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A PROFILE OF TENANTS IN CENTRAL EDMONTON:

THEIR CHARACTERISTICS AND HOUSING PREFERENCES

by

Ⓒ   THOMAS S. CARTER

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF GEOGRAPHY
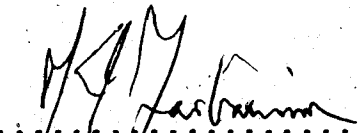
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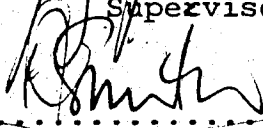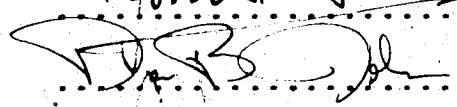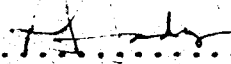
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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "A Profile of Tenants in Central Edmonton: Their Characteristics and Housing Preferences", submitted by Thomas S. Carter in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Geography.

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ABSTRACT

To a large extent, the combined choices of thousands of households with respect to where they live determines the physical and social character of urban residential neighbourhoods. This thesis delves into the housing choice of a specific group of households-- tenants in central area rental housing. The research has been spurred by the realization that there is extremely little hard information available about the central city renter--who they are, and why they have chosen their particular residential setting.

The thesis begins with a discussion of previous work related to the residential location decision, with specific emphasis on inhabitants in the central area. It discusses market theory, land use theory, and the concepts of life cycle, dwelling satisfaction and place utility, summarizing basically what is known about households renting in the downtown area and the reasons why they have chosen a central location.

The thesis then presents the analysis which identifies the characteristics of a sample of renters in

central Edmonton and assess the active variables in their residential location decision making process. The variables examined within the context of the decision include those associated with the interior of the unit, aspects of site and structure, aspects of management, physical and social aspects of the surrounding development and neighbourhood, accessibility to other facilities and financial considerations. The research determines the role of each of these variables in the location decision and how they vary with the characteristics of the individual households.

The purpose of the study is to verify or clarify existing models, hypotheses and assumptions. It addresses itself to what has been discovered as an information gap--the paucity of evidence on the characteristics of central area tenants and their reasons for choosing a central as opposed to a suburban residential location. The study will not introduce new models or hypotheses although it will discuss policy and theory implications of the work and suggest approaches that future work could take to further our knowledge of central area tenants.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

THE GROWTH OF EDMONTON'S RENTAL HOUSING INVENTORY

Rapid population growth dating back to the
1940's and the discovery of oil in the Edmonton area has
resulted in substantial increases in the city's housing
inventory. Between 1941 and 1976 the number of occupied
dwelling units in the metropolitan area rose from just
over 23,000 to 179,635 (Statistics Canada), a 681 per cent
increase. Even more noticeable than the total increase
in the inventory has been the increase in the relative
importance of multiple as opposed to single detached
units. Table 1-1 illustrates that the percentage of
multiple units rose from less than 20 per cent of Edmonton's
annual housing starts in the late fifties to over 75 per
cent in the late sixties. Multiple unit construction
dropped substantially in the early seventies but not to
the low levels characteristic of the fifties. In the mid-
seventies there has again been a marked increase in
multiple unit starts. National figures illustrate a
similar trend. The increase in multiple unit starts has

TABLE 1-1

HOUSING STARTS BY TYPE OF STRUCTURE--EDMONTON AND CANADA

	Edmonton				Canada		
Year	Multiple	Total	Mult.% Total		Multiple	Total	Mult.% Total
1957	397	3,320	12		39,385	122,340	32
1959	843	4,004	21		49,167	141,345	34
1961	1,722	4,562	38		49,147	125,577	39
1963	1,993	4,883	41		71,466	148,624	48
1964	1,872	4,479	42		88,579	165,658	54
1965	1,805	4,581	39		91,124	166,565	55
1966	1,623	3,746	43		63,832	134,474	44
1967	4,203	6,111	69		91,589	164,123	56
1968	6,395	9,005	71		121,539	196,878	62
1969	7,439	9,807	76		132,011	210,415	63
1970	4,410	6,330	70		119,779	190,528	63
1971	8,132	11,286	72		135,597	233,653	60
1972	5,545	9,500	58		134,344	249,914	54
1973	2,741	7,384	37		137,007	268,529	51
1974	1,876	5,362	35		99,978	222,123	45
1975	3,673	8,647	42		107,527	231,456	46
1976	7,092	12,370	57		138,890	273,203	51
1977	8,251	12,206	68		137,321	245,724	56

Source:--CMHC: Canadian Housing Statistics

had an effect on the dwelling inventory composition as a
whole and the proportion of multiple units increased from
31 per cent in 1961 to 44 per cent in 1976 (Table 1-2). A
similar trend is evident in other major urban centres and
in Canada as a whole (Table 1-2).

The majority of multiple units in the invent-
ory are part of the rental as opposed to the ownership market.
For example; the Central Mortgage and Housing Corporation
Survey of Housing Units in 1974 illustrated that only 9 per
cent of Edmonton's multiple units are owner occupied while
at the same time only 17 per cent of the single detached
units are rented. Rental accommodation, besides being
concentrated in multiple unit structures, is also heavily
concentrated in the central area of the City. In 1971
approximately 85 per cent of Edmonton's rental inventory was
concentrated in the older central area built up before 1951
(Figure 1-1). At the same time, 60 per cent of the total
occupied stock in this area was tenant as opposed to owner
occupied. In some selected census tracts within this area,
particularly those adjacent to the downtown core, the
proportion of tenant occupied units reaches 98 per cent.

In summary, the dominant element of change
in Edmonton's housing inventory in the past 30 years has
been the increasing importance of multiple unit dwellings.

TABLE 1-2

OCCUPIED DWELLINGS BY STRUCTURAL TYPE FOR SELECTED
CENSUS METROPOLITAN CENTRES AND CANADA 1961-1976

	Single Detached			Multiple Units		
	1961 %	1971 %	1976 %	1961 %	1971 %	1976 %
Canada	65	60	57	35	40	43
Edmonton	69	62	56	31	38	44
Calgary	64	60	58	36	40	42
Saskatoon	74	66	63	26	34	37
Toronto	55	46	40	45	54	60
Vancouver	75	63	57	25	37	43
Winnipeg	70	63	58	30	37	42

Source:--Statistics Canada
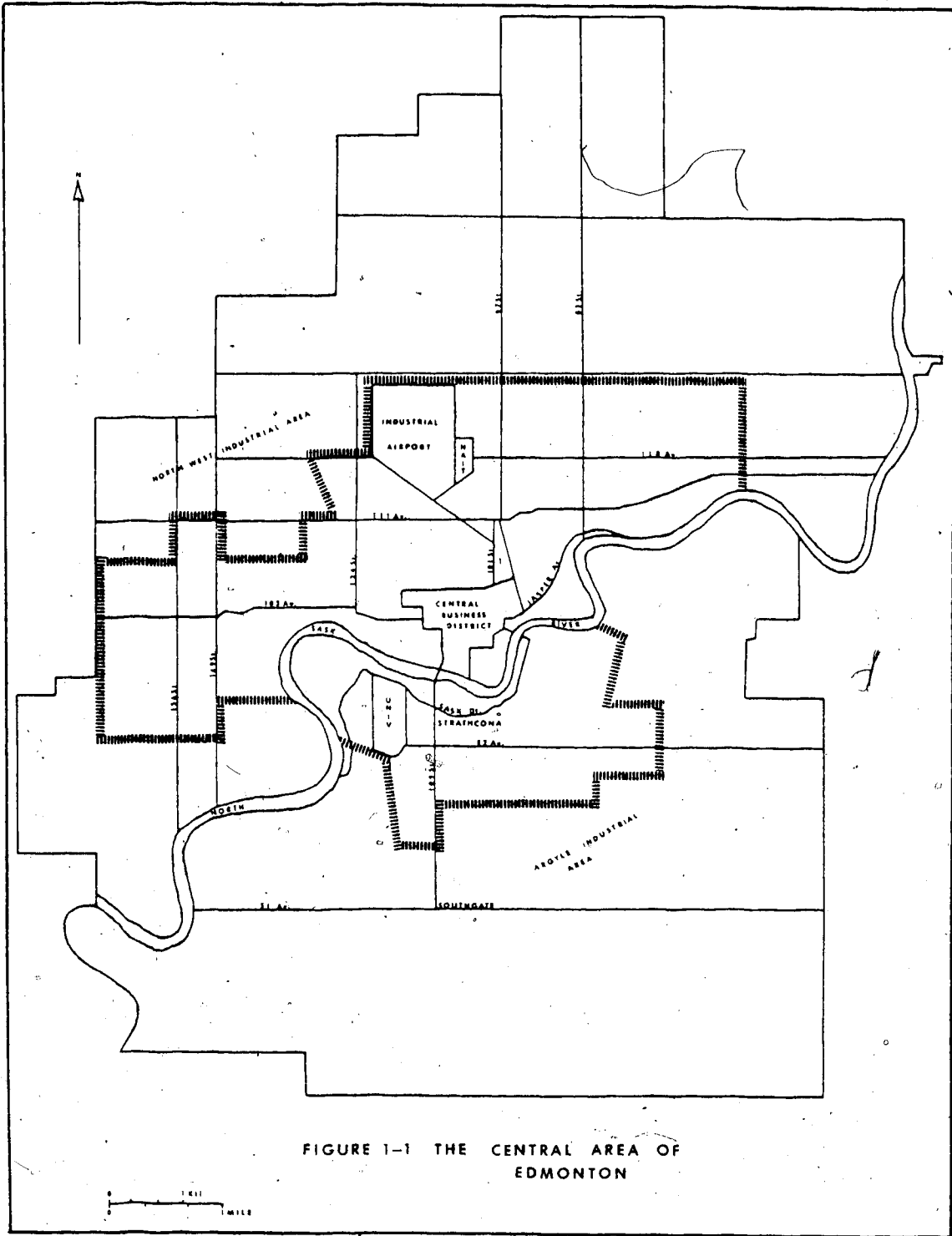
FIGURE 1-1 THE CENTRAL AREA OF
EDMONTON

The majority of these units are part of the rental market
and they are heavily concentrated in the central area of
Edmonton.

RENTAL HOUSING STUDIES--AN INFORMATION GAP

There has been a substantial amount of work
undertaken on the increasing importance of rental housing.
Throughout this introductory chapter, in the process of
identifying the study objectives, the different perspectives
of this work will be discussed, although the complete review
of the relevant literature and references to specific studies
will not be presented until Chapter Two.

Many studies have dealt extensively with the
market processes related to rental housing and by referring
specifically to demographic and economic trends, have been
able to demonstrate that the population and purchasing power
of certain sectors of the market from which tenants are
likely to be drawn has increased substantially. Still other
studies have dealt with sectors of the market that economic-
ally lack the power to choose other than the rental market.
Most of the studies deal with the market processes and the
tenant population as they relate to the city as a whole.
Very little of the work, particularly on Canadian cities,
focuses on the central area or, more specifically,

determines if, in fact, the central area residential environment attracts a particular type of resident.

Studies of the rental inventory per se do focus more specifically on the central area (Hoover and Vernon, 1959; Bourne, 1967; Andrews, 1971; Birch, 1971 and McCann, 1972 and 1975) but they discuss the physical and structural processes of conversion and re-development, documenting these processes and the role they play in increasing the rental inventory. They do not specifically discuss the tenant population of these units.

Even more specifically, there is little hard information available on the variables involved in the location decision of consumers of rental housing in the central area. Very few studies deal with the specific reasons behind the decision to take a central as opposed to a suburban location.

Much has been made of the concept of accessibility, particularly to employment, as an instrumental element in the decision to locate in the central area. However, several studies have pointed out that accessibility, or locational efficiency, consists of a complex set of variables and includes much more than the home/work relationship. The active variables in the household's decision to locate in the central area may,

on the other hand, be totally unrelated to accessibility.

Studies focusing on the residential location decision illustrate that the variables active in the decision vary with the socio-economic characteristics of the households involved. For example, as people age they progress through the stages of the life cycle, and a change in the stage of the cycle often changes housing requirements. This can be an instrumental factor in precipitating a move and choosing a different type of unit or a different residential location. Studies have also shown that components related to a household's education and income can be relevant in determining where, and with what neighbours, people choose to live. Life styles and their relationship to the residential location have also been examined. Suburbs, for example, have been assumed most appropriate for the satisfaction of "familism" (family considerations) while central city areas are assumed most appropriate for life styles related to "careerism" and "consumerism".

However, the previous work in this area has had a strong bias towards occupants of suburban, owner occupied, single detached housing and there is still a paucity of evidence on the variables that are important in the location decision of tenants in central city rental housing. There is also little hard evidence on how the variables

active in the location decision vary with differences in

socio-economic characteristics such as age, stage in the

life cycle, education and income of the households involved.

STUDY OBJECTIVES

To add to our understanding of the demand

for housing in the central area of Edmonton this study will:

1) identify what sectors of the population actually

create the demand for rental housing in the central area,

concentrating extensively on the socio-economic character-

istics of the population present in rental units, and how

these characteristics vary with different dwelling types,

realizing, of course, that change is proceeding and that

the people and their characteristics may not be the same

in the future;

2) identify the variables responsible for the decision

of these households to locate in the central area. It will

specifically determine the importance of the concept of

accessibility and if the concept includes more than the

home/work relationship, or, if in fact, variables not

related to accessibility play a role in the decision making

process; and

3) determine how the relevant set of variables in

the location decision varies with such socio-economic

characteristics of the household as age, life cycle,

education and income.

The purpose of the study is to verify or

clarify existing models, hypotheses and assumptions. It

addresses itself to what has been discovered as an inform-

ation gap--the paucity of evidence on the characteristics

of central area tenants and their reasons for choosing a

central as opposed to a suburban residential location.

The study will not introduce new models or hypotheses

but it will discuss policy and theory implications of the

work and suggest approaches for future work that could

further our knowledge of central area tenants.

ORGANIZATION OF THE STUDY

Briefly the organization of the study and

the research focus of individual chapters is as follows:

Chapter Two will discuss the relevant literature, pointing

out what is generally known about the characteristics and

motivations of inner city renters and the related demo-

graphic and economic trends. Life cycle, land use and

market theory and related concepts such as residential

search behaviour, dwelling satisfaction and place utility

will also be discussed. Chapter Three will outline and

discuss the research design.

The analysis begins with Chapter Four
which discusses demographic and economic trends relevant
to inner city rental demand in Edmonton. Chapters Five,
Six and Seven proceed to deal more directly with a sample
of tenants of rental housing in the inner area, discussing
their characteristics, their activity patterns and their
motivations for choosing a central location. Many
variables, some common to existing theory and others not
tested extensively in existing studies are analyzed to
determine their relevance in the location decision. A
summary of the major findings plus relevant conclusions
and possible approaches for further research are presented
in Chapter Eight.

CHAPTER 2

A REVIEW OF EXISTING LITERATURE

Although there is not a substantial amount of literature focusing specifically on inner city renters, many studies undertaken from different perspectives do provide information on the inner city tenant. The different perspectives include studies on market and land use theory, the journey to work, place utility and dwelling satisfaction, mobility and residential search behaviour, and the life cycle concept. Literature on these topics is reviewed because it provides a substantial amount of information on the characteristics and motivations of inner city renters and also helps to shape the objectives of the study.

