

A COMPARATIVE ANALYSIS OF THE IMPACT OF
SINGLE-DETACHED HOUSES AND APARTMENT UNITS
ON HOUSING RESOURCES AND MUNICIPAL FINANCES

by

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AN ABSTRACT OF
A COMPARATIVE ANALYSIS OF THE IMPACT OF
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If Canadian consumer demand for housing underwent a significant change in favour of apartment units compared to single-detached houses, significant savings in housing resources would result, with little significant impact on municipal finances.

Chapter 1 develops a sample population of 1,000 persons based on the 1966 Census of Canada. Chapter 2 develops a model apartment complex and a model housing development to contain the sample population, and to derive cost figures. These cost figures are compared in Chapter 3.

Chapter 4 compares the impact of the two different housing models on Municipal Finances.

Chapter 5 presents a summary of conclusions based on analysis made to this point.

Chapter 6 examines consumer Attitudes and Preferences regarding the two types of housing, and Chapter 7 deals with consumer demand for housing, and shifts which have occurred in this demand.

Chapter 8 examines two possible patterns of housing in 1971. One is based on the distribution of housing by type revealed by the 1966 Census, and the second is based on a projected distribution. Comparisons are made of the impact of these two distributions on housing resources and municipal finances.

Chapter 9 presents summary and conclusion material based on Chapter 8.

TABLE OF CONTENTS

	Page
AN ABSTRACT OF A COMPARATIVE ANALYSIS OF THE IMPACT OF SINGLE-DETACHED HOUSES AND APARTMENT UNITS ON HOUSING RESOURCES AND MUNICIPAL FINANCES	iii
LIST OF TABLES	vii
LIST OF ILLUSTRATIONS	x
INTRODUCTION	1
Chapter	
1 POPULATION SAMPLE	3
Introduction Population Sample	
2 HOUSING MODELS	18
Introduction Case I: Population Sample Housed in Apartment Units Case II: Population Sample Housed in Single-Detached Dwellings	
3 COMPARISON OF COSTS	26
Comparison of Capital Costs Comparison of Operating and Maintenance Costs	
4 IMPACT OF DIFFERENT HOUSING DENSITIES ON MUNICIPAL FINANCES	38
Comparison of Annual Costs Imposed on Municipal Finances Comparison of Annual Municipal Revenues	

Chapter	Page
5 SUMMARY AND CONCLUSIONS RESULTING FROM HOUSING MODELS	58
<ul style="list-style-type: none"> Introduction Capital Cost Differentials Operating and Maintenance Cost Differentials Costs Imposed on Municipal Government Revenues Forthcoming to the Municipal Government 	
6 CONSUMER ATTITUDES AND PREFERENCES FOR APARTMENT UNITS VERSUS SINGLE-DETACHED DWELLINGS	63
<ul style="list-style-type: none"> Introduction The Concept of the House The Housing Market Consumer Attitudes and Preferences <ul style="list-style-type: none"> Single-Detached Dwellings--Ownership Tenure Apartment Units--Rental Tenure Summary 	
7 CONSUMER DEMAND FOR CANADIAN HOUSING	76
<ul style="list-style-type: none"> Introduction Long-Run Determinants of Housing Demand: <ul style="list-style-type: none"> Demographic Features Measuring Effective Demand Shifts in the Demand for Housing <ul style="list-style-type: none"> Long-term Changes in the Patterns of Canadian Life The Impact of Residential Mobility Changes in the Composition of Newly Constructed Housing 	
8 THE IMPACT OF CONSUMER DEMAND ON CANADIAN HOUSING RESOURCES; AND ON MUNICIPAL FINANCES, 1966-1971	97
<ul style="list-style-type: none"> Introduction Case I: Distribution of Households and Dwellings by Structural Type in 1971, based on the 1966 Census Distribution of Dwellings by Structural Type Case II: Distribution of Households and Dwellings by Structural Type in 1971, based on a Projected Distribution 	

Chapter	Page
Comparison of the Differential Impact on Housing Resources of Case I and Case II	
Comparison of the Differential Impact on Municipal Expenditures of Case I and Case II	
Comparison of the Differential Impact on Municipal Revenues of Case I and Case II	
9 SUMMARY AND CONCLUSIONS	123
Introduction	
Conclusions	
APPENDIX I: CALCULATIONS FOR SELECTED ITEMS, TABLE 33	126
APPENDIX II: CALCULATIONS FOR SELECTED ITEMS, TABLE 39	129
BIBLIOGRAPHY	131

