AN ANALYSIS OF FACTORS AFFECTING THE DEMAND

FOR HOUSING IN BRITISH COLUMBIA

by

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ABSTRACT

The main justification for selecting this topic is the general
lack of understanding surrounding the basic operation of the housing
market and the subsequent errors which arise from this basic ignorance.
Private discussion, public opinion and even government policy have dis-
played an unnerving inability to separate symptom from cause, promoting
misdirected effort and in some cases initiating action which compounds
the perceived problem.

Following the premise that an understanding of the fundamentals
is essential to the solution of any problem, this thesis helps to elucidate
the operation of the housing supply-demand relationship by analyzing the
effect of the four major components of housing demand: demographic forces;
income; price; and credit conditions. To give relevance and strength to
the theoretical analysis, current data pertaining to the effect of these
components, in a British Columbia context, is supplied wherever possible.
Finally, this thesis provides an exploration of the related policy
implications.

The majority of the data used in this thesis was obtained from
a survey of housing consumers in British Columbia, administered jointly
with the Interdepartmental Study Team on Housing and Rents of the Government

of British Columbia. The survey collected results from 1769 interviews

conducted in the Greater Vancouver Regional District, the Prince George

Census Agglomeration and the City of Cranbrook in July 1975.

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*"We need to establish guidelines before
corrective policies are applied and for
this we need to be clear how the market
operates. The alternative (alas, more
often than not in practise the norm) is
that emotion and expediency are allowed
to dictate policy and the housing market
becomes choked with well-meant but mis-
conceived policies that can (and do)
actually finish up doing more harm than
good. . . ."*

- Professor F. Pennance (1975)[1]

Chapter 1

INTRODUCTION

PRICE = f (SUPPLY, DEMAND)

As a result of the universality of its application in economic markets, the above equation all too often receives but a passing acknowledgement in discussions of housing. More importantly, the same lack of understanding of this basic equation has resulted in a large segment of our housing policy being directed towards symptoms rather than causes.

Both the federal and provincial governments operate substantial subsidy programs for home buyers, with the implication that their grants represent a solution to the problem of a market price which excludes certain people from obtaining ownership. In the rental sector, the so-called solutions reach their penultimate position by imposing a rent increase ceiling, and thus solving the rental 'problem'. These government actions are aimed at the symptoms of the problem with the additional drawback that they "exert unintended effects, some directly counter to the delared policy aims."[2]

No one can refute the fact that housing prices are a product of supply and demand. However, the characteristics of the commodity, and

its market, establish certain fundamental and crucial differences in the operation of the housing equation. As a result of these characteristics the supply of housing is viewed as inelastic (i.e. fixed) in the short run, and thus, the element of demand is placed in a position of exhibiting the most volatility in the supply-demand relationship. It is this dominating effect of demand which both sets apart the operation of the basic equation from other economic markets and provides the central theme for this thesis.

1.1 Demand Volatility

The best evidence of demand volatility in the housing market is displayed by the flexibility exhibited by the housing stock. This flexibility exists primarily because the intensity of occupation can be varied. Doubling of households, the existence of conversions, basement sleeping rooms and illegal suites are all indicative of a more intensive use of the standing stock. Moreover, they are indicative of the adjustment of the existing stock to changes in demand. Another such indicator is the vacancy rate in the rental submarket and the number of units completed and unoccupied in the ownership market. When vacancy rates and the number of unoccupied units are low then demand is high. It naturally follows that when such symptoms are evident there is a corresponding increase in price (given a market free from external interference). This is the natural result of increased demand upon a limited supply.

Such symptoms of more intensive use are in evidence in the housing market of Vancouver today. Recent data on the vacancy rate

indicate that virtually no units are available, with those units indicated as vacant simply awaiting the arrival of the new tenant.[3] It is interesting to note that intensity in one submarket does not necessarily imply a similar demand in all submarkets, as in Vancouver the number of completed and unoccupied ownership units has increased dramatically.[4] This situation serves as evidence of the complexity of the housing demand phenomenon, with the factors of rent control and limited mortgage availability definitely influencing the observed consumer demand in opposite ways.

1.2 Demand, Need and Want

Semantics are a source of confusion in any paper, therefore it is considered valuable at this point to elucidate the concepts of demand, need and want.

Effective demand is represented by the quantity of a good people will buy at a particular time. As such, it is quite distinct from need and want, as it implies some action on the part of the individual. In essence, marketplace demand represents purchases which consumers have both the desire and the economic means to make, and hence it implies entrance into the marketplace.

Need is a term heard all too often in housing related discussions (e.g. "the basic need for housing"). In relation to economics, need may differ from effective demand either because some of those who need the commodity are not able to afford it, or because some who can afford the commodity are not acting in their own best interest, according to someone else's judgement.[5] Again using someone else's judgement, situations may exist where consumers demand and consume more than they need. Simply

put, the difference between demand and need is the difference between what happens and what someone feels ought to happen.

Wants are perhaps best described as constrained desires, having more of a basis in the consumer's mind than in reality. If the particular want is without economic support it cannot find justification in necessity, thus it is distinct from need; and if it has economic support, then the very fact that it remains a want and not a demand displays that it is not real enough to warrant further action. As such, wants must take a back seat to need and demand, as their only relevance is as a predictor of possible future demand. Certainly, there can be no social or economic justification for public or private action to fulfill a consumer's *want* for a villa on the French Riviera.

Thus, with these distinctions in mind and the basic premise that solution to need is best accomplished through the smooth operation of the market, the concern of this thesis is with demand only.

1.3 The Four Factors

Due to the intricacies of our economic system it is virtually impossible to construct a complete list of the factors which influence the demand for housing. Adding to this the limitations of time and space, this thesis is forced to select for discussion what are considered to be the four 'major' factors influencing demand: demographic forces, income, price and credit conditions. In addition to the fact that there are further factors at play, the reader should also note that the selected factors do not stand in isolation from each other. There exists a complex interplay between the elements, some of which this thesis will attempt to explain.

There are certain basic relationships between the four factors and the demand for housing:

(i) With respect to demographic forces, the greater the aggregate number of existing or potential households in a housing market area, the greater the demand.

(ii) With respect to income, the greater the income of an individual consumer or household, the greater the amount that that particular con- suming unit will spend on housing and hence, the greater the demand.

(iii) With respect to price, the higher the price of a particular commodity or service, the less of it will be demanded by each consumer and the fewer consumers who will demand it at all.

(iv) With respect to credit conditions, the relation- ship is somewhat more complex as they do not directly affect the demand for units in the rental submarket. The cost and availability of credit varies, and both have their own effect on the demand for owned units. Clearly, the more available is credit, the more likely that demand for owned units will increase. The higher the borrowing cost, the fewer the con- sumers who will choose to own. In addition, it should be noted that more than one lending term may vary. For example, a higher interest rate may be offset by a longer term, so that the consumer's monthly payment is no greater despite the higher borrowing cost.

These basic relationships are complicated by the existence of housing submarkets. It is an acknowledged fact that housing markets are localized. In addition, there exist within each localized area, sub- markets delineated by housing type, location, tenure and so on. Of particular note are the tenure submarkets, which include the markets of dwelling units for rent and dwelling units for sale. Hence, changes in demand factors influence the level of housing demand in the aggregate, the level of demand in each submarket and shifts in demand between submarkets.

Further complications are added by the relationships which exist between our four factors of discussion. As an example one can see that although demographic forces may bring households into existence, it is income which places households in a position to purchase or rent a dwelling unit. In turn, it is the price of the submarket units and the credit conditions faced which influences the final decision. Although each of these demand factors will be explored individually, it is necessary to never loose sight of the effect of the other three and their interaction.

1.4 Data

In order to provide a viable context in which to explore the impact of demographic forces, income, price and credit conditions it is essential that up-to-date data with respect to the housing consumer be available. Virtually the only source of data with respect to housing consumers in British Columbia is that which can be extracted from the Census of 1971. The unfortunate fact remains that 1971 is not 1975, and there was reason to believe that significant changes had taken place in the market since the Census.[6] In addition to the time-lag problem the Census data does not supply the detail required.

With respect to household characteristics, the answers to questions such as the following were considered to be of some value: How is the existing stock of rental and owned units being used? - in other words, what size and type of household is consuming what size and type of dwelling unit. How much is being spent by households on their shelter and on what, specifically, is the money being spent? Would households prefer alternate types of accommodation and, if so, why? Had some

households recently moved, if so, from where, from what type of dwelling unit and what were the household's circumstances prior to the move? What are the approximate income and asset figures of current households? Answers to these and other questions would provide valuable information about the current market and the changes in household characteristics that had taken place since the Census of 1971.

A decision was reached in late June of 1975 that the Urban Land Economics Division of the Faculty of Commerce and Business Administration would cooperate with the Interdepartmental Study Team on Housing and Rents of the Government of British Columbia in order to generate the needed data from housing consumers in the province. Both research teams were working under time constraints which required that whatever data that could be generated would have to be available for analysis in the latter part of the summer. Thus, little more than four weeks were available to design a questionnaire and sampling procedure; administer the survey; and code, keypunch and verify the questionnaires so that editing and analysis of the data could be undertaken.[7] While the limitations of available time were recognized,.it was decided that the need for current data outweighed the risks involved in undertaking a major survey in such a short period of time.[8]

A further limitation of the survey of direct concern for this thesis is the fact that it was not specifically designed to obtain data on the effect of our four factors on demand, but rather to obtain a global picture of the housing consumer in British Columbia. However, certain parts of the data base were applicable and are incorporated in the chapters dealing with demographic forces, income, and credit conditions.

1.5 Presentation

The thesis proceeds by examining each of the four factors: to see how each operates on housing demand; to display evidence of this operation in British Columbia through relevant data; and to present policy suggestions for each of the four factors.

Specifically, Chapter 2 will present an explanation of the characteristics of the housing commodity and its market which lead to the volatility of the demand component. Chapter 3 will contain a review of previous literature, with Chapter 4 containing the methodology and administration of the consumer survey. Following this 'stage setting', Chapters 5 through 8 will contain the analysis of the operation of the four demand components.

In addition to the conclusion contained in Chapter 9, this thesis includes as an appendix a copy of the questionnaire used and further tabulation of the results.

FOOTNOTES

[1] F.G. Pennance, "Background to the Housing Research Project," Urban Land Economics Division of the Faculty of Commerce and Business Administration, The University of British Columbia, 1975, p. 5 (Draft Only).

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

[3] Central Mortgage and Housing Corporation, *Canadian Housing Statistics, 1974* (Ottawa: C.M.H.C., March 1975), p. 20.

[4] *Ibid.*, p. 19.

[5] Wallace F. Smith, *Aspects of Housing Demand - Absorption, Demolition and Differentiation* (Berkeley: The Regents of the University of California, 1966), p. 1.

[6] For example, between 1971 and 1974 the vacancy rate in privately initiated apartment structures of six units and over dropped dramatically in Vancouver - in June 1971 it was 4.1% while in June 1974 it was 0.3% and in December 1974 it was 0.1%. See Central Mortgage and Housing Corporation, *Canadian Housing Statistics, 1974* (Ottawa: C.M.H.C., March 1975), Table 21, p. 20. The average sale price of multiple listings in Greater Vancouver (primarily single detached houses and condominiums) increased from $26,471 in 1971 to $57,242 in June of 1974. See Real Estate Board of Greater Vancouver, *Multiple Listing Service Statistics* (Vancouver, 1975). See also Mike Grenby, "House Prices Rose $5 Hourly," *The Vancouver Sun*, May 22, 1974, p. 38.

[7] Statistics Canada had administered a similar, but slightly longer questionnaire in late 1974 for the C.M.H.C. As the sample size was considerably larger, it was not anticipated that the initial tabulations would be available prior to early 1976. The C.M.H.C. survey was administered in every metropolitan centre in Canada.

[8]In retrospect, the need for current data may not have outweighed the problems which were created by the time constraints. It was necessary for the field consultant to hire additional staff to handle the assignment during one of their busiest periods of the year. The resulting inefficiencies necessitated a major editing task before the data could be analyzed.

Chapter 2

MARKET AND COMMODITY

As demand volatility in the housing market is the justification
for this analysis, it is logical to begin with an explanation of the
characteristics of housing which determine this volatility.

Classical economic theory is based on the 'perfect' market
model, composed of many buyers and sellers, equipped with perfect informa-
tion and dealing in a homogeneous commodity. The model maintains an
equilibrium position through rapid adjustment of the supply, demand and
price variables, governed by the basic equation of price = f (supply,
demand).

That the housing market is imperfect is hardly a startling
revelation itself, however, it is through the characteristics which cause
the imperfections that the dominant position of the demand variable arises.

The commodity consumed in the housing market is the flow of
services derived from the dwelling unit. This is a standard characteristic
of consumer durables which adds immediate complexity when one attempts to
explicitly define the service. Naturally shelter forms the core of the
service, but thereafter a myriad of ancillary functions are present:
location, privacy, prestige, amenities, etc. As the service of 'location'

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suggests, housing, for all intents and purposes is immobile. With an
immobile commodity, the market in which it is traded is necessarily local,
with no facility to compensate for an excess demand in one area with an
excess supply from another area. In addition, both the specific commodity
and the specific market, experience a unique vulnerability to the effect
of externalities, with the traditional examples being the glue factory
and the closing of a local source of employment.

A further effect of immobility is encountered when one attempts
to compare dwelling units and their transaction prices. By definition each
parcel of real estate (i.e. structure and land) is unique, hence the
market deals in a heterogeneous commodity. It necessarily follows that
the establishment of a market price in line with classical economic theory
is virtually impossible, since the homogeneity assumption is violated.

The second major characteristic of housing is its durability.
Once constructed, housing will continue to generate its flow of services
until the structure collapses (as a result of decay or demolition).
Thus, the housing market is composed of a supply built up through many
periods of time, rather than a supply that is generated and consumed in
one period. In the economic theory of housing, this characteristic
establishes a crucial difference between housing and other economic markets
as it reverses the emphasis of the supply variable from the flow component
to the stock.

Within the reality of the Canadian economy, the maximum produc-
tion of housing per year (i.e. the flow) is generally agreed to be approxi-
mately 3 to 4 percent of the accumulated supply (i.e. the stock). This

means that the supply side of the housing equation is virtually fixed or inelastic.

To accentuate this condition, the provision of new units requires a relatively lengthy period of planning and construction before the units are ready to provide their services. Thus, the flow of new units cannot respond rapidly to movement of the demand variable, and demand pressure must be absorbed by the stock.

As a result of the long life of the services offered by housing, the financial commitment is large relative to other commodities and the market involvement is sporadic. Hence, the majority of the buyers and sellers lack experience and understanding of the market operation and are slow to respond to market trends in contrast to the rapidity of the 'perfect' market model. In addition, the size of the financial outlay makes the decision to purchase extremely sensitive to both the consumer's current economic situation and his future expectations.

As far as the requirement of perfect information is concerned, the housing market has many shortcomings. In addition to the ignorance inherent in rare and sporadic market involvement, the variety of terms and forms of financing make the determination of the actual market price extremely difficult. Although the real estate industry attempts to reduce this lack of information through multiple listing services and their role as surrogate buyers and sellers, the market remains quite distant from the classical requirements.

The principle characteristic which establishes the distinction between housing and other economic markets is its durability. As was mentioned previously, the durability of structures creates a situation

where the stock of housing completely swamps the effect of the flow of
new units. Thus, the supply variable on which the market price is estab-
lished is the total collection of housing structures still standing. In
essence, the paucity of the flow component and the time necessary to bring
new units on-stream, dictates that the supply variable is fixed or
inelastic. This fact establishes two crucial points: (1) that the market
price is established by the standing stock rather than the flow; and
(2) that movement in the price level is almost entirely accounted for by
the movement of the demand curve. This situation is depicted graphically
in Figure 2.1.
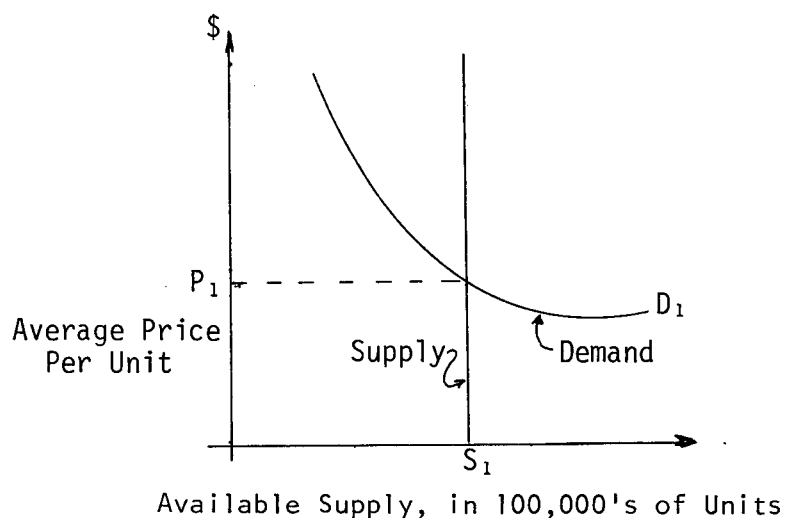
Figure 2.1. Basic supply-demand relationship in the housing market.

It is important to note that although the supply of *units* is
inflexible in the short run, the supply of *service* does exhibit some
flexibility through changes in the intensity of use. Rapid demand fluc-
tuation results in absorption of existing vacancies, doubling up of house-
holds, the creation of suites through conversions and an increase in the
market price level (Figure 2.2).
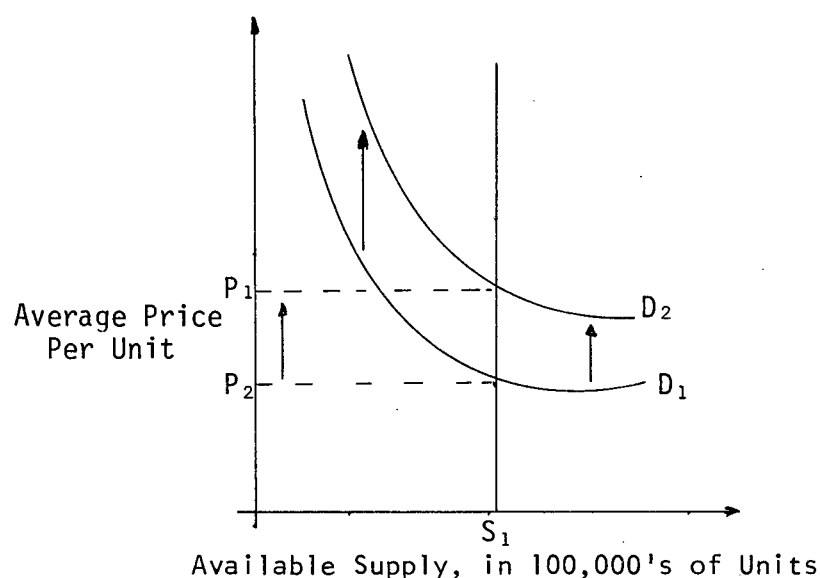
Figure 2.2. Demand shift and price level.

In addition to dictating who shall secure housing, the price

level serves the vital function of relaying signals to the production

sector of the housing industry. This process is illustrated in Figure 2.3.

As price takers, developers assess their potential through a process of

subtraction of the cost of labour, materials, financing, overhead, land and

profit from the given market price. Under normal conditions, the cost of

everything except land and profit is considered fixed. Thus, the bidding

process for land is pictured as absorbing the residual and dictating the

profit. If the profit is considered sufficient after all the costs have

been subtracted from the market price, the developer will proceed. It is

at this point that the length of time involved with housing construction

injects an additional element of risk into the calculations. With lengthy

periods of time, the various costs and even the market price can change,

and healthy profits can quickly be eroded. This fact has instilled the

PROFIT	
LABOUR	
MATERIALS	
FINANCING	
OVERHEAD	
LAND	

Quantity
(units = 10,000's)

Quantity
(units = 100's)
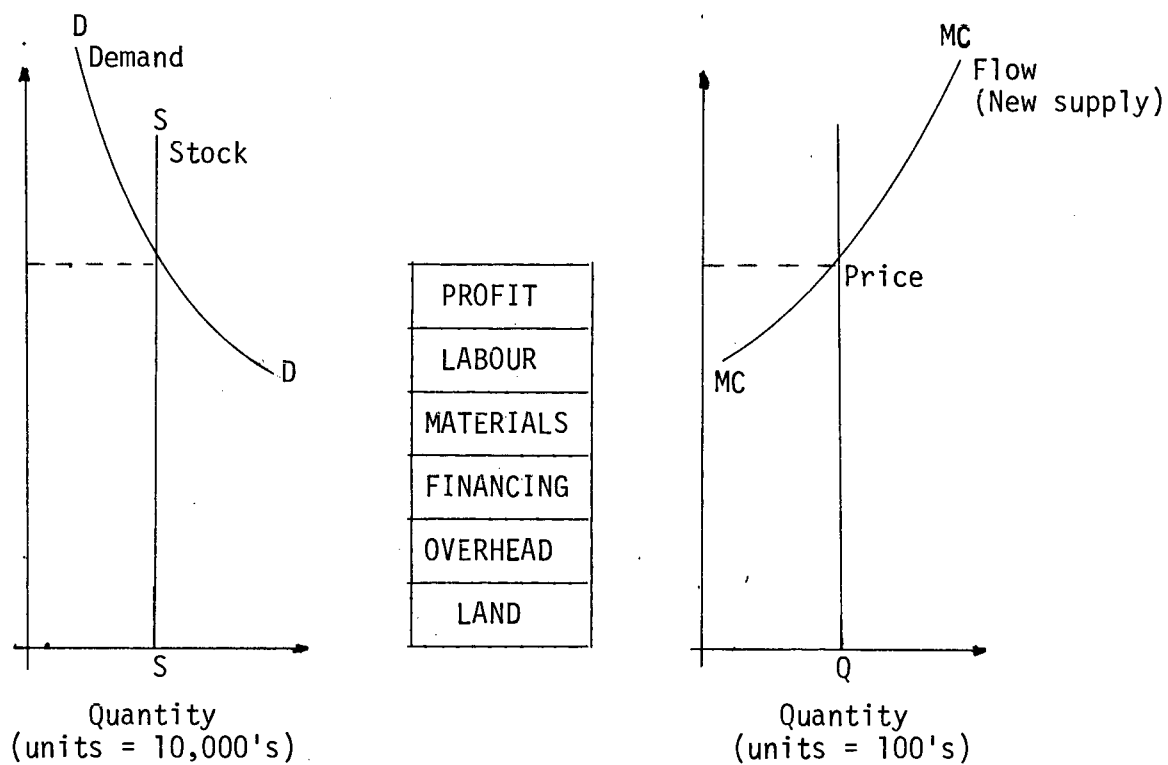
Source: David Baxter, *Speculation in Land*, Urban Land Economics, Report
no. 7, Faculty of Commerce and Business Administration, The
University of British Columbia, p. 5.

Figure 2.3. Stock and Flow Model of the Housing Market.

characteristic of caution into the housing industry, adding further to the inelasticity of the supply.

2.1 Summary

This chapter has explained the fundamental aspects of the housing market's operation. Of central concern to this thesis is the characteristic of durability which establishes the housing market's inelastic supply, and hence the dominance of the demand variable in the establishment of market price. It is the effect of the four major components (demographic forces, income, price and credit conditions) of this volatile variable which is the central focus of this thesis.

Chapter 3

REVIEW OF PREVIOUS LITERATURE

This chapter will serve to briefly outline the approach and
results of previous research conducted on the demand side of the housing
market. This review is intended to provide the reader with a comparative
basis for assessing the direction, scope and methodology of the analysis
presented in this thesis.

Although the number of studies of this subject is large, the
majority of the research effort has been channeled into five specific
areas: mobility; journey to work; consumer preference for the particular
unit; price elasticity; and income elasticity. As the last two subject
areas are of integral importance to our study of the price and income
components of housing demand, the review of their literature will be
reserved for the appropriate chapters. In addition, this literature
review will concentrate on what are considered to be the three leading
survey-based studies, with reference to associated studies for the
interested reader.

In 1955, Peter H. Rossi published his study of the urban housing
consumer entitled, *Why Families Move: A Study in the Social Psychology
of Urban Residential Mobility*. The source of the data was a personal

interview survey administered to 924 families living in selected areas of Philadelphia. In essence, Rossi was amalgamating the aims of previous residential mobility studies (such as those conducted by Green (1934),[1] Branch (1942),[2] Tableman (1948),[3] and Caplow (1949)[4]) and applying "modern social research methods."[5] Rossi was sufficiently concerned with the methodology of these new research methods to state that one of his primary aims was to provide an example of their use in the area of housing consumer study.

As the title of the work indicates, the central focus was residential mobility, which Rossi examined on three levels: area - to establish the distinguishing features of mobile areas; household - to pinpoint the characteristics which differentiate between stable and mobile families; and the individual decision to move - which features attract, and which features repel. To check the reality of the intention to move discovered in the initial interview, a further interview was conducted some eight months later.

There were four areas of Philadelphia selected for study, based on an index of mobility and socio-economic status obtained from Census statistics. The ultimate selections were made to obtain two high mobility and two low mobility areas, with each two characterized by contrasting (i.e. high and low) socio-economic status. This method of selection was used to remove the causal relationship of the socio-economic element. The principle finding of these area comparisons was that although the more mobile areas were characterized by large proportions of childless families and single person households, these segments of the population were not

the most mobile elements. The greatest mobility was found in families with children.

This finding was expanded upon in the household level with the incidence of mobility displaying a strong relationship to certain stages of the life cycle. The survey established two indices: Mobility Potential - family characteristics which predispose them to be mobile; and a Complaints index - establishing objections of the respondents to their dwelling unit and neighbourhood. It was found that expressed dissatisfaction and the position of the family in the life cycle were "extremely good predictors of a household's current desire for moving."[6] With regard to mobility of households, the survey results established that: large families were more mobile than small; young families were more mobile than old; renters were more mobile than owners; and renters who preferred to own most mobile of all. The relationship of complaints to mobility was the strongest for complaints concerning space within the dwelling unit, neighbourhood and costs; with complaints concerning the journey to work and the distance from friends only slightly related to mobility.

At the third level of study, Rossi was concerned with the answers to two questions: Why did the family leave their former home? and Why did they select their present home? His findings established that complaints concerning the lack of space, the quality of the neighbourhood and the cost of rent or maintenance were instrumental in promoting mobility. For the selection of the particular dwelling unit, the sampled population placed 'space' at the top of the list of things required, followed by design, location, and cost. However, at the point of the actual decision, 'cost' was the major consideration, followed by space, location and neighbourhood.

Although Rossi's findings suffer from the selectiveness of the sample (i.e. the results must form generalizations about consumers in the selected mobility and socio-economic grouping rather than a more general universe of housing consumers), they do establish considerable precedence for the study of the urban housing consumer. Specifically, his assessment of mobility as a mechanism by which a family's housing is brought into adjustment to its housing needs, as determined by shifts in family composition has been substantiated by numerous additional studies (see Greenbie (1968),[7] Butler (1969),[8] and Menchik (1971)[9]).

In 1960, *Housing Choices and Housing Constraints* by Foote, Winnick, Abu-Lughod and Foley presented a lengthy treatise on the American housing "problem." The problem per se, was expressed by Louis Winnick as being the fact that by "comparative standards, a large proportion of American families occupy inadequate housing and will continue to do so as long as existing conditions prevail."[10]

In the first section of the study, entitled, *Economic Constraints*, Winnick analyzed the expenditure on housing by the American consumer. Winnick's premise was founded on his belief in the 'filtering' process as an avenue of solution to discrepancies in quantity and quality at the lower ends of the income scale. To facilitate betterment through this process, consumption must be active at the upper and middle income levels. Drawing from data of the 1950 Survey of Consumer Expenditures, compiled by the Bureau of Labor Statistics from over 12,000 urban families, Winiick displays that a dwindling proportion of consumer expenditure has been devoted to housing. The study analyzed housing expenditures by place of residence (both geographical areas and city/suburb comparison); by family

size; life cycle; age of head; type of family; race; occupation and education; and tenure. Winnick acknowledges Rossi's work through his life cycle analysis of consumer behaviour reflecting changing family needs, and thus changing patterns of consumption. With his strong belief in the filtering process, his solution to the problem was to stimulate the upper income levels through government action, and by increasing their consumption of housing, passing on the benefits to the lower echelons.

The *Consumer Strategies* section by Janet Abu-Lughod and Mary Mix Foley, presented an in-depth analysis of the behavioural aspects of housing consumers based on previous research reports. The authors concentrated on consumer mobility, preference and satisfaction. Once again life cycle analysis of changing needs occupies the central thrust of the mobility argument. In addition, the importance of neighbourhood characteristics and the preference of suburban versus central location are noted in the area of preferred attributes. In the final stage of actual choice, the elements of cost and the structural characteristics of the specific dwelling unit were considered to be of paramount importance. The analysis of the dwelling unit effect is presented in extreme detail, even to the point of considering laundry and bathroom equipment.

The results of a survey conducted by Abu-Lughod are included as an appendix to the study. The survey attempted to determine why people of sufficient economic ability to move to the suburbs chose to reside in the urban centre. A sample of 297 households was taken from large luxury apartments in New York, Philadelphia and Chicago. The central finding of the survey was that a large percentage of the respondents had migrated from the suburbs for the convenience of the location with regard to work and leisure time activities. The positive nature of these findings in

the context of demand for central urban location is significant when
weighed against the pessimistic opinion held at the time with regard to
the future of North American cities (see Jacobs (1961)[11]).