TENANT CHARACTERISTICS

Several studies have examined the character-istics of renters illustrating that they consist of specific consumer groups within the housing market. Rapkin and Grigsby (1960) and Abu-Lughod (1960) undertook studies of central area renters in Philadelphia and New York respectively and documented quite extensively the household characteristics. They found that many households were

unattached individuals living alone or sharing accommodation or married couples without children. Many households had no one in the workforce, i.e. they were retired or had independent means of support. The majority of those employed worked downtown, and were white collar workers with above average incomes. The high income people were concentrated in the apartments while blue collar workers lived in converted homes. Many individuals were young and highly mobile. Both these studies, however, dealt basically with deluxe apartments or modernized expensive converted homes.

Gans (1962) in his study The Urban Villagers also documented the characteristics of the central city resident. He identified several groups including: intellectuals and professionals who live in the central city to be near cultural facilities; childless or unmarried households who are temporary central residents if they have children and eventually move to the suburbs or permanents if they never marry or never have children; the deprived who are poor, emotionally disturbed, or broken families both white and non-white who cannot or are not allowed to afford better housing; and, the elderly on fixed incomes. He did not, however, focus specifically on tenants in the central area.

Sternlieb and Burchell (1977) in a study
of 7,500 rental units to determine how household character-
istics vary with dwelling type made the following general-
izations about tenants. In modest single family homes, the
households are generally blue collar, lower income, less
educated and larger, with more children than households in
other dwelling types. Only rarely are two members of the
household employed. Walk-up apartment households are
likely to be of low-moderate income, slightly smaller than
households in single family homes but with relatively more
children than households in townhouses or high rise units.
They are young and more commonly headed by females or
those not employed. Both adults in two parent households
generally work, and their educational attainments are
inferior to residents in row or town houses and high rise
units.

Townhouse residents are generally character-
ized by professional employment and high income. The house-
holds are smaller and have fewer children than households in
walk-ups, they generally have only one employed member
and they have higher educational qualifications. High
rise apartments generally accommodate professionals with
higher incomes and educational attainments than other
dwelling types. The households are smaller and older

with virtually no children and very few second workers.
The study, however, focused specifically on rental units
in newly developing suburban areas rather than rental
units in the central city.

Other studies, including those by Foote,
et. al. (1960), Neutze (1968), Norcross and Hysom (1968),
Lansing, et. al. (1969), Nader (1971) and Smith, L.B.
(1974), although they do not focus specifically on central
area tenants, arrive at many of the same conclusions.
Generally, these studies indicate that renters, although
not necessarily central area renters, fall within one of
the following categories.

1. Newly formed family households whose head is young
i.e. twenty to thirty-four. These households often continue
to be renters until the arrival of the first or perhaps even
second child.

2. Households consisting of late middle-aged and
elderly couples whose children have left home.

3. Single parent households.

4. New migrant households with or without children.

5. Non-family households i.e. individuals living
alone or a group of unrelated individuals sharing a
dwelling unit. This group consists of three sub-groups:

a) persons never married, mainly young individuals

who have recently moved out of their parents' homes to live in separate dwellings,

> b) divorced and separated individuals, and

> c) elderly widows and widowers.

The significance of these groups to the central area rental market of Edmonton will be determined.

THE FAMILY LIFE CYCLE

Characteristics Of The Life Cycle

One characteristic of rental households that cannot be ignored is the stage in the life cycle. The life cycle stage is frequently stated as significant in the relationship between households and the type, tenure and location of their dwelling units. It is often explored as an alternative control to age and used interchangeably, though life cycle experiences of a birth cohort are by no means uniform.

Speare (1970) identifies six stages of a normal life cycle:

1) young unmarried--age under forty-five;

2) just married with no children;

3) young married with children--the oldest child under five;

4) married with school-age children;

5) older married with the youngest child over eighteen; and 6) older unmarried--age forty-five or over which includes widowed households.

Pickvance (1973 and 1974) views the concept much the same and his phases include:

1) pre-marriage;

2) married without children;

3) married from the birth of the first child to the birth of the last child--the child bearing or expansion stage;

4) married from the birth of the last child to the departure of the first child--child rearing stage;

5) married from the departure of the first child to the departure of the last child--the child launching stage; and

6) post child stage.

Doling (1976) has also explored the concept and identified the stages and although his description of the stages varies slightly it follows the general pattern that Speare and Pickvance have outlined.

Relationship To Housing Characteristics

Not all households pass through the normal cycle but if they do there is a relationship between the stage of the cycle and the type, tenure and location of the dwelling unit. For example, studies by Foote, et. al.

(1960), Hoffman (1961), Melamed (1962), Norcross and

Hysom (1968), Vancouver City Planning Department (1972)

and Doling (1976) illustrate that young unmarried persons

when they leave their parents' home generally move into

a small rental dwelling in a high density neighbourhood

often close to the city centre. As they move from the

young unmarried to the just married stage they generally

demand a slightly larger dwelling but again often found in

a high density neighbourhood close to the city centre and

usually rented. Moving from the just married to the

young married stage children appear in the family and the

size of the family increases and with it the demand for

the space of suburban living. The household moves from

the rental to the ownership market as the family grows and

at the same time usually moves from a central city to a

suburban location. When family size decreases, partic-

ularly with the child launching stage as the children

reach adulthood and leave the parental home there is

often a return to a smaller rental dwelling at higher

densities and closer to the city centre.

Hayter (1973) and Smith and Hayter (1974)

illustrate a relationship between dwelling type and life

cycle in Edmonton in a study of seven central city high

rises. Their studies indicate that inner city high rises

> . . . . largely exclude the conventional nuclear family
> of parents with children. From this, it is suggested
> that these apartments cater primarily to people at
> the extremes of the family life cycle. The first
> group comprises young adults in the pre-marriage phase
> or young married couples without children (pre-child
> phase). The second group consists of families that
> have gone through the nuclear family sequence of
> child bearing, child rearing and child launching and
> are now in the post child stage either as a married
> couple or as a single survivor. (Smith and Hayter,

1974).

The changes in housing associated with the

changes in the life cycle are really the result of changes

in preference or objective needs as the household structure

changes, particularly with the changes in size that are

associated with the changes in the life cycle. Put very

simply, the relationship between the stage in the life

cycle and the type of dwelling is that households move as

they outgrow their dwellings in a period of household or

family formation. There is a change in the size of the

household and in the amount of space required. However,

there is also a change in the type of life style that

individuals lead as they move from one stage of the life

cycle to another. Bell (1958 and 1968) and Michelson (1977)

have stressed this relationship and the bearing it has on

residential location. In the early stages of the life cycle

(young unmarried or married without children) the occupants

of the household are often more concerned with "careerism"

or "consumerism". The city centre areas are most appropriate for such life styles. As households move into the married with children, child rearing and child launching stages of the life cycle they become more concerned with "familism", and so are attracted to suburban areas where single family homes and larger lots cater more to this stage of life.

There may, however, be little change in the life cycle status as a person ages. For example, if a person remains unmarried his need for a change in dwelling type may never occur so one would expect to find not only the young unmarried and the old unmarried in the central area, but people of middle age who have never married. Because they have not progressed through the stages of the family life cycle, they have not experienced the same need for a change in dwelling, and may even continue to live in high density housing close to the city centre.

Implications Of The Life Cycle For The Location Decision

Although studies identifying the characteristics of rental households do not examine extensively the household's motivation for locating in the central area Grigsby and Rapkin (1960) and Gans (1962) do discuss the personality of some of the groups identified as central area residents, and the desire of these groups to partici-

pate in the recreational and cultural pursuits available in or near the central business district. Bell (1958 and 1968), Hayter (1973) and Doling (1976) also illustrate the relationship between stage in the life cycle, dwelling type, tenure and location. Bell (1958 and 1968) pursues the relationship between life cycle and life style and the ensuing residential location discussing how the more central areas cater to households most concerned with "careerism" or "consumerism" while a suburban location is more appropriate for "familism" or family considerations. However, for a more thorough and complete review of the motivating factors behind the residential location decision it is necessary to turn to studies on market and land use theory, the journey to work, place utility and dwelling satisfaction and residential search behaviour.

THE RESIDENTIAL LOCATION DECISION : ECONOMIC APPROACHES

Rental Market Theory

Work on the rental market theory or the relationship between the demand and supply of rental housing units is best outlined in work by Grigsby (1967), Smith, W. F. (1970), Ricks (1973), Smith, L. B. (1974) and Kain (1975). According to the theory the allocation of any resource (rental housing included) is accomplished

by means of the pricing mechanism. Price, which includes
the profit margin, is determined by competitive demand and
supply.

To briefly summarize the theory, at any given
time, a stock of dwellings exist (line AB, Figure 2-1a).
This stock together with the demand for dwelling accommod-
ation (line CD) determines the price or rent (P_1) for
dwelling units and the number of units that will be
vacant. When demand increases (C_1D_1), the theory suggests
that the price will increase (P_2) stimulating new constr-
uction and an increase in supply (H_1 to H_2) as entre-
preneurs capitalize on the increase in demand.

In Figure 2-1b the cost of new construction
is represented by CC, the price of housing by PP. The
intersection of CC and PP determines the volume of new
construction at H_1. If the price PP which includes the
profit margin, increases (P_1P_1), the volume of new
construction will increase to H_2. Entrepreneurs examine
the price or rent increases together with existing
vacancies and compare this with construction, land and
financing costs and in the case of rental units, operating
costs, to determine the volume of construction that can
profitably be undertaken. Beyond some point, the volume of
construction will exert pressure on the availability of

FIGURE 2—1 THE MARKET MODEL
SOURCE: SMITH 1974
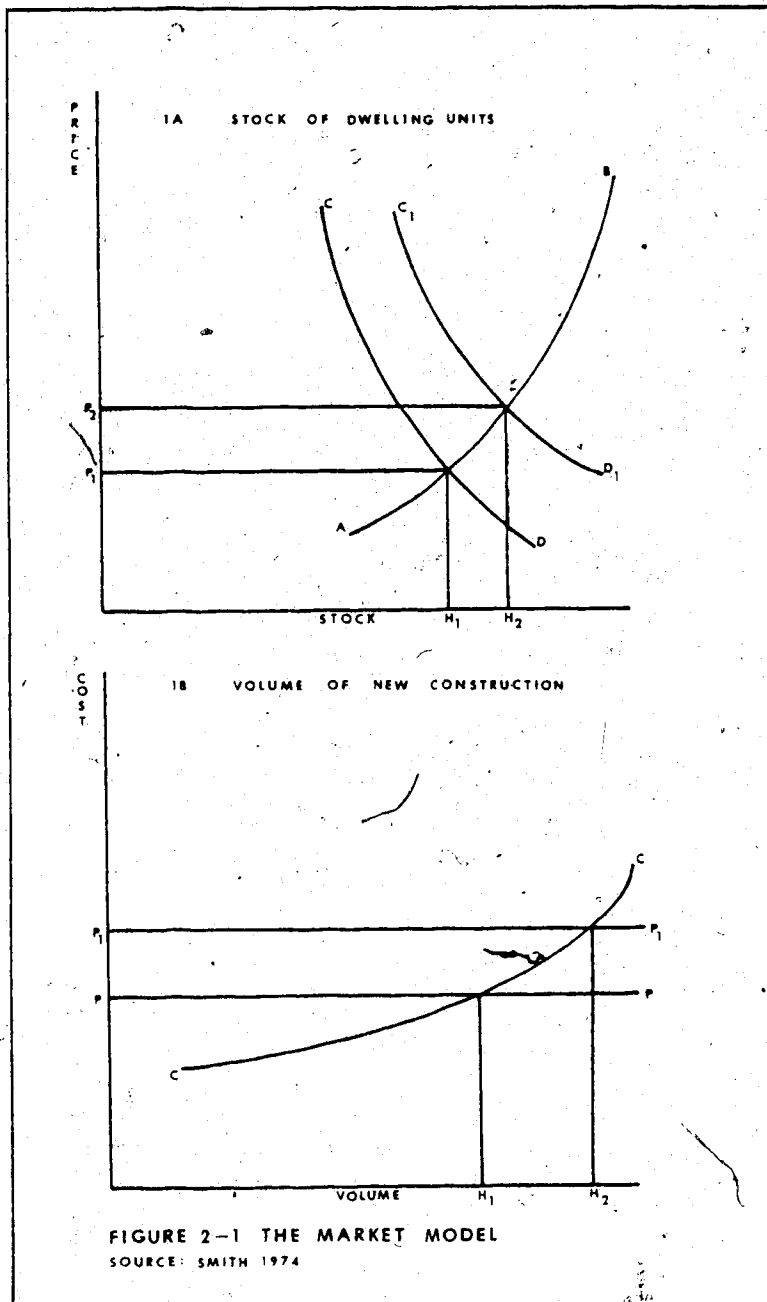
funds, building materials, land and labour, increasing the

cost line CC until prices are higher than the market

can bear.

To recapitulate, market theory postulates

that an increase in demand leads to higher prices resulting

in an increase in the volume (supply) of dwelling units,

subject of course to supply constraints that may restrict

output in spite of unsatisfied demand.

The theory is a macroeconomic approach

and relates to the total housing market. However, housing

markets tend to be compartmentalized into segments or

sub-markets of units with different characteristics--

price, tenure, type and location (Grigsby, 1963 and Bourne,

1976). These sub-markets are occupied by households whose

characteristics (age and sex of head, life cycle stage,

size and type of household, income, race, employment

location and life style) differ depending on the character-

istics associated with the particular sub-market. The

theory, however, can be applied to specific sub-markets--

the inner city rental market included. Significant in

the context of this study is not the principles of the

theory but the many variables that affect the dynamic

interrelationship (supply/demand) which result in housing

market behaviour. These variables are documented in work

by Dusenberry, 1958; Grebler and Maisel, 1963; McKeever,

1974 and Smith, L. B., 1974. A list of the most important

of these variables is contained in Table 2-1.

The list is not exhaustive as it only makes

superficial references to aspects of location, character-

istics of the dwelling and consumer tastes and preferences.

Characteristics of the management and the social and

physical aspects of the surrounding neighbourhood are not

even mentioned. Also, the list does not focus specifically

on the inner city rental market. However, it does contain

several variables that will have to be examined in this

study because they are instrumental in the demand for

inner city rental units and must be explored before the

characteristics of inner city renters and the motivations

for choosing an inner city location can be determined.

Therefore the study will analyze demographic characteristics,

trends in the age composition of the population and

household formation, current income distribution and

trends in household income, the different tastes and

preferences of inner city rental consumers with respect

to rental accommodation and the cost of alternatives such

as homeownership.