LIST OF TABLES

Table	Page
1 Households by Number of Families, Canada 1966	5
2 Distribution of Persons by Type of Household	6
3 Households By Families	7
4 Families By Number of Children 24 Years and and Under at Home, Canada, 1966	8
5 Families by Number of Children 24 Years and and Under at Home, Canada, 1966; Sample 220 Households	9
6 Population by Marital Status, Canada, 1966; Sample	11
7 Families by Number of Children 24 Years and Under at Home, Canada 1966; Revised Sample, 235 Family Households	12
8 Distribution of Apartments by Number of Bed- rooms and Square Footage	19
9 Distribution of Households in Apartments By Type of Household, Number of Persons per Household, and Number of Bedrooms per Apartment	20
10 Households by Number of Persons, Census 1966; Sample Population 1,000	21
11 Distribution of Single-Detached Dwellings by Number of Bedrooms and Square Footage	24
12 Costs of Services to Residential Land	27
13 Servicing, Construction, and Land Costs for Apartment Complex and Housing Development	28

Table	Page
14 Per Household and Per Capita Costs of Apartment Complex and Housing Development	29
15 Mortgage Payments: Principal and Interest: Apartment Complex; Housing Development	31
16 Principal and Interest Payments and Miscell- aneous Costs Levied on Apartment Complex	32
17 Utility and Fire Insurance Costs: Apartment Complex and Housing Development	34
18 Municipal Revenues from Apartment Complex and Housing Development	36
19 Summary of Operating Costs, Maintenance Costs, Capital Costs and Municipal Taxes	37
20 Breakdown of Municipal Expenditures by Percentage	39
21 Occupied Dwellings by Structural Type: Canada, 1966	40
22 Annual Maintenance Costs of Municipal Ser- vices for Apartment Complex and Housing Development	43
23 Breakdown of Municipal Expenditures by Percentage: Average Municipality; High Residential Density Municipality; and Low Residential Density Municipality	49
24 Breakdown of Municipal Revenues by Percentage	51
25 Comparison of Municipal Tax Base as Between Apartment Complex and Housing Development	53
26 Breakdown of Municipal Revenues by Percentage: Average Municipality; High Residential Density Municipality; Low Residential Density Municipality	57
27 Average Annual Increases in Families and Households Between Census Years 1901-1966	78
28 Degree of Urbanization: Canada	85

Table	Page
29 Dwelling Starts By Type, Canada, 1949-1968	90
30 Components of Housing Demand 1951-1966 and Estimates to 1971	99
31 Occupied Dwellings by Structural Type: Canada, 1966 (D.B.S. Breakdown)	101
32 Occupied Dwellings by Structural Type: Canada, 1966 (CMHC Breakdown)	102
33 Occupied Dwellings By Structural Type: Canada, 1966 and Estimates to 1971 on the 1966 Distribution by Structural Type	103
34 Occupied Dwellings by Structural Type: Canada, 1966; Additions and Estimates to 1971	110
35 Occupied Dwellings by Structural Type: Canada, 1966; 1971 Based on 1966 Dis- tribution; 1971 Based on Projected 1971 Distribution	112
36 Model Dwelling Stock by Structural Type 1966; 1971 Based on 1966 Distribution; and 1971 Based on Projected Distribution: Cost Comparisons	114
37 Additions to the Model Dwelling Stock by Structural Type: 1971 Based on 1966 Distribution; and 1971 Based on Projected Distribution; cost comparisons	116
38 Breakdown of Municipal Expenditures by Percentage: 1966; Case I; and Case II	120
39 Breakdown of Municipal Revenues by Per- centage: 1966; Case I; and Case II	122

LIST OF ILLUSTRATIONS

Figure	Page
I Population in Private Households: 1966 Census of Canada; Population Sample . . .	15
II Total Number of Private Households: 1966 Census of Canada; Population Sample . . .	16
III Densities: 1966 Census of Canada; Population Sample	17
IV Apartment Complex	23
V Housing Development	25
VI Dwelling Starts By Type, Canada, 1949-1968	91
VII Dwelling Starts By Type as a Percentage of Total Dwelling Starts, Canada, 1949-1968 . . .	92
VIII Total Dwelling Starts, Canada, 1949-1968 .	105

INTRODUCTION

The purpose of this study is to make a comparison of two different types of housing accommodation--apartments and single-detached dwellings. Together, these two types accounted for 85.2% of all occupied dwellings in the 1966 Census of Canada, and, therefore, represent the two predominant forms of housing in Canada.

