquisition and clearance and the installation of all services. The federal government is now also prepared to loan up to two-thirds of the expenses incurred by the provincial and municipal governments.
>
> The federal-provincial partnership arrangements were extended to permit the purchase or lease of existing properties, as well as the construction of new housing, for families and individuals in need. Self-contained hostel or dormitory projects may also be built under these new arrangements. Furthermore, a new and alternative approach to public housing is now open to provinces and municipalities, under which the federal government will advance 90 per cent of the cost of construction or acquisition of public housing, including hostel and dormitory accommodation.
>
> The operating subsidies, amounting to 50 per cent of cost, and previously applicable only to newly constructed low-rental projects, have now been extended to cover other low-rental units as well.
>
> For future low-rental needs, the establishment of "land-banks" by municipalities may be financed, up to 90 per cent, by federal loans.
>
> Limited dividend organizations now have access to low-interest federal loans for up to 90 per cent of the cost of building or acquiring low-rental projects, hostels or dormitories for older people.
>
> The National Housing Act was amended to permit insurance of mortgages on existing properties in urban areas designated for urban renewal, in the hope that this measure may encourage rehabilitation and conservation of existing properties.

These legislative changes would appear to offer increased scope and incentives for action in this field by provincial and municipal governments. However, it would be very difficult to quantify the possible additional effect on housing demand. If it were assumed that the additional expenditure due to increased government participation would amount to $200 million per year by 1970, this would provide an

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1/ See the June 18, 1964, Amendment to the National Housing Act of Canada, 1954.

additional 15,000 units[1/] annually in the form of new developments, purchases of existing units, and rehabilitation of worthwhile residential properties. Public financial aid to families for purposes of conservation of existing housing in danger of serious decay could also be made a useful part of any such programme.

1/ The additional number of dwelling units may be assumed to comprise 3,000 singles and 12,000 multiples in 1970 (see Table A-14). Such an additional subsidy would tend to encourage a somewhat higher rate of undoubling, and it would also tend to accelerate the removal of existing substandard or inadequate housing. To achieve this effect, it is not necessary to assume that the housing subsidy would be used exclusively for the construction of new dwellings. Rather, the ultimate impact on over-all demand would also be achieved by allocating a portion of the funds to the acquisition of existing properties for the purpose of creating low-rental units. In either case, low-standard housing would tend to be eliminated and the need for construction of new units would be increased.

APPENDIX

STATISTICAL TABLES

Table A-1

Percentage of Married Males by Age,

Census Years, 1931-71

Age Group	1931	1941	1951	1956	1961	1971
			(Per cent)			
20-24	14.2	16.1	25.5	27.9	30.5	35.0
25-29	47.2	49.6	64.6	65.8	70.2	74.0
30-34	69.7	70.0	79.7	80.8	82.1	84.0
35-39	78.5	76.6	84.1	85.4	86.2	87.0
40-44	81.4	79.9	85.2	86.4	87.7	88.0
45-49	81.8	81.1	84.5	86.0	87.6	88.0
50-54	80.9	80.5	83.8	84.3	86.5	87.0
55-59	79.6	78.6	82.6	82.9	84.0	85.0
60-64	76.7	75.5	80.3	80.5	80.9	82.0
65-69	72.9	71.0	74.6	76.1	77.5	79.0
70	59.9	57.5	59.4	60.7	63.6	66.0
Total Adult Males	63.7	63.5	71.4	73.1	75.4	75.2

Source: Based on data from Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

Table A-2

Specific Marriage Rates, Census Years, 1921-76

(Rates per 1,000 persons by age and sex)