Urban Land Use Theory

Early Work.--Many of the market studies

TABLE 2-1

VARIABLES AFFECTING THE SUPPLY AND DEMAND
OF RENTAL ACCOMMODATION

Type Of Variable	Effect On Supply Or Demand
DEMOGRAPHIC	
population growth (natural or migration)	demand
age/sex composition of the population	demand
changing household size	demand
number of family and non-family households	demand
INCOME AND EMPLOYMENT	
household income (past, present and expected)	demand supply
income distribution	demand supply
employment/unemployment	demand supply
CONSUMER ASSETS	
size	demand supply
liquidity	demand supply
PRICE VARIABLES	
rising cost of homeownership	demand supply
rents	demand supply
price of alternative consumer goods	demand supply

TABLE 2-1--Continued

Type Of Variable	Effect On Supply Or Demand
GOVERNMENT INVOLVEMENT	demand supply
HOUSING INVENTORY size of stock	supply
location of stock	supply
composition of stock (age, structural type, quality)	supply
vacancies	demand supply
demolitions, conversions, removals	supply
DEVELOPMENT COSTS construction costs	supply
land costs and availability	supply
availability of interim or bridge financing	supply
FINANCIAL mortgage rates	supply
mortgage availability	supply
non-price mortgage terms	supply
imputed cost of equity funds	supply
availability of CMHC loans	demand supply
NON-FINANCIAL OPERATING COSTS operating expenses	supply
real estate taxes	supply

TABLE 2-1--Continued

Type Of Variable	Effect On Supply Or Demand
NON-FINANCIAL OPERATING COSTS--Continued	
depreciation	supply
CONSUMER TASTES AND PREFERENCES	demand
DEVELOPER ORGANIZATION size, structure, expectations	supply
POLITICAL zoning regulations	supply
building codes	supply
land use plans	supply
taxation policies i.e. income tax, capital gains, depreciation allowance rates	supply
land assessment and taxes	supply
MISCELLANEOUS transportation facilities	demand supply
services	demand supply

Source:--Grebler and Maisel, 1963; McKeever, 1974; and Smith, L. B., 1974

adopt an aspatial approach with little emphasis on the spatial aspects of the rental market. To find an explanation of the spatial patterning of residential land use and associated households it is necessary to turn to urban land use theories that discuss the internal arrangement and distribution of land uses.

The most widely accepted explanation of urban land use distribution is economic rent theory. The basic assumption of the theory is the notion of a trade-off between the price paid for the use of a particular location and the transportation costs arising from its distance from other locations with which interaction is carried out. In the context of residential land use the relationship is between the place of work and the residence.

The theory dates back to the work of Von Thünen (1826) when he laid the foundations of the formal spatial analysis of agricultural land use. Early in the twentieth century it was adapted to the urban situation by Hurd (1911) when he recognized that economic rent was based on superiority of location although he saw the journey-to-work as a secondary factor to social considerations. Haig (1926) stated that the trade-off between accessibility (length of the work trip) and housing prices or rents was the primary determinant of residential

location. Much of this earlier work, however, lacked empirical underpinnings.

Empirical work was undertaken by Leipman (1944) who focused on the significant cost involved in the work journey and its influence on the spatial patterning of residences and workplaces in cities. Loewstein (1965) undertook empirical work which indicated that men travel further than women, high status high income households further than low status low income households, and new employees further than long term employees.

Carroll (1952) adapted Zipf's (1947) principle of least effort to the spatial relationship of homes to workplaces stating that forces are in operation to minimize distance between home and place of work i.e. there is an effort to minimize the journey to work. Further theoretical work by Schnore (1954) modified the previous work by pointing out that it is not simply transportation costs to work that change with distance but also that housing costs decline as transportation costs increase. Duncan (1958) found empirical evidence to support this hypothesis in his work on Chicago. Following Schnore and Duncan, Hoover and Vernon (1959) were the first economists to explain the pattern of residential location in a city in terms of a trade-off between travel

costs and housing costs and the theory was formally stated

by Alonso (1960 and 1964) and Wingo (1961) then refined

and made more comprehensive by Muth (1961 and 1969),

Mills (1972) and Evans (1973) and forms the basis of the

economics of residential location. The basic framework

of the theory is outlined more fully below.

The Basic Economic Theory.--The initial

theory assumed a single production and consumption

centre (the central business district) located on an

isotropic surface with transportation costs varying only

with distance from the central business district. Greatest

utility is derived from occupation of the most accessible

(to the central business district) site as transportation

costs are lowest. Thus the most accessible sites earn

the highest economic rent. The slope of the land value

curve is set by transportation costs, decreasing as

transportation costs (distance from the central business

district) increase (Figure 2-2).

Activities differ in the degree to which

they can take advantage of the locational qualities of

the position of greatest accessibility as they differ

considerably in their access needs. A retail outlet,

in theory, can maximize its sales in a central location

rather than an outlying one. Although the price of the
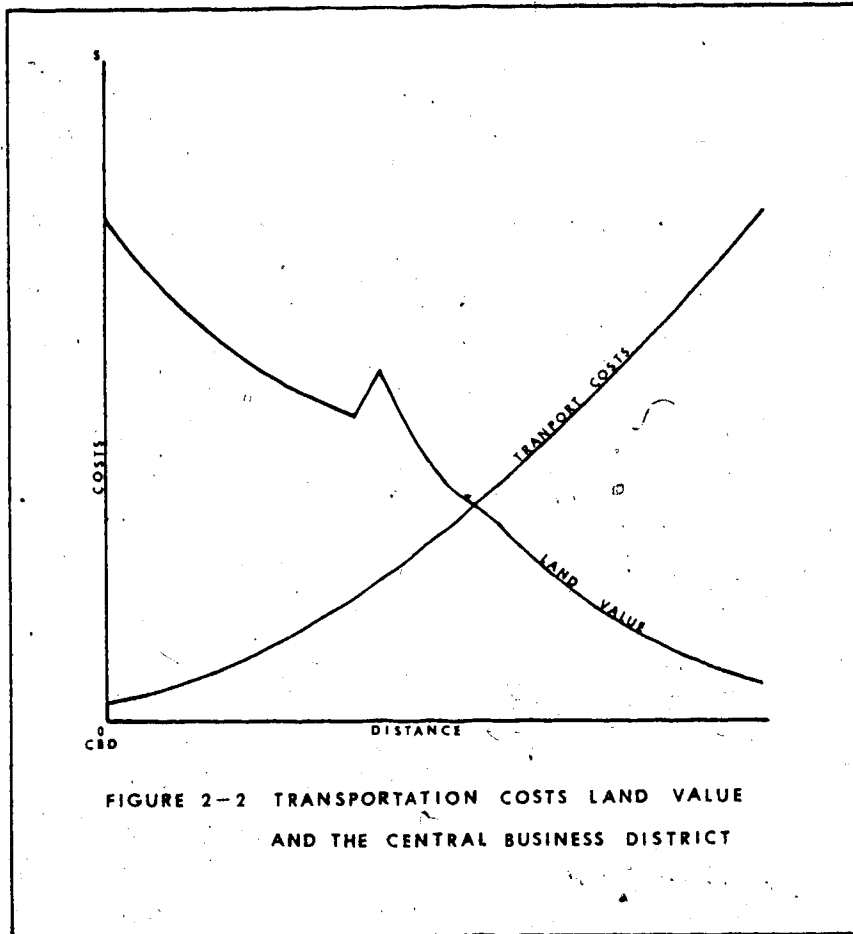
FIGURE 2-2 TRANSPORTATION COSTS LAND VALUE
AND THE CENTRAL BUSINESS DISTRICT

goods may not differ by location, the total number of transactions or links will differ. The reason is that if the establishment is located in the central business district--the focus of transportation routes--more people will walk or drive by it than if it were located five miles away. To make the same number of transactions five miles from the central business district would demand higher operating costs for such things as advertising and deliveries.

As the cost of access links are higher for an activity located away from the central business district or other activity node retail outlets are willing to pay more for a highly accessible location as their profits are tied directly to their location. As their costs increase rapidly with distance, the amount they are prepared to pay for a location drops off very rapidly with the distance from the central business district; i.e. they have a steep rent bid function. Therefore, activities which will derive the greatest benefits (savings in transportation costs) will have the largest surpluses and will be prepared to pay for the most accessible sites and the order of precedence of such activities is worked out by competitive bidding (Figure 2-3). Commerce and industry usually occupy the most accessible sites in this theory
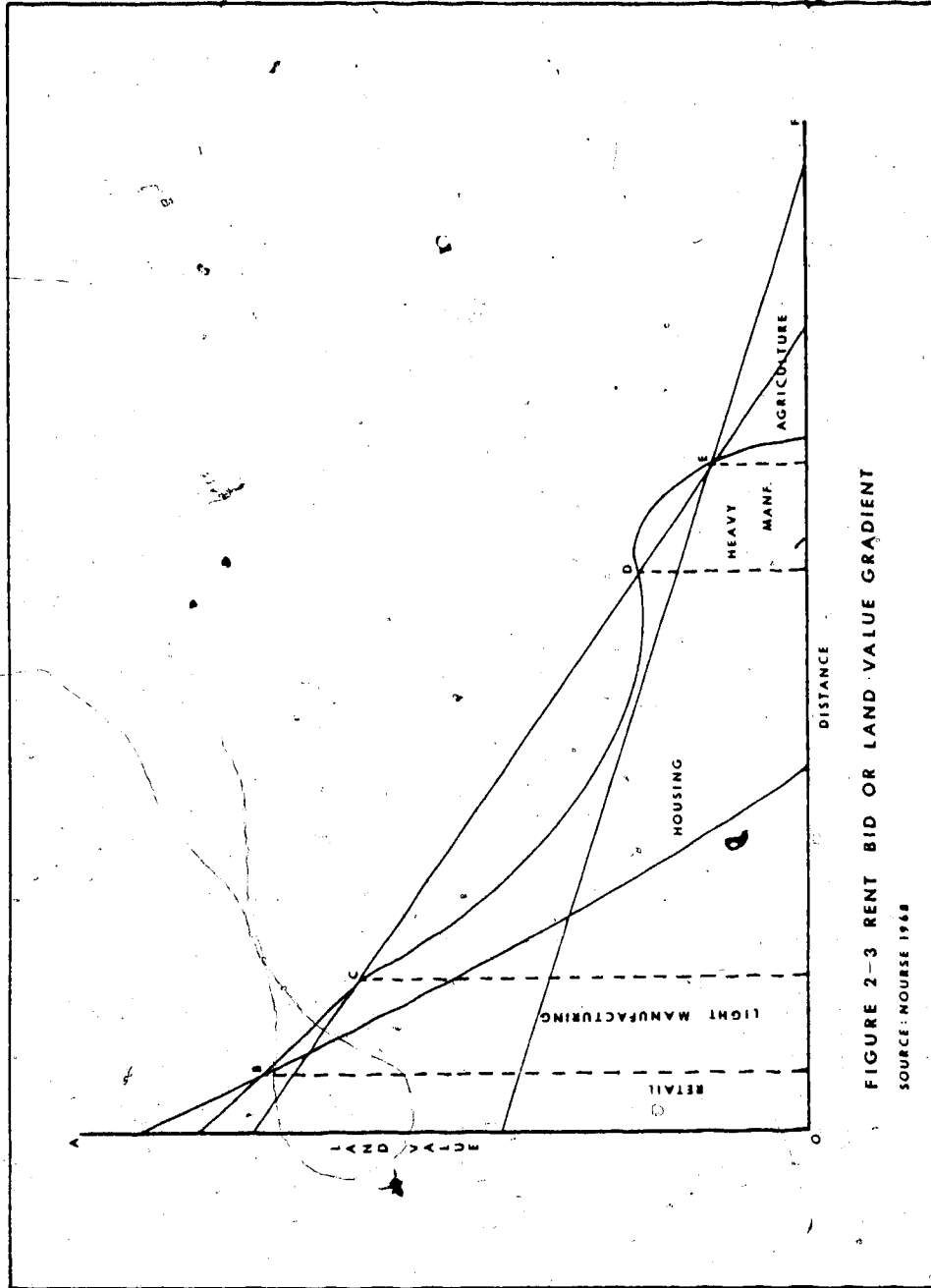
FIGURE 2-3 RENT BID OR LAND VALUE GRADIENT

SOURCE: NOURSE 1968

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because they are prepared to bid more for them while residential uses are relegated the residual land. The expectation of profit which determines the amount they are prepared to pay sorts out the uses or activities. In this way the internal land use structure of the city is resolved.

The theory has been modified and made more representative of reality by more recent work. For example, Evans (1973), Kirwan and Ball (1973) and Nelson (1977) have introduced the variable of commuting or travelling time as well as distance. The effects of rapid transit or freeways make transport costs dependent on direction as well as distances although this does not nullify the validity of the theory. Kain (1962) and Gera and Kuhn (1977) have introduced the concept of multiple job location pulling the theory away from the restrictive and outmoded single centre concept. Land values, housing prices and land use intensity will decline with distance from each centre so land use intensity no longer declines continuously with distance from the central business district--instead the centre is surrounded by local peaks.

Implications For Residential Location.--The household differs from the urban firm in that satisfaction

is a more relevant criterion of optimal location than profit. In purchasing or renting housing space, households in theory will be willing to pay more for housing close to the market centre, in order to reduce their transportation costs for the journey to work and shopping trips. To explain the way in which transportation costs theoretically reduce the amount that a consumer is willing to pay for a dwelling unit at different distances from the city centre it is necessary to introduce indifference curve analysis as explained in Nourse (1968) and Bish and Nourse (1975).

Housing consumers receive income from various sources: wages, profits from self employment or inheritances. Given this income and the price of goods and services, consumers must make the choice of the things they wish to buy. One necessary purchase is housing. Assuming a household has an income equal to OC in Figure 2-4, the household has a choice of spending varying portions of this income on food, clothing, transportation costs, other items and housing. The budget line CD shows all the combinations of income spent on other things and amounts on housing that the household could purchase with OC income. At the city centre the price of a standard unit of housing is so high that if a household spent all of its income on
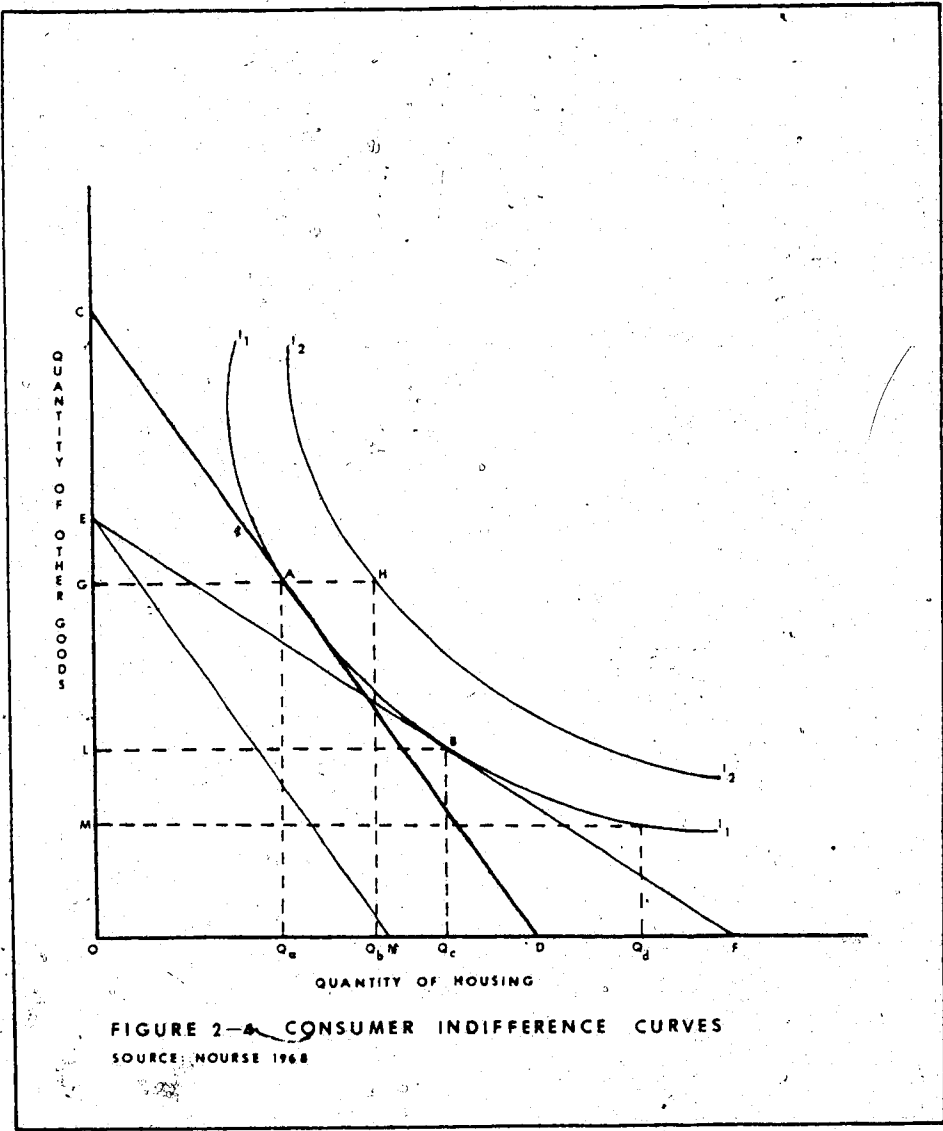
FIGURE 2—4 CONSUMER INDIFFERENCE CURVES
SOURCE: NOURSE 1968

housing it could buy only OD units.