The comparisons made are of two types: cost comparisons aimed at establishing the relative impact of the two housing types on housing resources; and comparisons of the different impact that these two types have on municipal finances.

There are many differences between apartment units and single-detached houses other than structural differences, and in the course of this study I have tried to eliminate these in order to isolate and assess the impact of structural differences only on housing resources and municipal finances.

Initially, a sample population of 1,000 persons is evolved and fitted into two different housing models, one consisting of an apartment complex and one, a development of single-detached houses. This was done to

derive cost figures for dwelling units which would be suitable for housing a cross section of the Canadian population, and to eliminate cost differentials which might occur because apartments were designed for small families and houses for large families.

Cost differentials may also occur as a result of locational differences, particularly with respect to the central urban location of a considerable amount of apartment construction. To eliminate cost differences attributable to locational differences, it was assumed that both types of housing were constructed on unserviced land of equal value per acre, and that all municipal services had to be provided.

As well, a variety of other non-structural differences are dealt with in the section on Consumer Attitudes and Preferences.

The first five sections present a static comparison of the impact of these housing types on housing resources and municipal finances. The latter sections apply these derived figures to the aggregate demand for housing in Canada for the period 1966-1971.

CHAPTER 1

POPULATION SAMPLE

Introduction

The purpose of this section is to derive a model population of 1,000 persons based on the 1966 Census of Canada. This is done in order to ascertain the housing requirements of such a population, and to derive housing costs and other information which would be applicable to the Canadian housing situation.

Population Sample

The first stage in the construction of this model is the development of a population sample. Since this study is based upon the housing requirements of the Canadian population in general, all statistics are based on the 1966 Census of Canada.

The sample is composed of a representative distribution of 1,000 persons in the general population of Canada. The housing requirements of this sample are arrived at by an examination of the number of households, families, and non-family persons which the 1966 Census revealed. For statistical convenience, Census definitions are used, subject to the qualifications introduced

following them:

Census Definitions

Household: . . . consists of a person or group of persons occupying one dwelling. It usually consists of a family group, with or without lodgers, employees, etc. However, it may consist of a group of unrelated persons, of two or more families sharing a dwelling, or of one person living alone. Every person is a member of some household, and the number of households equals the number of occupied dwellings. . . . Households may be classified as family or non-family.

Family: A census family consists of a husband and wife (with or without children who have never married) or a parent with one or more children never married, living together in the same dwelling.

Non-family Persons: Persons not in families are those persons living alone, living with unrelated individuals, or living with relatives, but not in a husband-wife or parent-child relationship.

Qualifications for Population Sample

Households: All households in the sample are assumed to be either one-family households, or non-family households. All collective households (ie. institutions, hotels, motels, large lodging houses, etc.) are excluded leaving only private households. In this sample, the term household refers only to private households. In 1966 one family and non-family households accounted for respectively 82.0% and 15.5% of all households, for a total of 97.5%. The remaining 2.5% were households containing two or more families. (see Table 1, page 5)

The 1966 Census reported the total Canadian population at 20,014,880 and the number of households at

5,180,473. Excluding persons in large collective households, the population figure becomes 19,366,746. (see Table 2, page 6) This results in a household-population ratio of approximately 26.7%. A representative population of 1,000 persons would contain 267 households and would divide between one-family and non-family households as indicated in Table 3, page 7.

TABLE 1
HOUSEHOLDS BY NUMBER OF FAMILIES
CANADA, 1966

Number of Families Per Household	Number of Households Per Category	Percentage of Households per Category
0	804,064	15.5
1	4,246,753	82.0
2	124,052	2.4
3	5,253	.1
4+	351	.0
TOTALS	5,180,473	100.0%

Source: 1966 Census of Canada, Volume II
"Households and Families, Household Composition,"
Catalogue Number 93-904, Table 14.

TABLE 2
DISTRIBUTION OF PERSONS BY TYPE OF HOUSEHOLD

Type of Household	Category of Person	Number of Persons	Percentage of persons in each type of household	Number of persons in sample of 1,000
Private Family Households	Family Persons	17,629,640	91.0	910
	Non-family Persons	622,067	3.2	32
Private Non-family Households	Family Persons	0	0.0	0
	Non-family Persons	1,115,039	5.8	58
TOTAL		19,366,746	100.0	1,000

Source: Letter from Dominion Bureau of Statistics, February 24, 1969.

The 1966 Census revealed the breakdown of families by number of children as set out in Table 4, page 7.