Nelson Foote's concluding section on *Consumers as Actors*, uses
the previous two sections as his basis for a unique observation of the
housing consumer within, as he terms it, a "wider social context."[12] Foote's
remarks are based on the inflexibility of present residential structure
and the acknowledgement of the need for structural flexibility presented
by household change during the life cycle. Through the concept of modular
construction, Foote envisages the dwelling unit as a chameleon-like object
to be altered as the needs of the household are altered.

The premier behavioural work incorporating interview-questionnaire
results was conducted by J.B. Lansing in 1966.[13] His study of residential
location and urban mobility represented the completion of research begun
in 1963, when 824 interviews were taken of families living in private
dwellings in metropolitan areas of the United States.[14] In this concluding
study, Lansing added 740 more interviews from 32 metropolitan statistical
areas, using an enlarged and more refined questionnaire than the previous
study. Lansing divided his objectives into five areas of concern:
residential density; locational preference; factors in choosing a home;
vacation homes; and the journey to work.

In the area of residential density, Lansing found that in the
choice between single and multiple family housing, 85% of the sample pre-
ferred the single family home. In addition, the proportion who occupied
single family homes rose with income and the general evidence pointed
to continued increases in the overall proportion of single to multiple
dwellings. As another variable of density, the lot size was studied.

The observed preference was with a lot size larger than the median of the sampled population and the results provided evidence that the lot size rose with income.

With regard to locational preferences, the surveyed population overwhelmingly preferred locations well out from the centre of the metro- politan area; citing noise, crowding and confusion as the repelling factors and the desire for space and recreational activities as the attraction to more distant locations. The factors involved with housing choice were primarily related to the need for space, centering on the floor plan, the number of bedrooms and the size of the rooms.

Lansing's analysis of the journey to work centres more on the journey itself with regard to choice of mode, time, cost and preference, rather than as a determinant of residential location (see Kain (1961)[15] and Wolforth (1965)[16]). His analysis does suggest that maximum distance to work is not a factor in housing selection, with 66% of the sampled population not even having a time limit in mind prior to their dwelling selection.

It is beyond the scope of this thesis to review all of the works concerning the demand side of the housing market. The three works pre- sented here were selected as much for the precedence they established in housing consumer research as for their statistical findings.

In addition to the studies referred to throughout the body of this chapter, the interested reader is directed to the more recent, survey-backed, behavioural studies by Clark (1971),[17] Moore (1972),[18] Barrett (1973)[1] and Ermuth (1974).[20] Furthermore, the works by Lowry (1964),[21] Chapin (1965)[22] and Goldner (1968)[23] will give the reader an

opportunity to view the question of housing demand and residential location through the medium of model simulation.

In addition to presenting the reader with a comparative framework from which to view this thesis, this review serves to establish the gaps in our knowledge of housing demand in general, and specifically the lack of research in British Columbia. Clearly, one of the underlying purposes of this thesis is to present some recent material to help establish a British Columbia picture of housing demand.

FOOTNOTES

[1]Howard W. Green, *Movements of Families Within the Cleveland Metropolitan District, 1933* (Cleveland: Real Property Inventory of Metropolitan Cleveland, 1934).

[2]Melville C. Branch, Jr., *Urban Planning and Public Opinion* (Princeton, N.J.: The Princeton University Press, 1942).

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Chapter 4

SURVEY

The majority of the data used in this thesis was obtained from a survey of housing consumers in British Columbia. This chapter will provide both general and technical comments with respect to the preparation; administration; and the methodology of generating and analyzing the survey data.

4.1 The Survey: General

4.1.1 Purpose

The purpose of the survey was to provide information about the current housing market in the Province of British Columbia. This information would be used to both update and augment the data provided by the 1971 Census of Canada. Hopefully, the survey would allow conclusions to be drawn about the existing stock of housing units and how those units are being used. Data would be generated about the size and type of households consuming particular sizes and types of housing units. Furthermore, data on household income, wealth and housing expenditure would be generated. In addition, numerous peripheral questions directed towards respondents would provide helpful information on consumer preferences, opinion and

mobility. In essence, the survey would present an up-to-date picture of
housing consumers in British Columbia.

4.1.2 Coverage

Clearly, both time and cost constraints preclude the administra-
tion of a survey to every household in the province, or even a large
proportion of households in the province. Thus, it was necessary to devise
a sampling procedure that would generate enough useful information within
a limited budget. This placed the two study teams in a position of having
to make a trade-off between the size of the sample and the physical length
of the questionnaire. Definitely, there was a certain minimum sample size
that would be required to make any in-depth analysis of the data possible,
but at the same time the scope of the analysis would depend upon the amount
of questions directed at each respondent. To compound the problem, the
respective study teams felt that any data obtained should be gathered
from *all* types of households in the province. When one placed these desires
in the context of the recognized time and cost contraints, the design of
the sample and the survey appeared impossible.

As a consequence, it was deemed to be necessary to relax the
prerequisite with respect to coverage. Initially it was proposed that five
to seven communities be surveyed individually rather than sampling from
the province as a whole. This was an obvious way to stratify the study
area in order to maximize the value of a relatively small sample.[1] However,
it later appeared that it would be necessary to reduce the number of
communities further, to ensure that the sample in each community was large
enough to form an adequate basis for analysis of the data.

The choice of particular communities was further constrained by both groups involved in the survey. Each group was concurrently conducting research on other aspects of the housing market in particular communities throughout the province. Hence, it was considered valuable to generate data from households living in those centres in which other data was being obtained. This would mean that at the conclusion of the data collection a relatively complete package of data would exist for a few centres as opposed to an incomplete package for a larger number of centres.

A dwelling unit was defined as a set of living quarters which

1. is structurally separate, and

2. has a private entrance outside the building or from a common stairway or hall inside. The entrance must be one which can be used without passing through anyone else's living quarters.

The only other limitation placed on the coverage was that an interview was not to be carried out if the dwelling unit was a tent, boarding house, motel, hotel, dormatory or any kind of institution (e.g. student hostel, hospital, etc.).[2]

The next area of importance is the nature of the information collected.

4.1.3 Collection of Information

The questionnaire is structured in the following manner. Section A deals with the composition of the household being interviewed. Section B deals with the characteristics of the present dwelling unit of the household. This is a lengthy section which covers structural type and

characteristics of the dwelling; tenure type; shelter expenditure by
renters; the awareness of renters with respect to rent control regulations;
and the preferences of renters with respect to home ownership. The
section goes on to determine shelter expenditure for owner occupiers and
preference with respect ot renting. Section B concludes with questions
eliciting information about expenditures by renters and owners on utilities,
repairs, maintenance and improvements.

Section C deals with mobility. If the household head had moved
since June 1, 1971 the details of his move (or moves) were recorded; his
reasons for moving; his reasons for choosing the current dwelling; and
his search procedure. Household heads who had not moved since June 1,
1971 were not required to complete sections C, D or E. Section D deals
with previous dwelling characteristics including type of structure; type
of tenure; and approximate monthly rental or sale price and level of
additional expenses. Section E deals with the household composition of
the head's previous dwelling.

Section F was to be completed by all respondents and deals with
current household income and wealth. The respondents were asked to com-
plete quite detailed income information. The purpose of doing so was
primarily to ensure accuracy by the respondent, as it was felt that going
through every source of income for every member of the household would
provide a more accurate figure than if the household head was simply asked
to approximate a range of household income. While the detailed data are
available, for the purposes of this analysis they were aggregated. With
respect to household wealth, respondents were asked to review household

assets and liabilities and approximate a range in which household wealth
would fall.

Section G was completed by only those respondents who had moved
since June 1, 1971 and deals with previous income and wealth. Respondents
were asked to approximate the range in which their previous household
income fell and a similar range for their previous household wealth. This
section completed the survey.

No respondnet would have completed every section of the question-
naire, as the type of tenure or mobility of the respondent would have
determined which sections were completed fully and which were ignored. The
questionnaire itself composes Appendix A to this thesis. The survey was
intended to be isolated; that is, undertaken only once to generate data
for current housing market research.

The survey was administered by Regional Marketing Surveys Ltd.
of Vancouver. Personal interviews with the household for the purpose of
the survey took place at the respondent's place of residence during the
month of July, 1975. Completed questionnaires were edited and coded
periodically during the latter part of July and then keypunched. The
keypunched data was transferred to magnetic tape and provided to the
study team in August, 1975.

The Statistical Package for the Social Sciences (SPSS) was the
vehicle for the analysis of the data.[3] However, considerable editing
was required before any statistical analysis could be undertaken. First,
interviewing, coding and keypunching errors had to be tracked down and
corrected.[4] Second, some new variables had to be generated from the data

contained in the original tape. For example, the household composition

data contained in section A had to be reworked to generate the variables:

number of people in the household; number of families; number of people

in each family; type of family; and number of non-family occupants.

This new information was added to a specific data card.[5] In many cases

generation of the new variables required physical examination of the

individual questionnaires.

Despite the technical problems involved in generating the data,

the results of the survey appear accurate and fulfill the purpose for

which the survey was intended.

Before proceeding with the technical aspects of the survey, the

groups responsible for the survey should be described. The survey was

undertaken jointly by the Interdepartmental Study Team on Housing and Rents

of the Government of British Columbia and the Housing Study Team of the

Urban Land Economics Division of the Faculty of Commerce and Business

Administration at The University of British Columbia. The questionnaire

was designed jointly by the groups and a mutually acceptable sample design

was constituted in cooperation with a consultant, Regional Marketing

Surveys Ltd. and their affiliate, Canada Facts Co. Ltd. The Interdepart-

mental Study Team on Housing and Rents hired the consultant, Regional

Marketing Surveys Ltd. to undertake the fieldwork related to the survey

and the initial coding and editing of the data. The U.B.C. group, in turn,

undertook final editing of the data and the statistical analysis of the data.

As well, the U.B.C. group worked closely with the consultant during the

administration of the survey.

The data generated was intended to be used by the Interdepartmental Study Team as an aid in the preparation of policy recommendations related to housing for the Cabinet of the Province of British Columbia in fall 1975. The U.B.C. group intended to use the data to aid in the analysis of the housing market for their study for the Real Estate Institute of British Columbia.

4.2 The Survey: Technical

4.2.1 The Frame

The frame is defined to be the listing of all the items from which the sample is drawn. In this case the frame available for use in this study was the 1971 Census of Canada population counts of households for each of:

1. the Greater Vancouver Regional District

2. the Prince George Census Agglomeration

3. the City of Cranbrook

It should be noted that the 1971 census figures are no longer accurate but the census data is the only viable source for establishing a sampling framework for this type of survey.[6]

The sample design was undertaken by Canada Facts Co. Ltd., an affiliate of Regional Marketing Surveys Ltd. The frame was stratified in a geographic and economic sense. A tape was constructed for the urban parts of each geographic zone. In each urbanized area on each tape the census tracts were ordered from highest average income to lowest average

income and within each census tract the enumeration areas were ordered according to their designated number.

The type of geographic stratification depended on the size of the city or town involved. Whether or not economic stratification took place depended on whether or not census tracts exist, since an average income is published for census tracts only. Hence, in this study, both geographic and economic ordering of the population frame only took place in the Greater Vancouver Regional District. Geographic ordering of the data is important because of the systematic random sampling approach which was used. Geographic ordering forces geographic dispersion on the selected sample. Ordering of the data by average income where census tracts exist, forces economic dispersion on the selected sample in the GVRD, where the sample proportion was low; stratification of the frame ensured a dispersed sample.

Canadian Facts used the 1971 Census of Canada not in its published form, but transposed to physical tape listings of household counts in the following hierarchical order:

1. City/Town

2. Urban Parts

3. Census Tracts (where they exist)

4. Enumeration Areas.

The tapes were then used as the frame in the first stage of sample selection.

4.2.2 First Stage of Sample Selection

To select a sample from the tapes that make up the frame by a systematic random process, it was first necessary to calculate the selection interval. The calculation is:

$$\frac{\text{(Total Household Count According to the Tapes)}}{\text{Sample Size}} = \underline{I}$$

Then a random start between 1 and $\underline{I}$ was selected from a table of random numbers. If the random start was X, the Xth item or household in the list was duly noted by the enumeration area of residence. By adding the interval $\underline{I}$ to the Xth item, the second item or household selected was again noted by the enumeration area of residence. Continuing this process until the list was exhausted, a list of enumeration areas that form the first stage of selection was achieved. At the second stage of sampling a set of blocks was selected.

An emuneration area is defined by Statistics Canada as a spatial unit canvassed by one census representative. It is defined according to the following criteria: (1) Population - an area may include as many as 300 households, depending on its location; (2) Number of farms (in rural areas) - an emuneration area always includes fewer than 100 farms; (3) Limits - an enumeration area being the building block of all statistical areas, never cuts across any area recognized by the census. Also, emuneration area boundaries are such that they may readily be located by census representatives (e.g. streets, roads, railways, rivers, etc.).[7]

4.2.3 Second Stage of Sample Selection

Each enumeration area selected was matched with a corresponding enumeration area map. This map contained a sequenced and monotonic numerical identification of all blocks. (For the purposes of this study, these were city/town blocks as generally understood.) Again, the table of random numbers was utilized to select a single block from all blocks in the enumeration area. After this selection was made for each enumeration area of Stage 1, the listing of blocks for Stage 2 was complete.

It is at this point that production of a block diagram began forming the basis for the third stage.

4.2.4 The Block Diagram and Third Stage of Sample Selection

The block diagram was an 8½ x 11" sheet of paper containing:

(1) The specific block that the interviewer was
to visit as noted by its street boundaries
and names.

(2) The instructions as to which household was
the beginning household.

(3) The pattern of skips between households that
was to be maintained.

(4) The number of households that were to be visited
or the number of completions that were expected
from a visit to the block. (In this study, 5
completions were required from a block)

(5) Any special rules regarding interviewing. In
this study there were special rules when apart-
ment dwellings were encountered.

Since special rules were in effect (as requested by the Inter-
departmental Study Team on Housing and Rents), they are here restated:

(a) A maximum of two interviews were to be conducted in any one apartment building, regardless of the number of occupied units.

(b) Interviews which were initially assigned to an apartment building but not completed due to the application of item a, were to be reassigned to another apartment building on the same block if possible.

(c) The pattern of skips between households within an apartment building was to be adjusted to compensate for the number of occupied units.

4.2.5 The Fourth and Final Stage of Selection

The final stage selected the respondent from the dwelling unit. The major criterion for choosing a respondent was that he be able to answer all the questions. Generally, it was assumed that the household head, the person who contributed the largest amount of money for the operation of the household, would have been appropriate. In a non-family household, any individual who contributed to the rent or shared in ownership would have been appropriate.

4.3 Comments on the Sample Selection Procedure

With respect to the sampling procedures, a number of points should be made.

(1) The sample was selected from only three urban areas in the province; the Greater Vancouver Regional District, the Prince George Census Agglomeration, and the City of Cranbrook. To the extent that a metropolitan area, a major urban area and a city were chosen, a case can be

made after the fact that population strata were formed by inspection.
However, it remains that other factors such as growth rate, average
income and economic base should have been considered when determining
the strata. Hence, the data generated by this survey cannot be inter-
preted to accurately represent the province at large. The data for each
urban area taken separately or weighted by population and pooled still
only represent the three communities surveyed. With considerable caution
inferences might be made about similar communities but the risks inherent
in such a procedure must be recognized. In defence of the approach used,
it must be remembered that knowing a lot about three communities from
different geographic regions in the province, and each of different size
was considered more valuable than knowing very little about the whole
province. Moreover, other sources were generating up-to-date data with
respect to the three urban areas surveyed.

(2) This study dealt only with individuals at home at the time
of the interview. Call back studies indicate that the portion of the
households that can be contacted on one call is approximately 40%, thus
it must be recognized that the study opinions may not represent a majority
of the households. This is a potential source of bias.

(3) For cost reasons, a clustering process was used in the
sample selection. Once a random process had been used to choose a block,
interviews on the block were clustered by a predetermined process. The
procedure is cost efficient but may increase the variance of the results.[8]

(4) The procedure used to determine the clustering of dwelling units in multi-unit buildings was different from that used to determine the clustering of single detached dwelling units. It would be impossible to gauge the effect or non-effect of the differences in the types of clustering. For example, if interviews in apartment blocks tended to be conducted on lower floors, the results would be biased against occupants who could afford the higher rents on the upper floors.

In the opinion of the researchers, the constraints applied to the sampling procedure did not seriously impede the generation of data which is representative of current housing markets in the three urban areas surveyed. Certainly, one would not be precluded from drawing qualitative conclusions from the data.

4.4 The Sample

The basic sample consisted of 1675 interviews in the Greater Vancouver Regional District, the Prince George Census Agglomeration and the City of Cranbrook. This sample was divided up in the following way.

Table 4.1

The Basic Sample

	Number of Interviews	Number of Households 1971 Census	Sample as % of Population (Total Households)
GVRD	925	329,505	0.28
Prince George C.A.	472	12,710	3.71
Cranbrook	278	3,260	8.53

1971 census figures indicated that the likely proportion of renters in the Cranbrook sample would form a subgroup too small to provide any detailed analysis. Consequently, an over-sample of renters was taken in Cranbrook by interviewing an additional 94 renters. The data from the special Cranbrook sample (Cran 9) can be used for the analysis of renters, but cannot be aggregated with the basic sample of 278 interviews unless the other tenure types are weighted accordingly.

The prime determinant of the sample size in each urban area was the need to be certain that fairly extensive cross-tabulations could be undertaken with the data. It was for this reason that an additional tenant sample was taken in Cranbrook. Hence, there exists a significant range in the sample as a proportion of the statistical population (the number of households as of the 1971 census). The proportion ranges from .28% in G.V.R.D. to 3.71% in the Prince George C.A. and 8.53% in Cranbrook. Since there was no intention that the data be aggregated, weighting was not necessary in the basic sample. The only possible concern might be that the GVRD sample was too small but the costs of even a 1% sample would have been prohibitive. However, the GVRD sample seems adequate provided one does not wish to make detailed analysis of individual municipalities within the metro area.

4.5 Comparison with Other Sources of Information

It would be valuable to make some comparisons with other sources of data. Unfortunately, the only available source is the 1971 census data which, as pointed out earlier in this paper, cannot be considered strictly

comparable due to changing market conditions. On the other hand, if antici-
pated changes show up in the survey data, potential sources of bias could
be discounted.

It should be recognized that these comparisons are limited in
scope and detail by the publications of Census Canada. Thus, the com-
parisons offered are brief and, with two exceptions, they are given only
for the G.V.R.D.

The first table gives a comparison of the renter/owner tenure
split in the three communities studies.[9]

Table 4.2

Tenure

	G.V.R.D.		Prince George		Cranbrook	
	Census	Survey	Census	Survey	Census	Survey
Owner	58%	61%	61.8%	63.1%	72.1%	75.9%
Renter	42%	39%	38.2%	36.9%	27.9%	24.1%

The observed decline in renters and the consequent increase in owners was
predictable, given the emphasis placed on home ownership by federal and
provincial governments and the policies constraining rental development
(e.g. removal of capital cost allowance and the introduction of rent
control).[10] Table 4.3's comparison of structures displays the same evidence.

Table 4.3

Structure

	G.V.R.D.		Prince George	
	Census	Survey	Census	Survey
Single Detached	61.5%	68.5%	72.3%	81.3%
Apartment	34.3%	25.2%	16.6%	4.0%

Table 4.4 shows the comparison of income results, with a predictable increase in the Survey observed incomes.

Table 4.4

Household Income

	G.V.R.D.	
	Census	Survey
Less than $1,000	2.89%	3.02%
$1,000 - $2,999	11.60%	7.76%
$3,000 - $4,999	10.80%	6.58%
$5,000 - $6,999	11.80%	8.68%
$7,000 - $9,999	21.10%	11.18%
$10,000 - $14,999	25.00%	21.84%
$15,000 - $19,999	9.69%	17.11%
Greater than $20,000	6.96%	23.82%

The divergence between the survey's income responses and those offered by the 1971 Census is considerable. However, when one takes into account the inflation experienced between the time periods, the shift in income appears reasonable.

Personal disposable income per capita for all Canadians, rose 42.3% between 1971 and 1974.[11] Thus, it is reasonable to assume that the inflation effect to 1975 for the G.V.R.D. was approximately 50% (given the additional year and the G.V.R.D.'s comparatively high position in Canadian inflationary trends). To test this approximation, the income categories were raised 50% and the Survey's responses were regenerated into the new categories. The results are displayed in Table 4.5, with the original results.

Table 4.5

Income Inflation

	G.V.R.D.		Census	G.V.R.D.
Less than $1,500	4.8%	Less than $1,000	2.89%	3.02%
$1,500 to $4,500	10.8%	$1,000 to $2,999	11.60%	7.76%
$4,501 to $7,500	12.4%	$3,000 to $4,999	10.80%	6.58%
$7,501 to $10,500	13.6%	$5,000 to $6,999	11.80%	8.68%
$10,501 to $15,000	18.1%	$7,000 to $9,999	21.10%	11.18%
$15,001 to $22,500	24.6%	$10,000 to $14,999	25.00%	21.84%
$22,501 to $30,000	9.3%	$15,000 to $19,999	9.69%	17.11%
Greater than $30,000	6.4%	Greater than $20,000	6.96%	23.82%

These results help to justify the comparability of the sample, *if* one
accepts the assumption of a 50% total income inflation for the G.V.R.D.
from 1971 to 1975.

Table 4.6 and 4.7 offer the final comparisons by age of house-
hold head and by number of occupants per household.

Table 4.6

Age of Head

	G.V.R.D.	
	Census	Survey
Less than 25 years	5.894%	8.00%
25 to 34 years	22.000%	22.70%
35 to 44 years	22.940%	18.10%
45 to 54 years	21.000%	18.70%
55 to 64 years	15.540%	14.90%
Greater than 65 years	12.580%	17.50%

Table 4.7

Number of Occupants

	G.V.R.D.	
	Census	Survey
One	18.96%	16.6%
Two	29.32%	32.9%
Three	16.00%	18.5%
Four/Five	26.80%	26.3%
Six/Nine	8.50%	5.7%
Ten plus	0.29%	0.0%

4.6 <u>Summary</u>

The validity of any survey-generated conclusions must ultimately rest on the 'purity' of the sampling technique and the methodology used. In addition, the comparisons offered in the previous section add further credance to the representative nature of the sample. Thus, there appears to be no reason to hesitate in applying the data to the analysis contained in this thesis.

FOOTNOTES

[1]Technically the correct approach to stratifying the communities within the province would have been to stratify all communities within the province according to characteristics of each individual community such as size, growth rate, average income, and economic base. Then a sample community is selected from each stratum and the sample results from each stratum can then be pooled to arrive at an estimate for the whole. See Des Raj, *The Design of Sample Surveys* (New York: MacGraw-Hill, 1972), pp. 22-24.

[2]See Question B3, option #8 of the Survey contained in Appendix A.

[3]N.H. Nie, D.H. Bent and C.H. Hull, *Statistical Package for the Social Sciences* (New York: McGraw-Hill, 1970), and see also Nie and Bent, *Statistical Package for the Social Sciences: Update Manual* (Chicago: N.O.R.C., University of Chicago, April 1971 and April 1972).

[4]Due to the complexity of the questionnaire and the speed at which the survey had to be undertaken, it is likely that the potential for error at every stage of the survey was magnified. Hence, a lengthy process was required before the data was considered "clean" enough to subject it to statistical analysis. Since so many of the questions in the questionnaire were interrelated (household composition data is a good example), interviewer, coding and keypunching, errors were usually readily apparent and easily corrected. Unfortunately such corrections required, in viritually every case, individual examination of the questionnaire or at least the data file.

[5]See the Questionnaire, Appendix A.

[6]For example, in 1971 the population of the G.V.R.D. was 1,028,345. Projections by the Regional District suggest a population of 1,169,923 in 1976. An increase of 13.77%. The increase in population, primarily taking place in the suburbs, would tend to bias any sample design based on 1971 census figures. Assuming population growth is taking place in the suburbs

and not in Vancouver City, a sample based on 1971 census figures would be biased slightly toward Vancouver City. See Greater Vancouver Regional District, Population Forecast (Vancouver: January 1973), p. 6.

[7]Statistics Canada, *Dictionary of 1971 Census Terms (12-540)*. (Ottawa: Information Canada), p. 49.

[8]Des Raj, *op. cit.*, pp. 24-25.

[9]The figures for Prince George and Cranbrook were taken from a detailed analysis of the 1971 census data, performed by Prof. David E. Baxter and Mr. Danial Ulinder (Urban Land Economics Division of the Faculty of Commerce and Business Administration, The University of British Columbia, 1975).

[10]For further analysis of this subject see Robert C. Levine, "The Economic Reasons for the Shortage of Residential Rental Accommodation in Greater Vancouver" (M.Sc. dissertation, The University of British Columbia, 1974).

[11]See reference Table 11, *Economic Review, April 1975 (Finance)* (Ottawa: Information Canada), p. 112.

Chapter 5

DEMOGRAPHIC FORCES

This chapter discusses demographic forces as they affect the demand for housing by analyzing two areas of influence: those factors influencing household formation; and those factors influencing the size of the population from which the households are formed. Increases in either area implies an increase in the demand for housing.*

Every Canadian, at some point in his life, must choose a living arrangement to suit his particular needs at the time. He may live alone, with a friend or friends, with a spouse or with a spouse and children. The characteristics of the household,[1] the household income, mobility, the ages of the household members and so on, all come together as factors determining the type of dwelling unit, the form of tenure and the location which is appropriate for a particular individual, family,[2] or combination thereof.

In the aggregate, the desired living arrangements of people are major determinants of housing demand from an economic point of view.

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*The assumption of new households having sufficient funds to express demand will be carried throughout this chapter.

Shifts in living arrangements of the population may be determined by any number of variables, but one which will be discussed at this time is demographic structure.

Past research has used the concept of the family life cycle or "normal life cycle" as a framework for the study of demographic forces.[3] While it is customary to use the concept of households in any analysis of housing markets, trends with respect to family formation must be observed in order to determine what kind of households are apt to be formed. Alder Speare constructed a cycle of six stages, each of which is occupied in succession by a person passing through a "normal life cycle." They are:

1.	Young Unmarried:	aged under 45 and never married, widowed, separated or divorced.
2.	Just Married:	the year of marriage.
3.	Young Married:	oldest child under age 5, or childless; and respondent under age 45.
4.	Married with School Age Children:	youngest child 5 or older, oldest child under 18.
5.	Older Married:	youngest child over 18, or childless; and respondent age 45 or over.
6.	Older Unmarried:	age 45 and over, and never married, widowed, separated or divorced.[4]

These catagories were designed by Speare specifically for the analysis of data pertaining to residential mobility. Nonetheless, they can also be used for general application as a set of stages that are each representative of certain housing needs. Assuming that at each stage, the individual or

family has the resources to bid effectively in the marketplace, they will demand housing appropriate to those needs.

It should be noted that not all persons will pass through this "normal life cycle": some never marry, while others marry but never have children and still others have their marriage terminated by death, divorce or separation before their children reach maturity.

The rate of growth of non-family households in metropolitan Vancouver was dramatic between 1961 and 1971.

Table 5.1

Family and Non-Family Households: G.V.R.D. 1961-71

	1961	% Increase	1966	% Increase	1971
Non-Family Households	40,484	48.5	60,155	38.1	83,130
Family Households	188,114	12.5	211,801	16.2	246,315

Source: Michele Lioy, *Social Trends in Greater Vancouver*, United Way of Greater Vancouver, 1975.

While these figures may not indicate an increase in the number of individuals who will not progress through every stage in the life cycle of the family, the data certainly indicate a burgeoning of the number of households in stages one and six.

As previously stated, the manner in which an area divides itself into households is one factor of housing demand. An exploration of trends in past years may be helpful in shedding light on the current

market situation. The number of new families being formed depends on historic changes in population characteristics, birth rates, death rates, marriage rates, divorce rates and so on. The number of families at any particular time can be assumed to approximate a large portion of the households. In addition, as can be seen from the figures in Table 5.1, the proportion of non-family groups is also significant. Hence, an important factor in the analysis of demographic forces (and thus housing demand) is to observe trends in family household formation, type of family household formation and also non-family household formation within the housed population. Such observations of the marketplace allow conclusions to be drawn, not only about the type of households being formed, but also about those family and non-family groups which have been successful in converting their need to effective demand, through the exercise of purchasing power.