The indifference curve I_1I_1, traces all the combinations of housing and other goods and services that would make a household equally satisfied. As the quantity of housing purchased increases the quantity of other goods and services that can be purchased decreases. The household will select the combination that yields the greatest satisfaction to its members, an example being point A. OG of the household's income will be spent on all other goods and services and OQ_a will be the amount of housing purchased.

The household might feel equally well off with other combinations of housing and other goods, the co-ordinates of point B for example, but given present prices and the household income, the household cannot afford B. The combination of housing and other goods available to the household at the market that are within its budget are represented by the budget line CD. The point on the budget line tangent to an indifference curve is the highest level of satisfaction that can be reached with the given budgetary constraints.

The same household K miles from the city centre will have its real income lowered by the cost of transportation to work and shopping and its budget line

will shift to EN. If the price of a standard unit of
housing was the same five miles out as it was at the city
centre the household spending all its income on housing
could purchase only ON units. However, it has already
been illustrated that the price of land declines with
distance from the centre so the price of a standard unit
of housing is reduced accordingly. The household can
thus purchase OF units and its new budget line is EF and
tangent to the indifference curve I_1I_1 and a combination
of housing and other goods and services equivalent to
that purchased at the city centre is possible i.e. OQ_c
of housing and OU of other goods and services.

The indifference curve I_2I_2 illustrates all
the combinations of housing and other goods and services
that a household with a higher level of income could
purchase. The entire graph could be filled with indiff-
erence curves with those closest to the origin representing
the least satisfaction (households with lower incomes).

Theory And The Central City Renter.--At
this point a summary of what the economic rent theory and
indifference curves indicate about central area renters is
in order. The rent bid function of the various land users
and the indifference curves of housing consumers can be
ranked in terms of accessibility to the city centre. Those

consumers with indifference curves closest to the origin

of the graph are closest to the city centre. This implies

that accessibility is important to these consumers. They

are prepared to give up greater quantities of housing for

closer access to work. Indifference curves also imply

that those closest to the origin are the lowest income

households. Therefore, according to the theory central

area tenants would be basically low income households

largely concerned with accessibility to work.

The reason for this is not that the poor

have greater purchasing power but rather that they have

steeper rent bid curves. This stems from the fact that,

at any given location the poor can buy less land than

the rich, and since only a small quantity of land is

involved, changes in its price are not as important for

the poor as the cost and inconvenience of commuting. The

rich on the other hand buy greater quantities of land,

and are consequently affected by changes in its price to

a greater degree. Therefore, if the theory is correct

one should find low income households and those households

that place a great deal of priority on accessibility to

work living in the central area.

The theory is also applicable to family

size. Even when income is held constant an increase in

size will increase the family's demand for housing. Given

that the price of housing near the centre reduces the

amount that can be purchased <u>ceteris paribus</u> households

with the greater space requirements will live farther from

the place of work than households with smaller space

requirements (Gera and Kuhn, 1977). Other social variables

that may be affected by implications of the theory include

age, sex and marital status. In a sense these are a

special case of family size.

   <u>Criticism Of The Theory</u>.--The theory is,

however, strictly economic and speaks only of economic

man. And although the predictable robot "Economic Man"

is, like Santa Claus, a comforting figure (Adams, 1968)

real men and social groups have needs, emotions and

desires which are not considered in this theory (Alonso,

1968). Also not considered by the theory are the aspects

of life style, household type and stage in the life cycle

although they may be important in the residential location

decision. The theory is dependent on accessibility and

the assumption that the place of work and place of residence

are related. Accordingly the resulting residential

location decision is explained. Bourne, in his 1976

article "Housing Supply and Housing Market Behaviour and

Residential Development", sums up the approach of the

economic models to residential location by pointing out

that these models

> . . . assume that population and housing stock
> distributions . . . are one and the same. The output
> of these models provides, simultaneously, a market
> equilibrium pattern of location rents . . . and an
> equilibrium distribution of households based on utility
> maximization between housing consumed and access to
> city-centred jobs. Even the trade-off between access-
> ibility to work and living space is determined as if
> the latter were plastic, tastes were invariant and work
> places were either fixed at one location (city centre)
> or ubiquitous, instead of becoming concentrated at
> several nodes within the city. The resulting patterns
> (of housing, population) are, in fact, identical to
> those which would be obtained if an urban area was
> constructed again each year in a systematic form around
> the city centre.

This study will try to determine, by interviewing a sample

of inner city renters, if accessibility is important in

their decision to take an inner city location or if in fact

the decision is contingent upon other variables with no

immediate economic importance.

NON-ECONOMIC APPROACHES TO THE LOCATION DECISION

Identifying the shortcomings of the economic

approach is easier than improving on it, though a great

deal of work has examined and stressed non-economic

factors in the residential location decision. This work

has centred around such topics as social area analysis,

residential preference or place utility, and residential

search behaviour. An examination of this work indicates

what variables have been considered significant in the

residential location decision and at the same time reveals

the shortcomings of this work with respect to the central

city rental market.

Social Area Analysis

Hurd (1911), although he recognized the

importance of the journey to work, felt it was secondary

to the social class of the household and the neighbourhood

in the choice of a residence as mentioned earlier.

Burgess and Park (1925), Hoyt (1939), Harris and Ullman

(1945) and Firey (1947) explained location by pointing out

that higher income groups gravitated to newer and larger

accommodation on the best residential land (i.e. well-

drained, high land away from nuisances) while low income

households lived in housing that had been abandoned by

the higher income groups and had thus filtered down.

Shevky and Bell (1955) through factorial ecology and

social area analysis explained patterns of residential

differentiation using three socially significant indices

i.e. social rank, family status and ethnicity. This

approach was carried further and emphasized such factors

as neighbourhood quality, social climate, compatible

friends and neighbours, shared values and sentiments and

the concept of the neighbourhood as a relatively homogeneous

and "natural" social unit (Greer, 1968). Residential

choice was thus based on the match between the household's

social characteristics and those of the (potential)

residential neighbourhood, or in other words, on the

"social distance" between them (Moriarty, 1970).

Dwelling And Locational Preferences

Geographers for several decades have employed

the term "place utility". Historically they have relied

extensively on the role of accessibility (home/work

relationship) in defining place utility and more recently

have added the relationship between life cycle and dwelling

characteristics. However, in recent years this concept

has been broadened even further to include a wide range of

urban attributes and amenities, dwelling characteristics

and proximity to certain kinds of people that have been

identified as important in a household's preference for a

particular residential setting.

Frieden, as early as 1951, in discussing

locational preferences in the urban housing market was

considering neighbourhood attributes other than access-

ibility as variables in the location decision. Included

among these variables was the social and aesthetic quality

of the neighbourhood and characteristics of social class.

Further work by Kaiser and Weiss (1962), Chapin and Weiss

(1965), Lowry (1964 and 1972), Steffens (1964), Kaiser
(1966 and 1968), Ellis (1967), Greenbie (1969), Wilson
(1969 and 1970) and Apgar and Kain (1972) in the modelling
of household location and developer location decisions,
although dealing basically with the role of accessibility,
also attempted to determine the role of similar variables.
Steffens (1964) and Greenbie (1969) also included attributes
of the dwelling itself. Lansing and Hendricks (1967)
in an extensive study of living patterns and attitudes
in the Detroit region also confirmed the importance
of neighbourhood and dwelling attributes. These studies,
however, dealt almost exclusively with the single family
housing market and focused basically on the suburban
areas. The work did not study to any extent tenants
in apartments, or specifically, tenants in central city
locations.

Aberle and Wang (1965) dealt with the
preferences of apartment residents in San Jose but focused
on their home buying intentions rather than their prefer-
ences for rental units. Leamon (1967) conducted a similar
study of black renters. Neutze (1968) discussed several
variables in the location decision but focused on suburban
apartments trying specifically to determine the reasons
for the sudden popularity of suburban apartment living.

Stegman (1972) in his study <u>Housing Investment In The Inner</u>

<u>City</u> discusses why private developers were prepared to

invest in inner city rental projects. Accessibility to

employment is stressed but other variables that developers

considered important in marketing a project, such as

neighbourhood atmosphere and environment, are mentioned.

Mowbray (1962), McAfee (1967) and Homenuck

(1973) have undertaken studies of apartments in central

city areas. Although not focusing specifically on the

location decision these studies, in passing, do mention

that associated aspects of the complex such as office,

commercial and retail facilities (Mowbray, 1962), access

to cultural, recreational and open space activities (McAfee,

1967), management policies and privacy (Homenuck, 1973)

influenced the tenant's decision to take the particular

dwelling. Mowbray's study, however, emphasized the supply

side of the market, McAfee concentrates on high income

high rise units and Homenuck is more concerned with the

effect of high rise living on the tenants.

Hayter (1973) in a study on the function of

seven central city high rises in Edmonton focuses basically

on the relationship between the style of housing and the

family life cycle. However, the study also discusses

characteristics of the apartments which influenced the

tenants in their residential location decision. These
characteristics included size, furnishings and decor, the
provision of ancillary services such as recreation rooms
and swimming pools, and policies of the management.

Other non-economic factors identified as
important in the residential location decision in studies
include environmental quality (Pendakur and Brown, 1970;
and Redding, 1970), visual appearance of the neighbourhood
and the structure (Peterson, 1967) and perception of the
neighbourhood (Kasl and Harburg, 1972). Yamada (1972)
mentions space within the dwelling and access to leisure
areas; Richardson, Vipond and Furby (1975) discuss the
role of other facilities (not related to employment or
shopping) within the urban infrastructure. Austin and
Mitchell (1975) mention dwelling type and Davies (1974)
the presence of a garage and the size of the lot.
Preference for a particular side of town (Simmons, 1968)
and preference for a certain type of people with particular
pastimes and life styles (Clark and Cadwelder, 1973) have
also been highlighted in the location decision.

Ermuth (1974) and Baxter (1975) in compre-
hensive studies of residential satisfaction and urban
environmental preference confirmed the importance of many
of the variables already mentioned and identified by others.

Ermuth dealt extensively with the role of accessibility but expanded it to include other facilities in the urban infrastructure. He also identified other factors such as cleanliness and appearance of the neighbourhood, public services available, availability of leisure and cultural opportunities and the education, race, sex, nationality and income of other households in the area. Baxter focused on many aspects of the site, the situation and the actual structure of the dwelling in an attempt to identify the controlling variables in the spatial patterning of residential location. He concluded that location played only a minor role in the attractiveness of housing and the characteristics of physical space were dominant in the choice of a dwelling. The characteristics most significant were private ownership, structural type, age, condition, the size and shape of the residential lot and acres per dwelling.

Michelson, in work spanning a period of ten years (1966, 1969, 1977), presents perhaps the most comprehensive work on the factors involved in the location decision. His study covers most structural types of housing throughout the urban area of Toronto including rental units in the central area. His work clearly illustrates that the location decision is not a simple

decision or one dependent on just a few variables. Many different variables associated with the interior and exterior features and the management of the unit, the social, physical and locational features of the neighbour-, hood, financial and economic constraints associated with income and the journey to work and the demographic and behavioural aspects of the household itself, are considered. His studies, however, did not focus specifically on rental units in the central area. It also dealt only with families and Michelson pointed out that he had difficulty finding units rented to families with children, particul- arly in the central area.

These studies identify many of the relevant variables in the location decision and confirm that the decision is contingent upon many variables that are not of a strictly economic nature. However, most studies to date have dealt almost exclusively with owner occupied new or existing single family units, often in suburban areas. There has been less work on rental units in the market place, particularly in the central area of the city and there is still a paucity of evidence on the motivating variables in the tenant's decision to live in an inner city neighbourhood.

Mobility And Residential Adjustment

Confirmation of the significant variables in the location decision of housing consumers can also be found in the literature on mobility. As the life circumstances of a household change a process of residential adjustment occurs and households move to different dwellings often of a different type and in a different location. The concepts of place utility and family life cycle are closely related and instrumental in this adjustment process. Rossi (1955), Wolpert (1965), Simmons (1968, 1972 and 1974), Brown and Moore (1970), Brown and Longbrake (1970), Brown and Holmes (1970) and Brown and Firby (1978) have all discussed the dynamic aspects of residential adjustment and the associated mobility. These studies indicate that stress occurs as the life and context of the household changes and its residential environment no longer suits its present way of life. Stress may occur because of changes in the household structure (stage in the life cycle) or because of changes in the environment associated with the residential location.

The variables responsible for creating or alleviating the stress associated with residential adjustment are the same variables identified in other

studies as playing a role in the residential location

decision. Stress leads to mobility and many of the

reasons households give for leaving the current dwelling

and moving to a new dwelling are related to place utility

and the life cycle. In short, the determinants of mobility

are often the vital determinants in the location decision.

Discussing the individual variables at this point is

repetitious, but one general finding that should be

mentioned is that mobility itself is often a significant

variable in a household's decision to rent as opposed to

owning a dwelling. Households that see their location as

temporary because they are enrolled in an educational

institution, expecting a job transfer, or prefer to live

elsewhere often choose to rent as opposed to owning because

of the greater convenience of dissolving housing respons-

ibilities in a rental situation.

Residential Search Behaviour

To complete this review the significant

variables in the residential location decision are also

confirmed in the literature written on how people find new

housing. Studies that have sought generalizations concern-

ing the dimensions of the residential search include

Rossi (1955), Adams (1969 and 1973), Barrett (1973),

Simmons (1968 and 1974), Brown and Moore (1970), Moore

(1972), Gad, _et. al._ (1973) and Michelson (1977).

The work is not concerned with why the households move, what they expect, of what they find, but only with the mechanics of how they find a place to live. However, in the process of answering these questions variables related to why they chose the location as a matter of course are identified. These studies also provide some indication of how these variables differ with the life cycle and other socio-economic and demographic characteristics of the household.

SUMMARY

The review of the relevant literature illustrates that there has not been a substantial amount of work focusing specifically on inner city tenants--particularly in the Canadian context. Very few studies have documented extensively the characteristics of inner city tenants. Most work deals with a particular unit type, area of the inner city or income group but does not cover all the different types of rental units in the inner city as a whole.

With respect to the motivations for locating in the inner city, market and land use theory place the emphasis on economic factors as the controlling variables in the location decision. Other studies identifying

dwelling and locational preferences illustrate that there

are many variables, of no immediate economic significance,

that are important in the location decision. Again,

however, very little of this work focuses specifically

on the motivating variables in the inner city tenant's

decision to live in an inner city area. Even fewer

studies have determined how the relevant variables in the

location decision vary with the characteristics of the

household.