MALES

Age Group	1921	1931	1941	1951	1956	1961	1966	1971	1976
15-19	n.a.	n.a.	5.41	12.51	12.77	12.00	13.0	14.0	15.0
20-24	44.04	50.81	79.87	101.32	104.16	103.01	106.0	106.8	107.9
25-29	45.32	52.23	84.32	62.68	60.26	51.12	55.0	55.5	57.0
30-34	24.12	24.22	41.76	26.55	21.09	18.09	18.0	18.0	18.0
35-39	13.27	11.71	20.43	13.19	10.02	8.47	8.3	8.1	8.0
40-44	7.97	6.98	16.38	8.30	6.24	4.96	4.8	4.7	4.5
45-49	5.59	4.69	6.65	6.47	5.46	4.07	4.0	3.8	3.5
50-54	4.72	3.66	5.00	5.29	4.22	2.25	3.8	3.5	3.4
55-59	3.81	3.40	4.00	4.75	4.04	3.48	3.4	3.4	3.3
60-64	2.52	3.32	3.48	4.16	3.92	3.77	3.4	3.4	3.3
65-69	1.83	2.75	2.89	3.68	3.45	3.78	3.3	3.3	3.2
70-74	1.29	2.42	2.52	3.37	3.52	3.35	3.2	3.1	3.1
75-79	1.23	1.92	1.64	3.19	2.29	2.80	2.8	2.8	2.7

FEMALES

Age Group	1921	1931	1941	1951	1956	1961	1966	1971	1976
15-19	n.a.	n.a.	42.45	60.40	63.91	57.22	63.5	64.5	65.0
20-24	55.06	65.02	101.62	99.99	99.20	91.53	96.4	96.8	97.0
25-29	30.09	32.26	56.39	35.95	32.60	24.20	25.0	23.2	22.0
30-34	14.31	12.19	23.21	15.35	12.25	9.90	8.0	7.0	6.5
35-39	8.02	6.79	10.97	8.66	7.10	5.64	5.5	5.0	4.5
40-44	5.21	4.20	6.04	6.44	5.27	4.24	4.0	3.7	3.3
45-49	4.43	3.42	4.20	5.17	4.64	4.00	3.9	3.6	3.2
50-54	2.15	2.51	3.05	4.03	3.82	3.17	3.8	3.6	3.2
55-59	1.87	2.13	2.25	3.29	3.08	3.17	3.1	3.1	3.1
60-64	1.18	1.98	2.12	2.53	2.75	2.76	2.7	2.7	2.7
65-69	.63	1.45	1.47	2.01	2.10	2.21	2.1	2.1	2.1
70-74	.42	.86	1.19	1.47	1.60	1.67	1.6	1.6	1.6
75-79	.20	.53	.67	1.03	.97	.57	.8	.8	.8

Source: Based on data from Dominion Bureau of Statistics and estimates by Central Mortgage and Housing Corporation.

Table A-3

Nonfamily Households, by Age and Sex, 1951-76

	1951	1956	1961	1966	1971	1976	1951	1956	1961	1951	1956	1961
	Total						Male			Female		
Household Heads Related to Population, by Age												
	(Per cent)											
20-24	1.51	1.80	2.72	3.20	3.44	3.66	n.a.	2.06	2.59	n.a.	1.55	2.86
25-34			2.46	3.10	3.37	3.50	n.a.		2.85	n.a.		2.07
35-44	2.30	2.33	2.60	2.87	3.01	3.08	n.a.	2.59	2.83	n.a.	2.08	2.37
45-54	5.95	4.47	4.85	5.23	5.42	5.52	n.a.	4.44	4.49	n.a.	4.48	5.22
55-64		8.23	9.61	10.99	11.68	12.03	n.a.	7.18	7.76	n.a.	9.33	11.51
65+	13.32	14.35	16.90	19.45	20.72	21.35	n.a.	11.72	12.61	n.a.	17.00	20.95
Total	4.42	4.74	5.71	6.67	7.10	7.45	n.a.	4.42	4.95	n.a.	5.06	6.47
Nonfamily Households (One and Multiple Person)(1)												
	(Thousands)											
20-24	49.4	64.0	32.3	46.8	65.2	77.9	n.a.	36.6	15.2	n.a.	27.4	17.1
25-34			61.2	76.4	93.0	121.3	n.a.		35.9	n.a.		25.3
35-44	43.0	50.0	62.2	73.5	76.6	77.9	n.a.	28.0	33.7	n.a.	22.0	28.4
45-54	147.9	72.0	91.0	110.5	128.0	139.6	n.a.	37.2	43.1	n.a.	34.7	48.0
55-64		95.0	123.9	165.5	205.8	238.4	n.a.	42.2	50.8	n.a.	52.8	73.1
65+	144.7	178.5	235.2	306.1	370.5	439.3	n.a.	73.0	85.0	n.a.	105.5	150.2
Total-A	385.0	459.4	605.8	778.8	931.1	1,094.4	n.a.	217.0	263.7	n.a.	242.4	342.1
Total-B	385.0	458.0	604.5	777.4	929.6	1,092.8						

n.a.: Not available.