Tabulation 5.1 presents the surveyed population divided into families with no children, families with children and non-family households, cross-tabulated by their tenure.[5]

In the short-run, the pressures of new family formation and the desire of unattached individuals to form households encounters the inelasticity of housing supply, thus producing significant price rises. If, at the same time, incomes are rising and credit conditions are favorable, these price rises can be even more dramatic. Restrictions on the number of available units and the existence of high prices may require that families and/or individuals pool their resources in order to translate their needs into effective demand (i.e. doubling-up: which is akin to a reduction in the number of households).

```
                    NTEN
          COUNT   I
          ROW PCT ICONDOMIN OWNER_OC RENTED    LONG TRM LEASED      ROW
          COL PCT I                            LEASE    LAND        TOTAL
          TOT PCT I    1.00I     2.00I     5.00I    4.00I     5.00I
DEM                -I--------I--------I--------I--------I--------I
          1.00    I      5  I    270  I    138  I      0  I      1  I    414
    NO  CHILDREN  I    1.2  I   65.2  I   55.3  I    0.0  I    0.2  I   24.7
                  I   55.6  I   25.4  I   23.0  I    0.0  I   33.3  I
                  I    0.3  I   16.1  I    8.2  I    0.0  I    0.1  I
                 -I--------I--------I--------I--------I--------I
          2.00    I      2  I    692  I    231  I      1  I      2  I    928
FAM AND CHILDREN  I    0.2  I   74.6  I   24.9  I    0.1  I    0.2  I   55.4
                  I   22.2  I   65.2  I   38.5  I   50.0  I   66.7  I
                  I    0.1  I   41.3  I   13.8  I    0.1  I    0.1  I
                 -I--------I--------I--------I--------I--------I
          3.00    I.     2  I     99  I    231  I      1  I      0  I    333
    NON  FAMILY   I    0.6  I   29.7  I   69.4  I    0.3  I    0.0  I   19.9
                  I   22.2  I    9.3  I   38.5  I   50.0  I    0.0  I
                  I    0.1  I    5.9  I   13.8  I    0.1  I    0.0  I
                 -I--------I--------I--------I--------I--------I
          COLUMN       9      1061       600         2         3      1675
          TOTAL       0.5      63.3      35.8       0.1       0.2     100.0
```

Tabulation 5.1.   Tenure of Selected Demographic Groups.

5.1 Family and Non-Family Patterns

The family has continued to be the predominant form of living arrangement for Canadians. In recent years, marriage rates have been on the upswing, causing a marked increase in family household formation between 1966 and 1971, as opposed to the previous five years. To a great extent, this fact reflects the increase in the number of people of marriageable age — the children of post World War II marriages, referred to in many contemporary articles as the 'baby boom'.[6] Demographers have likened the assimilation of the baby boom "to the process by which a python digests a pig. As the pig moves along the snake's digestive tract, it makes a bulge, just as the boom babies are causing a travelling bulge in the economy and social life of the country."[7]

In addition to this surge in families that demographers have been able to predict for many years, the housing market is facing an even greater rise in the number of non-family households. As can be seen from the figures in Table 5.1, non-family formation is increasing at a much faster pace than family formation, a fact which has led housing analysts to emphasize even more the need for a free-flowing productive market.

The reason for this increase in non-family formation is considerably more complex than a factor of age in the population. In essence, it has been caused by a major shift in social attitudes, placing much more emphasis on the period in a person's life cycle between his natural family and the creation of a new family unit. To tie the emergence of this 'independent' period to any one cause is virtually impossible, and whether one leans to the new role of women or Roszak's "counter culture" is a matter of personal opinion. Suffice it to say, that all submarkets of housing

demand have been swelled by the new non-family households with fewer

expenses (i.e. dependents) and thus greater disposable income than the

traditional family unit. It can also be suggested that as the attitude of

these non-family households is not constrained by the need to provide secu-

rity for dependents, they tend to be more aggressive in the marketplace

and more investment oriented in their approach to housing consumption.

A closer look at non-family households displays that an increased

prevalence of one person households, backed by the prosperity of the 1960's

and 1970's, has been a significant contributor to the general increase in

housing demand. A recent article by Robert M. Fisher and John W. Graham

outlines the growth of the one person households in the United States: the

number of one person households as a percentage of all households increased

from 9.3% in 1950 to 17.6% in 1970; while the share of one person house-

holds in total household growth amounted to 16% in the 1940's, 30% in the

1950's and 39% in the 1960's. The authors also add that in 1970, 11

million of the 52 million occupied dwellings were occupied by one person

households, while the remaining 41 million dwellings were occupied by

192 million people.[8]

Canadian data support the American research in that the number

of one person households as a percentage of the total number of households

has increased, and that 29% of the new households formed in Greater Vancouver

between 1960 and 1970 were one person households.

From the accumulation of this data, it has become apparent that

changing social and economic factors have resulted in the rapid growth

of a new household sector which has added pressure to an already difficult

market situation. A society which permits independence from the family

Table 5.2

Growth of One Person Households in Greater Vancouver

	1961	Change 1961-66	1966	Change 1966-71	1971
A = No. of one person households	30,080	17,187 57%	47,267	18,408 39%	65,675
B = Total households	228,598	43,358 19%	271,956	74,259 27%	346,215
$\frac{A}{B}$ x 100	13%	40%	17%	25%	19%

Source: Statistics Canada, *Population and Housing Characteristics by Census Tracts*, Vancouver, Census of Canada, 1961, 1966, 1971.

unit at an early age, accepts unmarried life as a norm for many and demands independence and freedom for its elderly has given the impetus to this growing sector of housing demand. That the number of one person households has mushroomed should not be condemned, but their role as disproportionate consumers of shelter space must be recognized in a market where dramatic increases in demand are evident.[9]

These changes in the aggregate make-up of households have significant implications. If it can be assumed that the increased prevalence of one person households has not been offset by a corresponding drop in the number of family households, then there has been increased competition for the existing housing units. Since by definition a household must occupy a dwelling unit, then (in many cases) one person households must have outbid family households for the existing dwelling units. The number of intended households has increased, thereby intensifying the bidding for

the existing dwelling units and the flow of new units.[10] Without the

expense that dependents necessarily entail, the one person household

can apply a far greater percentage of his (or her) income to shelter cost.

A further implication of increased non-family households

(including one person households) arises from the fact that these house-

holds are less consistent participants than family households. Non-family

households of more than one person are potential sources of one person

households and one person households can readily shift to some other

household status. Louis Winnick noted as early as the 1950's that:

> *The one-person household may possibly be the most*
> *volatile sector of housing demand shifting from*
> *headship to other household status more readily*
> *than other groups. That is, the 'doubling' and*
> *'undoubling' of adult individuals may be charac-*
> *terized by wider cyclical swings than in the case*
> *for married couples or other types of families.*[11]

The young adult is totally flexible in his ability to 'double'

or 'undouble', or in fact to return to his family, depending primarily

on his economic circumstances. Essentially this means that the elasticity

of housing demand with respect to income may be considerably greater for

the young single householder than for the established family household.

5.2 Survey Results

The survey-generated data helps to elucidate the operation of

demographic groups in the British Columbia housing market. The means

offered in Table 5.3 display one measurement of housing size for families

with children, families without children and non-family households.

Table 5.3

Mean Room and Bedroom Figures

	Room	Bedroom
Families with Children	6.798	3.089
Families without Children	5.754	2.321
Non-family Households	4.330	1.700
Total Population	6.050	2.623

Although the mean size falls in favour of families with children, it is interesting to note that one measurement of housing quality, crowding (i.e. number of occupants per room and bedroom), displays benefits in the opposite direction.

Table 5.4

Mean Number of Occupants Per Room and Bedroom

	Occupants/Room	Occupants/Bedroom
Families with Children	0.649	1.416
Families without Children	0.397	1.069
Non-family Households	0.355	0.859
Total Population	0.528	1.219

With respect to income and shelter/income ratios, the non-family group of the sampled population, while displaying a lower mean income devoted more of their income to housing consumption.

Table 5.5

Mean Income and Shelter/Income Ratios

	Income	Shelter/Income Ratios
Families with Children	$16,728.547	17.759%
Families without Children	$13,564.465	16.018%
Non-Family Households	$ 9,167.840	23.947%
Total Population	$14,468.848	18.534%

The reader should be cautioned that the existence of consumer preference must be acknowledged when viewing the observed shelter/income figures. That is, one cannot be totally sure that the figures represent the consumer's ability in the market place rather than his preference for how he spends his money.

5.3 Net Migration

The most overwhelming contributor to increased household formation and housing demand in British Columbia is net migration. As the cartoon illustrates, if the other factors are pictured as dribbling taps then net migration adds its influence by the bucket full. Net migration is determined by the residual increase in population after natural increase (the number of births less the number of deaths) is accounted for. Obviously, any net influx of people will shift the demand curve for housing upward. In British Columbia's case, the high opinion in which it is held for climatic and amenity benefits has had the effect of attracting large

DEATH

NEW HOUSEHOLD FORMATION

NET POPULATION INCREASE (BIRTH)
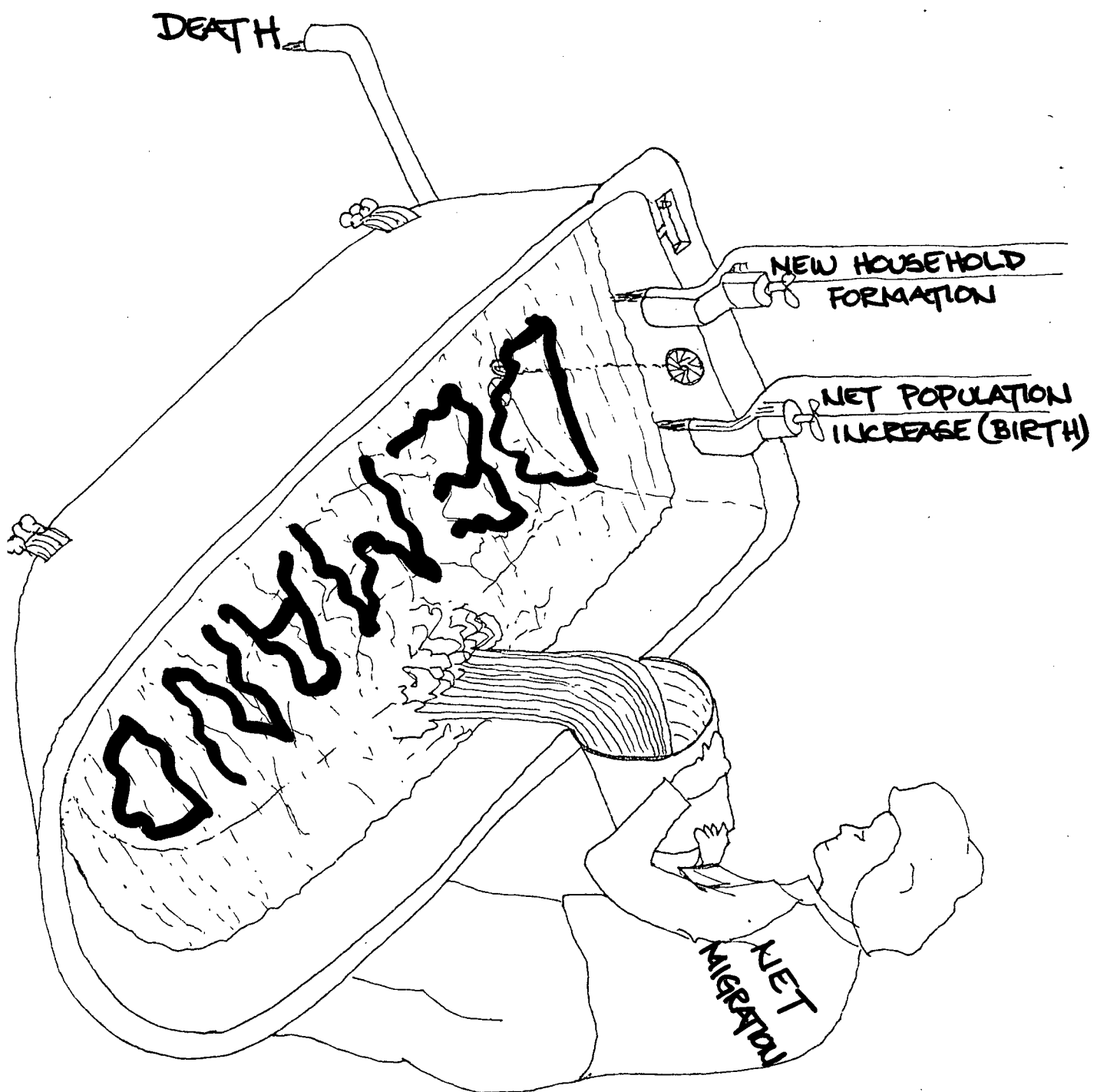
NET MIGRATION

numbers of migrants. These people come from other provinces as well as other countries to form two 'prongs' of migration activity. As long as British Columbia remains in this position of high esteem, our man will have no problem filling his bucket and the aggregate demand for housing will continue to rise.

Total immigration (i.e. migrants from outside Canada) has risen steadily for the province of British Columbia.

Table 5.6

Immigration to British Columbia

	1972	1973	1974
Number of People	20,107	27.949	34.481
% of Canadian Total	16.48%	15.17%	15.78%
% Increase		39.00%	23.37%

Source: *Immigration Quarterly*, Statistics Canada, 4th quarter, 1973, 1974.

Up-to-date information on migration from points within Canada is more difficult to obtain, thus one has to rely on the census statistics of 1971. These show that movement from all other provinces to British Columbia totalled 194,195 with the movement of people away from the province totalling 74,160, giving a net increase of 120,035.

Net migration (i.e. migration from both inside and outside of Canada) has long been recognized as a major factor in the increased rates of household formation in Greater Vancouver. Net migration accounted for a staggering 76.5% of the growth in population in the Greater Vancouver Regional District between 1966 and 1971.

Table 5.7

Migration to the G.V.R.D.

Period	Met Migration	% of Population Increase
1951-56	57,608	55.8%
1956-61	72,052	57.6%
1961-66	63,054	61.6%
1966-71	103,592	76.5%

Source: *Population Forecast*, G.V.R.D. Planning
Department, Vancouver, B.C. January 1973.

While these statistics are interesting because net migration gives some indication of additional housing requirements, a look at the age distribution of the 1966 to 1971 group is even more helpful.

Table 5.8

Age and Sex Distribution of Migrants to the G.V.R.D. 1966-71

Age	% Male	% Female	% Total
0-9	16%	16%	16.0%
10-19	14%	15%	14.5%
20-29	33%	33%	33.0%
30-39	16%	12%	14.0%
40-49	9%	6%	7.5%
50-59	5%	5%	5.0%
60-69	4%	7%	5.5%
70-79	1%	3%	2.0%
80 +	2%	3%	2.5%

Source: *Population Forecast*, G.V.R.D. Planning Department,
Vancouver, B.C., January 1973.

The greatest proportion of migrants to the G.V.R.D. during this period was, and still is, in the household formation stage of their life cycle. Clearly, these in-migration factors have a significant effect on the demand for housing in British Columbia.

5.4 Summary and Policy Implications

In this analysis of the demographic component, it has been shown that British Columbia's housing market has experienced significant effect from the two areas of influence: population size and household formation. Specifically, in-migration and the increasing influence of non-family households have both led to intensified demand for housing.

Initially, it would appear as if the basic rights of freedom of movement and freedom of choice would negate any attempts at policy with regard to this component. However, it is possible to influence movement and location indirectly through either offering greater benefits in areas of low population or more stringent measures in areas of high population. This idea of "carrot or stick" manipulation creates a number of questions, not the least of which is the degree to which such policies could be used and still remain within the boundaries of democracy. In addition, the 'success' of such policy is questionable, given the example of Britain's "new towns". There can be no doubt that these new towns have reached a satisfactory level of population, however, the amount of 'stick' used, and thus the loss to freedom of choice, makes the whole question of 'success' rather nebulous.

Essentially, what one must emphasize is that governments remain

cognizant of the demographic influence and structure their policy accordingly. In essence, they should be aware that a large amount of increased housing demand in certain areas remains a given fact. Accordingly, market conditions will reflect this pressure and policies which stimulate demand will increase the pressure.

FOOTNOTES

[1]Central Mortgage and Housing Corporation, *Canadian Housing Statistics, 1974* (Ottawa: C.M.H.C., March 1975), p. 100, defines a household as follows:

> "A household for census purposes, consists of a person or group of persons occupying one dwelling. It usually consists of a family group, with or without lodgers or employees. It may consist of a group of unrelated persons, or 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. A "non-family household" is one whose head is not the head of a family. A non-family household may contain lodging families."

[2]A census family corresponds to the 'nuclear family'. It consists of a husband and wife (with or without children who have never been married, regardless of age) or a parent with one or more children (never married), living in the same swelling. A family may also consist of a man or woman living with a guardianship child or ward under 21 years, for whom no pay was received.

Persons not in families or "non-family persons" refer to those living alone; those living with unrelated individuals and those living with relatives but not in a husband-wife or parent-child relationship.

Statistics Canada, *Census Tract Bulletin, 1971 Census, Population and Housing Characteristics: Vancouver* (Ottawa: August 1974).

[3]See Paul C. Glick and Robert Parre Jr., "New Approaches in Studying the Life Cycle of the Family," *Demography*, February 1965, pp. 187-202 and Alden Speare Jr., "Home Ownership, Life Cycle State, and Residential Mobility," *Demography*, November 1970, pp. 449-458. In the context of the housing consumer see Nelson Foote *et al.*, *Housing Choices and Housing Constraints* (New York: McGraw-Hill, 1960), Chapter 5.

[4]Speare, *op. cit.*, p. 452.

[5]This footnote will serve as a general example of how to read the cross-tabulation results appearing in this report.

	NTEN					
COUNT	I					
ROW PCT	ICONDOMIN	OWNER_OC	RENTED	LONG TRM	LEASED	ROW
COL PCT	I			LEASE	LAND	TOTAL
TOT PCT	1.00I	2.00I	3.00I	4.00I	5.00I	

DEM

		CONDOMIN (1.00)	OWNER_OC (2.00)	RENTED (3.00)	LONG TRM LEASE (4.00)	LEASED LAND (5.00)	ROW TOTAL
1.00 NO	CHILDREN	5	270	138	0	1	414
		1.2	65.2	33.3	0.0	0.2	24.7
		55.6	25.4	23.0	0.0	33.3	
		0.3	16.1	8.2	0.0	0.1	
2.00 FAM ANC	CHILDREN	2	A 692	231	1	2	928
		0.2	B 74.6	24.9	0.1	0.2	55.4
		22.2	C 65.2	38.5	50.0	66.7	
		0.1	D 41.3	13.8	0.1	0.1	
3.00 NON	FAMILY	2	99	231	1	0	333
		0.6	29.7	69.4	0.3	0.0	19.9
		22.2	9.3	38.5	50.0	0.0	
		0.1	5.9	13.8	0.1	0.0	
COLUMN TOTAL		9	1061	600	2	3	1675
		0.5	63.3	35.8	0.1	0.2	100.0

A. Count: 692 of the 1675 respondents were families with children having owner occupier tendency.

B. Row PCT: 74.6% of the families with children were owner occupiers.

C. Col PCT: 65.2% of the owner occupiers were families with children.

D. Tot PCT: 41.3% of the sample were families with children having owner occupier tendency.

[6]Warren E. Kalbach and Wayne W. McVey, *The Demographic Bases of Canadian Society* (Toronto: McGraw-Hill Book Company, Inc., 1971), p. 304.

[7]Those Missing Babies," *Time Magazine,* 16 September 1974, p. 51.

[8]Robert Moore Fisher and John W. Graham, "Housing Demand in One-Person Households," *Land Economics,* vol. L, No. 2 (May 1974).

[9]David Dale-Johnson, "Housing Policy, Tenure Choice and the Demand for Housing in Greater Vancouver" (M.Sc. dissertation, The University of British Columbia, 1975), pp. 116-117.

[10]*Ibid.,* p. 117.

[11]Louis Winnick, *American Housing and its Use, the Demand for Shelter Space* (New York: John Wiley and Sons, 1957), p. 86, cited by Fisher and Graham, *op. cit.,* p. 166.

Chapter 6

INCOME

Housing is an economic good and income represents the ability
of people to participate in the market; the ability to translate their
desires into effective demand. In addition, the relative size of a
consumer's income dictates the size and quality of housing for which he
is able to bid. Rising incomes result in more people having basic
market ability in the short-run. That is, more people can afford the
downpayment and monthly payment required to purchase a home or the
monthly payment required to rent a dwelling unit. At the same time, the
increased income will allow those already in the market to increase the
quality of the housing services they are consuming. They may do this
by either undoubling (i.e. moving from shared accommodation) or by
moving into a more expensive dwelling unit, as much as the market permits
(i.e. available units)

Thus, one observes in the short-run both enlargement of the
aggregate number of participants in the market and also shifts within the
market to higher quality housing when incomes rise. While decreases in income

appear rather farfetched at this point in time, in theory they would
have the opposite effect, causing a decrease in the demand for housing.

6.1 Movement

To show the consumer's reaction to a rise in income it is
beneficial to use the basic economic tool of indifference curves. Quite
simply, the individual consumer responds to the utility of a combination
of goods. He receives greater utility from some combinations than he does
from others, and in certain cases he is indifferent. As an example, a
consumer may be indifferent to receiving either 5 units of commodity X
and 5 units of commodity Y, or 7 units of commodity X and 3 units of
commodity Y. Obviously there exists a countless number of these combi-
nations for each consumer, and the points of indifference may be linked
to form a series of curves on a graph. Figure 6.1 displays a number of
combination points with several indifference curves drawn in.
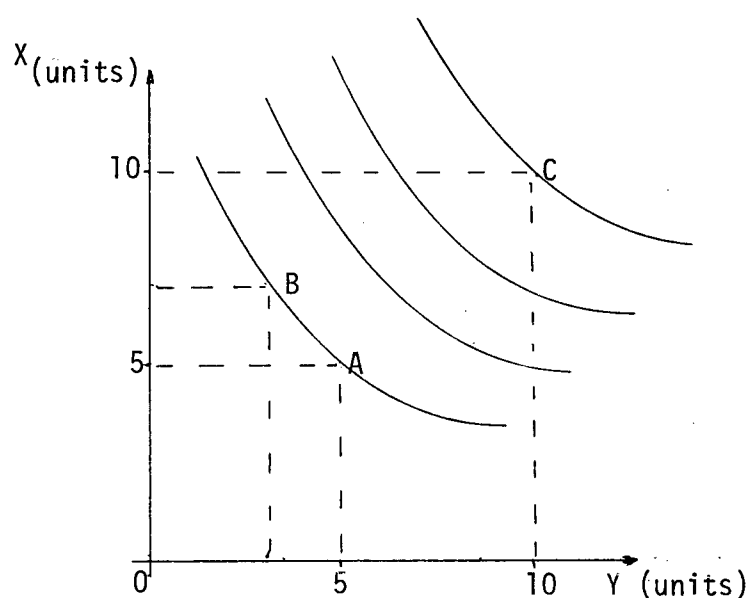
Figure 6.1. Indifference theory.

To this theory we add the basic assumption that if a consumer receives more of a commodity without a decrease in the quantity of any other good, his total utility is increased. Thus, looking at Figure 6.1 we can say that the consumer is indifferent along the curves, but expresses preference between the curves. As an example, the consumer is indifferent to receiving either 5 units of X and 5 units of Y (point A), or 7 units of X and 3 units of Y (point B). However, the consumer would prefer to receive 10 units of X and 10 units of Y (point C).

Without any constraints, the consumer would naturally shift to the curve giving his highest utility. Unfortunately, everyone's operation in an economic market is constrained by income. Thus, when the consumer's budget line is added to the indifference graph his movements are limited. The line labeled 'income$_1$' in Figure 6.2 represents such a budget line.
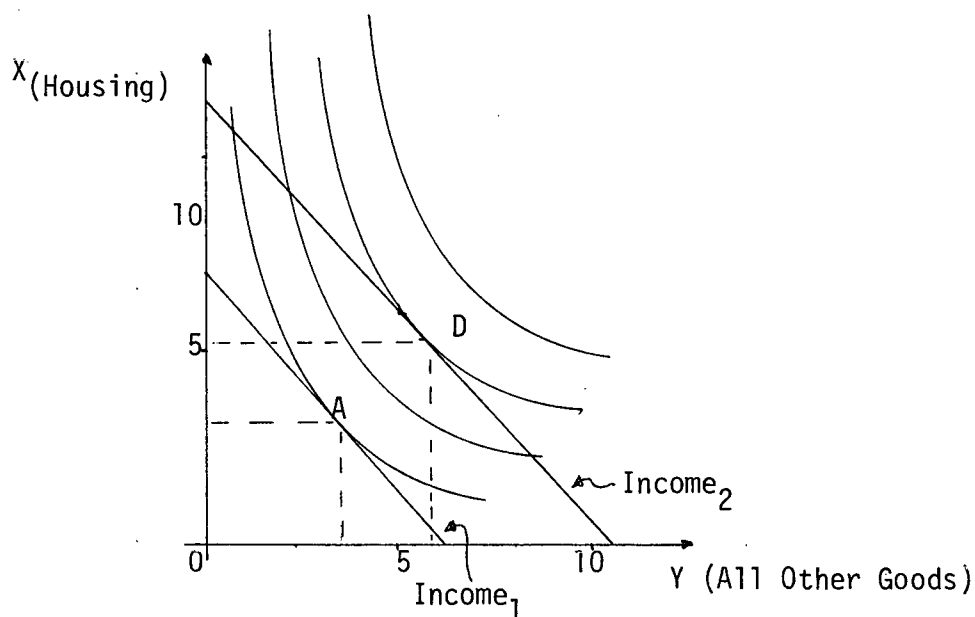
Figure 6.2. Indifference theory and budget constraint.

The points of intersection with the X and Y axes indicate the maximum

units of either commodity that can be purchased (i.e. if the consumer

applies all his income to the purchase of either commodity). Thus, the

area beneath the budget line represents the possibilities open to the

consumer. With the assumption that the consumer will attempt to reach

the highest possible curve, his actions are depicted by the point of

tangency of the budget line with the highest indifference curve (point

A in Figure 6.2).

From this analysis we can see the effect of a rise in income

on housing consumption and thus housing demand. Looking at commodity X

as being housing and commodity Y as being 'all other goods', and assuming

that prices are held constant, a rise in income will shift the budget line

upwards to the right (income$_2$). One can see that all quantities are

increased: the amounts attainable by spending all of one's income on

X or Y, and the combination given by the point of tangency (point D in

Figure 6.2).

Looking at the data generated by the survey, one observes that

the size of the respondent's accommodation (indicated by the number of

rooms and bedrooms) increases with the respondent's yearly income. These

results are consistent with our indifference theory of larger amounts

of housing being consumed as the budget line moves out from the origin

(i.e. as income increases).

Table 6.1

Mean Number of Rooms/Bedrooms by Income Groups

Income	Rooms	Bedrooms
Less than $3,000	4.843	1.933
$3,000 - $5,999	5.013	2.127
$6,000 - $8,999	5.350	2.357
$9,000 - $11,999	5.533	2.480
$12,000 - $14,999	5.864	2.615
$15,000 - $17,999	6.284	2.812
$18,000 - $20,999	6.553	2.807
$21,000 - $23,999	6.987	3.063
$24,000 - $26,999	7.338	3.062
Greater than $27,000	8.236	3.528
Total Population	6.024	2.620

6.2 Magnitude

Although the direction of the movement indicated by indifference theory is undeniable, the actual magnitude of these movements is difficult to determine. To this end, most economic studies with respect to income and housing demand have attempted to quantify the proportion of marginal increases in income which would be spent on housing. What these studies tried to determine was the degree of responsiveness of the quantity of housing demanded, given a change in income. The formula used to determine the income elasticity of a good is:[1]

$$e_I = \frac{\frac{\Delta x}{x}}{\frac{\Delta I}{I}} = \frac{\% \text{ change in quantity of x (e.g. housing) demanded}}{\% \text{ change in income}}$$

If such a relationship could be measured, projections of housing demand based on changes in income would be relatively straightforward.

Early observers theorized that housing used a constant proportion of income, while a later study by Schwabe observed that the higher the income, the lower the proportion of income going to housing.[2] This became known as the "Schwabe Law of Rent." This theory was subjected to some uncertainty in the early 1950s. Studies by Margret Reid and Richard F. Muth noted that housing-income ratios rose markedly with income.[3]

Hence, the view generally held until the mid-1950s was that the elasticity of housing consumption with respect to current income was less than one. In other words, for any increase in income there was a less than proportionate increase in expenditure on housing. Since that time it has been argued that if consumption is related to current income, results are downward biased because such factors as wealth and expectations of future income are ignored. This more recent view of income in relation to housing demand was given impetus by Friedman's permanent income hypothesis. This theory of consumption should be considered in greater detail in order to throw some light on how income influences housing demand.

Friedman asserted that measured income and measured consumption can each be regarded as the sum of two components: the permanent income component and the transitory component reflecting the influences of factors regarded as changeable or random by the consumer unit. The permanent income component is to be interpreted as reflecting those factors which the consumer unit regards as determining its capital value

or wealth.[4] The transitory component can be either positive or negative and does not influence permanent consumption which is proportional to permanent income.

Since the incorporation of the permanent income hypothesis into the relationship between income and the demand for housing, the following conclusions have been relatively consistent among researchers: When using current or yearly income figures, as the consumer's income increases, the proportion spent on housing decreases; and when using permanent income, the consumption of shelter space and housing quality increases proportionately. Thus, the current income approach supports the view that housing is a staple good and the permanent income approach supports the view that housing is a luxury item.

6.3 A Review of Previous Income Elasticity Research

This review serves to briefly outline the techniques and results of the major works on income elasticity of demand (presented in a chronological order).

The initial studies of the income elasticity of demand for housing produced below unity results that supported Schwabe's 'law of rent', namely that the higher the income, the lower the proportion of income going to housing. The Duesenberry and Kistin study of 1950 used intertemporal comparisons of budget studies derived from the B.L.S. study *Spending and Saving in Wartime (1918-1948)*.[5] In a linear regression using per capita consumption of housing as the dependent variable, and per capita expenditure and average family size as the independent, the study obtained a figure of 0.15 for income elasticity.