The objectives of the thesis have been

fashioned to address this information gap which exists in

the literature on inner city tenants. The thesis will

document the characteristics of inner city tenants and

determine how these characteristics vary with dwelling

type and areas within the inner city. It will also test

the motivating factors, both economic and non-economic, in

their residential location decision and determine if these

factors vary with the characteristics of the tenants.

Although the relevant literature on inner

city tenants is not extensive, related work has helped

fashion the detailed design of the research. The review

has illustrated what socio-economic characteristics are

likely to be important and what sectors of the housing

market one can expect to find in the central area. It

has also identified a wide range of variables that may be instrumental in the residential location decision. The review has helped considerably in determining the relevant market processes for analysis and in formulating the questionnaire used in interviewing the sample of renters.

Based on the literature review one would expect to find in the central area small households consisting of unattached individuals living alone or sharing accommodation, married couples without children and elderly couples or widows. Young households in the early stages of the life cycle and elderly couples or widows in the post child stage should be the dominant groups. Tenants are likely to represent the opposite ends of the occupation and income ranges varying from high income professionals to the economically disadvantaged and elderly on fixed incomes. The majority of the employed can be expected to work in the downtown area.

With the emphasis on downtown employment, accessibility to work can be expected to play a role in the residential location decision of central area tenants. However, a review of the literature indicates that there are other active variables in the location decision including variables associated with the interior of the unit and aspects of the site and structure. Access to

friends and family and other facilities in the urban area,

aspects of management and the physical and social aspects

of the surrounding development and neighbourhood may also

play a role.

CHAPTER 3

RESEARCH DESIGN

GENERAL OBJECTIVES

To briefly reiterate, this study will focus on the tenants of rental housing in central Edmonton. It poses two questions:

1) what are the characteristics of central city renters in Edmonton? and,

2) what are the active variables in the residential location decision making process of these renters?

More specifically, within the context of the first question the study will: a) document the socio-economic characteristics of the tenants (i.e. age, size, type of household and the occupation, education, and income of the household heads); b) determine how these characteristics vary with different dwelling types; and, c) identify the tenants' attitudes to their present housing, their future housing anticipations and their shopping and leisure time activities. The second objective will attempt to determine that: a) the concept of accessibility is an instrumental variable in the residential location decision of central city renters.

However, it is expected that the concept will include more than the home/work relationship and accessibility to friends, shopping and other facets of the urban structure will also be important; b) many locational decisions will be a response to variables not associated with accessibility and the import- ance of many of the non-economic variables mentioned in the literature review will be confirmed; and, c) the relevant set of variables in the location decision process varies with the age, income and life cycle stage of the consumer.

Account must, of course, be taken of the wider social, demographic and economic forces operating in Edmonton's society. As Meir (1962) points out demographic, economic and social forces are among the most important determinants of human behaviour. Studies in geography tend to be micro-level and often run the risk of losing sight of the broader context within which the observed people are behaving. Therefore, the study will analyze in detail changes in demographic and economic variables operative within Edmon- ton's rental housing market that have influenced the demand.

THE STUDY AREA

Precision in definition usually leads to precision in problem solving but even reasonable precision in defining the central city is illusive if not impossible

(Case, F. E., 1972). The term central or inner city is generally used to connote the area of older dwelling units surrounding the downtown core. It is distinguished by areas of decay and poverty often immediately adjacent to new high rise, high income luxury apartments. Generally rental tenure is dominant throughout but small exclusive areas of high income owner occupied housing can also be located in the area.

The central city as defined in this study is outlined in Figure 1-1, page 5. It is largely confined by the boundary of the 1951 built-up area of Edmonton. Although rental accommodation is scattered throughout the entire urban area, in 1974 there was a concentration within this area. McCann (1972) found that the processes of conversion and redevelopment are largely confined within this area and these processes have added a large number of rental units to the market. In 1971, 60 per cent of the total occupied stock in this area was tenant occupied and in some census tracts within this area, particularly those adjacent to the down-town core, the proportion of tenant occupied units reached 98 per cent. Beyond this area the city takes on a much more suburban quality. Many, although not all, areas beyond this boundary are newer, planned neighbourhoods where there has been greater initial control over the land use pattern.

As the time involved in constructing a sampling frame made it impossible to survey this entire area the characteristics of rental demand and the basis for the residential location decision were tested in selected enumeration areas as illustrated in Figure 3-1. These particular enumeration areas were chosen because collectively they contain a wide range of units both in terms of rental rates and dwelling types. Their proximity to the central business district, the University of Alberta, the Northern Alberta Institute of Technology and other employment nodes will either affirm or negate the role of accessibility to employment in the residential location decision. Some of these enumeration areas are adjacent to major arterials, others are situated so that residents of apartments have a view of the river valley, while others are close to major shopping facilities and relatively accessible to parks and entertainment. They provide ample opportunity to test and determine many of the variables that may be important in the residential location decision of tenants of rental units.

THE SAMPLE

A 6 per cent proportionate random sample of rental dwelling units, stratified by dwelling type was used. Choice of the 6 per cent sample (approximately 300

FIGURE 3-1 SAMPLE AREAS
7023—9192

dwelling units) results in a standard error of estimate,

$p = \frac{pq}{n}$, of 16.7 per cent, i.e. the estimates derived from

the sample could vary as much as 16.7 per cent from the

true population quantities. This degree of precision

could be criticized and common sense indicates that a

larger sample would provide more precise results. However,

as the standard error varies inversely to the square root

of n--that is, to halve the standard error requires a

sample four times as large (Haggett, 1965)--to reduce this

to even 8 per cent would require a sample size of 1,200

which was not possible given the method adopted and the

time and resources available.

A sample size selected to obtain a standard

error of 5 per cent, which is often used, could have been

obtained by conducting the survey in a much more limited

area but this would not have guaranteed a representative

measure of the characteristics of rental demand in the

central area as a whole or the basis for the residential

location decision, as both aspects can vary substantially

from one area of the central city to another. The personal

interview and the reliability it provides in terms of

reducing the number of "No" responses and the additional

insights it provides was much more important than selecting

a sample that meets a specific significance level. A

sample to meet a specific level, say 5 per cent, would have to be carried out by mail and such samples are notorious for the low return rate and the number of questions that are not completed. As well, a departure from the appropriate sample size to obtain a required standard error of 5 per cent means only that the intended precision is not obtained, it does not affect the validity of the results (Yates, 1960 and Moser and Kalton, 1972).

The sampling unit was the dwelling unit and the sampling procedure was conducted as follows:

1) All rental dwelling units in each enumeration area selected were listed and classified according to dwelling type--high rise, walk-up, converted dwelling, duplex or rented single family dwelling. Three sources were used--the assessment files, the 1973 city census records and fieldwork. The assessment files contain the legal description and address of all properties in the city plus building and land use information, including the number of dwelling units in each building. Like the assessment records, the 1973 city census records contain the address of each residential property, the number of units in each building, but it is more recent and contains some changes in the number of dwelling units in certain areas that are not available in assessment records. It

also provides information on the age, sex and marital

status of the population which was used as a check on the

accuracy of the survey information. A considerable

amount of field work was necessary to ensure the accuracy

and reliability of the sampling frame.

2) A separate sampling frame was constructed for each

dwelling type in each enumeration area. Six per cent of

the units were sampled in each frame. Stratification by

dwelling type ensured that all dwelling types are

represented in the sample in proportion to their percentage

of the total dwelling units. If the sample was not

stratified by dwelling type, a true representation of other

types of dwelling units might not be achieved in an

enumeration area containing a large number of high rise

units when a random sample is used.

3) Each dwelling unit was given a number and from a

list of random numbers designated units were chosen and

sampled. Table 3-1 illustrates the total number of

dwelling units in a particular enumeration area, the

stratification by dwelling type, the total size of the

sample that was generated and the stratification of this

sample by dwelling type. A similar breakdown is given for

the total sampling frame.

4) A contingency sample of the same size was drawn,

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TABLE 3-1

THE SAMPLE STRATIFIED BY DWELLING TYPE

Dwelling Type	Enumeration Area 8087		Total Sampling Frame	
	Total Units In Frame	Sample Units*	No. Of Units	Sample Units*
Single Detached	43	3	267	16
High Rise	--	-	1,767	106
Walk-up	214	11	2,183	131
Converted	57	4	533	32
Other	44	1	133	8
	328	19	4,883	293

* 6 per cent of total

to allow for the replacement of households not wishing to

be interviewed and those that could not be contacted. This

sample was used on nine occasions.

THE SURVEY

The survey of housing consumers was conducted

by means of a questionnaire administered personally

(Appendix I). The presence of an interviewer as opposed to

a self-administered questionnaire assures a higher response

rate. The method also decreases the number of "don't

know"s and "no answer"s as the interviewer can probe for

answers and at the same time the information is likely to

be more accurate as the interviewer can guard against

confusion in the interpretation of the questions. The

interviewer can also observe as well as ask.

Both open-ended and closed questions were

used. The respective advantages and disadvantages of the

two types of questions are well known and fully explained

in Babbie (1973) so they will only be treated briefly here.

The principal advantage of open-ended questions is the

spontaneous undirected responses they elicit. They elicit

responses that have been overlooked by the researcher's

structuring of the questions and guard against the

possibility of introducing bias because of this structuring.

However, they are very difficult to standardize, code and

process. Closed questions are easier and quicker to answer

and provide greater uniformity of responses and standard-

ized data more amenable to quantification and processing.

They also offset the disadvantages of information recall

which is important in this study as information on the

reasons behind the choice of the present location and

dwelling was probed and in many cases there was a consider-

able time lag between the tenant occupying the residence

and the time of the survey. Many questions were asked in

open form then re-directed in closed form to derive the

benefits of both formats. Closed questions were also

followed by the question "why?" A preliminary draft of

the questionnaire was pretested in the field and modif-

ications made to problems that were detected. The data

that the questionnaire was designed to collect and its

relationship with the general research objectives outlined

on pages 9 and 10 is described below:

1) profile data, i.e. socio-economic characteristics

of the household which is necessary to identify the

specific submarkets generating demand for the different

types of rental accommodation and also to stratify the

relevant set of variables in the decision making process

by age, income and life cycle stage;

2) <u>location of employment and mode of travel to and
from work</u> which will allow testing of the home/work
relationship and the role it plays in the decision making
process;

3) <u>the reasons for choosing the current dwelling and
location</u> to determine if accessibility consists of only one
variable, proximity to work, or a set of variables
including proximity to shopping, schools, entertainment
and recreational facilities. The questionnaire will also
determine what variables other than those related to
accessibility are important in the location decision;

4) <u>the general attitudes to their present housing</u>,
i.e. why they choose rent and elements they like and
dislike about their present dwelling and location. This
data will provide an indication of the reasons behind the
demand for rental accommodation and act as a check on the
variables they consider important in their decision making
process; and

5) <u>future housing anticipations</u> which will provide
some indication of the future action of consumers, how
often they will move, what type of housing they will be
seeking, and for what locational aspects they will be
searching. This will provide the data necessary to
determine what elements of demand regard rental housing

as transitional and rent because it is more convenient

given their present circumstances and status in the

life cycle and what elements regard it as permanent

accommodation. The questionnaire will also determine if

consumers expect the relevant variables in their location

decision to vary with changes in their life cycle status.

Limitations in data collected in the survey

of consumers are of course subject to the limitations that

apply to any survey that is done on a sampling basis.

These limitations need not be discussed here but a full

explanation can be found in Cochrane (1962), Kish (1965)

or Babbie (1973). Surveys which deal with processes of

human behaviour do have another limitation, however.

Human behaviour can be directly observed for continuous

periods only on a very small environmental scale using

experimentally controlled groups. For behavioural

processes at the neighbourhood or city wide scale direct

and continuous observation is impractical and generally

impossible. Process is thus being inferred from a static

cross-section rather than continuous activity. Still,

it is a useful task as it represents an alternate approach

to urban analysis that is badly needed to correct the

market theory bias.

To supplement the information collected

from consumers, unstructured but focused interviews were

conducted with as many producers as time permitted. No

attempt was made to conduct a scientific sample as the

construction of a sampling frame, when dealing with such

a group of individuals, is difficult. The topics discussed

were selected on the basis of a priori reasoning or on

the basis of information from the literature review.

Discussion generally centred around what the producers

felt were the stimulants behind the recent surge in rental

construction and what aspects of design and location were

important to consumers.

OTHER DATA SOURCES

For the analysis of changes in the rental

housing market several data sources are used. Sufficient

data are available from the Census of Canada and the

Alberta Bureau of Statistics to measure changes in

population composition, family size, family formation,

employment and income distribution. Most of this infor-

mation is available for Edmonton since the 1941 Census of

Canada. However, income has risen so much and so rapidly

since 1941 that changes in the classes and class intervals

in which the data is grouped make comparison difficult and

restricts analysis to the period since 1961. One must

also bear in mind that changes in income per se are not

a realistic measure of changes in purchasing power unless

they are compared to changes in the cost of housing.

As a result the income changes over the period are compared

with changes in price indices associated with the cost

of shelter. Lack of reliable historical data limits

analysis of these variables to the past ten to fifteen

years.

LIMITATIONS

One limitation faced by any study that

focuses on housing is the inability to cope with the

numerous variables that affect the supply and demand

and the difficulty of unravelling the interrelationships

of these variables. All housing studies are forced to

make certain simplifying assumptions and focus on a

selected few of the variables responsible for changes

in the housing inventory (Smith, L. B., 1974). There

is also the problem that when the market process is

discussed one is really dealing with a set of related

sub-processes but for the sake of simplicity such a

fine distinction is not usually drawn (Amedeo and Golledge,

1975).

This study is no exception. It does not

analyze all the variables operative in the supply and
demand but it does focus on those most instrumental in
the recent increase in rental housing. Demand elements
receive the most attention because the study focuses
on the consumers rather than the producers of rental
housing in the central area. However, work on other
variables, particularly variables that affect the supply
of rental housing, would result in a better understanding
of the role the market place has played in the central
city.

The study also speaks of the market process
but discusses changes in several economic and demographic
trends which are processes in themselves or sub-processes
of the market process as a whole. Future work ident-
ifying the sub-processes, their interrelationships with
each other and the role they play in the market would
add extensively to our understanding of how the market
operates in the central area.

Another limitation of this study is that
consumer behaviour is being inferred from a static
cross-section. Behaviour is not being studied as the
on-going process that it is in reality. Future work
would benefit by a continuing study which observes consumer
behaviour in the market place and consumers' activity

patterns within the urban area over a longer time period.
The participant observer or diary of activities approach
as outlined by Chapin (1974) would add extensively to
our understanding of the decision making process of
households.

CHAPTER 4

MARKET PROCESSES AND THEIR RELATIONSHIP TO THE

CHANGING DEMAND FOR RENTAL HOUSING

This chapter will identify, discuss and analyze in detail change in both demographic and economic variables that have influenced the demand for rental housing. These changes are often referred to as processes but in fact are really sub-processes within the context of the market process as a whole. Although not all of these sub-processes discussed have specific spatial implications they cannot be divorced from the events which are or have occurred in the rental market of central Edmonton. They must be identified and explained to achieve a true understanding of the characteristics and housing preferences of renters in the central area.