(1) Excludes nonfamily households with lodging families, and institutional nonfamily households.

Note: A - Canada; B - Canada, excluding Yukon and Northwest Territories.

Source: Based on data from Dominion Bureau of Statistics and Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

Table A-4

Nonfarm Household Heads, by Age and Tenure, 1961

	Per cent Owning	Per cent Renting	Per cent Reporting a Mortgage(1)
Household Heads			
All household heads	66.0	34.0	n.a.
Male	67.6	32.4	n.a.
Female	55.5	44.5	n.a.
Under 25 years	23.9	76.1	n.a.
Male	25.4	74.6	n.a.
Female	12.4	87.6	n.a.
25-34	49.8	50.2	n.a.
Male	51.1	48.9	n.a.
Female	23.6	76.4	n.a.
35-44	67.5	32.5	n.a.
Male	69.5	30.5	n.a.
Female	39.5	60.5	n.a.
45-54	73.2	26.8	47.2
Male	75.8	24.2	48.6
Female	52.2	47.8	31.1
55-64	75.1	24.9	27.1
Male	77.9	22.1	28.6
Female	62.2	37.8	19.1
65-69	76.9	23.1	15.2
Male	80.4	19.6	15.8
Female	66.4	33.6	13.1
70 and over	77.0	23.0	9.3
Male	81.3	18.7	9.4
Female	68.8	31.2	9.2
Total, 65 and over	77.0	23.0	11.3
Male	80.9	19.1	11.7
Female	68.1	31.9	10.3

n.a.: Not available.

(1) Refers to owner-occupied, single-detached dwellings.

Source: Based on data from Dominion Bureau of Statistics.

Table A-5

Trends in Nonfamily Households, by Type,

1951, 1956 and 1961[1]

Type	Total Number			Percentage Distribution			Percentage Change		
	1951	1956	1961	1951	1956	1961	1951-56	1956-61	1951-61
	(Thousands)			(Per cent)			(Per cent)		
1. One-person households	252.4	307.6	423.8	55.0	59.1	63.5	21.8	37.8	67.9
2. Multiple-person households									
without lodging families	132.6	150.4	180.7	28.9	28.9	27.1	13.5	20.1	36.3
with lodging families	68.1	51.3	48.6	14.8	9.8	7.3	-24.7	- 5.2	-28.6
3. In institutional dwellings	5.8[2]	11.6	14.0[2]	1.3	2.2	2.1			
4. Total	458.9	520.9	667.1	100.0	100.0	100.0	13.5	28.1	45.4

(1) Excludes Yukon and Northwest Territories.

(2) Estimated.

Source: Based on data from Dominion Bureau of Statistics and Central Mortgage and Housing Corporation.

Table A-6

Summary of Families and Households,

Census Years, 1941-76[1]

		1941[2]	1951[2]	1951	1956	1961	1966	1971	1976
1. Total families	(Thousands)	2,525.3	3,207.6	3,282.4	3,705.6	4,140.4	4,500.3	5,041.6	5,672.3
2. Families forming households	(Thousands)	2,333.5	2,897.0	2,962.0	3,420.3	3,904.9	4,293.3	4,860.1	5,530.5
3. Percent of families forming households	(Per cent)	92.4	90.3	90.2	92.3	94.3	95.4	96.4	97.5
4. One and multiple person nonfamily households	(Thousands)	n.a.	380.8	385.0	458.0	604.5	777.4	937.6	1,092.8
5. Total nonfamily households[3]	(Thousands)	372.6	452.6	458.9	520.9	664.1	836.6	994.3	1,147.2
6. Per cent nonfamily population forming households	(Per cent)	24.0	25.8	25.7	26.1	31.1	34.9	37.1	38.0
7. Total number of households	(Thousands)	2,706.1	3,349.6	3,420.8	3,941.1	4,569.0	5,129.9	5,854.4	6,677.7

n.a.: Not available.