In 1955, Morton included a section on income elasticity in his study entitled, *Housing Taxation*.[6] By his own admission, little importance should be attached to the absolute magnitudes of the figures due to the smallness of the sample, the brief period of the years studied and the lack of effort to eliminate the effect of influences other than income. Cross section data was taken from the annual reports of the Federal Housing Administration and the National Housing Administration (1938-1947). Using the F.H.A. mortgage value for single family, owner occupied housing and Morton's own formula for the demand for housing amenities (housing space) in conjunction with annual income (measured) data, he derived an elasticity of 0.5 to 0.6 using value and 0.75 using amenities.

The Maisel and Winnick study of 1960 derived its data from the Wharton B.L.S. study of consumer expenditures.[7] Logarithmic regression was used, with housing expenditures (including utilities) as the dependent variable and measured income (after taxes) used in all cases as one of the independent variables, along with: race, family size, education, age of head, and location (taken singly or in combination). The results were grouped by tenure, occupation, education, family size, age of head and location. They ranged from 0.49 to 0.721, with a reading of 0.605 for "all families." This study followed Friedman's permanent income hypothesis, prompting the authors to include an estimate using groups that reported stable income or as they termed it, "more permanent." They concluded that the elasticity results were "no different" from those using measured income.

Richard Muth conducted the first extensive research on housing income elasticity using Friedman's income hypothesis.[8] With data obtained from the U.S. Department of Commerce 1954 (B.L.S.), the 1950 Census of Housing and the 1950 Census of Population, Muth established a number of equations which produced elasticity estimates. The results of the four major equations are as follows:

(1) Flow Demand - New construction as the dependent variable and: the Boeckh index of residential construction costs; Friedman's per capita income series*; Durand's basic yield of ten year corporate bonds; and the stock actually in existence as the independent variables.
Income Elasticity: 0.879

(2) Demand for Services - National Industrial Conference Board rent index as the dependent variable and Friedman's per capita income series and stock actually in existence as the independent variables.
Income Elasticity: 0.935

(3) Quality of Dwellings in Various Cities - Average quality of new dwellings as the dependent variable and: the Boeckh index of residential construction costs; expected income per household; Durand's basic yield of ten year corporate bonds; and the average size of households as the independent variables.
Income Elasticity: 1.87

(4) Quality of Dwellings in Various Cities - Stock per dwelling unit in different cities (1949) as the dependent variable and: the Boeckh index of residential construction costs; expected income per household; persons per household; and the percentage of dwelling units in the city which are in one unit detached structures as the independent variables.
Income Elasticity: 1.68

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*The expected-income series is intended to be an empirical approximation to the subjective concept of "normal" or "permanent" income. It is in fact a weighted moving average of disposable income, in which current income gets weights which decline progressively and roughly exponentially, income of nine years ago and earlier receiving zero weight.[9]

As far as Muth was concerned, these results could probably be much higher due to the associated confidence limits.

In 1962, Margaret Reid published her study of housing and income, containing elasticity figures even higher than those estimated by Muth.[10] Her data was compiled from several sources: the 1950 Census of Housing; the 1933 Housing Survey; the National Housing Inventory; and the Consumption Survey of 1950 (B.L.S.). Reid begins her study by displaying the low elasticities obtained using measured income against expenditures for the "main" dwelling. This produced results of 0.314 to 0.527 for owners, and 0.261 to 0.431 for tenants. She then proceeded to display the effect of shifting to an estimate of permanent income on the lines established by Friedman. Like Muth, Reid chose to use an averaging process to approximate permanent income. The first estimates were made from inter-place comparisons of U.S. geographical areas and metro areas. For owner occupier, Reid used two dependent variables; 10% of market value and "actual" housing expense. For tenant housing she used contract rent as the dependent variable. The independent variables, other than income, included: degree of employment; rise in the rent index; housing built during 1945 or later; housing built during 1940 through 1944; and the number of households per 100 households that do not have either a male head of 65 years or more, or a female head. The results of the logarithmic regressions were: 1.7 for owners (using the 10% variable) and 1.55 (using expense); 0.8 to 1.0 for tenants (the lowness attributed by Reid to the lingering effect of rent control).

Reid concludes her analysis with an estimate using intra-city comparisons. For this she used quality of housing and census tract

areas for grouping the data. With the same variables in effect, the results were 2.051 for owners and 1.162 for tenants.

In 1963, Lee produced a cross section analysis of the demand for housing.[11] The data was taken from the 1958 survey of consumer finances conducted by the Survey Research Center of the University of Michigan. The income figure used was disposable income (measured), and the elasticity figure was for owned homes only. Using a combination of two equations used to determine probability of purchase and cost of purchase, the estimated elasticity obtained was 0.89. A number of independent variables were used, including: age of head, marital status, size of unit, occupation, education, race, sex and new or old house. This study was added to by Lee in 1964.[12] The majority of the data used was taken from Muth's study of the demand for non-farm housing, with Lee altering the handling of the data and adding a "stronger" credit-term variable. Lee chose two equations to form a "high" and "low" bracket for income elasticity and also two measures of income to test Friedman's hypothesis. The variables of these equations were: gross housing construction; the Boeckh index of residential construction cost; per family current (measured) income (Raymond Goldsmith's series); per family permanent income (Friedman's series); mortgage rate times the time horizon of the mortgage contract*; loan to value ratio*; and beginning-of-year per family housing stock. Gross housing construction and income were used as the dependent variables for the low and high equations. The results from the first set of equations using measured income were 0.366

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*Taken from figures obtained from 24 leading life insurance companies.

and 0.978, with an average of 0.652 taken as the estimate of "true income

elasticity." Using permanent income, Lee produced a bracket of 0.335

and 1.283, with 0.809 as the income elasticity measure.

Oksanen presented the first study using Canadian data.[13] Using

the National Accounts, Income and Expenditures (D.B.S.) for 1947 to 1954

and 1955 to 1962, Canadian Housing Statistics (C.M.H.C.) and the Statistical

Summary for the Bank of Canada (1954), he compiled a number of elasticity

estimates. Two forms of income were used: measured income and an "un-

weighted and uncentered, three year moving average" to approximate per-

manent income. Oksanen developed three stock and flow estimates using:

relative price of housing; government bond rate; N.H.A. rate and govern-

ment bond rate differential; stock of housing; and the two measures of

income as the variables. The estimates of elasticity are as follows:

(1) Current Income: stock 0.527
                            flow   1.900

(2) Permanent Income: stock 0.500
         (bond rate)   flow   2.410

(3) Permanent Income: stock 0.330
        (differential)   flow   1.450

In 1968, Lee published yet another study of housing demand,

this time using permanent income.[14] The data was supplied from a reinter-

view survey covering the years 1960 to 1962. This study offers elasticity

estimates for 1959 and 1961, for both owners and tenants; with or with-

out socio-demographic variables; and measured as well as permanent income.

The dependent variables were 10% of market value for owners and monthly

rent payments for tenants. The results were as follows:

(1) Owners - Measured: 0.338 to 0.552
             - Permanent: 0.782 to 0.892

(2) Tenants - Measured: 0.293 to 0.559
             - Permanent: 0.462 to 0.678

In 1970, Houthakker and Taylor published their study on con-
sumer demand in the United States.[15] This included in its calculations
an estimate for long-run income elasticities of demand for housing.
The data was supplied by the Department of Commerce, and consisted of
private consumption expenditure from 1929 to 'date'. It was felt by the
authors that the use of total expenditure was in keeping with Friedman's
hypothesis. The dependent variable was per capita consumption expenditure
for both tenant and owner occupied housing; with relative price (using
1958 as the base year) and total per capita personal consumption as the
independent variables. Their study revealed elasticity estimates of
1.5 for renters and 2.45 for owners.

In 1971, Frank de Leeuw produced a study reviewing previous
cross section evidence of the demand for housing, in which he incorporated
an adjustment process for figures presented by Muth, Reid, Lee and Winger,
while also presenting evidence of his own.[16] De Leeuw's first objection
to the previous studies concerned the use of market value rather than
housing expense. Using F.H.A. statistics (1967) he suggests that
elasticity figures are biased upward some 15 to 20 per cent. In addition,
he points out that the exclusion of inputed rent creates a bias in the
results *away* from 1.0. His third criticism was concerned with studies
not taking into account the "wide regional differences in the price of
a standard bundle of housing services."

The first study adjustment was taken for Muth's estimate of 1.68, which de Leeuw reduces to 1.35 by a formula based on his criticisms. With Reid's study, he takes the inter-place estimate of owner-occupancy elasticity of 1.7 and 1.55 and adjusts them to 1.35 and 1.46 respectively. He then adjusts the intra-city estimate from 2.05 for owners to the range of 1.55 to 1.60; adding a basic criticism (supported by Lee) of Reid's grouping technique, feeling that this also caused an upward bias. The adjustment to Lee's reinterview study places the income elasticity figure for owners at 0.7 rather than 0.8; and for renters the adjustment is upward from 0.65 to 0.85 (due to the omission of movers in the survey). De Leeuw adjusts Winger's study for faults in grouping and the use of value rather than expense. The result was an elasticity figure of 1.25 rather than 1.05.

In presenting his own evidence, de Leeuw takes data from the 1960 Census of Housing and the B.L.S. Survey of City-Worker Budget Costs (1959). He produces elasticity figures based on median housing expense, median income (permanent) and price levels in 19 metropolitan areas in 1960. The results of the entire study (i.e. de Leeuw's work and the adjustments) suggests an income elasticity for renters in the range of 0.8 to 1.0 and "moderately" above 1.0 for owners.

In 1971, Smith produced a study of Canadian housing which included an estimate of income elasticity and a review of past works in the area.[17] Using C.M.H.C. and the Bank of Canada statistics, and per family housing starts as the dependent variable, Smith estimated permanent income elasticity of 0.5 (with reservations suggesting a downward bias). His concluding remarks, based on his evidence and previous work, suggest that the permanent income elasticity falls somewhere between 0.6 and 1.0.

To conclude this review, Carliner's 1973 study offered further
estimates based on "better data than has been available to researchers
before."[18] The study used a four-year panel which followed up movers
and used two definitions of permanent income: four-year average of
measured real family income and the same four-year average, but applying
an arithmetically declining weight. The data was supplied by a research
entitled, *A Panel Study of Income Dynamics*, from the Survey Research
Center of the University of Michigan. The regressions were run with house
value and rent as the dependent variables and: permanent income, price,
age of head, sex of head, and race of head as the independent variables.
This produced results of 0.6 to 0.7 for owners and 0.5 for renters.

6.4 Survey Results

An indication of the amounts spent on housing by our surveyed
population was obtained by calculating shelter/income ratios for each
income group. The results display a declining magnitude as the respondent's
yearly household income (current) increases.

Table 6.2

Mean Shelter/Income Ratios by Income Groups

Income	Shelter/Income Ratios
Less than $ 3,000	43.798%
$ 3,000 to $ 5,999	36.555%
$ 6,000 to $ 8,999	26.318%
$ 9,000 to $11,999	20.262%
$12,000 to $14,999	18.342%
$15,000 to $17,999	15.486%
$18,000 to $20,999	15.112%
$21,000 to $23,999	11.796%
$24,000 to $26,999	12.194%
Greater than $27,000	9.231%
Total Population	20.596%

Although these results are consistent with the 'current' income theory presented above, one must reiterate the warning pertaining to consumer preference contained in Chapter 5.[19] It is also an acknowledged fact that higher income households devote more of their income to housing 'oriented' expenditures (i.e. furniture, paintings, antiques, etc.) than do lower income consumers. Although these expenditures were intended to be included in the survey's section on "repairs, maintenance and improvements," it is often difficult for people to relate such items to actual expenditure on the dwelling unit. Furthermore, higher incomes are associated with preferential mortgage terms and certainly mortgage payments form a large proportion of shelter cost for owners.[20]

A final point to note is that the yearly income figures are gross (i.e. before taxes and other deductions), thus, as deductions generally increase with income, the shelter/income figures receive a downward bias at the higher levels.

6.5 Summary and Policy Implications

This chapter has explained the basic effect of income on the demand for housing. Although a consensus of the actual magnitude (income elasticity) may be difficult to obtain, the short-run stimulation of housing demand with rising incomes is undeniable (*ceterus paribus*). Obviously the government control for this component is found in the federal and provincial income tax provisions. By increasing or decreasing the amounts taken by income tax, the consumer's disposable income (and thus his demand for housing) is decreased and increased respectively.

Putting aside the political volatility of this controlling device, we should first attempt to determine in which direction the disposable income amount should be moved and thus the housing demand. To do this we should look at the government's justification for tampering with housing markets in general. For years this justification has been founded upon the inability of certain segments of society to obtain housing in accordance with some anonymous standard. Logically, the segments experiencing this inability were, and still are, the lower and fixed income groups of society. Thus, if we are going to adjust disposable income, the adjustment should be in the favour of these two groups. By decreasing the disposable income of the higher echelons and by increasing the disposable income of the lower and fixed income groups, we would effect a distribution of housing demand to the benefit of the segments of society who we seek to help. In essence, this process would dampen the demand at the top and stimulate the demand at the bottom.

Unfortunately, such manipulation of income tax amounts is about as politically explosive a technique as one can find. Thus, governments find it far easier to point to so-called inequities in the operation of the housing market than to acknowledge that disposable income is really the heart of the problem. However, if the desire of governments is really to assist these people at the lower end of the income scale, they must realize that aggregate increases in income result in these groups being left further and further behind in their ability to operate effectively in the market. Thus, additional adjustments to income distribution and further income supplementation are required to balance the differences in demand between the upper and lower ends of the income scale.

FOOTNOTES

[1]Michael J. Brennan, *Theory of Economic Statics*, 2nd ed. (New Jersey: Prentice-Hall, Inc., 1970), pp. 69-86.

[2]Margaret Reid, *Housing and Income* (Chicago: University of Chicago Press, 1962).

[3]Reid, *op. cit.* and R.F. Muth, "The Demand for Non-Farm Housing," in *The Demand for Durable Goods*, ed. A.C. Harberger (Chicago: University of Chicago Press, 1960).

[4]Milton Friedman, *A Theory of the Consumption Function* (Princeton: Princeton University Press, 1957), pp. 220-224.

[5]J.S. Duesenberry and H. Kistin, "The Role of Demand in the Economic Structure," in *Studies in the Structure of the American Economy*, ed. W. Leontief (New York: Oxford University Press, 1953).

[6]W.A. Morton, *Housing Taxation* (Madison: University of Wisconsin Press, 1955).

[7]S.J. Maisel and L. Winnick, "Family Housing Expenditures: Elusive Laws and Intrusive Variances," in *Consumption and Saving*, vol. 1, ed. I. Friend (Philadelphia: University of Pennsylvania, 1960).

[8]Muth, *op. cit.*

[9]Harberger, *op. cit.*, p. 7.

[10]Reid, *op. cit.*

[11]T.H. Lee, "Demand for Housing: A Cross-Section Analysis," *The Review of Economics and Statistics*, 45 (May 1963).

[12]Idem, "The Stock Demand Elasticities of Non-Farm Housing," *The Review of Economics and Statistics*, 46 (February 1964).

[13]E. Oksanen, "Housing Demand in Canada, 1947-62: Some Preliminary Experimentation," *Canadian Journal of Economics and Statistics*, 50 (November 1968).

[14]T.H. Lee, "Housing and Permanent Income: Tests Based on a Three-Year Reinterview Survey," *The Review of Economics and Statistics*, 50 (November 1968).

[15]H.S. Houthakker and L.D. Taylor, *Consumer Demand in the United States: Analyses and Projections* (Cambridge, Mass.: Harvard University Press, 1970).

[16]F. de Leeuw, "The Demand for Housing: A Review of Cross-Section Evidence," *The Review of Economics and Statistics*, 53 (February 1971).

[17]L.B. Smith, *Housing in Canada: Market Structure and Policy Performance* (Ottawa: C.M.H.C., 1971).

[18]G. Carliner, "Income Elasticity of Housing Demand," *The Review of Economics and Statistics*, 55 (November 1973).

[19]See page 60 of this thesis.

[20]See Philip H. White, *Prologue to an Analysis of the Residential Mortgage Market* (Vancouver: The University of British Columbia, 1965).

Chapter 7

PRICE

Our third component of housing demand is price, where one immediately observes a fundamental difference between this component and the components of demographic forces and income. Price, defined in our initial formula of Price = f (Supply, Demand), affects both the demand for housing and is in turn created by the interaction of that demand and the supply of housing units. Thus, we have a two-way flow in our equation: from price to demand, and from demand to price.

The process of price creation is illustrated in Figure 7.1.
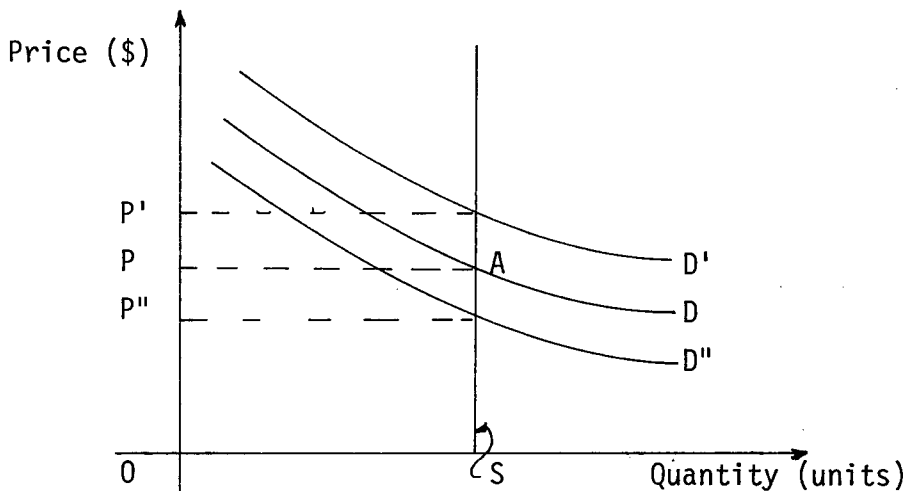
Figure 7.1. Price creation.

Drawing once again on the characteristics of durability and immobility,
and the fact that normally only 3-4% is added to the total stock per
year when the housing industry is operating at full capacity our supply
curve (S) is inelastic, and hence is drawn parallel to the price axis.
The demand curve (D) intersects the supply curve at point A, producing
price P. An increase in demand (curve D') or a decrease in demand (curve
D") results in a corresponding rise (P') or fall (P") in price. To rein-
force our basic premise of demand volatility, Figure 7.2 illustrates the
difference in price movement created by the maximum yearly increase in
supply (S' - exaggerated for illustrative purposes) and an increase in
demand (D').
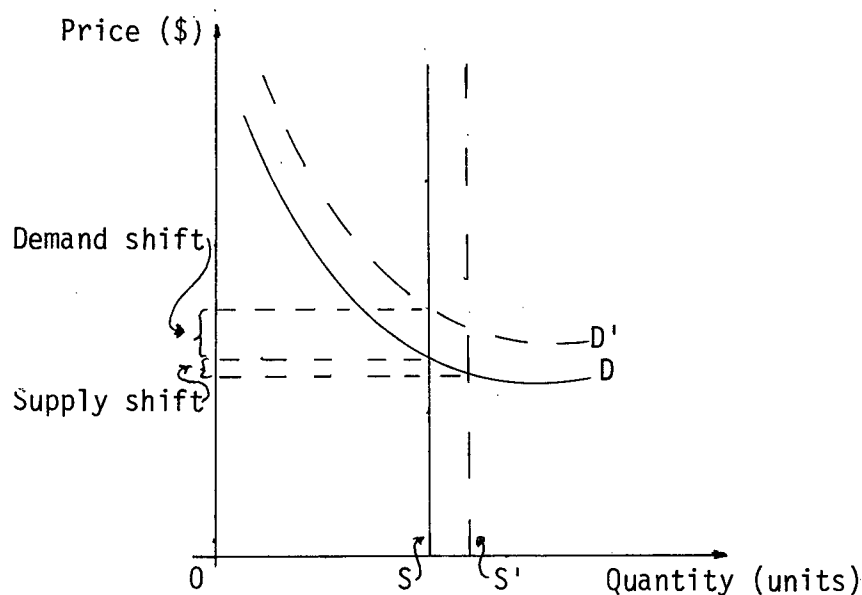
Figure 7.2. Demand volatility.

Housing prices have an impact on the demand for housing units just as the price of any good has a bearing on how much of that good will be demanded and by whom. With a simple commodity, an increase in the price causes a decrease in demand, and a decrease in price causes an increase in demand (assuming that all other factors remain constant). However, due to the complexity of the housing commodity and the various methods which can be used to pay for it one must add some important qualifications.

To explain this process in the housing market we will return to the indifference theory presented in the previous chapter. There the consumer's action was depicted as a process of maximizing his satisfaction from a combination of housing and 'other goods', given the constraints of his budget. To this we add the concept of marginal utility: the more an individual consumes the more his utility increases, however, the marginal or extra utility added by the last unit consumed, decreases with the consumption of successive new units (similar to the satisfaction derived from the last piece of pie as compared to the first piece). At the point of tangency of the budget line with the indifference curve, the marginal rate of substitution (i.e the amount of Y the consumer is willing to give up to get an extra unit of X) between housing and 'other goods' is equal to the ratio of the price of 'other goods' over the price of housing. The consumer maximizes his utility by consuming quantities of housing and 'other goods' such that the marginal utility per dollar of each alternative is equal.[1]

In this two commodity picture, the individual's consumption may be altered by any of the four factors: his marginal utility for

housing; his marginal utility for 'other goods'; the price of housing; or the price of 'other goods'. The price factors of both commodities are presented to the consumer by the market. Adjustments to his marginal utility and his position on the indifference curve must follow accordingly. Thus, we observe adjustments in the individual's consumption being influenced by market adjustment of the price. The consumption adjustments follow the basic pattern of increasing price and decreasing demand, and decreasing price and increasing demand.

7.1 A Review of Previous Price Elasticity Research

In the same manner as income elasticity, housing analysts have long sought to measure the proportionate change in housing demand that accompanies a change in price.[2] This section will briefly outline the research attempts to determine the specific magnitude of the price elasticity of demand for housing.

Empirical studies of price elasticity received the majority of their North American attention in the 1960's. In fact, prior to Richard Muth's *The Demand for Non-Farm Housing*, the only published estimate was made by Duesenberry and Kistin in 1953.[3] The data source for the Duesenberry and Kistin study was the B.L.S. study entitled, *Spending and Saving in Wartime (1918-1948)*. Their estimate was derived through logarithmic regression of intertemporal comparisons, using consumption of housing as the dependent variable and: the relative price of housing; the real income (measured) of family groups; and family size as the independent variables. The result obtained for price elasticity was -0.078.

In 1960, Muth published his major analysis of price elasticity for housing demand, using the more enlightened approach of incorporating Milton Friedman's permanent income hypothesis.[4] His data was obtained from the U.S. Department of Commerce 1954 (B.L.S.), the 1950 Census of Housing and the 1950 Census of Population. His estimates were derived from four equations:

(1) Flow Demand - using new construction as the dependent variable and: the Boeckh index of residential construction costs; Friedman's per capita income series; Durand's basic yield of ten year corporate bonds; and the stock actually in existence as the independent variables.
Price Elasticity: -0.904

(2) Demand for Services - using the National Industrial Conference Board rent index as the dependent variable and Friedman's per capita income series and stock actually in existence as the independent variables.
Price Elasticity: -1.47

(3) Quality of New Dwellings - using average quality of new dwellings as the dependent variable and: the Boeckh index of residential construction costs; expected income per household; Durand's basic yield of ten year corporate bonds; and the average size of households as the independent variables.
Price Elasticity: -1.21

(4) Quality of Dwellings in Various Cities - using stock per dwelling unit in different cities in 1949 as the dependent variable and: the Boeckh index of residential construction costs; expected income per household; persons per household; and the percentage of dwelling units in the city which are in one unit detached structures as the independent variables.
Price Elasticity: -1.59

In 1962, Margaret Reid included price elasticity estimates in her *Housing and Income* study.[5] Using data from the consumption survey of

1918 to 1919 and 1934 to 1936, and the Census of Housing, Reid conducted intertemporal estimates. The main dependent variable was "housing of the terminal year, adjusted for change in the rent index," and change in average income (permanent) and change in the relative price of housing (compared to that of other consumer products) as the independent variables. Reid was unsatisfied with her price data, however, the more consistent results suggested a price elasticity of around -1.0.

In 1964, Lee published a study on the demand for non-farm housing.[6] In essence, Lee's study represented a revision of Muth's previous work, in that the bulk of the data was taken from Muth, however, the handling of the data was altered and a "stronger" measurement of credit-term effect was incorporated. Lee chose to compare results from two equations which presented 'high' and 'low' brackets for the ultimate estimate of price elasticity. In addition, the author made estimates using both permanent and measured income to determine if there was any noticeable change in the results. The first equation (low) treats gross housing construction as the dependent variable, with: the Boeckh index of residential construction cost; per family current (measured) income (Raymond Goldsmith's series); mortgage rate times the time horizon of the mortgage contract;[*] loan to value ratio;[*] and beginning-of-year per family housing stock as the independent variables. The high estimate equation used the same variables but made price the dependent variable. The results obtained from using measured income produced a bracket of -1.79 and -1.07, giving an average estimate for price elasticity of -1.43. Lee then

[*]Taken from figures obtained from 24 leading life insurance companies.

exchanged the measured income series for permanent income (using Friedman's series). This produced a bracket of -1.05 and -1.90, giving an average estimate of -1.48.

Houthakker and Taylor's 1970 study of consumer demand in the United States included both long-run and short-run estimates of price elasticity for housing.[7] The data used in their analysis was supplied by the Department of Commerce in the form of private consumption expenditures from 1929 to 'date'. The dependent variable was per capita consumption expenditure for both tenant and owner occupied housing, with relative price (using 1958 as the base year) and total per capita personal con-sumption as the independent variables. The results of their study revealed that the short-run relative price elasticity for owner occupied housing was -0.0351 and that the long-run relative price elasticity was -1.215. For tenant occupied housing only a short-run figure of -0.1839 was offered.

In 1971, Frank de Leeuw reviewed a number of previous cross-section estimates of income elasticity of demand for housing.[8] He also included in this study his own estimates for price elasticity for renters, using data from the 1960 Census of Housing and the B.L.S. Survey of City-Worker Budget Costs in 1959. He produced price elasticities through regression of median housing expense, median income (permanent) and price levels in 19 metropolitan areas, with both price and deflated expenditures as alternative dependent variables. The results suggested a range of -0.7 to -1.5 for the overall price elasticity for rental accommodation.

In Smith's study of Canadian housing, using C.M.H.C. and Bank of Canada data, he reaches an estimate of -0.35 for price elasticity.[9] This was derived from time series data, using family demand for housing

units as the dependent variable and: permanent family disposable income; price of dwelling units; and the price of alternative goods and services as the independent variables.

To conclude, Geofferey Carliner's 1973 study used data from a research entitled, *A Panel Study of Income Dynamics* (S.R.C., University of Michigan).[10] The author ran regressions with house value and rent as the dependent variables and: permanent income, price, age of head, sex of head and race of head as the independent variables. This produced results of -0.8 for owners and -0.101 for renters (the latter result was obtained using measured income and was not statistically significant).

7.2 Demand Flow

The effect of the price component is complicated by the existence of the rental and ownership submarkets in the housing market as a whole. Despite the difference between the 'bundle of rights' provided the renter and the owner, the flow of services from a rental unit is substitutable for the flow of services from an owned unit.[11] This means that when the price of commodity Y (e.g. a unit for rent) is fixed, an increase in the price of commodity X(e.g. a unit for sale) will result in increased demand for commodity Y, and vice versa.[12] This creates a flow of demand between these two housing submarkets.

In economic theory, the process of price calculation is considered to be on-going, and thus the movement between the two submarkets should be equally fluid in either direction. However, in reality, the nature of the commitment that home ownership involves virtually negates the flow from the ownership submarket to the rental submarket, and thus

the majority of the flow is seen as travelling in the other direction.
The best example to help visualize the complete process is that of a newly
formed family seeking accommodation for the first time. Here, the con-
sumer faces the prices offered by both submarkets, and his demand is
directed from one market to the other by shifts in price.

7.3 Price Expectation

A further complication to the effect of price on housing
demand is added by the concept of 'price expectation'. As the name suggests,
price expectation refers to the consumer's belief of what future housing
prices will be. If the consumer is convinced that the price of houses
for sale will continue to escalate, he will make every attempt to make
his purchase now rather than wait. Obviously, the existence of price
expectation is spurred on by evidence of inflation in other consumer markets.
Thus, it is not surprising that under the conditions that the Canadian
economy is presently experiencing, the effect of price expectation in
the housing market is abundantly evident.

As ownership is viewed as a growing asset that will provide
a desired 'hedge' against inflation as well as a form of accommodation,
the consumer does not react 'normally' to increases in price. Instead of
high housing prices driving down the demand for home ownership, the con-
sumer reacts with a form of 'do-or-die' urgency to establish a toe-hold
in the market place. Under these conditions, any attempt to measure the
price elasticity of demand for housing is virtually impossible.

Unfortunately, none of the survey data was found to be applicable to this analysis of the price component of housing demand. Shortcomings of this nature were predictable, given that the original intention of the survey was to provide a general picture of housing consumers, rather than specific data on housing demand.