Families containing 0 to 4 children accounted for approximately 91% of all families. Because this study deals in part with apartment dwellings, and because of the inherent problems in housing large families in apartments, the statistical sample being evolved will not include families containing more than four children. With this

adjustment made to the figures in Table 4 they apply to sample of 224 family households as indicated in Table 5. (see page 9) This results in the sample of 1,000 persons being divided as follows: 224 family households containing a total of 778 family persons; 330 children and 448 married adults and 32 non-family persons. 43 non-family households containing a total of 190 non-family persons.

TABLE 3
HOUSEHOLDS BY FAMILIES

	Number In Canada	Percentage	Number In Sample
One-Family Households	4,246,753	84.1	224
Non-Family Households	804,064	15.9	43
TOTAL	5,050,817	100.0%	267

Source: Table 1, page 5.

The sample is aimed at being representative of the Canadian population, but comparison with 1966 Census figures reveals a significant discrepancy. The percentage of persons in family-households is too low, (see Table 2, page 6) resulting in an abnormally high density for non-family households.

TABLE 4
 FAMILIES BY NUMBER OF CHILDREN 24 YEARS
 AND UNDER AT HOME, CANADA, 1966

Number of Children	Number of Families	Percentage of Families by number of children
0	1,309,580	29.0
1	881,088	19.5
2	928,434	20.4
3	628,515	13.9
4	363,701	8.0
5	188,333	4.2
6	101,178	2.2
7	55,209	1.2
8	31,453	0.7
9+	38,775	0.9
TOTALS	4,526,266	100.0

Total Number of Children in Families: 8,656,245

Average Number of Children Per Family: 1.9

Source: 1966 Census of Canada Volume II, "Households and Families, Children in Families", Catalogue No. 93-610, Table 58.

TABLE 5

FAMILIES BY NUMBER OF CHILDREN 24 YEARS AND UNDER
AT HOME, CANADA, 1966; SAMPLE 220 FAMILY HOUSEHOLDS

Canada			Sample, 220 Family Households		
Number of Children	Number of Families	Percentage of Families by Number of Children	Number of Families	Number of Persons	Number of Children
0	1,309,580	31.9	72	144	0
1	881,088	21.4	48	144	48
2	928,434	22.5	50	200	100
3	628,515	15.4	34	170	102
4	363,701	8.8	20	120	80
TOTALS	4,111,318	100.0%	224	778	330
Persons in Non-Family Households (from Table II)				32	
				<hr/>	
				810	

Source: Computed from Table 4, page 8.

In 1966, 8,656,245 children accounted for 44.5% of the population in private households. The sample figure is 33.0%. This discrepancy is largely the result of two previous adjustments:

- 1) the omission of all households containing more than one family; and
- 2) the omission of all families containing five or more children.

The first adjustment eliminated 2.5% of all households. If the families represented by these households contained the Canadian average of 1.9 children per family, they would represent approximately 5.9% of all children.

The second, and much more significant adjustment, omits all families containing five or more children. This represents only 9.2% of all families but 18.4% of all children. (see Table 4, page 8)

The fact that the proportion of children is understated in the sample, causes an abnormally high density for non-family households. 190 non-family persons make up 43 non-family households, a density of 4.4 persons per household. In the Census population, 1,115,039 non-family persons make up 804,064 non-family households, a density of 1.4 persons per household. (see Table 3, page 7)

There are a number of ways of adjusting the population sample to make its characteristics more closely resemble those of the census population:

- 1) Increase the number of family households and thereby the number of children and parents. However, since I have assumed all families to consist of husband and wife, with or without children, the number of married persons in the sample is 448 (44.8%) which corresponds well with the Census figure of 43.4%. (see Table 6, page 11)

TABLE 6
 POPULATION BY MARITAL STATUS,
 CANADA, 1966; SAMPLE

Marital Status	Percentage Distribution		Distribution in Sample of 1,000	
Single		54.4		544
Under 15 years	33.5		335	
15 years and over	20.9		209	
Married		43.4		434
Widowed		1.9		19
Divorced		0.3		3
TOTALS		100.0%		1,000

Source: 1966 Census of Canada, Volume 1, "Population, Marital Status," Catalogue No. 92-612, p. 1.

2) A second alternative would be to keep the number of families at 224, but increase the proportion of families with children to bring the percentage of children more in line with that of the Census population. In addition, this would reduce the number of non-family persons.

3) A third alternative would be to increase the number of non-family households, thereby lowering the density.

4) A fourth alternative would be to increase the number of non-family persons living with family households.

5) A combination of two, three, or all four of the above alternatives.