(1) Data do not cover Yukon and Northwest Territories.

(2) Excluding Newfoundland.

(3) Total nonfamily households include line 4, plus nonfamily households with lodging families, and institutional nonfamily households.

Source: Based on data from Dominion Bureau of Statistics and Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

Table A-7

United States - Households by Type, Census Years, 1940-75

1. Totals at Census Years

(Thousands)

Year	Family Households	Nonfamily Households	Total Households
1940	31,500	3,500	34,900
1950	38,900	4,700	43,600
1960	44,900	7,800	52,600
1965	48,800	9,800	58,600
1970	52,800	11,100	63,900
1975	57,500	12,500	70,000

2. Annual Changes Between Census Years

(Thousands)

Year	Family Households	Nonfamily Households	Total Households
1940-50	730	130	860
1950-60	600	310	910
1960-65	790	420	1,210
1965-70	800	250	1,050
1970-75	960	280	1,240

Source: L. Jay Atkinson, "Long-Term Influences Affecting the Volume of New Housing Units", Survey of Current Business, November 1963.

Table A-8

1961 Housing Stock - Period of Construction

	Occupied Housing Stock[1]	Before 1920	1920-45	1946-61
		(Thousands of units)		
Canada	4,554.5	1,391.7	1,148.4	2,014.4
Rural	1,274.0	484.1	319.5	470.4
Farm	449.6	234.3	118.5	96.8
Nonfarm	824.5	249.9	201.0	373.6
Urban	3,280.5	907.6	828.9	1,544.0
100,000 and over	2,089.1	528.1	526.7	1,034.3
30,000 - 99,999	428.2	122.2	119.8	186.3
10,000 - 29,999	262.4	82.1	66.1	114.2
5,000 - 9,999	149.5	51.2	34.1	64.2
Under 5,000	351.3	123.9	82.3	145.1
(17 metropolitan areas)	(2,152.8)	(546.8)	(536.0)	(699.4)
		(Percentage distribution)		
Canada	100.0	30.6	25.2	44.2
Rural	100.0	38.0	25.1	36.9
Farm	100.0	52.1	26.4	21.5
Nonfarm	100.0	30.3	24.4	45.3
Urban	100.0	27.7	25.3	47.0
100,000 and over	100.0	25.3	25.2	49.5
30,000 - 99,999	100.0	28.5	28.0	43.5
10,000 - 29,999	100.0	31.3	25.2	43.5
5,000 - 9,999	100.0	34.3	22.8	42.9
Under 5,000	100.0	35.3	23.4	41.3
(17 metropolitan areas)	(100.0)	(25.4)	(24.9)	(49.7)

(1) Including Yukon and Northwest Territories. Excluding certain nonfamily households such as those in "institutional" dwellings, and nonfamily households with lodging families.

Source: Based on data from Dominion Bureau of Statistics.

Table A-9

1961 Housing Stock - Condition

	Occupied Housing Stock	In Good Condition	In Need of Minor Repair	In Need of Major Repair
		(Thousands of units)		
Canada	4,554.5	3,372.6	926.5	255.4
Rural	1,274.0	802.7	351.4	119.9
Farm	449.6	270.1	137.2	42.3
Nonfarm	824.5	532.5	214.3	77.7
Urban	3,280.5	2,570.0	575.0	135.5
100,000 and over	2,089.1	1,689.3	331.7	68.0
30,000 - 99,999	428.2	326.4	80.6	21.3
10,000 - 29,999	262.4	193.3	54.1	15.0
5,000 - 9,999	149.5	110.2	30.1	9.2
Under 5,000	351.3	250.7	78.5	22.1
		(Percentage distribution)		
Canada	100.0	74.1	20.3	5.6
Rural	100.0	63.0	27.6	9.4
Farm	100.0	60.1	30.5	9.4
Nonfarm	100.0	64.6	26.0	9.4
Urban	100.0	78.3	17.5	4.1
100,000 and over	100.0	80.9	15.9	3.2
30,000 - 99,999	100.0	76.2	18.8	5.0
10,000 - 29,999	100.0	73.7	20.6	5.7
5,000 - 9,999	100.0	73.7	20.1	6.2
Under 5,000	100.0	71.4	22.3	6.3

Source and Note: See Table A-8.