7.4 Summary and Policy Implications

In our analysis of the effect of price on housing demand we have identified three main effects: the basic relationship that an increase in price leads to a decrease in demand; that the flow of demand between the ownership and rental submarkets is influenced by the relative prices offered in both submarkets; and that the effect of price expectation in the ownership submarket has promoted continued demand, placing the consumer in a vicious circle of increasing prices.

The market price of housing has long held the centre of attention for government housing policy. With an infantile simplicity, policies of subsidization and price control have been advanced as solutions to the housing problem. However, what should be clear from our analysis is that housing subsidization in the ownership submarket adds fuel to the perceived problem of high prices. By reducing the price through government subsidies, demand must intensify. Given the volatility of the demand component in the housing equation, this has to lead to further increases in housing prices, quite possibly to the point of neutralizing the subsidy. With increasing prices being spurred on by such subsidization, a perfect environment is created for price expectation, and thus further increases in demand and price.

A further effect of ownership subsidization is brought about by the reduction of the price offered in the ownership submarket relative to the price offered in the rental submarket. This reduction tends to shift demand from rental accommodation to ownership. As this effect is caused by forces outside the market, the natural process of 'resource allocation through market price' becomes unbalanced in favour of home ownership. This affects both the efficiency of the market and the maximization of benefits derived from market resource allocation.

Displaying a similar fault of attacking the symptoms rather than the cause, British Columbia's former government introduced price control in the rental sector. Although rent control has the desired effect of holding down the price of rental units, the inadvertant damage to the rental submarket is large.[13] In addition, artificially reduced prices help to keep the demand high and to deter further additions to the rental stock by presenting the investor with a situation of controlled revenues and uncontrolled costs.

In light of these criticisms of current policy with respect to price, one should ask if any policy aimed at this component is justified. The inability of certain groups to operate, given the market price, suggests a similar inability in other markets, and as such, the problem is one of income rather than price. Attempts to give assistance through subsidization and price control only adds fuel to the fires of demand and creates certain side effects which add further problems to the housing market.

In essence, one must recognize that price is but a symptom of the housing problem and policy should be aimed at the cause.

FOOTNOTES

[1] that is: $\dfrac{MU_H}{P_H} = \dfrac{MU_{OG}}{P_{OG}}$

where: MU_H = marginal utility of housing

MU_H = marginal utility of 'other goods'

P_H = price of housing

P_{OG} = price of 'other goods'

[2] For price elasticity of demand, the concept is virtually the same as income elasticity described in Chapter 6. Its formula is as follows:

$$e_p = \frac{\dfrac{\Delta x}{x}}{\dfrac{\Delta P}{P}} = \frac{\% \text{ change in quantity of x (e.g. housing) demanded}}{\% \text{ change in price}}$$

[3] J.S. Duesenberry and H. Kistin, "The Role of Demand in the Economic Structure," in *Studies in the Structure of the American Economy*, ed. W. Leontief (New York: Oxford University Press, 1953).

[4] Richard F. Muth, "The Demand for Non-Farm Housing," in *The Demand for Durable Goods*, ed. A.C. Harberger (Chicago: The University of Chicago Press, 1960).

[5] Margaret Reid, *Housing and Income* (Chicago: The University of Chicago Press, 1962).

[6] T.H. Lee, "The Stock Demand Elasticities of Non-Farm Housing," *The Review of Economics and Statistics*, 46 (February 1964).

[7]H.S. Houthakker and L.D. Taylor, *Consumer Demand in the United States: Analyses and Projections* (Cambridge, Mass.: Harvard University Press, 1970).

[8]F. de Leeuw, "The Demand for Housing: A Review of Cross-Section Evidence," *The Review of Economics and Statistics*, 53 (February 1971).

[9]L.B. Smith, *Housing in Canada: Market Structure and Policy Performance* (Ottawa: C.M.H.C., 1971).

[10]G. Carliner, "Income Elasticity of Housing Demand," *The Review of Economics and Statistics*, 55 (November 1973).

[11]David Dale-Johnson, "Housing Policy, Tenure Choice and the Demand for Housing in Greater Vancouver" (M.Sc. dissertation, The University of British Columbia, 1975), pp. 84-89.

[12]In a situation of cross-demand, the quantity of commodity X demanded by the consumer is a function of the price of commodity Y:

$$q_X = f(P_Y)$$

This occurs when the commodities are related as 'substitutes' or 'complements.' In substitute situations, the consumer is faced with an either/or condition; whereas with complements the commodities are consumed together and thus their consumption is linked by necessity.

Indifference curves for these two situations are illustrated in Figures 7.3 and 7.4. The straight lines of the 'perfectsubstitutes' allow for only a corner solution to depict the individual's consumption, as by definition only one is consumed at any particular time. With complements, the curves form a right angle, giving just one point of tangency with the budget line (determined by the consumption relationship between the two commodities).

To observe the effect of a change in price of one of the commodities, with everything else held constant, two budget lines have been drawn into each graph.

In the case of complements, the price of Y (e.g. gasoline) has been increased. Py' is greater than Py, thus the maximum units attainable is reduced from 25 units to 16. As the price of X (e.g. automobiles) remains unchanged, the budget line intercept with the X axis remains the same. The point of indifference tangency has shifted down from curve I3 to curve I2, leading to decreasing consumption of both commodity X and commodity Y.

X
(e.g. owned units)

25

20

15

dget line at Px

10

dget line at Px'

5

I4

I3

I2

I1

0   5   10   15   20   25   Y

(e.g. rental units)
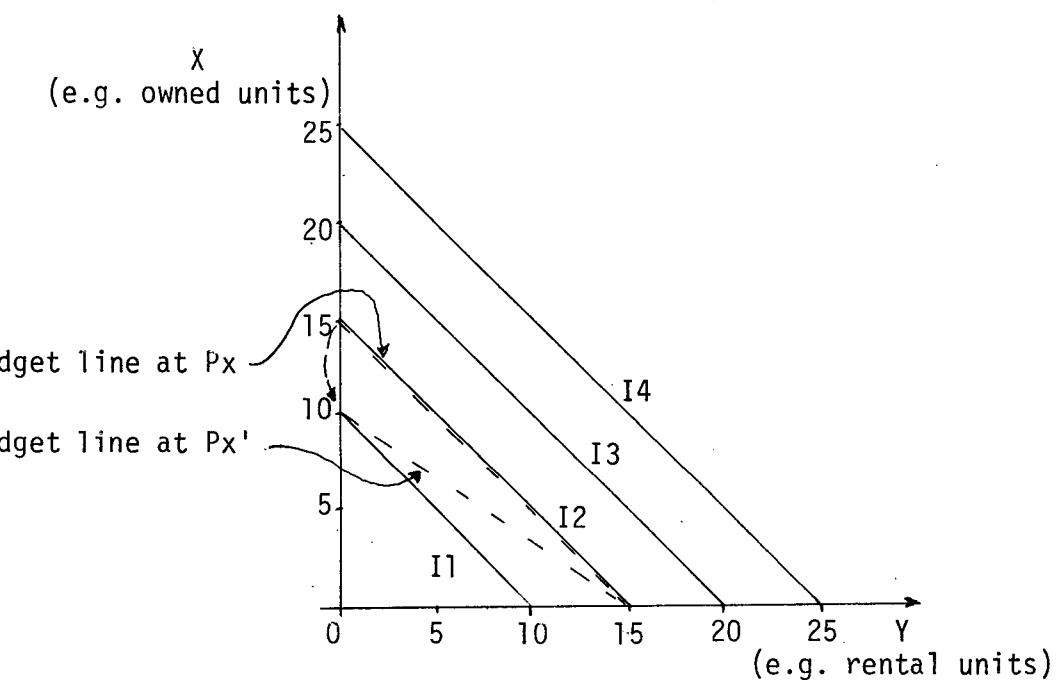
Figure 7.3.   Perfect substitutes.

X
(e.g. automobiles)

25

20

15

10

5

I4

I3

I2

I1

0   5   10   15   20   Y 25

(e.g. gasoline)

Budget lines at Py

Budget line at Py'
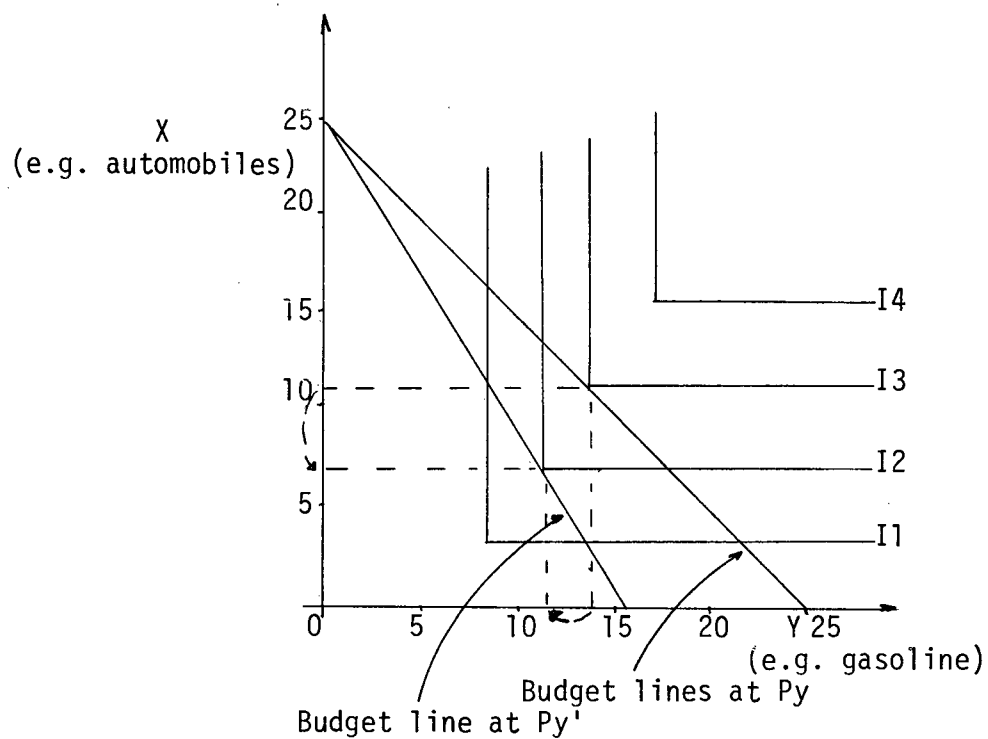
Figure 7.4.   Perfect complements.

In the substitute situation, the price of X (e.g. owned units) is increased. With Px' greater than Px, the maximum units attainable is reduced from 15 to approximately 10. The consumer, being committed to reaching his highest indifference curve, displays a shift in demand from commodity X to commodity Y (e.g. rental units).

[13]See David Baxter and S.W. Hamilton, *Landlords and Tenants in Danger - Rent Control in Canada* (Winnipeg: Appraisal Institute of Canada, 1975).

Chapter 8

CREDIT CONDITIONS

The fourth and final component of housing demand is that of credit conditions, in which, in a manner similar to the price component, there exists a two-way flow between credit conditions and housing demand. This occurs because the mortgage market is an economic market itself, with its own features of supply, demand and price. The nature of the two markets results in a meshing of the two demands (in the fashion of complementary goods), thus the demand for housing affects credit conditions and credit conditions affect the demand for housing.

The impact of credit conditions occurs predominantly in the ownership submarket, as it is there that the consumer is generally faced with the need to finance acquisition. Demand in the rental submarket experiences an indirect influence to the extent that the cost and availability of financing may shift potential home owners to the rental submarket or vice versa. In addition, the supply of rental units is influenced by the fact that the flow of new units is dependent on adequate financing.[1] For the purpose of this thesis, the major emphasis will be on the effect of credit conditions on the individual purchaser of a housing unit.

Due to the size of the financial commitment involved in purchasing a home, most consumers must amortize the capital cost of the dwelling unit through mortgage financing. This affects the demand for owned units both through the cost presented in the form of downpayment and monthly payment amounts, and through the absolute availability of mortgage funds. The impact of this component depends primarily on the liquidity position of the purchasing household. Clearly, a buyer who has already built up a large equity in another house (already sold or for sale) or a household which simply has sufficient funds to purchase without borrowing would not be seriously influenced by credit conditions. Demand by such households would be influenced primarily by relative prices and the potential return from alternate investments. On the other hand, households with insufficient capital must finance some part of their purchase with one or more mortgage loans (60% of the surveyed homeowners).

The ability of credit conditions to affect the housing demand of the surveyed population is displayed in the following tabulations. Of the respondents currently occupying rental accommodation and with a preference to own, 81.1% selected credit related problems (i.e. downpayment, monthly payment or mortgage financing not available) as their primary reason for not changing tenure, and 58.9% choose credit conditions as their secondary reason.[2]

It is important to note that mortgage financing has a rather unique influence on the housing demand of individual consumers. First, financing involves a cost and thus it exhibits all the effects on demand outlined in the chapter on price. In addition, there is the 'cost' in the

```
                      LOC1
              COUNT   I
              ROW PCT IG.V.R.D.  PRINCE    CRANBRK.    ROW
              COL PCT I          GEORGE                TOTAL
              TOT PCT I     1.00I     2.00I     3.00I
R4NC1         --------I--------I--------I--------I
              1.00    I    197 I     85 I     31 I     313
  DOWN _  PAYMENT     I   62.9 I   27.2 I    9.9 I    74.7
                      I   77.9 I   66.9 I   79.5 I
                      I   47.0 I   20.3 I    7.4 I
              -I--------I--------I--------I
              2.00    I     10 I      4 I      0 I      14
  MONTHLY PAYMENT     I   71.4 I   28.6 I    0.0 I     3.3
                      I    4.0 I    3.1 I    0.0 I
                      I    2.4 I    1.0 I    0.0 I
              -I--------I--------I--------I
              3.00    I     15 I      8 I      1 I      24
  NOTHING SUITABLE    I   62.5 I   33.3 I    4.2 I     5.7
                      I    5.9 I    6.3 I    2.6 I
                      I    3.6 I    1.9 I    0.2 I
              -I--------I--------I--------I
              4.00    I      6 I      7 I      0 I      13
  NO MTGE             I   46.2 I   53.8 I    0.0 I     3.1
                      I    2.4 I    5.5 I    0.0 I
                      I    1.4 I    1.7 I    0.0 I
              -I--------I--------I--------I
              5.00    I      8 I      8 I      2 I      18
  RESPONS_IBILITY     I   44.4 I   44.4 I   11.1 I     4.3
                      I    3.2 I    6.3 I    5.1 I
                      I    1.9 I    1.9 I    0.5 I
              -I--------I--------I--------I
              6.00    I     17 I     15 I      5 I      37
  OTHER               I   45.9 I   40.5 I   13.5 I     8.8
                      I    6.7 I   11.8 I   12.8 I
                      I    4.1 I    3.6 I    1.2 I
              -I--------I--------I--------I
            COLUMN          253      127       39      419
            TOTAL          60.4     30.3      9.3    100.0
```

Tabulation 8.1. Primary Reason for not Changing Tenure.

```
                      LOC1
              COUNT   I
              ROW PCT IG.V.R.D.  PRINCE     CRANBRK.     ROW
              COL PCT I          GEORGE                  TOTAL
              TOT PCT I    1.00I     2.00I      3.00I
R4NC2         --------I--------I---------I--------I
         2.00 I    114 I     31 I       8 I    153
MONTHLY PAYMENT I  74.5 I   20.3 I     5.2 I   38.8
              I   46.7 I   27.4 I    21.6 I
              I   28.9 I    7.9 I     2.0 I
              -I--------I---------I--------I
         3.00 I     11 .I     11 I       1 I     23
NOTHING SUITABLE I 47.8 I   47.8 I     4.3 I    5.8
              I    4.5 I    9.7 I     2.7 I
              I    2.8 I    2.8 I     0.3 I
              -I--------I---------I--------I
         4.00 I     42 I     24 I      13 I     79
NO MTGE       I   53.2 I   30.4 I    16.5 I   20.1
              I   17.2 I   21.2 I    35.1 I
              I   10.7 I    6.1 I     3.3 I
              -I--------I---------I--------I
         5.00 I     36 I     26 I       5 I     67
RESPONS_IBILITY I  53.7 I   38.8 I     7.5 I   17.0
              I   14.8 I   23.0 I    13.5 I
              I    9.1 I    6.6 I     1.3 I
              -I--------I---------I--------I
         6.00 I     41 I     21 I      10 I     72
OTHER         I   56.9 I   29.2 I    13.9 I   18.3
              I   16.8 I   18.6 I    27.0 I
              I   10.4 I    5.3 I     2.5 I
              -I--------I---------I--------I
       COLUMN       244        113        37       394
        TOTAL      61.9       28.7       9.4     100.0
```

Tabulation 8.2.   Secondary Reason for not Changing Tenure.

sense of a cash flow from the consumer (both initially and monthly),
depending on the size of his downpayment and the terms he can negotiate
with the lender.*

Both these costs are affected by the fluctuation of three
terms: interest rate, amortization period and loan-to-value ratio. The
interaction of the interest rate with the amortization period gives the required
monthly payment per dollar borrowed. A comparison of the monthly payment
figures displayed in Table 8.1, with their associated interest rates and
amortization periods, shows the effect of a movement in either direction
of the two terms.

Table 8.1

Monthly Payments Required for a Loan of $1,000

Amortization Period (yrs)	20	25	30	35	40
Interest Rate					
8.0%	$ 8.28	$ 7.63	$ 7.25	$ 7.01	$ 6.86
8.5%	$ 8.59	$ 7.95	$ 7.59	$ 7.35	$ 7.21
9.0%	$ 8.89	$ 8.28	$ 7.93	$ 7.69	$ 7.56
9.5%	$ 9.20	$ 8.61	$ 8.28	$ 8.04	$ 7.92
10.0%	$ 9.52	$ 8.95	$ 8.63	$ 8.44	$ 8.33
10.5%	$ 9.84	$ 9.28	$ 8.98	$ 8.81	$ 8.71
11.0%	$10.16	$ 9.63	$ 9.34	$ 9.18	$ 9.09

The loan-to-value ratio determines the size of the individual's loan in
relation to the value of the purchased property and hence, the downpayment
required.

---

*Recognizing but ignoring in this analysis the opportunity cost
equity.

A research project was undertaken by Jack E. Gelfand to attempt
to show the influence of these credit terms on the lower middle-income
housing market in three Pennsylvania cities: Philadelphia, Pittsburg and
Harrisburg.[3] He concluded that the downpayment required was the most
onerous for the prospective buyer. The percentage of respondents who were
"financially capable" (i.e. who could use effective demand in the market-
place) almost doubled as the downpayment was reduced from one-third to
one-tenth. By comparison, decreases in the mortgage rate and increases
in the mortgage maturity period (i.e. decreased monthly payments) resulted
in only a marginal increase in the percentage of those who were "financially
capable."

An indication of the impact of these variables in a Canadian
milieu is provided by the Royal Commission on Banking and Finance's consumer
survey.[4] The results of this research indicated that of the families who
purchased homes in the period 1957 to 1962, 9% would not have purchased
a home and 6% would have purchased a cheaper home if the downpayment had
been 10% higher. Alternatively, 20 to 25% would not have purchased a home
and 12 to 15% would have purchased a cheaper home if the monthly payment
had been 10% higher.

Using two questions with a similar format to the questions used
in the latter studies, the survey generated results to the question of
consumer action in the face of a 10% increase in downpayment size and a
10% increase in the monthly payment size.[5] It should be noted that any
question which asks the respondent to "think back" cannot avoid being
tainted by the events which have occurred since that time. As can be seen
from the tabulations, the survey respondents found the size of the

```
                        LOC1
                COUNT   I
                ROW PCT IG.V.R.D.  PRINCE     CRANBRK.    ROW
                COL PCT I          GEORGE                 TOTAL
                TOT PCT I    1.00I     2.00I     3.00I
UPDP            --------I--------I--------I--------I
                  1.00  I    383  I    164  I    129  I    676
     SAME     HOUSE      I   56.7  I   24.3  I   19.1  I   68.8
                         I   73.5  I   60.3  I   68.3  I
                         I   39.0 .I   16.7  I   13.1  I
                 -I--------I--------I--------I
                  2.00  I     62  I     30  I     19  I    111
  CHEAPER HOUSE          I   55.9  I   27.0  I   17.1  I   11.3
                         I   11.9  I   11.0  I   10.1  I
                         I    6.3  I    3.1  I    1.9  I
                 -I--------I--------I--------I
                  3.00  I     62  I     69  I     31  I    162
     NOT     BOUGHT       I   38.3  I   42.6  I   19.1  I   16.5
                         I   11.9  I   25.4  I   16.4  I
                         I    6.3  I    7.0  I    3.2  I
                 -I--------I--------I--------I
                  4.00  I     14  I      9  I     1C  I     33
     OTHER              I   42.4  I   27.3  I   30.3  I    3.4
                         I    2.7  I    3.3  I    5.3  I
                         I    1.4  I    0.9  I    1.0  I
                 -I--------I--------I--------I
            COLUMN        521       272       189       982
            TOTAL        53.1      27.7      19.2     100.0
```

Tabulation 8.3. Response to a 10% Increase in Downpayment.

```
                        LOC1
              COUNT   I
              ROW PCT IG.V.R.D. PRINCE    CRANBRK.    ROW
              COL PCT I         GEORGE                TOTAL
              TOT PCT I   1.00I    2.00I    3.00I
UPMP          --------I--------I--------I--------I
               1.00   I   394  I   175  I   136  I    705
   SAME   HOUSE        I  55.9  I  24.8  I  19.3  I   72.2
                       I  75.5  I  65.5  I  72.3  I
                       I  40.3  I  17.9  I  13.9  I
                      -I--------I--------I--------I
               2.00   I    58  I    29  I    17  I    104
CHEAPER HOUSE         I  55.8  I  27.9  I  16.3  I   10.6
                      I  11.1  I  10.9  I   9.0  I
                      I   5.9  I   3.0  I   1.7  I
                      -I--------I--------I--------I
               3.00   I    49  I    54  I    30  I    133
   NOT    BOUGHT       I  36.8  I  40.6  I  22.6  I   13.6
                      I   9.4  I  20.2  I  16.0  I
                      I   5.0  I   5.5  I   3.1  I
                      -I--------I--------I--------I
               4.00   I    21  I     9  I     5  I     35
   OTHER              I  60.0  I  25.7  I  14.3  I    3.6
                     I   4.0  I   3.4  I   2.7  I
                     I   2.1  I   0.9  I   0.5  I
                      -I--------I--------I--------I
              COLUMN      522      267      188      977
              TOTAL      53.4     27.3     19.2    100.0
```

Tabulation 8.4.   Response to a 10% Increase in Monthly Payment.

downpayment more onerous, in line with Gelfand's findings. However, the
majority of respondents would have gone ahead with their purchase,
regardless of the increased financial outlay (both monthly and initially).

In addition to the cost of mortgage credit, there is also the
factor of absolute availability which has an obvious effect on the demand
for housing.[6] In periods of high demand for mortgage funds, supplies may be
depleted to the point where they are not available at any price or available
only to refinance existing mortgages. During the early months of 1975, it
was the high interest rates for mortgages which dominated the G.V.R.D.
headlines, but it was also a fact that a large number of mortgage lenders
either had no funds available or qualified their availability with re-
financing or maximum amount restrictions.[7] When this occurs, the consumer
is effectively precluded from participating in the home ownership sub-
market and the demand must necessarily decline.

8.1 Summary and Policy Implications

This chapter has shown that credit conditions occupy a crucial
position in the stimulation or retardation of housing demand. If the factors
of cost (both in terms of cost of capital and cash flow) and availability
are favorable, then the demand for owned units will increase. If credit
conditions are not favorable then demand must decrease due to the high
percentage of people who require financing in order to purchase.

As these two factors (cost and availability) of credit have such
an obvious effect on housing demand, it has been a characteristic of govern-
ments to use their influence on financial conditions to adjust the flow of

housing demand and in turn influence the economy.

> *This arises because of the size of the housing*
> *sector -- new residential construction expenditures*
> *are roughly 40% of total new construction expendi-*
> *ture, 24% of business gross fixed capital formation,*
> *and 4½% of gross national expenditure. . . .*[8]

In the past, most federal government policies have operated via the resi-

dential mortgage market: easing credit terms in an effort to give a

greater proportion of the population access to home ownership; federal

mortgage guarantee and insurance program; the regulation of lenders; and

the 'guidance' provided by the Central Mortgage and Housing Corporation.[9]

Over the long run the trend has been toward less onerous lending terms such

as longer amortization periods, higher loan-to-value ratios and higher

debt-service ratios. While to a large extent such moves have been

initiated to offset higher interest rates, they have also opened up resi-

dential mortgage financing to increasing numbers of housing consumers, thus

increasing the demand.

Such eased credit terms tend to shift demand from the rental

submarket to the home ownership sector (a similar action to the demand

shift created by a price change, as outlined in footnote 12 of Chapter 7)

and existing home owners tend to upgrade the quality and quantity of

the housing services they currently consume. While eased credit terms

may provide access to more buyers, that increased access implies greater

demand and hence higher prices. For this reason the inception of easier

credit terms when the construction of new units is taking place at the

maximum seems rather a pointless policy. Easier credit when demand is

already increasing rapidly due to demographic forces, higher income and subsidies preferential to home ownership only serves to aggravate demand and work at cross-purposes to the original intent by driving prices up.

When credit conditions are allowed to operate freely, they can serve a valuable function in the operation of the ownership submarket. Restricted availability and more stringent credit terms, which arise as a natural function of increased demand for mortgage funds, can have the effect of reducing housing demand. With such an effect, restricted credit conditions offer the simplest exit from the vicious circle of 'price expectation - price increase'. Tighter conditions in the mortgage market must reduce the demand for housing, thus causing prices to stabilize and possibly fall.

Unfortunately, it is during periods of high housing prices that the government experiences the greatest pressure to influence a relaxation of mortgage credit terms. Thus, the government is placed in a position of increasing the problem by satisfying public demands. However, in the final analysis, the government's decision to influence mortgage conditions results more from the potential for their general effect on the country's economy, rather than their specific effect on the housing market.

FOOTNOTES

[1] See M.A. Goldberg and D. Ulinder, *Residential Developer Behaviour: 1975* (Vancouver: Faculty of Commerce, The University of British Columbia, 1976).

[2] See questions B 36 and B 37 of the questionnaire, Appendix A.

[3] Jack E. Gelfand, "The Credit Elasticity of Lower Middle-Income Housing Demand," *Land Economics* (November 1966).

[4] *Royal Commission on Banking and Finance*, Appendix Volume (Ottawa, 1964), p. 100, cited by L.B. Smith, *Postwar Canadian Housing and Residential Mortgage Markets and the Role of Government* (Toronto: University of Toronto Press, 1974), p. 37.

[5] See question B 60 and B 61 of the questionnaire, Appendix A.

[6] The term 'absolute' is added to distinguish this factor from personal availability, which is dictated by the cost of mortgage credit and the specific person.

[7] In a survey of G.V.R.D. lenders, of the 27 surveyed lenders, 16 qualified their terms with "maximum amounts," "refinancing only," "limited funds" or "no funds available." See *Vancouver Sun*, 28 May 1975, p. 32.

[8] L.B. Smith, *Housing in Urban Canada: Problems and Prospects* (Ottawa: C.M.H.C., January 1971), p. 81.

[9] Idem, "Postwar Canadian Housing Policy in Theory and Practice," *Land Economics* (August 1968), pp. 339-349.

Chapter 9

CONCLUSION

This thesis has analyzed the four major components of housing demand to explain their effect on the housing equation's most volatile variable: demand. As the supply of housing units is viewed as inelastic in the short-run, an understanding of the influence provided by demographic forces, income, price and credit conditions is essential to the understanding of our current housing situation. This chapter brings together the more salient points of this analysis and makes some concluding comments.

Demographic forces have been shown to provide their influence on housing demand through alterations in the population size and the characteristics which lead to household formation. In this regard, in-migration, the growth of non-family households and the influence of the 'baby boom' have been responsible for increased housing demand in British Columbia.

The dramatic increase of income over the past ten years has heightened the demand for housing.[1] With greater amounts to spend, consumers have directed greater amounts toward housing.

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Through this increase in demand, with no corresponding increase
in supply, the price of housing in British Columbia has risen rapidly.[2]
Although this increase in price has tempered demand to a certain extent,
the phenomenon of price expectation has created a sense of urgency in the
ownership submarket. With housing consumers believing that prices will
continue to rise and their perception of housing as a hedge against infla-
tion, the high prices have not acted as a complete deterrent and the high
demand has been maintained. The only real escape from this circle of price
expectation-demand has been supplied by the restrictions placed on credit
availability as a result of the high demand for funds. With the major
avenue of financing curtailed, the demand for ownership must decline.

Evidence of the operation of our four components of housing
demand has been supplied throughout the text, with the main source being
a consumer survey conducted in July 1975. While the data supplied are
considered adequate, the amount of applicable data does fall short of what
was originally desired (e.g. none of the survey data were found to be
applicable to the chapter on price). What was required, were more sub-
jective questions as to why the consumer chose their current form of
housing and what factors would lead to what changes. To place it on a more
specific plane, more questions were required dealing with the effect of our
four components on the consumer's choice of housing.