DEMOGRAPHIC CHANGE

The rapid increase in the housing stock has been the response to a rapidly increasing population. This rapid population growth dates back to the 1940's or more specifically to 1947 when oil was discovered in the Edmonton area. Edmonton, in fact, has been growing

more rapidly than most urban centres in Canada. Between

1951 and 1961 the population of the metropolitan area

increased 86 per cent. Only Calgary, which increased

96 per cent, grew more rapidly. The urban population of

Canada increased only 45 per cent. Between 1961 and 1971

Edmonton's population increased 38 per cent, the central

city by 56 per cent. Calgary at 45 per cent and Kitchener

at 46 per cent grew more rapidly. The increase in the

1971-76 period was 12 per cent. Again only Calgary and

Kitchener increased more rapidly. Urban Canada increased

only 6 per cent.

The Components Of Change

The basic components of Edmonton'a popul-

ation growth, net natural increase and net ▮▮▮▮ion, are

presented in Table 4-1. The rapidly increasing number

of births combined with a slower increase in deaths,

resulted in increasing gains from natural increase during

the 1941 to 1961 period. Since then, deaths have continued

to increase gradually but the falling birth rate has led

to only marginal increases in the number of births.

Therefore, natural increase has declined slightly, although

absolute figures remain high.

Migration, although not a stable component

of growth has accounted for approximately 50 per cent of

TABLE 4-1

BASIC COMPONENTS OF POPULATION GROWTH--EDMONTON CITY 1941-1976

Year	Population* Increase	Births	Deaths	Natural Increase	Migration	Cumulative Migration Growth %
1941-46	22,572	12,808	4,183	8,625	13,947	62
1946-51	43,936	21,699	5,159	16,540	27,396	62
1951-56	65,091	34,339	6,780	27,559	37,532	60
1956-61	52,015	42,326	8,257	34,069	17,946	53
1961-66	63,611	43,846	10,026	33,820	29,791	51
1966-71	55,034	43,581	11,427	32,154	22,880	49
1971-76	25,295	38,783	13,142	25,641	346	46
Totals	327,554	237,382	58,974	178,408	149,146	46

* Adjusted for boundary changes

Source:--Vital Statistics Section--Edmonton Public Health

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the city's population increase in the period 1946-76. The influence of migration is greatest in the late forties and early fifties, then weakens slightly as a more stable economy replaced the boom conditions following the discovery of oil. The net negative figure in the 1971-76 period reflects the lower overall population growth during this five year period and the fact that much of Edmonton's recent development has taken place outside the city boundaries.

The Basis For Growth

Edmonton's rapid growth can be attributed basically to two factors (Hanson, 1966 and 1968 and Edmonton Planning Department, 1971). First, it is the provincial capital and as such contains many governmental functions. It also contains the University of Alberta. Both have been growing rapidly in the past twenty years. Second, and more important, many new manufacturing and service industries have located in Edmonton in association with the oil and natural gas development which has occurred since 1947. The result is a rapidly expanding labour force (Table 4-2). Employment in all occupations has increased by 223 per cent or approximately 150,000 jobs. Increases have been high in educational staff (802 per cent) and there has been a 248 per cent increase (30,000

TABLE 4-2

GROWTH IN THE LABOUR FORCE--EDMONTON 1951-1971

Category	1951 No.	1961 No.	1961 %	1971 No.	1971 %	1951-1971 %
All Occupations	67,711	131,576	94	218,770	66	223
Managerial	6,510	12,786	96	15,580	22	139
Govt. Service	445	756	70	950	26	113
Professional	6,978	16,189	132	23,460	45	236
Engineers Chemical	61	132	116	205	55	236
Professors/College Princ.	163	434	166	1,470	233	802
Clerical	11,807	22,806	93	41,140	80	248
Manufacturing/ Mechanical	7,683	19,071	148	22,100	16	188
Chemicals	120	585	388	1,140	95	850
Construction	5,952	9,201	55	17,615	91	196
Service	8,838	19,255	118	27,160	41	207

Source:--Statistics Canada 1951 and 1961, and 1971 Census

jobs) in clerical positions associated with government and business. Personnel associated with the chemical industry have increased 850 per cent. The growth in these sectors of the labour force has led to a substantial increase in service related occupations. Approximately 20,000 jobs have been created in this sector since 1951.

Household Formation

The rapidly expanding labour force and associated population increase has led to a substantial growth in the number of households--the basic element of housing demand. Between 1941 and 1976 there was a 534 per cent increase (Table 4-3). The largest percentage increases occurred between 1946 and 1956, the initial boom period after the discovery of oil, but the greatest absolute gains have occurred since 1961.

Households That Generate Rental Demand.-- Household formation may explain the growth in the housing inventory as a whole but it does not explain the increase in the importance of rental units. The households that generate demand for rental accommodation have been identified in Chapter Two and analysis of the 1971 and 1976 census data for metropolitan Edmonton confirms that these groups are important in the Edmonton rental market.

TABLE 4-3

GROWTH AND CHANGE IN HOUSEHOLDS BY TYPE--EDMONTON 1941-1976

	Total Households			Family Households				Non-Family Households			
	No.	Change No.	Change %	No.	% Of Total	Change No.	Change %	No.	% Of Total	Change No.	Change %
1941	24,509			23,214	95			1,285	5		
1946	29,982	5,473	22	27,825	93	4,611	20	2,157	7	872	68
1951	42,925	12,943	43	37,240	87	9,415	34	5,685	13	3,528	164
1956	57,748	14,823	35	51,159	89	13,919	37	6,589	11	904	16
1961	76,275	18,527	32	64,499	85	13,340	26	11,776	15	5,187	79
1966	105,016	28,741	38	85,694	82	21,195	33	19,322	18	7,546	64
1971	131,210	26,194	25	103,505	79	17,811	21	27,695	21	8,373	43
1976	155,490	24,280	19	111,790	72	8,285	8	43,700	28	16,005	58
1941-1976		130,981	534			88,576	382			42,415	3,301

Source:--Statistics Canada

Table 4-4, Households by Tenure by Age of Head, illustrates
that 45 per cent of total households are renters but in
households with heads under twenty-five, 93 per cent rent.
This figure still stands at 62 per cent in the 25-34 age
group but then declines rapidly. The percentage begins to
rise again in late middle-age (55-64) and reaches 36 per
cent in the over seventy age group.

Table 4-5 illustrates that the percentage
of migrant households that rent increases as the length
of time they have been in Edmonton decreases, rising
from 30 per cent for those who arrived more than twenty
years ago to 75 per cent for those arriving less than
five years ago.

Metropolitan Edmonton contained 28,650
non-family households in 1971. Fifty-three per cent were
headed by persons never married, 26 per cent were widowed,
11 per cent separated and 10 per cent divorced (Table 4-6).
The largest number of non-family households are over sixty-
five, approximately 80 per cent of these are widows. The
under twenty-five and the 25-34 age groups also contain
large numbers of non-family households (Table 4-7).
Seventy-eight per cent of the non-family households are
renters, while only 33 per cent of the family households
rent (Table 4-8).

TABLE 4-4

HOUSEHOLDS BY TENURE BY AGE OF HEAD
METROPOLITAN EDMONTON 1971

Age	Tenure	
	Own %	Rent %
All Households	55	45
Under 25	7	93
25 - 34	38	62
35 - 44	69	31
45 - 54	74	26
55 - 64	72	28
65 - 69	70	30
70 plus	64	36

Source:--Statistics Canada

TABLE 4-5

IMMIGRANT HOUSEHOLDS BY TENURE
METROPOLITAN EDMONTON

Period	Total	Tenure	
		%	
		Own	Rent
1946 - 1971	24,505	59	41
1946 - 1955	12,065	70	30
1956 - 1960	5,345	65	35
1961 - 1965	2,325	52	48
1966 - 1971	4,770	25	75

Source:--Statistics Canada

TABLE 4-6

NON-FAMILY HOUSEHOLDS BY TYPE
METROPOLITAN EDMONTON 1971

	No.	%
Total	28,650	100
Separated	3,150	11
Widowed	7,585	26
Divorced	2,735	10
Single	15,180	53

Source:--Statistics Canada

TABLE 4-7

HOUSEHOLDS BY AGE AND TYPE--METROPOLITAN EDMONTON 1971

	Total	Family Households		Non-Family Households	
		No.	%	No.	%
All Households	144,775	116,125	80	28,650	20
Under 25	15,875	9,860	8	6,020	
25 - 34	35,435	30,780	27	4,650	
35 - 44	32,225	29,160	25	3,055	
45 - 54	26,065	22,675	20	3,395	
55 - 64	18,220	13,870	12	4,345	15
65 plus	16,960	9,775	8	7,180	25

Source:--Statistics Canada

TABLE 4-8

HOUSEHOLDS BY TYPE AND TENURE
METROPOLITAN EDMONTON 1976

| Type | Tenure | |
| | % | |
	Own	Rent
All households	56	44
Family households	67	33
Non-family households	22	78
One person households	23	77

Source:--Statistics Canada

No information on the tenure of single

parent households was available from the census, however,

officials of both the Welfare and the City Planning

Departments in Edmonton indicated that approximately

80 per cent of all single parents who maintained their

own dwelling lived in rental accommodation. They also

indicated that not only has there been a rapid increase

in the number of single parents in the past ten years,

there has also been a rapid increase in the number

maintaining their own household. This latter increase is

the result of increased welfare benefits, an increase in

day care facilities allowing the single parent to work

and support the family and an increase in the number and

the amount of child support payments following separation

or divorce.

Growth In The Type Of Households That Rent.--

The type of households most likely to rent have been

increasing and generating an increase in rental demand in

Edmonton. Between 1941 and 1976 all households increased

534 per cent, family households by 382 per cent. The

increase in non-family households was nine times as great

(3,301 per cent). During the period non-family households

also increased their proportion of total households from

5 per cent to 28 per cent while family households dropped

from 95 per cent to 72 per cent (Table 4-3).

Although households in all age groups have increased, households with heads under twenty-five and 25-34 have been increasing much more rapidly (Tables 4-9 and 4-10). Absolute increases have been higher and percentage gains double that of any other age groups. Between 1961 and 1971 all households increased by 63 per cent, households with heads under twenty-five increased 190 per cent. The younger age groups also recorded the largest percentage gains between 1951 and 1971--280 per cent. The same pattern is illustrated by family and non-family households. There has also been large increases in the number of non-family households in the 55-64 and the sixty-five and over age groups.

When a second dimension, marital status, is added to the household data other aspects important to the rental market are revealed (Table 4-11). The rate of increase has been much more rapid for separated, widowed, divorced and single households than it has for married households and the most rapidly increasing ages in all marital categories are still those under twenty-five. Households under twenty-five have also recorded the highest absolute gains in divorced and single households and there have also been large increases in

TABLE 4-9

HOUSEHOLD GROWTH BY AGE OF HEAD AND TYPE
METROPOLITAN EDMONTON 1961-1971

Age Of Head	All Households No.	%	Family Households No.	%	Non-Family Households No.	%
Under 25	10,403	190	5,911	150	4,492	294
25 - 34	11,371	47	8,656	39	2,715	140
35 - 44	9,954	45	8,385	40	1,569	106
45 - 54	9,991	62	8,263	57	1,728	104
55 - 64	7,925	77	5,593	68	2,332	116
65 plus	6,112	56	2,676	38	3,436	92
Total	55,756	63	39,484	52	16,272	132

Source:—Statistics Canada

TABLE 4-10

HOUSEHOLD GROWTH BY AGE OF HEAD AND TYPE
METROPOLITAN EDMONTON 1951-1971

Age Of Head	All Households No.	%	Family Households No.	%	Non-Family Households No.	%
Under 35	37,884	280	29,073	251	8,811	474
35 - 44	20,981	189	18,789	181	2,192	254
45 - 64	28,931	188	23,382	178	5,549	253
65 plus	10,443	160	4,989	104	5,454	316
Total	98,239	211	76,233	191	22,006	332

Source:--Statistics Canada

TABLE 4-11

CHANGE IN HOUSEHOLDS BY MARITAL STATUS AND AGE OF HEAD
METROPOLITAN EDMONTON 1961-1971

Households

Age of Head	Married		Separated		Widowed		Divorced/Single	
	Increase	61-71%	Increase	61-71%	Increase	61-71%	Increase	61-71%
Under 25	5,009	132	377	173	77	592	935	339
25 - 34	6,760	32	975	154	36	25	3,605	189
35 - 44	6,913	35	646	80	1	--	2,399	174
45 - 54	7,016	54	655	86	501	42	1,814	174
55 - 64	5,052	69	385	73	1,043	59	1,395	218
65 plus	2,669	46	217	47	2,545	69	686	76
Total	33,419	47	3,255	98	4,203	57	14,834	203

Source:--Statistics Canada

the number of widowed households over fifty-five.

Dividing these households into the family and non-family categories (Table 4-12) illustrates the rapid increase in single parent households indicated by the Welfare and City Planning Departments. Between 1961 and 1971 this increase totalled approximately 6,000--over half of them in the divorced and single categories.

Ageing Of The "Baby Boom".--The rapid increase in the number of young households is due in part to the substantial wave of births during the late 1940's and the early 1950's. In Table 4-13 the dashed lines illustrate the ageing of the "baby boom". Each column indicates over a given five year span the population change for all age groups. The large increases underlined by the dashed lines demonstrate the ageing of the individuals born during the "baby boom". In the period 1966-71 these individuals had reached the 20-24 age group. It is in this age group that individuals begin to form households in substantial numbers and generate demand for housing units of their own. It has already been illustrated that approximately 90 per cent of the households in the age group rent so the ageing of the "baby boom" has added substantially to the demand for rental housing.

TABLE 4-12

PERCENTAGE CHANGE IN HOUSEHOLDS BY MARITAL STATUS AND TYPE
METROPOLITAN EDMONTON 1961-1971

	Family		Non-Family	
	Absolute Increase	% Change 61 - 71	Absolute Increase	% Change 61 - 71
Married	33,419	47	--	--
Separated	1,952	121	1,303	76
Widowed	703	22	3,500	86
Divorced/Single	3,420	417	11,414	176
Total Single Parent	6,075	108	--	--

Source:--Statistics Canada

TABLE 4-13

POPULATION CHANGE BY FIVE YEAR AGE GROUPS
EDMONTON CITY

Age Group	51-56	56-61	61-66	66-71	71-76
0 - 4	10,444	6,656	8,127	5,116	-6,490
5 - 9	10,065	7,828	13,615	676	-10,090
10 - 14	5,879	8,897	12,862	7,682	-3,535
15 - 19	3,540	4,583	13,199	10,482	7,320
20 - 24	4,359	2,512	9,223	15,536	11,725
25 - 29	5,456	1,407	4,244	8,783	8,270
30 - 34	6,077	2,271	4,025	1,809	2,430
35 - 39	4,755	3,910	4,898	1,051	-1,265

Source:--Statistics Canada 1951, 1956, 1961, 1966 and 1971

<u>Age Characteristics Of Migrants</u>.--The age
characteristics of migrants to Edmonton during the period
have added to the number of individuals born during the
"baby boom". During the 1946-66 period 43 per cent of the
migrants to Edmonton were between the ages of twenty and
twenty-four, 78 per cent were between twenty and thirty-
four (Edmonton Planning Department, 1971). Between 1966
and 1971, although the youthful characteristics of migrants
were not quite as pronounced; approximately 45 per cent
were still between the ages of twenty and thirty-four
(Statistics Canada, 1971, Vol. 1, Part 5).