Table A-10

Urban and Rural Population, 1951-70

	1951	1956	1961	1966[3]	1970[3]
1. Number of Persons					
Total population	14,009	16,081	18,238	20,039	21,729
Urban, total[1]	8,633	10,491	12,700	14,515	16,152
Metropolitan	5,637	6,806	8,164	9,282	10,285
Nonmetropolitan	2,996	3,685	4,536	5,233	5,867
Urban centres with 5,000 population and over	7,320	9,125	11,281	13,067	14,822
Rural	5,376	5,590	5,538	5,524	5,577
Farm[2]	2,564	2,438	2,073	1,874	1,728
Nonfarm	2,812	3,152	3,465	3,650	3,849
2. Percentage Distribution					
Total population	100.0	100.0	100.0	100.0	100.0
Urban, total	61.6	65.2	69.6	72.4	74.3
Metropolitan	40.2	42.3	44.8	46.3	47.3
Nonmetropolitan	21.4	22.9	24.8	26.1	27.0
Urban centres with 5,000 population and over	52.3	56.7	61.9	65.2	68.2
Rural	38.3	34.8	30.4	27.6	25.9
Farm	18.3	15.2	11.4	9.4	7.9
Nonfarm	20.0	19.6	19.0	18.2	17.7

3. Annual Per Cent Growth	1951-56	1956-61	1961-66	1966-70
Total population	2.8	2.7	1.9	2.0
Urban, total	4.0	3.9	2.7	2.7
Metropolitan	3.8	3.7	2.6	2.7
Nonmetropolitan	4.2	4.3	2.9	3.1
Urban centres with 5,000 population and over	4.5	4.3	3.0	3.2
Rural	0.4	-0.2	-0.1	0.2
Farm	-1.0	-3.2	-2.0	-2.0
Nonfarm	2.3	11.9	1.0	1.3

(1) Centres of 1,000 population and over, and fringe areas of metropolitan centres (1961 Census definition).

(2) 1961 data: 92.6 per cent of total given on the basis of the 1956 definition for 1951, 1956 and 1961.

(3) 1966 and 1970 based on following assumptions:
(a) Urban growth rates: ratios of 1951-61 urban to total population growth rates are applied to projected growth rate of total population to 1970.
(b) Farm population is projected to decline at 2 per cent per year.
(c) Other rates are residually obtained.

Source: Based on data by Dominion Bureau of Statistics and estimates by Economic Council of Canada.

Table A-11

Construction of New Housing Units by Type, All Areas, 1948-70

Year	Total, All Housing Units	Total Single Detached	Total Multiple	Apartments	Other Multiple	Percentage Distribution by Type: Single	Multiple	Apartments	Percentage Distribution by Area: All Areas	Centres of 5000 Pop. and Over	Other Areas
	(Thousands of units)					(Per cent)			(Per cent)		
1948	80.8	65.7	15.1	7.9	7.2	81.3	18.7	9.8	100.0	n.a.	n.a.
1949	89.0	69.8	19.2	11.5	7.7	78.4	21.6	12.9	100.0	n.a.	n.a.
1950	90.2	68.7	21.5	13.4	8.1	76.2	23.8	14.8	100.0	n.a.	n.a.
1951	77.0	57.9	19.1	11.8	7.3	75.2	24.8	15.3	100.0	73.5	26.5
1952	76.5	57.6	18.9	13.4	5.5	75.3	24.7	17.5	100.0	75.0	25.0
1953	98.6	69.5	29.1	21.2	7.9	70.5	29.5	21.5	100.0	76.8	23.2
1954	105.9	74.1	31.8	24.5	7.3	70.0	30.0	23.1	100.0	78.9	21.1
1955	131.4	93.4	38.0	27.3	10.7	71.1	28.9	20.8	100.0	72.4	27.6
1956	132.9	94.0	38.9	25.7	13.2	70.7	29.3	19.3	100.0	69.6	30.4
1957	119.0	81.7	37.3	26.2	11.1	68.7	31.3	22.0	100.0	69.2	30.8
1958	152.7	99.4	53.3	40.7	12.6	65.1	34.9	26.7	100.0	73.6	26.4
1959	144.3	94.4	49.9	36.9	13.0	65.4	34.6	25.6	100.0	74.4	25.6
1960	118.8	74.5	44.3	32.6	11.7	62.7	37.3	27.4	100.0	72.3	27.7
1961	119.0	76.3	42.7	29.7	13.0	64.1	35.9	25.0	100.0	72.6	27.4
1962	127.8	75.2	52.6	38.1	14.5	58.8	41.2	29.8	100.0	73.7(1)	26.3(1)
1962	127.8	75.2	52.6	38.1	14.5	58.8	41.2	29.8	100.0	79.6(1)	20.4(1)
1963	135.1	73.5	61.6	50.6	11.0	54.4	45.6	37.5	100.0	79.9	20.1
1970	190.0	95.0	95.0	78.0	17.0	50.0	50.0	41.1	100.0	87.3	12.7