The main reason for these shortcomings was the failure to
specifically define the use of the survey data, prior to its administration.
To a certain extent, this failure was predictable, given the circumstances
surrounding the creation of the survey. The opportunity to co-ordinate
and share expenses with the Interdepartmental Study Team on Housing and

Rents arose quite rapidly, establishing unavoidable time constraints.
Thus, with little time to prepare, the trade-off had to be made between
having some data on a variety of consumer oriented subjects, rather than
fulfilling all the requirements for specific topics. The gaps in the
applicable data for this thesis serve as evidence of what happens when a
report attempts to fit itself into the available survey. Certainly, the
ideal method is to design the survey specifically for the report.

The final intention of this thesis was to provide policy sug-
gestions to be directed toward the factors controlling the demand for
housing. Although one always hopes to provide the policy key which will
unlock the housing problem, in the final analysis one must admit that
the nature of the problem defies policy oriented, short-run solution.

It is possible for governments to use 'carrot or stick' policies
to manipulate demographic forces, however, the practice raises serious
moral questions. The important point is that governments should recognize
demographic impact and its effect on housing demand, and structure their
policy accordingly.

With regard to the price component, the current manipulation
through subsidy and price control policies has served to stimulate demand,
increasing prices further and causing detrimental side effects in the
market's operation. In addition, the advocates of price oriented policies
should be attacked for their failure to distinguish between symptom and
cause, and the facade of solution under which they operate should be
recognized as ludicrous.

When credit conditions are allowed to operate freely they can
serve the useful function of curtailing demand spurred on by price expec-
tation. However, credit oriented policies are continually being used to

manipulate the terms faced by housing consumers. Through alterations in the credit terms, the demand for home ownership is altered, and the country's economy is either stimulated or held back. In a number of ways, the relaxation of credit conditions has the same effect on housing demand as price subsidization, and it is usually accompanied by the same erroneous air of solution. Although the effect on the economy may be of general benefit, the short run effect on housing demand will be to drive up the price of housing and thus to eat away the benefits derived from relaxed mortgage terms.

It should be noted that there is nothing inherently evil in high prices alone, as they are simply the natural product of high demand reacting with limited supply. In fact, high prices serve a number of beneficial functions: by curtailing demand; by ensuring that the available supply is utilized to its fullest potential; and by passing on the necessary signals to the production sector.

One can assume that the housing problem, as perceived by governments, is the inability of low and fixed income groups to cope with the market price. Thus, the course of policy action should be to move against the factors which created the price and the size of the disposable income which creates the inability. As demand is so dominant in its short run effect, the removal of demand-stimulation in the form of price subsidization and relaxed credit conditions will do much to alleviate the high prices. In addition, adjustments to disposable income, through income-tax provisions, will assist in redistributing the ability to bid for housing to those groups who are considered to be in need.

If one is to believe that the housing problem has reached crisis proportions, then there is all the more reason for governments to realize the detrimental effects of their demand-stimulation policies, the need for further income redistribution and the necessity of easing the supply of housing to avoid problems in the future.

9.1 Areas for Further Research

It is an acknowledged fact that the bulk of the empirical studies concerning housing, on which our economic theory rests, originates from the United States and the United Kingdom. Although the general theory that these studies impart is transportable, the specifics of housing condi- tions are as immobile as the commodity itself. In this regard, the paucity of current, or in some subject areas any information concerning the British Columbia situation, makes the field for further research almost limitless. With the additional fact that the limitations of money and time (both for researchers and respondents) restrict the depth of any research that is undertaken, we are left with a fragmented picture of the present, with little or no opportunity for historical comparison.

To delineate all the areas of research needed is almost impossible, however, with regard to the demand aspect, certainly the subjects of mobility, preference and 'life cycle' effect are sadly lacking at present.

Although the housing consumer survey forms an integral part of this thesis, this in no way implies that this work has exhausted the potential for analysis of the collected data. Hopefully future work with the survey material will help to fill the void described in the previous two paragraphs. It is also hoped that such work will encourage additional

survey research in the future relating to the elements of housing demand

in British Columbia.

FOOTNOTES

[1] Between 1961 and 1973 personal disposable income per capita increased 232% while all consumer prices increased 167%; all housing 166%; home ownership 227%; and new home ownership 241%. See David Baxter and S.W. Hamilton, "Residential Real Estate Markets: Crisis or Confusion," *Financial Post* (October 1975), (draft paper).

[2] Figures used in a recent article on Canadian cities, listed the average selling price of residential homes in Vancouver, over the first six months of 1975, at $56,000; second only to Toronto ($57,150), using a comparison of 22 cities. See "The Great Canadian Cities, Game," *Weekend Magazine: Vancouver Sun* (18 October 1975).

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APPENDIX A

HOUSING CONSUMER SURVEY

128

Regional Marketing Surveys
Vancouver   AM   PM   Study R5590

START TIME   ＼____   ☐ ☐   (CARD)

FINISH TIME _____   ☐ ☐   0   1
                                          ── ── ── ── ── ── ── ──
                                           1   2   3   4   5   6   7   8

STREET NAME AND NUMBER_____

CITY, TOWNSHIP OR MUNICIPALITY_____
                                                                              ── ── ── ──
POSTAL CODE   9   10   11   12
                       ── ── ──   ── ── ──
                       13 14 15   16 17 18

Hello, I am _____ of Regional Marketing Surveys. Since Housing continues to be a problem of concern
to government, business, and the public, a joint survey is being administered by the Faculty of Commerce and Busines
Administration at U.B.C. and the Government of British Columbia to evaluate the current situation.

Regional Marketing Surveys has been asked to conduct this survey and your household has been selected for
inclusion in this study. I would like to ask some questions about your home.

Here is a letter that describes the study in a little more detail.

ADDITIONS TO CARD ONE

column

#'s	item
19 - 27	Prince George and Cranbrook gas cost
28 - 30	Number of dwelling units from B 3
31 - 33	Number of dwelling units from D 3
34 - 35	Number of people in household
36 - 37	Number of families
38 - 45	Number of people in each family
46 - 49	Type of family: (1) Husband and wife (2) One parent
50 - 51	Number of non-family occupants
52	Type of rental unit: (1) Controlled (2) Uncontrolled
53 - 56	Monthly shelter cost

-2-

SECTION A: HOUSEHOLD COMPOSITION

DEFINITION OF THE HEAD OF THE HOUSEHOLD: BY THE HEAD OF THE HOUSEHOLD, FOR THE PURPOSE OF THIS SURVEY, WE MEAN THE PERSON WHO CONTRIBUTES THE LARGEST AMOUNT OF MONEY FOR THE OPERATION OF THE HOUSEHOLD.

IF THE HOUSEHOLD IS A NON-FAMILY HOUSEHOLD, ANY INDIVIDUAL WHO CONTRIBUTES TO THE RENT OR SHARES OWNERSHIP MAY COMPLETE THE SURVEY EVEN THROUGH THERE MAY NOT EXIST A NOMINAL HOUSEHOLD HEAD.

A1. Would you please tell me the name of all household members, starting with the head of the household? (IF THERE ARE MORE THAN NINE MEMBERS IN THE HOUSEHOLD CONTINUE USING A SECOND QUESTIONNAIRE)

A2. Are there any persons away from this household attending school, visiting, travelling, or in hospital who normally live here?

    YES ☐ LIST ANY OMMISSIONS IN A 1.

    NO ☐

(FOR EACH NAME LISTED, COMPLETE QUESTIONS A3 to A 6)

A1 | Surname | Given Name

01 Head:
02
03
04
05
06
07
08
09

Line number	01	02	03	04	05	06	07	08	09
A3. What age is ____ ?	9/10	11/12	13/14	15/16	17/18	19/20	21/22	23/24	25/26
A4. What sex is ____ ? 1. Male 2. Female	27-	28-	29-	30-	31-	32- 33-		34-	35-
A5. What is ____'s marital status? 1. Single 2. Married 3. Other	36-	37-	38-	39-	40-	41- 42-		43-	44-

A6. What is ____'s relationship to the head of this household?

1. Head ....
2. Spouse (husb. or wife)
3. Son/Daughter ....
4. Son/Daughter-in-law
5. Parent ....
6. Parent-in-law ......
7. Grandchild ....
8. Brother/Sister .....
9. Brother/Sister-in-law
10. Other relative .....
11. Roomer/Boarder/Lodger
12. Employee ....
13. Partner/Roommate ...
14. Other (SPECIFY) ....

	45/46	47/48	49/50	51/52	53/54	55/56	57/58	59/60	61/62
01	☒								

A7. Which member(s) if any, owns this dwelling? NONE OWN ☐

63-	64-	65-	66-	67-	68-	69-	70-	71-

A8. Which member(s), if any, pay rent in this dwelling? NONE RENT ☐

72-	73-	74-	75-	76-	77-	78-	79-	80-

SECTION B: PRESENT DWELLING CHARACTERISTICS

B1. What type of dwelling is this? (HAND CARD A)

9 -

1. Single house .... 1 ☐

2. House attached to non-residential structure .... 2 ☐

3. Semi-detached or double house ..... 3 ☐

4. Row house .... 4 ☐

5. Duplex ....(UP - DOWN) .... 5 ☐

6. Apartment, flat or multiple dwelling .... 6 ☐

7. Mobile home on a fixed foundation.. 7 ☐

8. Other .... 8 ☐

(SPECIFY)

THANK RESPONDENT TERMINATE INTERVIEW

B2. How many stories having dwelling units are there in this building?....... $\overline{10}$ $\overline{11}$

B3. How many dwelling units are there in this building? .... $\overline{12}$ $\overline{13}$

B4. When was this building originally constructed? (HAND CARD B)

14 -

1. 1940 or before .... 1 ☐

2. 1941 - 1950 .... 2 ☐

3. 1951 - 1960 .... 3 ☐

4. 1961 - 1970 .... 4 ☐

5. 1971 - Dec. '73 .... 5 ☐

6. Jan. 1974 - Present .... 6 ☐

B5. Does this dwelling unit have a _____ ?

YES

1. Kitchen .... 15 - 1 ☐

2. Living room .... 16 - 1 ☐

3. Dining room .... 17 - 1 ☐

4. Family room .... 18 - 1 ☐

5. Recreation room .... 19 - 1 ☐

6. Den .... 20 - 1 ☐

7. Library .... 21 - 1 ☐

8. Workshop .... 22 - 1 ☐

9. Business or professional room .... 23 - 1 ☐

10. Bedroom 1 .... 24 - 1 ☐

11. Bedroom 2 .... 25 - 1 ☐

12. Bedroom 3 .... 26 - 1 ☐

13. Bedroom 4 .... 27 - 1 ☐

14. Bedroom 5 .... 28 - 1 ☐

15. Bathroom 1 .... 29 - 1 ☐

16. Bathroom 2........................... 30 - 1 ☐

B6. How many additional rooms are there in this dwelling unit not including halls, vestibules, unfinished basement rooms, garages, etc.? ....

$\overline{31}$ $\overline{32}$

B7. Are any of these rooms used solely for business or professional purposes?

No .... ☐

Yes ⟶ How many?.....

$\overline{33}$ $\overline{34}$

-4-

B8 (ASK ONLY IF SINGLE DETACHED HOUSE - SEE QUESTION B1)

What is the size of your lot in feet? What is the

Width------- $\overline{35}$ $\overline{36}$ $\overline{37}$

Depth------- $\overline{38}$ $\overline{39}$ $\overline{40}$

Area------- $\overline{41}$ $\overline{42}$ $\overline{43}$ $\overline{44}$ $\overline{45}$ $\overline{46}$

(NOTE: 1 ACRE EQUALS 43,560 SQUARE FEET)

47-

B9 (ASK EVERYONE)

Does this household have a flush toilet
exclusively for the use of this unit?   YES.....   1 ☐
                                              NO......   2 ☐

B 10 Does this household have a sink in the main bathroom?   48-

                                              YES.....   1 ☐
                                              NO......   2 ☐

B 11 Is the payment for this dwelling reduced for one or more of the
following reason?   (HAND CARD C)   49-

                                         1. Subsidized by government 1 ☐

This includes Federal Provincial   2. Subsidized by employer   2 ☐
and Municipal projects as well
as Department of National Defence   3. Subsidized by relative   3 ☐
and limited dividend projects   4. Services to landlord..   4 ☐

                                         5. Longer lease..........   5 ☐
                                         6. Some other reason.....   6 ☐
                                         7. Payment not reduced...   7 ☐

                          Specify

B 12 Which of these statements describes your dwelling unit? (HAND CARD D)

1. OWNED OR BEING BOUGHT AS A CONDOMINIUM BY A MEMBER(S)
    OF THIS HOUSEHOLD................................. 50-1 ☐ }
2. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THIS   GO TO B.38
    HOUSEHOLD.. 51-1 ☐ }
3. RENTED FOR MONEY BY A MEMBER(S) OF THIS HOUSEHOLD... 52-1 ☐ -- GO TO B.13
4. OWNED OR BEING BOUGHT AS A LONG TERM PREPAID
    LEASEHOLD BY A MEMBER(S) OF THIS HOUSEHOLD......... 53-1 ☐
5. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THIS
    HOUSEHOLD BUT SITUATED ON LEASED LAND. (INCLUDE
    MOBILE HOMES ON RENTED PAD)........................ 54-1 ☐ } GO TO B.38
6. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THIS
    HOUSEHOLD AS A UNIT IN A COOPERATIVE HOUSING PROJECT 55-1 ☐

7. OTHER_____
            (SPECIFY. THANK RESPONDENT AND TERMINATE
             INTERVIEW)

-5-

FOR RENTERS ONLY

B13 What is the regular rent payment for this dwelling?   56   47   58   59   60
     (ROUND TO THE NEAREST DOLLAR)

B14 How often is this payment made?·   1. Once a week (weekly)............   61 1 ☐
     (HAND CARD E)   2. Every two weeks (bi-weekly).....   2 ☐
                                               3. Once a month (monthly)..........   3 ☐
                                               4.· Every two months (bi-monthly)...   4 ☐
                                               5. Every three months (quarterly)..   5 ☐
                                               6. Every six months (twice a year).   6 ☐
                                               7. Once a year (yearly)............   7 ☐
                                               8. Other..........................   8 ☐

                              Specify

                                                                             62-
B15 Does this payment include the   1. No (not included or no such rooms)
     value of rent for rooms used   (GO TO B17).......................   1 ☐
     solely for business or   2. Don't know......(GO TO B 17)...........   2 ☐
     professional purposes?   3. Yes.............(GO TO B 16).............   3 ☐

                   B16 What is the value of the _____ (READ TIME PERIOD
                        FROM B.14) rent for these rooms?   63   64   65   66   67

                                                                             68-
B17 Did you receive the Renter's Resource Grant
     last year?   1. YES.........   1 ☐
                                                      2. NO..........   2 ☐
                                                      3. DON'T KNOW..   3 ☐

                                                                             69-
B18 To the best of your knowledge, is this dwelling unit
     covered by the rent control law?   1. YES.........   1 ☐
                                                      2. NO..........   2 ☐
                                                      3. DON'T KNOW..   3 ☐

                                                                             70-
B19 Do you know what the maximum permissible rent increase is?

                              YES...(GO TO B20).........   1 ☐
                              NO/DON'T KNOW..(GO TO B21).   2 ☐

              B20 What is the maximum permissible rent increase?

                              PERCENTAGE...........   __ __ . __ __ %
                                                                           71 72   73 74

                                                                           DUPLICATE
                                                                           COLUMNS 1 - 6

                                                                           CARD   0   4
                                                                                  7   8

9-

B21 Do you know how often the rent can be increased?

YES-----(GO TO B22) 1 ☐

NO/DON'T KNOW (GO TO B23) 2 ☐

10-

B22 How often can the rent be increased?
(DO NOT READ LIST)

ONCE A YEAR................ 1 ☐

ONCE A MONTH .... 2 ☐

ANY TIME................... 3 ☐

OTHER..................... 4 ☐

SPECIFY

B23 As far as you know, can the rent be raised automatically when a new
tenant moves in?

11-

1. YES.................... 1 ☐

2. NO..................... 2 ☐

3. DON'T KNOW............. 3 ☐

12-

B24 As far as you know, are there any circumstances under which the rent
can be raised more than the official percentage?

1. YES---(GO TO B 25)------------ 1 ☐

2. NO----(GO TO B 26)------------ 2 ☐

3. DON'T KNOW--(GO TO B 26)------ 3 ☐

B25 (a) Under what circumstances can the rent
be raised more? (DO NOT READ LIST)

13-

FOR RENOVATIONS...................... 1 ☐

OTHER................................ 2 ☐

FOR RENOVATIONS AND OTHER............ 3 ☐

DON'T KNOW........................... 4 ☐

(b) Can such an increase be challenged by
the tenant?

14-

1 Yes......................... 1 ☐

2 No.......................... 2 ☐

3 Don't know.................. 3 ☐

15-

B26 Did you move into this dwelling on or after January 1, 1975?

1 YES.....(GO TO B27)........................... 1
2 NO......(GO TO B28)........................... 2
3 DON'T KNOW..(GO TO B28)....................... 3

B 27 (a) What rent did you pay for the first month of occupancy?
(ROUND TO THE NEAREST DOLLAR)

$\overline{16}$ $\overline{17}$ $\overline{18}$ $\overline{19}$ $\overline{20}$

(b) Do you know how much rent the previous tenant paid?

21-

YES..(GO TO B 27 (c)).............. 1
NO/DON'T KNOW..(GO TO B27 (d)).... 2

(c) What did they pay? (ROUND TO THE NEAREST DOLLAR)

$\overline{22}$ $\overline{23}$ $\overline{24}$ $\overline{25}$ $\overline{26}$

(d) Do you know when the last rent increase prior to your moving
in occurred?

27-

YES..(GO TO B27 (e)).............. 1
NO...(GO TO B28).................. 2

(e) When did it occur? MONTH_____

$\overline{28}$ $\overline{29}$

YEAR..................

$\overline{30}$ $\overline{31}$

B 28. Has your rent been raised or have you received Notice of a Rent Increase since January 1, 1975?

       1. YES..(GO TO B29 (a))............

       2. NO...(GO TO B 30)..............

32-

  1

  2

B29 (a) Did you receive Notice of the increase on the government's Notice of Rent Increase form? (SHOW FORM)

       1. YES...........................

       2. NO............................

33-

  1

  2

(b) Did you receive notice of the increase 3 months in advance?

       1. YES...........................

       2. NO............................

34-

  1

  2

(c) What was the dollar amount of the increase? (ROUND TO THE NEAREST DOLLAR)

$\overline{35}$ $\overline{36}$ $\overline{37}$ $\overline{38}$

39-

(d) Did the increase include any amount for renovations?

       YES..(GO TO B 29 (e)).............

       NO;..(GO TO B 29 (f)).............

       DON'T KNOW (GO TO B 29 (f)).........

  1

  2

  3

(e) What amount included for renovations? (ROUND TO THE NEAREST DOLLAR)

$\overline{40}$ $\overline{41}$ $\overline{42}$ $\overline{43}$

(f) In what month did or will the increase take effect?_____

$\overline{44}$ $\overline{45}$

(g) Do you know when the last rent increase on this unit (PRIOR TO JANUARY 1, 1975) OCCURED?

       YES..(GO TO B 29 (h)).................

       NO/DON'T KNOW..(GO TO B 30)...........

46-

  1

  2

(h) When did it occur?   MONTH_____

$\overline{47}$ $\overline{48}$

       YEAR.............................

$\overline{49}$ $\overline{50}$

B 30. Did you feel that any aspect of your ren increase was not allowable?

       1. YES..(GO TO B31)........

       2. NO...(GO TO B34)........

       3. DON'T KNOW..(GO TO B34).

51-

  1

  2

  3

B31. Did you ask a Government Agency to review or investigate any aspect of your rent increase?

       1. YES..(GO TO B32 (a))....

       2. NO/DON'T KNOW..(GO TO B33)

52-

  1

  2

B 32 (a) Which agency? (DO NOT READ LIST)

    1. RENT REVIEW COMMISSION...............................

    2. RENTALSMAN...

    3. BOTH..

    4. OTHER...

53-

  1

  2

  3

  4

SPECIFY

(b) Was the entire rent increase permitted?

       1. YES........................

       2. NO.........................

       3. STILL PENDING..............

54-

  1

  2

  3

(c) Did the agency investigate your complaint or inquiry?

       1. YES.......................

       2. NO........................

       3. DON'T KNOW................

55-

  1

  2

  3

(d) Was your complaint dealt with promptly?

       1. YES.......................

       2. NO........................

       3. DON'T KNOW................

56-

  1

  2

  3

(e) Would you contact this agency again about a similar rent increase?

       1. YES.......................

       2. NO........................

       3. DON'T KNOW................

57-

  1

  2 GO TO B 34

  3

B 33. Why didn't you contact a Government Agency? (DO NOT READ LIST) 58-

      1. satisfied with increase................................ 1 ☐

      2. didn't know who to contact............................ 2 ☐

      3. too much trouble/didn't think it would help........... 3 ☐

      4. afraid of landlord retaliation........................ 4 ☐

      5. other.. 5 ☐

                             | SPECIFY

B 34. Was any payment other than rent required when you moved into this apartment? 59-

      1. YES..(GO TO B 35)...................... 1 ☐

      2. NO..(GO TO B 36)...................... 2 ☐

      3. DON'T KNOW..(GO TO B 36)............... 3 ☐

> **B 35** Which of the following were required (READ LIST) YES
>
>   1. damage or security deposit?............. 60-1 ☐
>
>   2. advance rent payment?................... 61-1 ☐
>
>   3. other?................................. 62-1 ☐
>
> | SPECIFY

B 36 Would you prefer to own your own dwelling unit rather than renting? 63-

             YES..(GO TO B 37) 1 ☐

             NO..(GO TO B63) 2 ☐

             DON'T KNOW..(GO TO B63) 3 ☐

> **B 37** (HAND CARD F) Which of these are the two most important reasons why you have not made the change?
>
>   1. Cannot afford down payment 64-1 ☐
>
>   2. Cannot afford monthly payments 65-1 ☐
>
>   3. Suitable unit not available 66-1 ☐
>
>   4. Mortgage financing not available 67-1 ☐
>
>   5. Not ready to undertake responsibilities of ownership yet 68-1 ☐
>
>   6. Other 69-1 ☐
>
>   7. Other 70-1 ☐
>
> | SPECIFY
>
> | SPECIFY

             | GO TO B 63 |

FOR OWNERS ONLY

B.38 What was the purchase price of this dwelling? (ROUND TO THE NEAREST DOLLAR)

```
 ―――  ―――  ―――  ―――  ―――  ―――
  9    10   11   12   13   14
```

B.39 What was the month and year of the purchase?

MONTH -- JAN.	01 ☐	15/16 -
FEB.	02 ☐	
MAR.	03 ☐	
APR.	04 ☐	
MAY	05 ☐	
JUNE	06 ☐	
JULY	07 ☐	
AUG.	08 ☐	
SEPT.	09 ☐	
OCT.	10 ☐	
NOV.	11 ☐	
DEC.	12 ☐	

YEAR ---------------

```
 ―――  ―――  ―――  ―――
  17   18   19   20
```

B.40 How much was the value of the downpayment? (ROUND TO THE NEAREST DOLLAR)

```
 ―――  ―――  ―――  ―――  ―――  ―――
  21   22   23   24   25   26
```

B.41 If you were selling this dwelling now, for how much would you expect to
      sell it? (ROUND TO THE NEAREST DOLLAR)

```
 ―――  ―――  ―――  ―――  ―――  ―――
  27   28   29   30   31   32
```

B.42 Do these amounts refer to one dwelling unit only?

                                  YES ....(GO TO B44)...   1 ☐
                                  NO......(GO TO B43)...   2 ☐

33 -

      B.43 How many dwelling units does it include? ....

```
 ―――  ―――
  34   35
```

B.44 How many mortgages are there on this dwelling?

                        0. None ....   0 ☐
                        1. One ....   1 ☐
                        2. Two ....   2 ☐
                        3. Three ....   3 ☐
                        4. Four or more ..   4 ☐

36 -

B.45 Is there an agreement for sale on this dwelling?

                  1. YES ......(GO TO B46)..   1 ☐
                  2. NO ....(GO TO B47)..   2 ☐
                  3. DON'T KNOW (GO TO B47).   3 ☐

37 -

      (AN AGREEMENT FOR SALE IS A LEGAL CONTRACT BETWEEN THE BUYER AND SELLER OF
      A HOUSE WHICH IS AN ALTERNATIVE TO A MORTGAGE. IN AN AGREEMENT FOR SALE
      THE SELLER CONTINUES TO HOLD THE TITLE UNTIL THE TOTAL AMOUNT OWED HAS BEEN
      PAID BY THE PURCHASER)

      B.46 How does it rank as a charge against the title
            of the property?

                        1. First ....   1 ☐
                        2. Second ....   2 ☐
                        3. Third ....   3 ☐

38 -

(IF THERE ARE NO MORTGAGES - SEE B 44 -AND THERE IS NO AGREEMENT FOR SALE-SEE B45 - GO TO B 54)
IF THERE ARE MORTGAGES OR AN AGREEMENT FOR SALE COMPLETE QUESTIONS B 47 - B 53 FOR EACH)

Do not include any amounts beyond the third mortgage and the agreement for sale	FIRST mortgage	SECOND mortgage	THIRD mortgage	AGREEMENT FOR SALE
B 47 What is the amount of the principal outstanding on the _____ mortgage? (ROUND TO THE NEAREST DOLLAR)	39 40 41 42 43 44	45 46 47 48 49 50	51 52 53 54 55 56	57 58 59 60 61 62
B 48 What is the regular payment? (ROUND TO THE NEAREST DOLLAR)	63 64 65 66	67 68 69 70	71 72 73 74	75 76 77 78

DUPLICATE COLUMNS 1 - 6 (CARD) 0 7 6 8

B 49 How often is this payment made?

1. Once a week (weekly)......
2. Every two weeks (bi-weekly)
3. Once a month (monthly)
4. Every two months (bi-montly)
5. Every three months (quarterly)
6. Every six months (twice a year)
7. Once a year (yearly)
8. Other........................

9-	10-	11-	12-
1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
SPECIFY	SPECIFY	SPECIFY	SPECIFY

B 50 Does the payment include:

	YES NO	YES NO	YES NO	YES NO
° Principal?.............	13- 1 □ 2 □	14- 1 □ 2 □	15- 1 □ 2 □	16- 1 □ 2 □
° Interest?.............	17- 1 □ 2 □	18- 1 □ 2 □	19- 1 □ 2 □	20- 1 □ 2 □
° Taxes?...............	21- 1 □ 2 □	22- 1 □ 2 □	23- 1 □ 2 □	24- 1 □ 2 □
° Any other charges	25- 1 □ 2 □	26- 1 □ 2 □	27- 1 □ 2 □	28- 1 □ 2 □

B 51 What interest rate is currently on the mortgage/agreement for sale? (IN PERCENT)

29 30 . 31 32 %	33 34 . 35 36 %	37 38 . 39 40 %	41 42 . 43 44 %

B 52 Does the mortgage/agreement for sale apply to one dwelling unit only?

YES..(GO TO B54)..............
NO...(GO TO B 53)..............

45-	46-	47-	48-
1 □ 2 □	1 □ 2 □	1 □ 2 □	1 □ 2 □

B 53 To how many dwelling units does it apply?

49 50	51 52	53 54	55 56

B 54 What was the amount of the total yearly property tax payment in 1974?   (ROUND TO THE NEAREST DOLLAR)

57 58 59 60 61

B 55 Is this property tax for one dwelling unit only?

YES...(GO TO B 57)................
NO....(GO TO B 56)................

62- 1 □ 2 □

B 56 How many dwelling units does it include?

63 64

B 56 (CHECK B 50 - IF NO TAXES INCLUDED OR NO MORTAGES GO TO B 58. IF TAXES INCLUDED, ASK:)
Do your mortgage payments include any property tax payments?

YES..(GO TO B 57 (a))..............
NO...(GO TO B 58)................
DON'T KNOW.(GO TO B 58)...........

65- 1 □ 2 □ 3 □

B 57 (a) Do you pay any additional property tax?

YES...(GO TO B 57 (b)).............
NO....(GO TO B 58)................
DON'T KNOW.(GO TO B 58)...........

66- 1 □ 2 □ 3 □

(b) How much additional did you pay?

67 68 69 79 71

139

DUPLICATE
COLUMNS 1 - 6
(CARD)   0 7
              7 8

B 58 When you received your property tax statement for 1974 what was the reduction, if any, for

the home owners grant? (ROUND TO THE NEAREST DOLLAR)

        9 10 11 12

school tax removal? (ROUND TO THE NEAREST DOLLAR)

        13 14 15 16

and what was the total reduction? (ROUND TO THE NEAREST DOLLAR)

        17 18 19 20

B 59 I am going to read you a list of sources people sometimes get their downpayment from. For each source, can you tell me whether you

got your <u>downpayment partly or entirely</u> from that source;

or got <u>no part</u> of your downpayment from that source?