<u>The Propensity To Form Households</u>.--Work
by Kirkland (1971) illustrates that the propensity for
individuals in these age groups to form households,
particularly non-family households, has been increasing
very rapidly--much more rapidly than for other age groups.
The motivating factors behind these increases are bound up
in a set of socio-economic factors which are difficult to
disaggregate. Undoubtedly they are closely linked with
economic considerations such as incomes and levels of
employment. Some of these factors will be discussed in
the next section.

<u>Summary</u>.--In summary, demographic processes

in Edmonton have resulted in rapid increases in the type of households most likely to rent. Young households, single parent households and new migrant households have all been increasing very rapidly. Households consisting of late middle-aged and elderly couples and individuals have also increased substantially. Perhaps even more important has been the shift in the nature of demand with the increase in the relative importance of non-family households adding even greater impetus to the shift towards multiple dwelling construction. Non-family households have been increasing much more rapidly than family households (Table 4-3, page 79) and a much higher percentage are rental households (Table 4-8, page 85).

ECONOMIC CHANGE

The preceding section illustrated that there has been a rapid increase in the type of households most likely to rent. This section will illustrate that changing income and employment patterns have increased the purchasing power of these households making it economically possible to set up households of their own but at the same time the increases in the cost of home ownership relative to the increase in rents has encouraged many of these households to become and remain renters.

Rising Income

Sufficient reliable figures on income are not available for Edmonton on a historical basis to establish a trend and previous to 1974 Alberta income data for families and individuals published by Statistics Canada was amalgamated with Manitoba and Saskatchewan under the prairie category. Therefore, to establish a trend, Canadian figures had to be used although it is a reasonably sound assumption that the trend has been the same. Alberta data published since 1974 indicates that incomes in the Province are slightly higher than the equivalent Canadian figures. Median and average figures for 1975 are approximately $500 higher than the equivalent figures for Canada.

Incomes in current dollars have risen substantially in the past decade. In Canada median family income measured in current dollars increased 187 per cent between 1965 and 1976 rising from $5,909 to $16,986. Individual income has risen 133 per cent from $2,449 to $5,701 (Table 4-14). When these figures are changed to constant (1971) dollars which is a better measure of purchasing power the increase is not as impressive. Between 1965 and 1975 the purchasing power of families increased 48 per cent, that of individuals by 23 per cent.

TABLE 4-14

MEDIAN FAMILY AND INDIVIDUAL INCOME--CANADA CURRENT AND CONSTANT (1971) DOLLARS

Year	Unattached Individuals				Families			
	Current $	Constant $	% Change Since 65 Current	Constant	Current $	Constant $	% Change Since 65 Current	Constant
1965	2,449	2,988			5,909	7,320		
1967	2,601	2,991	6	1	6,839	7,906	16	8
1969	3,124	3,234	28	8	8,008	8,465	36	16
1971	3,214	3,214	31	8	9,347	9,347	58	28
1972	3,373	3,170	38	6	10,367	9,847	75	35
1973	3,927	3,503	60	17	11,533	10,217	95	40
1974	4,838	3,865	98	29	13,516	10,827	129	48
1975	5,127	3,690	109	23	15,065	10,881	155	48
1976	5,701	N/A	133	--	16,986	N/A	187	--

Source:--Statistics Canada

However, incomes have increased more rapidly in the younger age groups than in the population as a whole. Median figures are not available but the percentage change in the average income of all individuals by age and sex for Alberta is presented in Table 4-15. The increase in the average income of younger individuals, both male and female, has been much higher than for the other age groups. The gains have been even greater for women than men although their annual averages are still lower. Earnings of women over the age of sixty-five have also increased substantially. Table 4-16 illustrates that it is the incomes of the single individuals in the younger age groups that have increased most rapidly.

Changing Employment Patterns

Employment patterns have also changed as a higher percentage of women enter the work force. In Alberta the participation rate of women in the work force has increased from 15.7 per cent of all female individuals fifteen years and over in 1941 to 43.8 per cent in 1971 (Table 4-17). Equivalent figures are not available for Edmonton. Increases have been substantial (25-30 per cent) in the age categories under thirty-four. Although they have been higher in the middle-age categories, from a rental housing point of view this

TABLE 4-15

AVERAGE ANNUAL INCOME BY AGE AND SEX NON-FARM POPULATION ALBERTA

Age Of Head	Males			Females		
	Average Annual Income		Percentage Change	Average Annual Income		Percentage Change
	1961 $	1971 $	1961-1971	1961 $	1971 $	1961-1971
15 - 24	2,145	4,299	100	1,423	2,837	99
25 - 34	4,595	7,443	62	1,914	3,222	68
35 - 44	5,496	8,989	64	1,783	3,114	75
45 - 54	5,181	8,597	66	1,922	3,354	75
55 - 64	4,165	6,760	62	1,813	3,122	72
65 plus	2,832	3,655	29	1,100	2,100	92

Source:--Statistics Canada

TABLE 4-16

AVERAGE ANNUAL INCOME BY AGE, SEX AND MARITAL STATUS
NON-FARM POPULATION ALBERTA

Marital Status	Age Of Head	Males			Females		
		Av. Annual Income		% Change 61-71	Av. Annual Income		% Change 61-71
		1961 $	1971 $		1961 $	1971 $	
Married	15 - 24	3,684	5,358	45	1,533	2,901	89
	25 - 34	4,822	7,850	63	1,599	2,928	83
	35 - 44	5,658	9,405	66	1,544	2,790	81
	45 - 54	5,357	9,072	69	1,635	2,978	82
	55 - 64	4,400	7,179	63	1,525	2,680	76
	65 plus	3,054	4,054	33	809	1,695	110
Single	15 - 24	1,590	3,593	126	1,352	2,734	102
	25 - 34	3,393	5,522	63	2,803	4,575	63
	35 - 44	3,561	5,330	50	3,118	5,266	69
	45 - 54	3,232	4,663	44	3,444	5,602	63
	55 - 64	2,485	3,715	51	3,525	4,944	40
	65 plus	1,506	2,528	68	1,918	3,056	59

Source:--Statistics Canada

TABLE 4-17

PARTICIPATION RATES--FEMALE WORKFORCE ALBERTA 1941-1971

Year	All Ages %	15 - 19 %	20 - 24 %	25 - 34 %	35 - 44 %	45 - 54 %	55 - 64 %	65 plus %
1941	15.7	15.5	34.8	18.1	10.2	9.5	9.4	5.4
1951	20.4	27.8	42.7	20.1	17.8	15.8	11.6	4.3
1961	30.8	30.3	46.8	30.0	34.4	37.0	25.4	5.2
1971	43.8	41.9	63.7	46.4	49.6	51.6	39.2	8.0
% change 41-71	28.1	26.4	28.9	28.3	39.4	42.1	29.8	2.6

Source:--Statistics Canada

is not as important. The women in these age groups are not as likely to form their own households, particularly rental households. Although it has previously been illustrated that there are an increasing number of single parent households in Edmonton and approximately 68 per cent of the single parent households with female heads are headed by women over the age of thirty-four (Statistics Canada, 1971). The fact that more women, particularly younger women are entering the work force means that more are economically able to maintain a dwelling of their own or in combination with another single individual. Between 1966 and 1971 the number of households headed by single females increased rapidly from 5,000 to 7,650--a 53 per cent increase (Statistics Canada, 1971). All households increased by only 31 per cent during the same period. It has already been illustrated that a high percentage of the young and the single parent households are renters.

Economic Change And Household Formation

One effect of the rising incomes, particularly of young single individuals, and increased female participation in the labour force is to increase net household formation (Kirkland, 1971 and Smith, L. B., 1971 and 1974). This increases the demand for new dwelling units, both multiple and single. In the single dwelling

sector net demand increases as family income increases and families shift their demand from rental to owner occupied accommodation. In the multiple dwelling sector these same rising incomes stimulate non-family household formation, earlier marriages and net family undoubling. In the past ten to fifteen years the increasing income combined with demographic change have resulted in a demand for rental units which has outweighed the reduction in demand arising from the shift of family demand from rental to owner accommodation (Kirkland, 1971 and Smith, L. B., 1971 and 1974).

Housing Prices And The Consumer

Housing prices have risen rapidly in Canada since the early 1960's. Price indices illustrating the increases in several of the components of housing are illustrated in Table 4-18. The most pronounced percentage increases have occurred in land costs, construction wage rates and mortgage interest charges. Significant but smaller increases have occurred in construction costs, building materials and property taxes.

The effect these increases have had on the cost of new single detached dwellings is presented in Table 4-19. In Edmonton the price of new single detached dwellings financed under the National Housing Act has

TABLE 4-18

INDICES OF SELECTED HOUSING COMPONENTS--CANADA 1961-1977
1971 = 100.0

Year	*M	*C	*P	*L	*R	*W	*T	*H
1961	50.4	68.3	63.1	56.7	69.3	46.6	82.4	57.4
1963	54.3	67.7	67.1	67.8	72.1	50.3	82.9	60.8
1965	57.8	74.7	71.8	67.5	80.2	55.2	83.7	66.0
1967	63.2	84.0	78.2	78.0	86.7	65.5	87.9	72.8
1969	78.6	95.5	90.7	91.6	96.4	76.5	95.3	85.1
1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	108.7	106.7	101.6	106.5	109.8	110.6	101.2	108.0
1973	120.9	122.2	103.5	101.9	124.0	121.8	102.6	118.8
1974	136.7	149.5	104.0	106.1	135.2	133.9	105.4	130.3
1975	156.8	167.1	111.2	157.9	139.7	151.6	111.1	143.6
1976	179.1	180.6	125.7	201.1	153.6	172.7	118.9	163.4
1977	198.8	189.3	141.1	223.9	165.4	193.8	126.3	181.2
*I	294	177	124	295	139	316	53	216

Source:--CMHC Statistical Handbook

*M--Mortgage Interest

*C--Construction Cost/Sq. Ft.

*P--Property Taxes

*L--Land Costs

*R--Residential Bldg. Materials

*W--Wage Rates Const. Workers

*T--Tenancy

*H--Home Ownership

*I--% increase 61-77

TABLE 4-19

COSTS OF NEW SINGLE DETACHED DWELLINGS FINANCED UNDER NHA
EDMONTON 1961-1977

	1961	1966	1971	1972	1973	1974	1975	1976	1977	% 61-77
Total Cost	$ 14,860	19,954	25,709	27,414	30,924	38,885	48,510	61,428	64,275	333
Land Cost	$ 3,058	3,578	6,663	6,913	7,944	9,885	13,118	19,142	25,252	726
Cons. Cost[1]	$ 11	12	15	16	18	24	29	35	33	212
Mth Payt[2]	$ 116	136	211	229	263	345	390	430	455	292
Downpayt[3]	$ 2,846	3,903	4,783	4,742	5,877	7,667	9,700	17,428	20,275	612
Req. Income[4]	$ 5,600	6,500	10,200	11,000	12,600	16,600	19,000	20,700	21,900	291
Med. Income[5]	$ 4,866	N/A	9,347	10,367	11,533	13,516	15,065	16,986	N/A	N/A

1. Construction cost per square foot (rounded)
2. Monthly payment includes principal, interest and taxes
3. Minimum downpayment calculated on the basis of requirements as supplied by CMHC
4. Required income assuming 25 per cent G.D.S.
5. Median income of Canadian non-farm families

Source:--CMHC Statistical Handbook

climbed from an average of $15,000 in 1961 to $64,275 in 1977, a 333 per cent increase. The land costs have increased over 700 per cent, construction costs 212 per cent. The downpayment necessary and the monthly carrying charges required to bear the cost of the mortgage have increased 600 per cent and 300 per cent respectively. Median income during the same period has increased less than 300 per cent. Assuming 25 per cent gross debt-service which is the ratio of monthly payments to gross income that is usually allowed under the regulations of the National Housing Act the price increases have raised the eligible income required to buy an average house from $5,600 to $22,000.

Comparison of the increasing annual income required to purchase a home with the median annual income of non-farm families (Table 4-19 and Figure 4-1) provides an indication of the increase or decrease in the percentage of families able to bear the cost of homeownership. Reliable income data for Edmonton was not available so Canadian figures had to be used. Census figures in 1961 and 1971 indicate that Edmonton figures are slightly higher, however, the comparison still illustrates clearly the fact that the percentage has declined rapidly in recent years. The percentage increased during the early
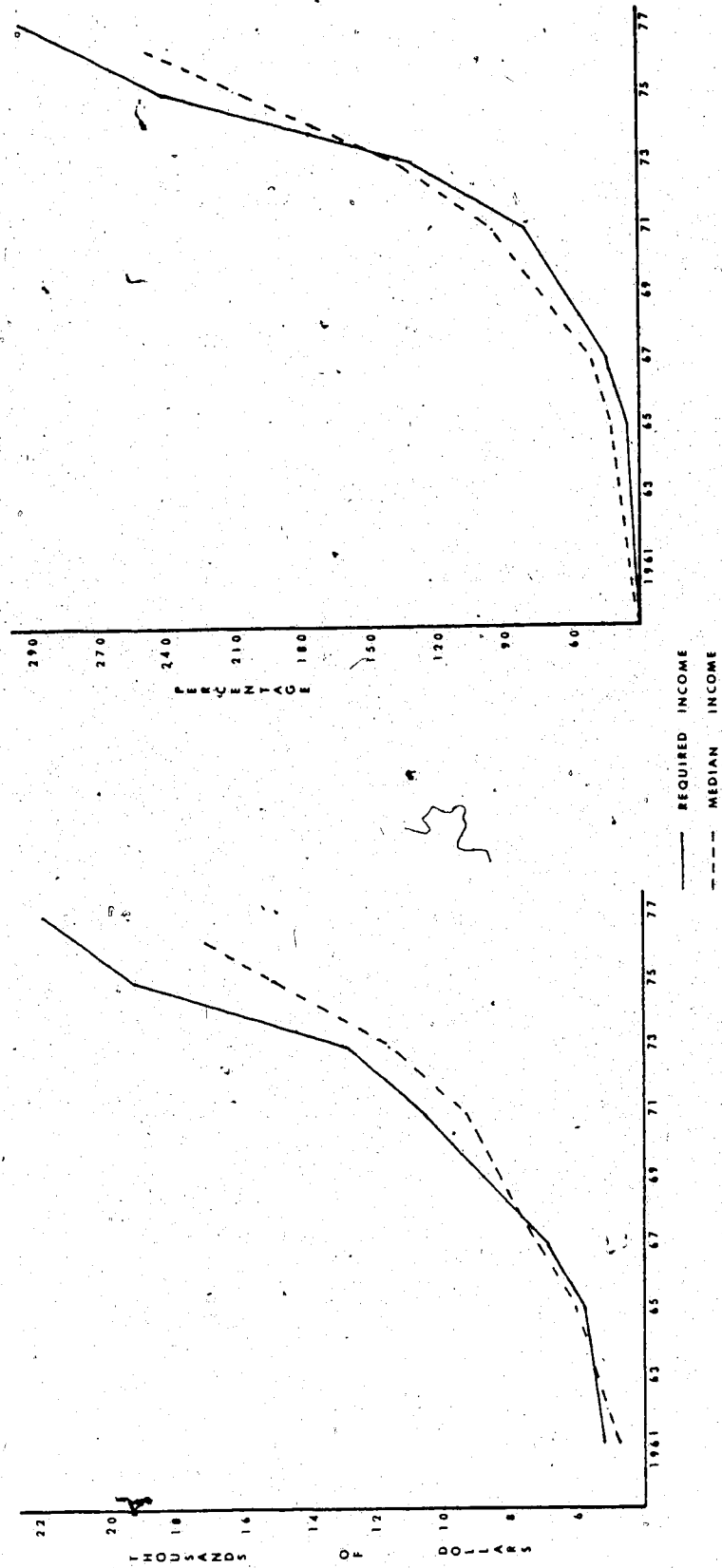
FIGURE 4-I HOUSING COSTS AND INCOME

sixties and as late as 1972 close to 50 per cent of the Edmonton families could still afford the cost of home-ownership. However, since 1972 the gap between the median income and the income required to purchase a home has widened and by 1976 far less than 50 per cent could afford the cost of homeownership. The reduction in the number of consumers eligible for homeownership means that more will remain in the rental market.