n.a.: Not available.

Note: "Construction" represents 1/3 starts and 2/3 completions; "Other Multiples" include "semi-detached, duplexes, and row houses"; they exclude "apartments".

(1) 1962 redefinition of areas.

Source: Based on data from Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

Table A-12

Construction of New Housing Units by Type,

Centres of 5,000 Population and Over, 1951-70

Year	Total, All Housing Units	Total Single Detached	Total Multiple	Apartments	Percentage Distribution		
					Single	Multiple	Apartments
	(Thousands of units)				(Per cent)		
1951	56.6	-	-	-			
1952	57.4	40.2	17.2	12.0	70.0	30.0	20.9
1953	75.7	48.4	27.3	20.2	63.9	36.1	26.7
1954	83.6	53.5	30.1	23.6	64.0	36.0	28.2
1955	95.1	60.2	34.9	25.6	63.3	36.7	26.9
1956	92.5	57.3	35.2	24.2	61.9	38.1	26.2
1957	82.3	48.5	33.8	24.2	58.9	41.1	29.4
1958	112.4	63.0	49.4	38.8	56.0	44.0	34.5
1959	107.4	59.6	47.8	36.3	55.5	44.5	33.8
1960	85.9	44.1	41.8	32.0	51.3	48.7	37.3
1961	86.4	46.9	39.5	28.9	54.3	45.7	33.4
1962(1)	94.2	44.4	49.8	37.2	47.1	52.9	39.5
1962(1)	101.7	50.7	51.0	37.6	49.9	50.1	37.0
1963	108.0	49.0	59.0	42.2	45.4	54.6	45.6
1970	166.0	73.0	93.0	77.0	44.0	56.0	46.4

(1) 1962 redefinition of area.

Source and Note: See Table A-11.

Table A-13

Construction of New Housing Units by Type, Other Areas, 1951-70[1]

Year	Total	Single Detached	Multiple	Apartments	Percentage Distribution: Single	Multiple	Apartments
	(Thousands of units)				(Per cent)		
1951	20.4	-	-	-			
1952	19.1	17.4	1.7	1.4	91.1	8.9	7.3
1953	22.9	21.1	1.8	1.0	92.1	7.9	4.4
1954	22.3	20.6	1.7	0.9	92.4	7.6	4.0
1955	36.3	33.2	3.1	1.7	91.5	8.5	4.7
1956	40.4	36.7	3.7	1.5	90.8	9.7	3.7
1957	36.7	33.2	3.5	2.0	90.5	9.5	5.4
1958	40.3	36.4	3.9	1.9	90.3	9.7	4.7
1959	36.9	34.8	2.1	0.6	94.3	5.7	1.6
1960	32.9	30.4	2.5	0.6	92.4	7.6	1.8
1961	32.6	29.4	3.2	0.8	90.2	9.8	2.5
1962[2]	33.6	30.8	2.8	0.9	91.6	8.3	2.7
1962[2]	26.1	24.5	1.6	0.5	93.6	6.1	1.9
1963	27.1	24.5	2.6	1.4	90.4	9.6	5.2
1970	24.0	22.0	2.0	1.0	91.7	8.3	4.2

(1) "Other Areas": Difference between "All Areas" and areas with "Centres of 5,000 Population and Over".