(READ LIST)

savings?...............................Partly or entirely....		21- 1
No part...............		2
sale of previous house..................Partly or entirely....		22- 1
No part...............		2
borrowed from friends and relatives.....Partly or entirely....		23- 1
No part...............		2
borrowed from bank or other financial institution		
Partly or entirely....		24- 1
No part...............		2
provincial government Home Acquisition .Partly or entirely....		25- 1
Grant No part................		2
Federal Grant...........................Partly or entirely....		26- 1
No part...............		2
Any other sources of down payment.......Partly or entirely....		27- 1
No part...............		2

SPECIFY

B 60 I would like you to think back to the time when you purchased this house. Suppose that the amount you had been able to borrow on your first mortgage had been 10% less, and that you had to make up the difference with an increased downpayment. Would you have...(READ LIST)

    28-

1. bought the same house.................... 1

2. bought a cheaper house................... 2

3. not bought at that time.................. 3

4. or done something else?.................. 4

SPECIFY

B 61 Now, suppose that the downpayment was the same as you actually paid, but that your monthly payments were 10% higher than you actually paid (perhaps because of higher interest rates, or a shorter term). Would you have...

    29-

1. bought the same house.................... 1

2. bought a cheaper house................... 2

3. not bought at that time.................. 3

4. or done something else?.................. 4

SPECIFY

B 62 (a) Would you prefer to rent rather than owning your own dwelling?

    30-

YES..(GO TO B 62 (b))..... 1

NO...(GO TO B 63)........ 2

DON'T KNOW.(GO TO B 63).. 3

B 62 (b) (HAND CARD G) Which of these are the two most important reasons why you have not made the change?

1. RENTAL ACCOMMODATION NOT AVAILABLE OR NOT AVAILABLE IN SUITABLE LOCATION............................ 31-1

2. RENTS ARE TOO HIGH................................ 32-1

3. FEEL IT IS IMPORTANT TO OWN NOW BECAUSE OF INFLATION 33-1

4. AVAILABLE RENTAL UNITS NOT OF ADEQUATE QUALITY..... 34-1

5. AVAILABLE RENTAL UNITS TOO LARGE................... 35-1

6. AVAILABLE RENTAL UNITS TOO SMALL................... 36-1

7. OTHER... 37-1

8. OTHER... 38-1

SPECIFY

SPECIFY

FOR RENTERS AND OWNERS

(READ)
The next few questions are asked to determine how much this household pays yearly
for basic utilities and services in addition to any rent or mortgage payments.
(OWNERS START WITH B64)

Utilities & Services	B.63 (FOR RENTERS ASK:) Is ___ included in the rent? (IF YES, CHECK BOX AND GO TO NEXT ITEM. IF NO GO TO B.64)	B.64 How often do you make payments for _____?							B.65 What is the average regular payment? (ROUND TO THE NEAREST DOLLAR)	B.66 Does this amount refer to one dwelling unit only?
		No payment	Once a month	Every two months	Every three months	Every six months	Once a year	Other (Specify no. of payments per year)		
Water	39 - 1 ☐	40- 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	41 42 43 44	45 - YES......... 1 ☐ NO .... 2 ☐ DON'T KNOW... 3 ☐ To how many does it apply? 46 47
Electricity or electricity and gas	48 - 1 ☐	49- 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	50 51 52 53	54 - YES .... 1 ☐ NO .... 2 ☐ DON'T KNOW... 3 ☐ To how many does it apply? 55 56
Oil, coal, wood or kerosene for cooking or heating	57 - 1 ☐	58- 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	59 60 61 62	63 - YES .... 1 ☐ NO .... 2 ☐ DON'T KNOW... 3 ☐ To how many does it apply? 64 65
Parking	66 - 1 ☐	67 - 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	68 69 70 71	72 - YES .... 1 ☐ NO .... 2 ☐ DON'T KNOW... 3 ☐ To how many does it apply? 73 74 DUPLICATE COLUMNS 1 - 6 (CARD) 0 8 / 7 8
Services for the upkeep of this condominium, prepaid lease payments, land lease payments or payments to a housing co-operative	9 - 1 ☐	10 - 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	11 12 13 14	15 - YES .... 1 ☐ NO .... 2 ☐ DON'T KNOW .. 3 ☐ To how many does it apply 16 17
Other services and utilities, not including telephone SPECIFY	18 - 1 ☐	19 - 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	20 21 22 23	24 - YES .... 1 ☐ NO .... 2 ☐ DON'T KNOW... 3 ☐ To how many does it apply? 25 26

B 67 Were there any expenditures on repairs, maintenance or improvements in this
      dwelling unit in 1974?

                              YES.....(GO TO B 68)................

                              NO......(GO TO SECTION C)...........

                              DON'T KNOW (GO TO SECTION C)........

27-

. 1 [   ]—,
  2 [   ]
  3 [   ]

B 68 How much was spent by you or other members of your
      household on each of the following items in 1974.
      (READ LIST) ' (ROUND TO THE NEAREST DOLLAR)

          1. electrical repairs or improvements.................

          2. plumbing system.................................

          3. roofing...

          4. heating system.................................

          5. carport/garage ....

          6. structural repairs to foundation.................

          7. moving walls, adding walls, or adding rooms......

          8. finishing basement.............................

          9. driveway.......................................

28	29	30.	31	32
33	34	35	36	37
38	39	40	41	42
43	44	45	46	47.
48	49	50	51	52
53	54	55	56	57
58	59	60	61	62
63	64	65	66	67
68	69	70	71	72

B 69 Did you or any member of your household make any additional
      expenditures on repairs, maintenance or improvements?

                              YES...(GO TO B 70).....................

                              NO....(GO TO B 72)....................

                              DON'T KNOW..(GO TO B 72).............

73-

  1 [   ]
  2 [   ]
  3 [   ]

B 70 How much were these additional expenditures?
      (ROUND TO THE NEAREST DOLLAR) ,

| 74 | 75 | 76 | 77 | 78 |

DUPLICATE
COLUMNS   1 - 6
(CARD)   0   9
             7   8

B 71 (ASK ONLY IF EXPENDITURES IN B 70 EQUAL $250 OR MORE)

   (a) What was the largest portion of this_____(READ AMOUNT
        IN B 70) spent on?

        _____

| 9 | 10 |

   (b) And how much was spent on _____(READ ANSWER TO B71(a))

| 11 | 12 | 13 | 14 | 15 |

B 72 Do the repair, maintenance and improvement expenditures
      you described refer to one dwelling unit only?

                              YES..(GO TO SECTION C).............

                              NO...(GO TO B 73)..................

                              DON'T KNOW..(GO TO SECTION C).....

16-

  1 [   ]
  2 [   ]
  3 [   ]

B 73 How many dwelling units were involved?..................

| 17 | 18 |

Choices for B 71 (a):

01. Paint House

02. Furniture / Rugs

03. Landscape / Outdoor Maintenance

04. General Maintenance

05. Rebuild/Remodel Rooms

06. Windows, Doors, Siding

19-

C 1 Has the head of this household moved since June 1, 1971?

                 1 YES..(GO TO C 2)......................   1 ☐

                 2 NO..(GO TO SECTION F)................   2 ☐

                 3 DO NOT KNOW..(GO TO SECTION F).......   3 ☐

C 2 Beginning with the head of this household's most recent move, what was the month and year of each move since June 1, 1971?

┌───┐
│ INCLUDE THE 5 MOST RECENT MOVES ONLY │
└───┘

FIRST MOST RECENT......MONTH............... 20 21

                       YEAR.............. 22 23

SECOND MOST RECENT.....MONTH.............. 24 25

                       YEAR.............. 26 27

THIRD MOST RECENT......MONTH.............. 28 29

                       YEAR.............. 30 31

FOURTH MOST RECENT.....MONTH.............. 32 33

                       YEAR.............. 34 35

FIFTH MOST RECENT......MONTH.............. 36 37

                       YEAR.............. 38 39

C 3 At what address did the head of this household reside prior to the move to this dwelling? (DO NOT READ LIST)

40-

      1. OUTSIDE CANADA................(GO TO C 5).....................   1 ☐

      2. IN CANADA, OUTSIDE BRITISH COLUMBIA..(GO TO C 5).............   2 ☐

      3. IN BRITISH COLUMBIA...   3 ☐

(IF IN BRITISH COLUMBIA, FILL OUT THE FOLLOWING)

┌───┐
│ STREET NAME AND NO. OR BOX NO.   │
│   │
│ CITY, TOWNSHIP, MUNICIPALITY, ETC.   │
│   │
│ PROVINCE AND POSTAL CODE   │
└───┘

41 42 43 44

45 46 47 48 49 50

C 4 What was the distance involved in the move to this dwelling?

(ROUND TO NEAREST MILE)..

51 52 53 54

(HAND CARD H)

C 5 Which of these were the TWO most important reasons for moving from the previous dwelling?

      1. Change in household membership.............................

      2. Desired less space and/or maintenace.......................

      3. Desired more living space..................................   55 56

      4. Desired better neighbourhood conditions....................

      5. Desired better quality of unit.............................

      6. Desired less expensive unit................................   57 58

      7. To establish an equity.....................................

      8. To be closer to transportation, work, services, friends, etc.

      9. Job transfer or change.....................................

     10. To own..

     11. To rent...

     12. Other...

     13. Other...

          SPECIFY ──────────────────────────────── ←

          SPECIFY ──────────────────────────────── ←

     14. Dwelling unit to be demolished

     15. Landlord problems

     16. Landlord moving in

C 6 (HAND CARD I) Which of these were the TWO most important reasons for selecting this
particular dwelling?

      1. Satisfied the need for less space... ☐

      2. Satisfied the need for more space... ☐ $\overline{59}$ $\overline{60}$

      3. Neighbourhood conditions.. ☐

      4. Quality of the unit... ☐ $\overline{61}$ $\overline{62}$

      5. Closer to transportation, work, services, friends, etc................ ☐

      6. Satisfactory financial arrangements................................... ☐

      7. Other.. ☐

      8. Other.. ☐

| SPECIFY | ← |
| SPECIFY | ← |

C 7 How many alternatives to this dwelling were inspected before choosing this one? $\overline{63}$ $\overline{64}$ $\overline{65}$

C 8 How was this dwelling found? (HAND CARD J)

                1. By individual search.......................... ☐

                2. Through friends or relatives................... ☐

                3. Through employer.............................. ☐ $\overline{66}$ $\overline{67}$

                4. Through newspaper, radio, T.V................. ☐

                5. Through a realtor............................. ☐ $\overline{68}$ $\overline{69}$

                6. Through a public agency....................... ☐

                7. Through a rental agency....................... ☐

                8. By other means............................... ☐

| SPECIFY |

Addition to C 6:

9. Only place available or was available at the time.

-16-

SECTION D: PREVIOUS DWELLING CHARACTERISTICS

Now I am going to ask you some questions about the last place of residence of the head of this household (READ OUT ADDRESS IN C 3) at the time that he/she left there.

D 1. What type of dwelling was that? (HAND CARD A)

70-

1. SINGLE HOUSE...................................... 1
2. HOUSE ATTACHED TO NON-RESIDENTIAL STRUCTURE 2
3. SEMI-DETACHED OR DOUBLE HOUSE.............. 3
4. ROW HOUSE................................... 4
5. DUPLEX (UP-DOWN)........................... 5
6. APARTMENT, FLAT OR MULTIPLE DWELLING..... 6
7. MOBILE HOME ON FIXED FOUNDATION........... 7
8. OTHER _____

(SPECIFY) _____

D. 2 How many stories having dwelling units were there in that building?................................... 71 72

D. 3 How many dwelling units were there in that building? 73 74

D 4. When was that building originally constructed? (HAND CARD B)

75-

1. 1940 or before............. 1
2. 1941 - 1950................ 2
3. 1951 - 1960................ 3
4. 1961 - 1970................ 4
5. 1971 - present............. 5

D 5. How many rooms were there in that dwelling unit, not including halls, garages, vestibules or unfinished rooms in the basement or attic?..............................

76 77

D 6. Would you say that your previous residence was.....

78-

1. about the same size as your present residence?.............. 1
2. larger than your present residence?....................... 2
3. or smaller than your present residence?................... 3
0. DON'T KNOW.. 0

DUPLICATE COLUMNS 1 - 6
(CARD) 1   0
        7   8

D 7. Was the payment for that dwelling reduced for one or more of the following reasons? (HAND CARD C)

9-

This includes Federal, Provincial and Municipal projects, as well as Department of National Defence and limited dividend projects

1. Subsidized by government.................. 1
2. Subsidized by employer................... 2
3. Subsidized by relative................... 3
4. Services to landlord..................... 4
5. Longer lease............................. 5
6. Some other reason....................... 6
7. Payment not reduced..................... 7

SPECIFY _____

D 8. Which of these statements describes the previous dwelling unit? (HAND CARD D - 1)

10-

1. OWNED OR BEING BOUGHT AS A CONDOMINIUM BY A MEMBER(S) OF THAT HOUSEHOLD... 1
2. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT HOUSEHOLD........ 2
3. RENTED FOR MONEY BY A MEMBER(S) OF THAT HOUSEHOLD.............. 3
4. OWNED OR BEING BOUGHT AS A LONG TERM PREPAID LEASEHOLD BY A MEMBER(S) OF THAT HOUSEHOLD.. 4
5. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT HOUSEHOLD BUT SITUATED ON LEASED LAND. (INCLUDE MOBILE HOMES ON RENTED PAD) 5
6. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT HOUSEHOLD AS A UNIT IN A COOPERATIVE HOUSING PROJECT 6
7. OTHER _____
(SPECIFY)

D 9. Will you tell me approximately the monthly rent/sale price of your previous residence? (HAND CARD K) Just give me the number please.

(NOTE: MONTHLY RENTS ARE NUMBERS 01 TO 11, SALE PRICES ARE NUMBERS 12 TO 24)

$\overline{11}$ $\overline{12}$

D 10. Did that amount refer to one dwelling unit only?

13-

YES..(GO TO D 12).................. 1 ☐

NO...(GO TO D 11).................. 2 ☐

DON'T KNOW..(GO TO D 12)........... ☐

D 11. How many dwelling units were there?

$\overline{14}$ $\overline{15}$

D 12. What were the approximate additional monthly expenses for basic utilities and services at the previous dwelling? Please include common area fees if the previous dwelling unit was a condominium. (ROUND TO THE NEAREST DOLLAR)

$\overline{16}$ $\overline{17}$ $\overline{18}$ $\overline{19}$

D 13. And what were the approximate monthly expenses for repairs and maintenance on the previous dwelling unit?

$\overline{20}$ $\overline{21}$ $\overline{22}$ $\overline{23}$

-18-

SECTION E: HOUSEHOLD COMPOSITION - PREVIOUS DWELLING

E 1. Including yourself, how many people lived in your previous dwelling unit? (IF '01' GO TO SECTION F)

$$\overline{24} \quad \overline{25}$$

E 2 Did all of these people move with you to your current dwelling unit?

26-

YES..(GO TO SECTION F)...................... 1 ☐

NO...(GO TO E 3).......................... 2 ☐ ┐

E 3. Including yourself, how many people moved together from your previous dwelling unit to your current one?

$$\overline{27} \quad \overline{28}$$

E 4 (HAND CARD L) Here are two definitions of a family. Using only these definitions how many families lived in your previous dwelling unit? (IF '0' GO TO E 8 (a))

$$\overline{29}$$

E 5 (FOR EACH FAMILY ASK:)

(a) How many people were there in the _____ family?

(b) And did that family include both a husband and wife or was it a one parent family

	FIRST FAMILY	SECOND FAMILY	THIRD FAMILY	FOURTH FAMILY
SIZE OF FAMILY:	$\overline{30}$ $\overline{31}$	$\overline{32}$ $\overline{33}$	$\overline{34}$ $\overline{35}$	$\overline{36}$ $\overline{37}$
TYPE: HUSBAND & WIFE	38-1 ☐	39-1 ☐	40-1 ☐	41-1 ☐
ONE PARENT	2 ☐	2 ☐	2 ☐	2 ☐

E 6 In addition to that family/these families did anyone else live in your previous dwelling unit?

42-

YES... (GO TO E 7 (a))........... 1 ☐

NO.... (GO TO SECTION F)......... 2 ☐

E 7 (a) How many of these people, if any, were relatives of the family(s) that lived there?

$$\overline{43} \quad \overline{44}$$

(b) And how many, if any, were not relatives of the family(s) that lived there? (GO TO SECTION F)

$$\overline{45} \quad \overline{46}$$

E 8 (a) How many of the people who lived in your previous dwelling unit, if any, were related to one another?

$$\overline{47} \quad \overline{48}$$

(b) How many of them were not related?

$$\overline{49} \quad \overline{50}$$

SECTION F: PRESENT HOUSEHOLD INDIVIDUAL PERSONAL INCOME

	COMPLETE THIS SECTION FOR ALL HOUSEHOLDS	DUPLICATE COLUMNS 1-6 (CARD) 1 1 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 1 3 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 1 5 / 7 8
		HEAD	SPOUSE (if any)	OTHER
F1	(ENTER THE LINE NUMBERS AND NAMES OF ALL HOUSEHOLD MEMBERS LISTED IN SECTION A WHO ARE 14 YEARS OF AGE OR OLDER) ———————→	Line No. 0 1 / 9 10 Name	Line No. 0 1 / 9 10 Name	Line No. 0 1 / 9 10 Name
	(Start with the head and then the spouse, if any)			
F2	For each person ask: During the twelve months ending December 31, 1974, what was ____'s income from each of the following sources: (ROUND ALL ANSWERS TO THE NEAREST DOLLAR)			
(a)	Wages and salaries before deductions, commissions, bonuses, tips, etc.............	11 12 13 14 15 16	11 12 13 14 15 16	11 12 13 14 15 16
(b)	Net income from self-employment or from operating his/her own non-farm business or professional practice. (Total business income less expenses of operation) (IF MONEY WAS LOST, MARK LOSS ⊠ AND WRITE ANSWER IN LOWER SET OF COLUMNS	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
	Loss ☐→	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(c)	Net income from operating a farm on his/her own account or in partnership. (Total farm income less expenses of operation) (IF MONEY WAS LOST MARK LOSS ⊠ AND WRITE ANSWER IN LOWER SET OF COLUMNS	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
	Loss ☐→	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(d)	Family and youth allowances	41 42 43 44 45 46	41 42 43 44 45 46	41 42 43 44 45 46
(e)	Old age security, guaranteed income supplement, and Mincome	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
(f)	Canada or Quebec pension plan benefits	53 54 55 56 57 58	53 54 55 56 57 58	53 54 55 56 57 58
(g)	Unemployment insurance benefits	59 60 61 62 63 64	59 60 61 62 63 64	59 60 61 62 63 64
(h)	Canada Manpower training allowance	65 66 67 68 69 70	65 66 67 68 69 70	65 66 67 68 69 70
(i)	Social assistance	71 72 73 74 75 76	71 72 73 74 75 76	71 72 73 74 75 76
		DUPLICATE COLUMNS 1-6 (CARD) 1 2 / 7 8 ID 9 10	DUPLICATE COLUMNS 1-6 (CARD) 1 4 / 7 8 ID 9 10	DUPLICATE COLUMNS 1-6 (CARD) 1 6 / 7 8 ID 9 10
(j)	Other income from government sources	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓
(k)	Gross income from roomers and boarders	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
(l)	Interest on bonds, deposits and savings certificates	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(m)	Dividends and other investment income	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
(n)	Retirement pensions, superannuation and annuities	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(o)	Other money income	41 42 43 44 45 46 Specify ↓	41 42 43 44 45 46 Specify ↓	41 42 43 44 45 46 Specify ↓
	If no breakdown by source can be given, ask: What was ____ total income from all sources in 1974?	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
	NO MONEY INCOME IN 1974 CHECK BOX	53-1 ☐	53-1 ☐	53-1 ☐

		COMPLETE THIS SECTION FOR ALL HOUSEHOLDS		
		DUPLICATE COLUMNS 1-6 (CARD) 1 7 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 1 9 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 1 / 7 8
		OTHER INDIVIDUAL	OTHER INDIVIDUAL	OTHER INDIVIDUAL
F1	(ENTER THE LINE NUMBERS AND NAMES OF ALL HOUSEHOLD MEMBERS LISTED IN SECTION A WHO ARE 14 YEARS OF AGE OR OLDER) ———————→	Line No. — — 9 10 ——— Name	Line No. — — 9 10 ——— Name	Line No. — — 9 10 ——— Name
F2	(Start with the head and then the spouse, if any) For each person ask: During the twelve months ending December 31, 1974, what was ____'s income from each of the following sources: (ROUND ALL ANSWERS TO THE NEAREST DOLLAR)			
(a)	Wages and salaries before deductions, commissions, bonuses, tips, etc.............	11 12 13 14 15 16	11 12 13 14 15 16	11 12 13 14 15 16
(b)	Net income from self-employment or from operating his/her own non-farm business or professional practice. (Total business income less expenses of operation) (IF MONEY WAS LOST, MARK LOSS ☒ AND WRITE ANSWER IN LOWER SET OF COLUMNS	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
	Loss ☐→	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(c)	Net income from operating a farm on his/her own account or in partnership. (Total farm income less expenses of operation) (IF MONEY WAS LOST MARK LOSS ☒ AND WRITE ANSWER IN LOWER SET OF COLUMNS	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
	Loss ☐→	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(d)	Family and youth allowances	41 42 43 44 45 46	41 42 43 44 45 46	41 42 43 44 45 46
(e)	Old age security, guaranteed income supplement, and Mincome	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
(f)	Canada or Quebec pension plan benefits	53 54 55 56 57 58	53 54 55 56 57 58	53 54 55 56 57 58
(g)	Unemployment insurance benefits	59 60 61 62 63 64	59 60 61 62 63 64	59 60 61 62 63 64
(h)	Canada Manpower training allowance	65 66 67 68 69 70	65 66 67 68 69 70	65 66 67 68 69 70
(i)	Social assistance	71 72 73 74 75 76	71 72 73 74 75 76	71 72 73 74 75 76
		DUPLICATE COLUMNS 1-6 (CARD) 1 8 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 0 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 2 / 7 8
		ID — — 9 10	ID — — 9 10	ID — — 9 10
(j)	Other income from government sources	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓
(k)	Gross income from roomers and boarders	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
(l)	Interest on bonds, deposits and savings certificates	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(m)	Dividends and other investment income	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
(n)	Retirement pensions, superannuation and annuities	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(o)	Other money income	41 42 43 44 45 46 Specify ↓	41 42 43 44 45 46 Specify ↓	41 42 43 44 45 46 Specify ↓
	If no breakdown by source can be given, ask: What was ____ total income from all sources in 1974?	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
	NO MONEY INCOME IN 1974 CHECK BOX	53-1 ☐	53-1 ☐	53-1 ☐

COMPLETE THIS SECTION FOR ALL HOUSEHOLDS			
	DUPLICATE COLUMNS 1-6 (CARD) 2 3 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 5 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 7 / 7 8
	OTHER INDIVIDUAL	OTHER INDIVIDUAL	OTHER INDIVIDUAL

F1 (ENTER THE LINE NUMBERS AND NAMES OF ALL HOUSEHOLD MEMBERS LISTED IN SECTION A WHO ARE 14 YEARS OF AGE OR OLDER) ⟶

	Line No. — — 9 10	Line No. — — 9 10	Line No. — — 9 10
	Name	Name	Name

(Start with the head and then the spouse, if any)

F2 For each person ask: During the twelve months ending December 31, 1974, what was ____'s income from each of the following sources: (ROUND ALL ANSWERS TO THE NEAREST DOLLAR)

(a) Wages and salaries before deductions, commissions, bonuses, tips, etc...............	11 12 13 14 15 16	11 12 13 14 15 16	11 12 13 14 15 16
(b) Net income from self-employment or from operating his/her own non-farm business or professional practice. (Total business income less expenses of operation) (IF MONEY WAS LOST, MARK LOSS ⊠ AND WRITE ANSWER IN LOWER SET OF COLUMNS	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
Loss ☐⟶	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(c) Net income from operating a farm on his/her own account or in partnership. (Total farm income less expenses of operation) (IF MONEY WAS LOST MARK LOSS ⊠ AND WRITE ANSWER IN LOWER SET OF COLUMNS	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
Loss ☐⟶	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(d) Family and youth allowances	41 42 43 44 45 46	41 42 43 44 45 46	41 42 43 44 45 46
(e) Old age security, guaranteed income supplement, and Mincome	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
(f) Canada or Quebec pension plan benefits	53 54 55 56 57 58	53 54 55 56 57 58	53 54 55 56 57 58
(g) Unemployment insurance benefits	59 60 61 62 63 64	59 60 61 62 63 64	59 60 61 62 63 64
(h) Canada Manpower training allowance	65 66 67 68 69 70	65 66 67 68 69 70	65 66 67 68 69 70
(i) Social assistance	71 72 73 74 75 76	71 72 73 74 75 76	71 72 73 74 75 76

	DUPLICATE COLUMNS 1-6 (CARD) 2 4 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 6 / 7 8	DUPLICATE COLUMNS 1-6 (CARD) 2 8 / 7 8
	ID — — 9 10	ID — — 9 10	ID — — 9 10
(j) Other income from government sources	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓	11 12 13 14 15 16 Specify ↓
(k) Gross income from roomers and boarders	17 18 19 20 21 22	17 18 19 20 21 22	17 18 19 20 21 22
(l) Interest on bonds, deposits and savings certificates	23 24 25 26 27 28	23 24 25 26 27 28	23 24 25 26 27 28
(m) Dividends and other investment income	29 30 31 32 33 34	29 30 31 32 33 34	29 30 31 32 33 34
(n) Retirement pensions, superannuation and annuities	35 36 37 38 39 40	35 36 37 38 39 40	35 36 37 38 39 40
(o) Other money income	41 42 43 44 45 46	41 42 43 44 45 46	41 42 43 44 45 46
	Specify ↓	Specify ↓	Specify ↓
If no breakdown by source can be given, ask: What was ____ total income from all sources in 1974?	47 48 49 50 51 52	47 48 49 50 51 52	47 48 49 50 51 52
NO MONEY INCOME IN 1974 CHECK BOX	53-, ☐	53-, ☐	53-, ☐

-22-

F. 3 (IF RESPONDENT PROVIDED DETAILED INFORMATION REQUESTED IN F-2 GO TO F-4.

      IF RESPONDENT WAS NOT ABLE TO PROVIDE DETAILED INFORMATION REQUESTED IN F-2 ASK:)

      (HAND CARD M) What was the approximate total money income of this household
      in 1974 taking into account the income of all members from all sources? Just
      give me the number from the card.

                                                                              $\overline{9}$ $\overline{10}$

F 4   (HAND CARD N) What is the approximate total net assets of this household.
      To obtain the net assets would you first estimate the total assets of all
      members (PAUSE). Then would you estimate the total liabilities of all
      members. (PAUSE) Subtract the liabilities from the assets. Now give me the
      number of the category in which your answer falls.

                                                                              $\overline{11}$ $\overline{12}$

SECTION G: PREVIOUS HOUSEHOLD INCOME

G 1. (CHECK QUESTION C-1. IF HOUSEHOLD HEAD HAS NOT MOVED SINCE JANUARY 1, 1971 THANK
       RESPONDENT AND END INTERVIEW.IF HOUSEHOLD HEAD HAS MOVED, ASK:)

       Now would you think back to your previous dwelling unit. What was the approximate
       total money income of that household in the year prior to the time you moved here?
       (HAND CARD M) Take into account the income from all sources of all members of that
       dwelling unit. Just give me the number from the card. $\overline{13}$ $\overline{14}$

G 2. (HAND CARD N) What was the approximate total net assets of that household in the
       year prior to the time you moved here? To obtain the net assets would you first
       estimate the total assets of all members (PAUSE). Then would you estimate the
       total liabilities of all members. (PAUSE)   Subtract the liabilities from the
       assets. Now give the number of the category in which your answer falls. $\overline{15}$ $\overline{16}$

       Additions to card 29

       column
       #'s   item

       53 - 54   Household income by card M breakdown

       55 - 62   Household income by actual dollar amount

APPENDIX B

SURVEY FLASH CARDS

CARD A - QUESTION B1   STUDY R5590

1. SINGLE HOUSE

2. HOUSE ATTACHED TO NON-RESIDENTIAL STRUCTURE

3. SEMI-DETACHED OR DOUBLE HOUSE

4. ROW HOUSE

5. DUPLEX (UP-DOWN)

6. APARTMENT, FLAT OR MULTIPLE DWELLING

7. MOBILE HOME ON FIXED FOUNDATION

8. OTHER - PLEASE SPECIFY

CARD B - QUESTION B4   STUDY R5590

1. 1940 OR BEFORE

2. 1941 - 1950

3. 1951 - 1960

4. 1961 - 1970

5. 1971 - DEC. '73

6. JAN. 1974 - PRESENT

CARD C - QUESTION B11   STUDY R5590

1. SUBSIDIZED BY GOVERNMENT: includes federal, provincial or municipal projects, such as low income or senior citizens housing; Department of National Defence Veterans' subsidization; or Limited Dividend Projects. (Restricted in the amount of profit because of a financial arrangement with the government.)

2. SUBSIDIZED BY EMPLOYER: some employees subsidize or cover completely all payments as part of their company benefits.

3. SUBSIDIZED BY RELATIVE: some respondents may live in a relative's dwelling at no or reduced cost to themselves, or else they may be subsidized indirectly.

4. SERVICES TO LANDLORD: in return for maintenance or other services, a landlord may reduce rent payments.

5. LONGER LEASE: rent payments may be reduced in return for taking a lease longer than normally expected.

6. SOME OTHER REASON: Payments may be reduced for another reason. if this is the case, specify that reason in the space provided.