(2) 1962 redefinition of area.

Source and Note: See Table A-11.

Table A-14

Component Cost Estimates in New Residential Construction, 1963 and 1970

	Unit	1963	1970 At Potential Output	1970 Alternate Assumption at Potential Output
1. Single-detached dwellings				
Average finished floor area	Square feet	1,250[1]	1,350	1,350
Average cost of construction per sq. ft.	Dollars	10.93[2]	11.00	11.00
Unit value per dwelling	Dollars	13,668	14,850	14,850
Total number constructed	Thousands	73.5	95.0	98.0
Total expenditure on singles	Million dollars	1,004.6	1,410.8	1,455.3
2. Multiple dwellings				
Average cost of construction per dwelling	Dollars	8,933	9,795	9,795
Total number constructed	Thousands	61.6	95.0	107.0
Total expenditure on multiples	Million dollars	550.3	930.5	1,048.1
3. Conversions				
Average cost per conversion	Dollars	3,489	3,500	3,500
Total number of conversions	Thousands	2.3	3.6	3.6
Total expenditure on conversions	Million dollars	8.1	12.6	12.6
4. Value of new housing construction (1+2+3)	Million dollars	1,563.0	2,353.9	2,516.0
5. Major alterations and improvements				
As percentage of new housing construction	Per cent	5.6	5.9	6.8
Total expenditures	Dollars	87.0	139.2	170.6
6. Supplementary costs				
2.4 per cent of expenditures on singles	Million dollars	24.0	33.9	34.9
7.2 per cent of expenditures on multiples	Million dollars	39.0	70.0	75.5
Total supplementary expenditures	Million dollars	63.0	103.9	110.4
7. Total new residential construction (4+5+6)	Million dollars	1,713.0[3]	2,597.0	2,797.0

(1) Estimated.
(2) Implicitly derived.
(3) Includes $8 million residential investment by federal government departments.

Source: Based on data from Dominion Bureau of Statistics and Central Mortgage and Housing Corporation, and estimates by Economic Council of Canada.

Table A-15

New Residential Construction, 1948-70

Year	Expenditure on				Percentage Distribution of Expenditure on		
	Total New Residential Construction[1]	New Housing	Major Alterations and Improvements	Supplementary Costs	New Housing	Major Alterations and Improvements	Supplementary Costs
	(Millions of current dollars)				(Per cent)		
1948	635	586	32	17	92.3	5.0	2.7
1949	822	751	48	23	91.4	5.8	2.8
1950	923	833	64	26	90.3	6.9	2.8
1951	947	846	75	26	89.3	7.9	2.8
1952	971	877	67	27	90.3	6.9	2.8
1953	1,189	1,082	72	35	91.0	6.0	2.9
1954	1,238	1,129	72	37	91.2	5.8	3.0
1955	1,397	1,281	73	43	91.7	5.2	3.1
1956	1,547	1,399	100	48	90.4	6.5	3.1
1957	1,430	1,308	76	46	91.5	5.3	3.2
1958	1,782	1,647	75	60	92.4	4.2	3.4
1959	1,752	1,619	75	58	92.4	4.3	3.3
1960	1,456	1,327	80	49	91.1	5.5	3.4
1961	1,467	1,336	82	49	91.1	5.6	3.3
1962	1,587	1,449	82	56	91.3	5.2	3.5
1963	1,713	1,563	87	63	91.2	5.1	3.7
	(Millions of 1963 dollars)						
1970	2,597	2,354	139	104	90.6	5.4	4.0

(1) Total construction includes a small amount of residential spending by federal government departments ($8 million in 1963), which is deducted when expressing new residential construction on the National Accounts basis.

Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

Table A-16

New Residential Construction as a Percentage of Gross National Product, Current and Constant Dollars, 1926-63

Year	In Current Dollars			In Constant (1949) Dollars		
	Gross National Product	New Residential Construction	New Residential Construction as Per Cent of GNP	Gross National Product	New Residential Construction	New Residential Construction as Per Cent of GNP
	(Millions of dollars)		(Per cent)	(Millions of dollars)		(Per cent)
1926	5,152	201	3.9	7,576	399	5.3
1927	5,549	204	3.7	8,270	405	4.9
1928	6,046	220	3.6	9,037	426	4.7
1929	6,134	230	3.7	9,061	426	4.7
1930	5,728	191	3.4	8,679	363	4.2
1931	4,699	158	3.4	7,567	322	4.3
1932	3,827	90	2.3	6,798	200	2.9
1933	3,510	72	2.1	6,359	168	2.6
1934	3,984	92	2.3	7,127	207	2.9
1935	4,315	107	2.5	7,678	242	3.2
1936	4,653	131	2.8	8,022	288	3.6
1937	5,257	164	3.1	8,820	336	3.8
1938	5,278	148	2.8	8,871	310	3.5
1939	5,636	174	3.1	9,536	361	3.8
1940	6,743	186	2.8	10,911	363	3.3
1941	8,328	240	2.9	12,486	427	3.4
1942	10,327	214	2.1	14,816	356	2.4

1943	11,088	220	2.0	15,357	343	2.2
1944	11,850	267	2.3	15,927	401	2.5
1945	11,835	318	2.7	15,552	472	3.0
1946	11,850	368	3.1	15,251	512	3.4
1947	13,165	494	3.8	15,446	610	3.9
1948	15,120	609	4.0	15,735	638	4.1
1949	16,343	794	4.9	16,343	794	4.9
1950	18,006	883	4.9	17,471	833	4.8
1951	21,170	895	4.2	18,547	727	3.9
1952	23,995	933	3.9	20,027	737	3.7
1953	25,020	1,166	4.7	20,794	905	4.4
1954	24,871	1,227	4.9	20,186	946	4.7
1955	27,132	1,378	5.1	21,920	1,040	4.7
1956	30,585	1,526	5.0	23,811	1,110	4.7
1957	31,909	1,409	4.4	24,117	998	4.1
1958	32,894	1,763	5.4	24,397	1,219	5.0
1959	34,915	1,734	5.0	25,242	1,157	4.6
1960	36,287	1,443	4.0	25,849	937	3.6
1961	37,391	1,458	3.9	26,466	941	3.6
1962	40,339	1,577	3.9	28,083	989	3.5
1963	43,007	1,705	4.0	29,380	1,033	3.5

Source: Based on data from Dominion Bureau of Statistics.

TECHNICAL STUDIES

The following is a list of technical studies which have been prepared as background papers for the First Annual Review of the Economic Council of Canada. They are being published separately and are available from the Queen's Printer, Ottawa. Although they are being published under the auspices of the Economic Council, the views expressed in them are those of the authors themselves.

Staff Studies

1. Population and Labour Force Projections to 1970, by Frank T. Denton, Yoshiko Kasahara and Sylvia Ostry.
2. Potential Output, 1946 to 1970, by B. J. Drabble.
3. An Analysis of Post-War Unemployment, by Frank T. Denton and Sylvia Ostry.
4. Housing Demand to 1970, by Wolfgang M. Illing.
5. Business Investment to 1970, by Derek A. White.
6. Special Survey of Longer Range Investment Outlook and Planning in Business, by B. A. Keys.
7. Canada and World Trade, by M. G. Clark.
8. Export Projections to 1970, by J. R. Downs.
9. Federal Tax Revenues at Potential Output, 1960 and 1970, by D. J. Daly.
10. National Saving at Potential Output to 1970, by Frank Wildgen.
11. Changes in Agriculture to 1970, by John Dawson.

Special Studies

1. Immigration and Emigration of Professional and Skilled Manpower During the Post-War Period, by Louis Parai.
2. A Survey of Labour Market Conditions, Windsor, Ontario, 1964: A Case Study, by G. R. Horne, W. J. Gillen and R. A. Helling.

Housing Demand to 1970 *by* Wolfgang M. Illing

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