7. PAYMENT NOT REDUCED: The normal charge for the dwelling is the amount paid by the tenant.

CARD D - QUESTION B12   STUDY R5590

1. OWNED OR BEING BOUGHT AS A CONDOMINUM BY A MEMBER(S) OF THIS HOUSEHOLD?

2. OWNED OR BEINC BOUGHT BY A MEMBER(S) OF THIS HOUSEHOLD?

3. RENTED FOR MONEY BY A MEMBER(S) OF THIS HOUSEHOLD?

4. OWNED OR BEING BOUGHT AS A LONGTERM PREPAID LEASEHOLD BY A MEMBER(S) OF THIS HOUSEHOLD?

5. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THIS HOUSEHOLD BUT SITUATED ON LEASED LAND. (INCLUDE MOBILE HOMES ON RENTED PAD).

6. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THIS HOUSEHOLD AS A UNIT IN A COOPERATIVE HOUSING PROJECT?

7. OTHER - PLEASE SPECIFY.

CARD E - QUESTION B14   STUDY R5590

    1. ONCE A WEEK (WEEKLY)

    2. EVERY TWO WEEKS (BI-WEEKLY)

    3. ONCE A MONTH (MONTHLY)

    4. EVERY TWO MONTHS (BI- MONTHLY)

    5. EVERY THREE MONTHS (QUARTERLY)

    6. EVERY SIX MONTHS (TWICE A YEAR)

    7. ONCE A YEAR (YEARLY)

    8. OTHER - PLEASE SPECIFY

CARD F - QUESTION B37   STUDY R5590

    1. CANNOT AFFORD DOWN PAYMENT

    2. CANNOT AFFORD MONTHLY PAYMENTS

    3. SUITABLE UNIT NOT AVAILABLE

    4. MORTGAGE FINANCING NOT AVAILABLE

    5. NOT READY TO UNDERTAKE RESPONSIBILITY

    6. OTHER - PLEASE SPECIFY

    7. OTHER - PLEASE SPECIFY

CARD G - QUESTION B62   STUDY R5590

1. RENTAL ACCOMMODATION NOT AVAILABLE OR NOT AVAILABLE IN
   SUITABLE LOCATION

2. RENTS ARE TOO HIGH

3. FEEL IT IS IMPORTANT TO OWN NOW BECAUSE OF INFLATION

4. AVAILABLE RENTAL UNITS NOT OF ADEQUATE QUALITY

5. AVAILABLE RENTAL UNITS TOO LARGE

6. AVAILABLE RENTAL UNITS TOO SMALL

7. OTHER - PLEASE SPECIFY

8. OTHER - PLEASE SPECIFY

CARD H - QUESTION C5   STUDY R5590

01. CHANGE IN HOUSEHOLD MEMBERSHIP

02. DESIRED LESS SPACE AND/OR MAINTENANCE

03. DESIRED MORE LIVING SPACE

04. DESIRED BETTER NEIGHBOURHOOD CONDITIONS

05. DESIRED BETTER QUALITY OF UNIT

06. DESIRED LESS EXPENSIVE UNIT

07. TO ESTABLISH AN EQUITY

08. TO BE CLOSER TO TRANSPORTATION, WORK, SERVICES,
    FRIENDS, ETC.

09. JOB TRANSFER OR CHANGE

10. TO OWN

11. TO RENT

12. OTHER - PLEASE SPECIFY

13. OTHER - PLEASE SPECIFY

CARD I - QUESTION C6 STUDY R5590

01. SATISFIED THE NEED FOR LESS SPACE

02. SATISFIED THE NEED FOR MORE SPACE

03. NEIGHBOURHOOD CONDITIONS

04. QUALITY OF THE UNIT

05. CLOSER TO TRANSPORTATION, WORK, SERVICES, FRIENDS, ETC.

06. SATISFACTORY FINANCIAL ARRANGEMENTS

07. OTHER - PLEASE SPECIFY

08. OTHER - PLEASE SPECIFY

CARD J - QUESTION C8 STUDY R5590

01. BY INDIVIDUAL SEARCH

02. THROUGH FRIENDS OR RELATIVES

03. THROUGH EMPLOYER

04. THROUGH NEWSPAPER, RADIO TV

05. THROUGH A REALTOR

06. THROUGH A PUBLIC AGENCY

07. THROUGH A RENTAL AGENCY

08. BY OTHER MEANS - PLEASE SPECIFY

CARD D-1   QUESTION D8   STUDY R5590

1. OWNED OR BEING BOUGHT AS A CONDOMINIUM BY A
   MEMBER(S) OF THAT HOUSEHOLD

2. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT
   HOUSEHOLD

3. RENTED FOR MONEY BY A MEMBER(S) OF THAT HOUSEHOLD

4. OWNED OR BEING BOUGHT AS A LONG TERM PREPAID LEASEHOLD
   BY A MEMBER(S) OF THAT HOUSEHOLD

5. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT HOUSEHOLD
   BUT SITUATED ON LEASED LAND. (INCLUDE MOBILE HOMES
   ON RENTED PAD)

6. OWNED OR BEING BOUGHT BY A MEMBER(S) OF THAT HOUSEHOLD
   AS A UNIT IN A COOPERATIVE HOUSING PROJECT

7. OTHER - PLEASE SPECIFY

CARD K - QUESTION D9   STUDY R5590

MONTHLY RENT	SALE PRICE
1) UP TO 100	12) LESS THAN 10,000
2) 101 TO 200	13) 10,001 TO 20,000
3) 201 TO 300	14) 20,001 TO 30,000
4) 301 TO 400	15) 30,001 TO 40,000
5) 401 TO 500	16) 40,001 TO 50,000
6) 501 TO 600	17) 50,001 TO 60,000
7) 601 TO 700	18) 60,001 TO 70,000
8) 701 TO 800	19) 70,001 TO 80,000
9) 801 TO 900	20) 80,001 TO 90,000
10) 901 TO 1000	21) 90,001 TO 100,000
11) GREATER THAN 1000	22) GREATER THAN 100,000

CARD L - QUESTION E4   STUDY R5590

        (A) HUSBAND AND WIFE, WITH OR WITHOUT UNMARRIED
             CHILDREN LIVING WITH THEM

        (B) ONE PARENT WITH UNMARRIED CHILDREN LIVING
             WITH THEM

CARD M - QUESTION F3   STUDY R5590

RANGES OF INCOME EARNED BEFORE TAXES

(1)	UNDER $1,000	(11)	$10,000 - $10,999
(2)	$1,000 - $1,999	(12)	$11,000 - $11,999
(3)	$2,000 - $2,999	(13)	$12,000 - $12,999
(4)	$3,000 - $3,999	(14)	$13,000 - $13,999
(5)	$4,000 - $4,999	(15)	$14,000 - $14,999
(6)	$5,000 - $5,999	(16)	$15,000 - $19,999
(7)	$6,000 - $6,999	(17)	$20,000 - $29,999
(8)	$7,000 - $7,999	(18)	$30,000 - $39,999
(9)	$8,000 - $8,999	(19)	$40,000 - $49,999
(10)	$9,000 - $9,999	(20)	$50,000 OR OVER

CARD N - QUESTION F4   STUDY R5590

ASSETS	LIABILITIES

<table>
<tr><td>1. CASH ON HAND</td><td>1. BANK LOANS</td></tr>
<tr><td>2. STOCKS AND BONDS</td><td>2. AUTOMOBILE LOAN</td></tr>
<tr><td>3. AUTOMOBILE</td><td>3. FINANCE COMPANY LOANS</td></tr>
<tr><td>4. INSURANCE</td><td>4. CHARGE ACCOUNTS</td></tr>
<tr><td>5. FURNITURE</td><td>5. MORTGAGES (OTHER THAN ON</td></tr>
<tr><td>6. REAL ESTATE (OTHER THAN PRINCIPAL RESIDENCE</td><td>PRINCIPAL RESIDENCE)</td></tr>
<tr><td>7. BUSINESS ASSETS</td><td>6. OTHER LOANS</td></tr>
<tr><td>8. OTHER ASSETS</td><td></td></tr>
</table>

(01)	NONE	(06)	$15,001 TO $20,000
(02)	$1,000 OR LESS	(07)	$20,001 TO $30,000
(03)	$1,001 TO $5,000	(08)	$30,001 TO $40,000
(04)	$5,001 TO $10,000	(09)	$40,001 TO $50,000
(05)	$10,001 TO $15,000	(10)	MORE THAN $50,000

APPENDIX C

SURVEY TABULATIONS

Number of Owners   1075[*]
Number of Renters   694[*]
Total Number of Respondents 1769[*]

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[*]Totals displaying less than the above numbers indicate respondent's failure to answer — with the exception of Tabulation 11 where the 319 missing responses mean the respondent did not know the maximum permissible rent increase (see question B 19 and B 20 of the Survey).

```
                        NTEN
            COUNT   I
            ROW PCT ICONDOMIN OWNER_OC RENTED    LONG TRM LEASED         ROW
            COL PCT I                            LEASE    LAND          TOTAL
            TOT PCT I    1.00I    2.00I    3.00I    4.00I    5.00I
   LOC1      -------I--------I--------I--------I--------I--------I
            1.00    I     8   I    556  I    359  I     1   I     1   I    925
        G.V.R.D.    I   0.9   I   60.1  I   38.8  I   0.1   I   0.1   I   52.3
                    I  88.9   I   52.4  I   51.7  I  50.0   I  33.3   I
                    I   0.5   I   31.4  I   20.3  I   0.1   I   0.1   I
                   -I--------I--------I--------I--------I--------I
            2.00    I     1   I    296  I    174  I     1   I     0   I    472
     PRINCE GEORGE  I   0.2   I   62.7  I   36.9  I   0.2   I   0.0   I   26.7
                    I  11.1   I   27.9  I   25.1  I  50.0   I   0.0   I
                    I   0.1   I   16.7  I    9.8  I   0.1   I   0.0   I
                   -I--------I--------I--------I--------I--------I
            3.00    I     0   I    209  I     67  I     0   I     2   I    278
       CRANBRK.     I   0.0   I   75.2  I   24.1  I   0.0   I   0.7   I   15.7
                    I   0.0   I   19.7  I    9.7  I   0.0   I  66.7   I
                    I   0.0   I   11.8  I    3.8  I   0.0   I   0.1   I
                   -I--------I--------I--------I--------I--------I
            4.00    I     0   I      0  I     94  I     0   I     0   I     94
  CRANBRK. TENANT   I   0.0   I    0.0  I  100.0  I   0.0   I   0.0   I    5.3
                    I   0.0   I    0.0  I   13.5  I   0.0   I   0.0   I
                    I   0.0   I    0.0  I    5.3  I   0.0   I   0.0   I
                   -I--------I--------I--------I--------I--------I
        COLUMN          9        1061      694        2         3       1769
        TOTAL         0.5        60.0      39.2      0.1       0.2      100.0
```

Tabulation 1. Surveyed Population by Tenure.

STRUC COUNT	SINGLE	ATTCHD 2	SEMI_	ROWHOUSE	DUPLEX	APARTMNT	MOBILE	ROW
ROW PCT	HOUSE	NON_RES	DETACHED				HOME	TOTAL
COL PCT								
TOT PCT	1.00	2.00	3.00	4.00	5.00	6.00	7.00	
LOC1 1.00	634	0	11	16	31	233	0	925
G.V.R.D.	68.5	0.0	1.2	1.7	3.4	25.2	0.0	52.3
	51.9	0.0	15.9	30.8	49.2	69.6	0.0	
	35.8	0.0	0.6	0.9	1.8	13.2	0.0	
2.00	326	0	43	25	12	54	12	472
PRINCE GEORGE	69.1	0.0	9.1	5.3	2.5	11.4	2.5	26.7
	26.7	0.0	62.3	48.1	19.0	16.1	46.2	
	18.4	0.0	2.4	1.4	0.7	3.1	0.7	
3.00	226	2	8	5	12	11	14	273
CRANBRK.	81.3	0.7	2.9	1.8	4.3	4.0	5.0	15.7
	18.5	100.0	11.6	9.6	19.0	3.3	53.8	
	12.8	0.1	0.5	0.3	0.7	0.6	0.8	
4.00	36	0	7	6	8	37	0	94
CRANBRK. TENANT	38.3	0.0	7.4	6.4	8.5	39.4	0.0	5.3
	2.9	0.0	10.1	11.5	12.7	11.0	0.0	
	2.0	0.0	0.4	0.3	0.5	2.1	0.0	
COLUMN	1222	2	69	52	63	335	26	1769
TOTAL	69.1	0.1	3.9	2.9	3.6	18.9	1.5	100.0

Tabulation 2. Surveyed Population by Structure Type.

```
                  INCOME
   COUNT    I
   ROW PCT  ILT_$3000 $3000 TO $6000 TO $9000 TO $12000 _ $15000 _ $18000 _ $21000 _ $24000 _ GE TO          ROW
   COL PCT  I          $5999    $8999    $11999   $14999   $17999   $20999   $23999   $26999   $27000        TOTAL
   TOT PCT  I    1.00I    2.00I    3.00I    4.00I    5.00I    6.00I    7.00I    8.00I    9.00I   10.00I
LOC1        --------I--------I--------I--------:--------I--------I--------I--------I--------I--------I--------I
      1.00  I     86 I     89 I     90 I    101 I    103 I     87 I     87 I     40 I     40 I     73 I     796
G.V.R.D.    I   10.8 I   11.2 I   11.3 I   12.7 I   12.9 I   10.9 I   10.9 I    5.0 I    5.0 I    9.2 I    49.5
            I   57.0 I   49.7 I   54.2 I   41.6 I   44.8 I   42.9 I   52.4 I   49.4 I   60.6 I   58.9 I
            I    5.3 I    5.5 I    5.6 I    6.3 I    6.4 I    5.4 I    5.4 I    2.5 I    2.5 I    4.5 I
          -I--------I--------I--------I--------I--------I--------I--------I--------I--------I--------I
      2.00  I     25 I     33 I     38 I     79 I     78 I     74 I     47 I     33 I     20 I     30 I     457
PRINCE GEORGE I 5.5 I    7.2 I    8.3 I   17.3 I   17.1 I   16.2 I   10.3 I    7.2 I    4.4 I    6.6 I    28.4
            I   16.6 I   18.4 I   22.9 I   32.5 I   33.9 I   36.5 I   28.3 I   40.7 I   30.3 I   24.2 I
            I    1.6 I    2.1 I    2.4 I    4.9 I    4.8 I    4.6 I    2.9 I    2.1 I    1.2 I    1.9 I
          -I--------I--------I--------I--------I--------I--------I--------I--------I--------I--------I
      3.00  I     23 I     35 I     29 I     47 I     40 I     36 I     27 I      6 I      5 I     20 I     268
CRANBRK.    I    8.6 I   13.1 I   10.8 I   17.5 I   14.9 I   13.4 I   10.1 I    2.2 I    1.9 I    7.5 I    16.7
            I   15.2 I   19.6 I   17.5 I   19.3 I   17.4 I   17.7 I   16.3 I    7.4 I    7.6 I   16.1 I
            I    1.4 I    2.2 I    1.8 I    2.9 I    2.5 I    2.2 I    1.7 I    0.4 I    0.3 I    1.2 I
          -I--------I--------I--------I--------I--------I--------I--------I--------I--------I--------I
      4.00  I     17 I     22 I      9 I     16 I      9 I      6 I      5 I      2 I      1 I      1 I      88
CRANBRK. TENANT I 19.3 I 25.0 I   10.2 I   18.2 I   10.2 I    6.8 I    5.7 I    2.3 I    1.1 I    1.1 I     5.5
            I   11.3 I   12.3 I    5.4 I    6.6 I    3.9 I    3.0 I    3.0 I    2.5 I    1.5 I    0.8 I
            I    1.1 I    1.4 I    0.6 I    1.0 I    0.6 I    0.4 I    0.3 I    0.1 I    0.1 I    0.1 I
          -I--------I--------I--------I--------I--------I--------I--------I--------I--------I--------I
   COLUMN        151      179      166      243      230      203      166       81       66      124      1609
   TOTAL         9.4     11.1     10.3     15.1     14.3     12.6     10.3      5.0      4.1      7.7     100.0
```

Tabulation 3.   Surveyed Population by Income.

WLTH

LOC1	COUNT / ROW PCT / COL PCT / TOT PCT	NONE 1.00	LT$1000 2.00	$1001_$5000 3.00	$5001_$10000 4.00	$10001_$15000 5.00	$15001_$20000 6.00	$20001_$30000 7.00	$30001_$40000 8.00	$40001_$50000 9.00	GT$50000 10.00	ROW TOTAL
G.V.R.D. 1.00	COUNT	38	43	130	130	67	47	61	44	34	135	729
	ROW PCT	5.2	5.9	17.8	17.8	9.2	6.4	8.4	6.0	4.7	18.5	49.3
	COL PCT	40.9	37.1	52.2	46.8	39.4	45.6	50.8	55.7	58.6	63.1	
	TOT PCT	2.6	2.9	8.8	8.8	4.5	3.2	4.1	3.0	2.3	9.1	
PRINCE GEORGE 2.00	COUNT	26	36	62	82	62	31	31	22	15	52	419
	ROW PCT	6.2	8.6	14.8	19.6	14.8	7.4	7.4	5.3	3.6	12.4	28.3
	COL PCT	28.0	31.0	24.9	29.5	36.5	30.1	25.8	27.8	25.9	24.3	
	TOT PCT	1.8	2.4	4.2	5.5	4.2	2.1	2.1	1.5	1.0	3.5	
CRANBRK. 3.00	COUNT	18	16	36	52	38	21	24	12	8	23	248
	ROW PCT	7.3	6.5	14.5	21.0	15.3	8.5	9.7	4.8	3.2	9.3	16.8
	COL PCT	19.4	13.8	14.5	18.7	22.4	20.4	20.0	15.2	13.8	10.7	
	TOT PCT	1.2	1.1	2.4	3.5	2.6	1.4	1.6	0.8	0.5	1.6	
CRANBRK. TENANT 4.00	COUNT	11	21	21	14	3	4	4	1	1	4	84
	ROW PCT	13.1	25.0	25.0	16.7	3.6	4.8	4.8	1.2	1.2	4.8	5.7
	COL PCT	11.8	18.1	8.4	5.0	1.8	3.9	3.3	1.3	1.7	1.9	
	TOT PCT	0.7	1.4	1.4	0.9	0.2	0.3	0.3	0.1	0.1	0.3	
COLUMN TOTAL		93 6.3	116 7.8	249 16.8	278 18.8	170 11.5	103 7.0	120 8.1	79 5.3	58 3.9	214 14.5	1480 100.0

Tabulation 4. Surveyed Population by Wealth.

```
                    OSC
          COUNT  I
          ROW PCT ILT$100     TO_$150    TO_$200    TO_$300    TO_$400    TO_$500    GT_$500      ROW
          COL PCT I                                                                              TOTAL
          TOT PCT I    1.00I      2.00I      3.00I      4.00I      5.00I      6.00I      7.00I
    LOC1          --------I--------I--------I--------I--------I--------I--------I--------I
           1.00   I    220 I      65 I      70 I      91 I      60 I      34 I      26 I      566
      G.V.R.D.    I   38.9 I    11.5 I    12.4 I    16.1 I    10.6 I     6.0 I     4.6 I     52.7
                  I   57.1 I    56.0 I    48.6 I    39.1 I    49.6 I    75.6 I    83.9 I
                  I   20.5 I     6.0 I     6.5 I     8.5 I     5.6 I     3.2 I     2.4 I
                  -I--------I--------I--------I--------I--------I--------I--------I
           2.00   I     68 I      28 I      46 I     105 I      38 I       8 I       5 I      298
    PRINCE GEORGE I   22.8 I     9.4 I    15.4 I    35.2 I    12.8 I     2.7 I     1.7 I     27.7
                  I   17.7 I    24.1 I    31.9 I    45.1 I    31.4 I    17.8 I    16.1 I
                  I    6.3 I     2.6 I     4.3 I     9.8 I     3.5 I     0.7 I     0.5 I
                  -I--------I--------I--------I--------I--------I--------I--------I
           3.00   I     97 I      23 I      28 I      37 I      23 I       3 I       0 I      211
     CRANBRK.     I   46.0 I    10.9 I    13.3 I    17.5 I    10.9 I     1.4 I     0.0 I     19.6
                  I   25.2 I    19.8 I    19.4 I    15.9 I    19.0 I     6.7 I     0.0 I
                  I    9.0 I     2.1 I     2.6 I     3.4 I     2.1 I     0.3 I     0.0 I
                  -I--------I--------I--------I--------I--------I--------I--------I
          COLUMN       385       116       144       233       121        45        31      1075
          TOTAL       35.8      10.8      13.4      21.7      11.3       4.2       2.9     100.0
```

Tabulation 5. Owner's Montly Shelter Cost.

```
                RSC
        COUNT   I
        ROW PCT ILT$100   TO_$150   TO_$200   TO_$300   TO_$400   TO_$500   GT_$500      ROW
        COL PCT I                                                                        TOTAL
        TOT PCT I    1.00I     2.00I     3.00I     4.00I     5.00I     6.00I     7.00I
LOC1    --------I---------I---------I---------I---------I---------I---------I---------I
          1.00  I     15  I     70  I    101  I    114  I     40  I     18  I      1  I    359
G.V.R.D.        I    4.2  I   19.5  I   28.1  I   31.8  I   11.1  I    5.0  I    0.3  I   51.7
                I   39.5  I   54.7  I   42.6  I   51.4  I   81.6  I  100.0  I   50.0  I
                I    2.2  I   10.1  I   14.6  I   16.4  I    5.8  I    2.6  I    0.1  I
                -I--------I---------I---------I---------I---------I---------I---------I
          2.00  I     10  I     26  I     66  I     64  I      7  I      0  I      1  I    174
PRINCE GEORGE   I    5.7  I   14.9  I   37.9  I   36.8  I    4.0  I    0.0  I    0.6  I   25.1
                I   26.3  I   20.3  I   27.8  I   28.8  I   14.3  I    0.0  I   50.0  I
                I    1.4  I    3.7  I    9.5  I    9.2  I    1.0  I    0.0  I    0.1  I
                -I--------I---------I---------I---------I---------I---------I---------I
          3.00  I      8  I     11  I     26  I     22  I      0  I      0  I      0  I     67
CRANBRK.        I   11.9  I   16.4  I   38.8  I   32.8  I    0.0  I    0.0  I    0.0  I    9.7
                I   21.1  I    8.6  I   11.0  I    9.9  I    0.0  I    0.0  I    0.0  I
                I    1.2  I    1.6  I    3.7  I    3.2  I    0.0  I    0.0  I    0.0  I
                -I--------I---------I---------I---------I---------I---------I---------I
          4.00  I      5  I     21  I     44  I     22  I      2  I      0  I      0  I     94
CRANBRK. TENANT I    5.3  I   22.3  I   46.8  I   23.4  I    2.1  I    0.0  I    0.0  I   13.5
                I   13.2  I   16.4  I   18.6  I    9.9  I    4.1  I    0.0  I    0.0  I
                I    0.7  I    3.0  I    6.3  I    3.2  I    0.3  I    0.0  I    0.0  I
                -I--------I---------I---------I---------I---------I---------I---------I
        COLUMN        38       128       237       222        49        18         2        694
        TOTAL        5.5      18.4      34.1      32.0       7.1       2.6       0.3      100.0
```

Tabulation 6.   Renter's Monthly Shelter Cost.

```
                     LOC1
          COUNT   I
          ROW PCT IG.V.R.D.  PRINCE    CRANBRK.  CRANBRK.    ROW
          COL PCT I          GEORGE              TENANT    TOTAL
          TOT PCT I    1.00I    2.00I    3.00I    4.00I
NMOVS             -I--------I--------I--------I--------I
           0.0    I    475  I    229  I    151  I     18  I    873
                  I   54.4  I   26.2  I   17.3  I    2.1  I   49.3
                  I   51.4  I   48.5  I   54.3  I   19.1  I
                  I   26.9  I   12.9  I    8.5  I    1.0  I
                 -I--------I--------I--------I--------I
           1.00   I    233  I     78  I     62  I     24  I    397
                  I   58.7  I   19.6  I   15.6  I    6.0  I   22.4
                  I   25.2  I   16.5  I   22.3  I   25.5  I
                  I   13.2  I    4.4  I    3.5  I    1.4  I
                 -I--------I--------I--------I--------I
           2.00   I    117  I     75  I     40  I     22  I    254
                  I   46.1  I   29.5  I   15.7  I    8.7  I   14.4
                  I   12.6  I   15.9  I   14.4  I   23.4  I
                  I    6.6  I    4.2  I    2.3  I    1.2  I
                 -I--------I--------I--------I--------I
           3.00   I     48  I     42  I     15  I     15  I    120
                  I   40.0  I   35.0  I   12.5  I   12.5  I    6.8
                  I    5.2  I    8.9  I    5.4  I   16.0  I
                  I    2.7  I    2.4  I    0.8  I    0.8  I
                 -I--------I--------I--------I--------I
           4.00   I     23  I     22  I      1  I     10  I     56
                  I   41.1  I   39.3  I    1.8  I   17.9  I    3.2
                  I    2.5  I    4.7  I    0.4  I   10.6  I
                  I    1.3  I    1.2  I    0.1  I    0.6  I
                 -I--------I--------I--------I--------I
           5.00   I     29  I     26  I      9  I      5  I     69
                  I   42.0  I   37.7  I   13.0  I    7.2  I    3.9
                  I    3.1  I    5.5  I    3.2  I    5.3  I
                  I    1.6  I    1.5  I    0.5  I    0.3  I
                 -I--------I--------I--------I--------I
          COLUMN       925      472      278       94     1769
          TOTAL       52.3     26.7     15.7      5.3    100.0
```

Tabulation 7. Mobility of Population since June 1, 1971.

Tabulation 8. Renter's Preference to Own.

		P2O			
	COUNT ROW PCT COL PCT TOT PCT	IYES I I I 1.00	NO I 2.00	DON'T KNOW I 3.00	ROW TOTAL
LOC1		I	I	I	
G.V.R.D.	1.00	254 70.9 53.0 36.7	102 28.5 51.8 14.7	2 0.6 12.5 0.3	358 51.7
PRINCE GEORGE	2.00	128 74.0 26.7 18.5	31 17.9 15.7 4.5	14 8.1 87.5 2.0	173 25.0
CRANBRK.	3.00	39 58.2 8.1 5.6	28 41.8 14.2 4.0	0 0.0 0.0 0.0	67 9.7
CRANBRK. TENANT	4.00	58 61.7 12.1 8.4	36 38.3 18.3 5.2	0 0.0 0.0 0.0	94 13.6
	COLUMN TOTAL	479 69.2	197 28.5	16 2.3	692 100.0

Tabulation 9. Owner's Preference to Rent.

		P2R			
	COUNT ROW PCT COL PCT TOT PCT	IYES I I I 1.00	NO I 2.00	DON'T KNOW I 3.00	ROW TOTAL
LOC1		I	I	I	
G.V.R.D.	1.00	11 1.9 61.1 1.0	548 97.0 52.3 51.1	6 1.1 85.7 0.6	565 52.7
PRINCE GEORGE	2.00	2 0.7 11.1 0.2	294 99.0 28.1 27.4	1 0.3 14.3 0.1	297 27.7
CRANBRK.	3.00	5 2.4 27.8 0.5	206 97.6 19.7 19.2	0 0.0 0.0 0.0	211 19.7
	COLUMN TOTAL	18 1.7	1048 97.7	7 0.7	1073 100.0

Tabulation 10. Did the Renter Receive the Renter's Resource Grant?

	COUNT ROW PCT COL PCT TOT PCT	RRG I IYES I I I 1.00I	NO 2.00I	DON'T KNOW 3.00I	ROW TOTAL
LOC1		--------I	--------I	--------I	
G.V.R.D.	1.00	157 43.7 64.6 22.6	196 54.6 44.7 28.2	6 1.7 46.2 0.9	359 51.7
PRINCE GEORGE	2.00	36 20.7 14.8 5.2	138 79.3 31.5 19.9	0 0.0 0.0 0.0	174 25.1
CRANBRK.	3.00	18 26.9 7.4 2.6	48 71.6 11.0 6.9	1 1.5 7.7 0.1	67 9.7
CRANBRK. TENANT	4.00	32 34.0 13.2 4.6	56 59.6 12.8 8.1	6 6.4 46.2 0.9	94 13.5
	COLUMN TOTAL	243 35.0	438 63.1	13 1.9	694 100.0

Tabulation 11. Renter's Estimates of Maximum Permissible Rent Increase.

	COUNT ROW PCT COL PCT TOT PCT	LOC1 I IG.V.R.D. I I I 1.00I	PRINCE GEORGE 2.00I	CRANBRK. 3.00I	CRANBRK. TENANT 4.00I	ROW TOTAL
RENTINCR		--------I	--------I	--------I	--------I	
10.6%	1.00	118 93.7 47.4 31.5	1 0.8 1.7 0.3	2 1.6 11.8 0.5	5 4.0 10.2 1.3	126 33.6
LT_10.6%	2.00	111 52.9 44.6 29.6	51 24.3 85.0 13.6	13 6.2 76.5 3.5	35 16.7 71.4 9.3	210 56.0
GT_10.6%	3.00	20 51.3 8.0 5.3	8 20.5 13.3 2.1	2 5.1 11.8 0.5	9 23.1 18.4 2.4	39 10.4
	COLUMN TOTAL	249 66.4	60 16.0	17 4.5	49 13.1	375 100.0