The figures presented deal only with houses financed under the National Housing Act. These houses increasingly represent the low price segment of the market as the price of such houses has not risen as rapidly as overall housing prices because of the restricted ceilings on National Housing Act Loans (McFadyen and Hobart, 1976). They are therefore not truly representative of the general level of housing prices and if such figures were available the gap between the median income and required income in Figure 4-1 would be even wider.

During the same period the cost of rental housing has not increased nearly as much as the cost of homeownership (Table 4-18). The rental price index in Canada has increased only 53 per cent since 1961, the homeownership index has increased 216 per cent. Although the index has been criticized as not truly reflective of

the cost of rental accommodation even allowing for a
reasonable margin of error the rental market is still
economically more attractive, particularly when these
increases are compared with the increase in actual
purchasing power in Table 4-14, page 97.

Housing Prices And The Developer

The action of the developers as well as
consumers is influenced by increased housing prices.
Shifts in land prices tend to shift housing patterns.
Lower land prices encourage the use of larger lots and
private gardens and shift housing patterns away from
multi-family units toward single family dwellings. But
in the face of increasing land costs many developers turn
to higher density land utilization in both the central
and suburban areas of the city (McFadyen, 1972). Land
price increases, even if they occur first in the suburbs
are soon followed by increases in the central areas as
the urban price gradient climbs and central areas move up
to their relative level.

Although it is impossible to determine how
instrumental increasing land costs have been in encouraging
developers to build higher density housing a few points
are worth noting. It is during this period of rapidly
increasing land costs that Planned Unit Development and

zero lot line have gained popularity. The average lot

and finished floor area of dwellings financed under the

National Housing Act in Canada have also declined

significantly. Front footage has declined approximately

twelve to fifteen feet while average floor area has

declined from 1,260 square feet in 1966 to 1,059 square

feet in 1977 (CMHC Statistical Handbook). These figures,

however, again refer to houses financed under the National

Housing Act and as previously pointed out they do not

include the high cost homes on the market and the trend

to smaller dwellings is not evident in Edmonton. Edmonton

houses, even those financed under the National Housing Act,

are among the largest in the country. In 1977 the average

size of new houses financed under the National Housing Act

in Edmonton was 1,157 square feet compared with the

national average of 1,059 square feet. Most of the new

housing financed under the National Housing Act is,

however, in suburban locations. Providing zoning allows

residential development land prices near the central

business district or near other important employment and

shopping nodes or major arterials in Edmonton, as well as

other Canadian cities, have increased to the point where

it no longer makes sense to build anything but multiple

units if a developer is to make a satisfactory return

on his investment.

Building multiple units on expensive land results in considerable savings for the developer. Table 4-20 illustrates the per unit land costs for low rise apartments and single detached dwellings. During the period 1961-75 land costs per apartment unit averaged 50-60 per cent of per unit land costs for single detached units. Information presented in the Peter Spurrs Report (1975) indicated that in 1971/72 land costs as a percentage of total costs varied from 16 per cent per unit for row type buildings, to 10 per cent for walk-ups and 12 per cent for high rise units. Land costs as a percentage of total costs for single detached units was 26 per cent.

Technological Change

Recent advances in technology have been cited by producers as playing an instrumental role in the increase in multiple unit construction (Economic Council of Canada, 1974). The introduction of the tower crane in the past ten to fifteen years has facilitated the constr- uction of high rise units. Prefabrication has also played a role. The Construction Industry of Canada in Toward More Stable Growth in Construction : Economic Council of Canada, 1974 reports that builders estimate that the tower crane along with prefabrication have

TABLE 4-20

AVERAGE ESTIMATED LAND COSTS FOR DWELLINGS AND APARTMENTS
FINANCED UNDER THE NHA--CANADA 1961-1975

Year	Apartment[1] Land Cost (per unit) $	Single Detached Land Cost $	Apartments/ Detached %
1961	1,259	2,602	48
1963	1,277	2,973	43
1965	1,590	3,095	51
1966	1,901	3,480	55
1968	2,196	3,746	59
1969	2,466	4,201	59
1970	2,076	4,191	50
1971	2,688	4,588	59
1972	2,876	4,887	59
1973	2,933	4,673	63
1974	3,050	4,167	55
1975	3,591	7,246	50

1. Low rise apartments only

Source:--CMHC Canadian Housing Statistics and Statistical
     Handbook
Note: Land cost figures taken from CMHC files are often
  questionable because they are based on value as appraised
  by CMHC staff and do not always reflect true market value.
  However, lack of a better documented source leaves most
  studies dependent on CMHC figures.

resulted in savings in labour costs of up to 20 per cent

and have reduced project construction times by 25-30 per

cent. This gives developers greater flexibility and

capacity to utilize much higher densities when faced with

increased land costs.

Inflationary Expectations

Inflationary expectations have also

influenced the pace of construction in multiple unit

dwellings. Many developers in the sixties and early

seventies, the apartment boom years, were building in

advance of demand. They were prepared to accept the high

vacancy rates that existed in many centres during this

period (Table 4-21). In a period of rising inflation

they were prepared to accept initial losses in anticipation

of rising costs, rents and incomes. Initial losses have

been more than offset by recent profits, however, building

in anticipation quickened the pace of residential change

in many Canadian cities.

Another important factor which has

stimulated investment in housing has been the flight of

investors in a period of steep inflation into real assets

such as housing. In times of inflation investors do not

wish to hold assets such as cash and bonds which are

denominated in money terms and lose real value. Housing,

TABLE 4-21

PERCENTAGE VACANCY RATES IN APARTMENT STRUCTURES OF SIX UNITS AND OVER 1964-1977

Metro Area	1964	1966	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Calgary	14.3	7.2	1.1	1.7	5.7	10.7	9.1	8.6	5.9	1.9	0.4	0.3
Edmonton	13.0	2.3	2.3	3.7	5.7	6.3	7.6	8.1	5.4	0.8	0.1	0.2
Montreal	6.6	4.4	4.7	7.2	7.9	7.0	5.6	3.9	2.6	1.1	0.6	1.4
Ottawa-Hull	8.2	7.1	1.3	1.6	2.1	2.0	2.4	2.1	3.2	2.1	2.5	2.8
Quebec	6.6	5.1	2.2	2.8	3.7	4.9	7.0	5.5	4.3	1.1	0.9	0.9
Regina	--	--	--	3.8	10.7	6.5	3.1	1.6	0.7	0.1	0.4	0.4
St. John's	--	--	--	18.9	20.7	3.6	0.9	0.3	0.4	0.5	2.4	3.4
Saskatoon	--	--	--	10.1	20.3	16.4	8.7	6.4	1.7	0.2	0.1	0.1
Vancouver	4.4	1.3	1.3	1.1	2.5	3.9	2.3	0.9	0.3	0.2	0.4	1.6
Winnipeg	5.6	4.1	1.5	1.5	2.5	3.4	5.1	3.9	2.6	1.5	1.5	1.2
*Total	5.5	3.1	2.6	3.8	4.7	4.8	4.3	3.3	2.4	1.2	1.1	1.5

* Weighted Average of metropolitan areas surveyed.   Source:--CMHC

residential lots and undeveloped urban fringe land, because they maintain their real value during inflation, become relatively attractive investments (McFadyen and Hobart, 1976).

Summary

In summary, from the consumers' point of view there have been economic factors which have increased the demand for rental accommodation. Rising incomes, particularly in the younger age groups and to a lesser extent in the sixty-five and over category mean that more individuals are able to maintain their own households. These are the age groups most likely to rent. At the same time the rising cost of homeownership has reduced the number of families able to bear the cost of owning a home while the substantially smaller increases in the cost of rental housing has made it economically more attractive.

Developers, aware of the changing emphasis in housing demand and encouraged by higher land costs and an inflationary economy, have responded by producing more multi-family housing.

POLITICAL PROCESSES

Standing between the market forces and the patterns of land use that result from them is the planning

process (Gracey, 1969). Planning authorities associated
with all levels of government have become involved in land
use decisions and their influence on residential change
has been exercised through zoning and development and
redevelopment policies.

Zoning

The traditional method of public land use
control is through municipal zoning ordinances. Zoning
regulations are intended to implement the overall planning
objectives of a community and should be based on a general
or master plan (Babcock, 1968). Any general or master plan
is in effect a policy statement as to how the community
should be spatially arranged and therefore controls the
general distribution of spatial change (Foley, 1964).

Although zoning in Edmonton may set limits
on the general spatial distribution of high density
residential units which are generally rental units it does
not always have specific locational significance. This is
evident by the large amount of land that is zoned for
redevelopment but has, as yet, failed to attract apartment
construction. For example, in 1973 only 455 of 1,250
acres zoned for apartments in the older central sub-
divisions of Edmonton had been redeveloped (Lovatt and
Olsen, 1973). Redevelopment has not occurred in some of

the areas where zoning allows it and there has been

considerable pressure for re-zoning to allow redevelop-

ment in areas not previously zoned as such, for example,

the Oliver area. This has come by way of requests from

developers who are equally, if not more, aware of the

locational variables important to rental housing and are

eager to capture the associated profits. Conversion

occurs outside areas legally zoned to allow it. On the

whole, it appears that zoning has at times tended to

reinforce the market forces responsible for change but

at other times has set definite barriers to the free

market system.

Development Policy

Public policy regarding the viability of

the downtown area is also an instrumental factor in the

development of rental housing in central Edmonton.

Frieden's (1964) study on the future of old neighbourhoods

confirmed what has long been recognized on an intuitive

basis. Strengthening the downtown core is an important

means of stimulating the demand for central city housing.

His analysis focused on three cities: New York, a large

urban area with a strong viable core which has experienced

a great deal of residential change; Los Angeles, which

lacks a single core and has experienced little change;

and, Hartford, a smaller urban area with a smaller but viable core representing the median situation where change has been more prominent than in Los Angeles but not as marked as in New York.

Edmonton city officials and personnel of the Planning Department stated that a primary planning objective is the maintenance of a strong, viable and growing downtown area. This is also outlined in the objectives of the General Plan (1972) which underscores the need to maintain central Edmonton as a focus of transportation and communication and encourage employment, entertainment, recreation and personal service facilities, to locate in the central area.

These objectives are clearly being implemented. The central area is the focus of many major traffic arteries and rapid transit. Redevelopment of business in the central area continues with the addition of retail floor space, offices and hotels with associated entertainment facilities. Since 1972 building permits for two large retail complexes, three major hotels and three major office buildings have been granted plus numerous permits for smaller commercial buildings and renovations of existing buildings (Edmonton Planning Department). Hand in hand with redevelopment, often in

response to requests by developers, public officials are re-zoning the neighbouring areas and gradually fashioning them into high density residential areas for households that work in the core or households that prefer a central area residence.

Summary

The development of rental housing in central Edmonton can at least partially be attributed to several on-going processes. Demographically there has been a rapid increase in the type of households most likely to rent and a shift in the nature of demand from family to non-family households. This, combined with rising incomes particularly in the younger age groups, means that there are more individuals able to maintain their own households. Greater and more rapid increases in the cost of homeownership have also made renting economically more attractive. At the same time rising land costs have forced more developers to turn to higher density development and advances in technology have enabled them to build larger buildings in less time and at reduced costs. Reinforcing these market processes has been the continuing objective of Edmonton city officials to maintain a strong viable downtown by way of zoning and development policies.

CHAPTER 5

THE CENTRAL AREA TENANT

The initial analysis of the sample concerns itself with identifying the socio-economic characteristics of the tenants surveyed. It has been assumed that the relevant set of variables in the location decision process varies with the age, income, life cycle stage and other characteristics of the tenant. At the outset therefore, it is necessary to document these characteristics. The analysis will also determine if the characteristics of the tenants vary with location and dwelling type.

Although the analysis relies heavily on data collected during the survey, Civic and Statistics Canada data are also utilized. Where possible comparisons are made with Edmonton Metropolitan data in order to more readily identify the characteristics unique to central area tenants.

CHARACTERISTICS OF THE TENANT POPULATION

Dwelling Type And Rental Rates

Table 5-1 illustrates the distribution of the different types of dwellings occupied by the rental

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TABLE 5-1

SAMPLE DWELLINGS BY TYPE, AVERAGE RENT
AND PERSONS PER UNIT

	Units No.	%	Average Rent $	Persons Per Unit Sample	Central Area*
High Rise	106	36	214	1.8	1.7
Walk-up	131	45	156	2.0	1.9
Converted	32	11	123	2.2	2.1
Single Detached	16	5	170	3.5	3.1
Other	8	3	137	2.5	2.7
Total	293	100	–	–	–
Average Persons Per Household	–	–	–	2.1	2.1

* Source:--Civic Census, Fall 1973

households. Forty-five per cent of the units were walk-ups, 36 per cent were high rise, 11 per cent converted and 5 per cent single detached units. The remaining 3 per cent consisted of du-, tri- and four plexes and dwellings above or behind stores.

The average rent in high rise units was $214. This average fell to $170 for single detached units, $156 for walk-ups, $123 for converted units and $137 for other dwellings. These averages were calculated exclusive of utilities and without taking into consideration the number of bedrooms.

Persons Per Dwelling

The 293 households interviewed contained a total of 630 individuals for an average of 2.1 persons per dwelling (Table 5-1). This matches exactly the average for all rental units in the sample area but is much lower than the metropolitan average of 3.3 for all dwellings. The smallest households are in high rise units with less than two persons per dwelling while single detached units contain the largest households with over three persons per dwelling. Converted units and walk-ups average approximately two persons per dwelling.

Household Type

The households surveyed in the sample were classified according to one of six different categories on the basis of marital status, the presence or absence of children in the household and the sharing arrangement of the unit (Table 5-2). The largest percentage of the households consisted of married couples without children (30 per cent), followed by single person households (25 per cent) and households shared by single individuals (24 per cent). Only 19.5 per cent of the households contain children. This is far below the 58.4 per cent for the metropolitan population as a whole.

The children in rental households were also much younger. Fifty-five per cent were pre-school, and 45 per cent between six and sixteen. In the total population the respective percentages are 27 per cent and 56 per cent. Approximately 33 per cent of the households containing children were single parent households but they account for only an estimated 5 per cent of total households in metropolitan Edmonton.

Family units account for only 49 per cent of total households in the sample. In the metropolitan area as a whole they account for 79 per cent. This fact illustrates the importance of the non-family unit in the

TABLE 5-2

HOUSEHOLDS BY AGE AND TYPE OF HOUSEHOLD

| | Family Households | | | | | | Non-Family Households | | | | | | Total Hhlds | |
| | M Couples | | M Couples Children | | One Parent | | Sing Pers | | Sh Single | | Other | | | |
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
0 – 19	2	2	--	--	3	16	6	8	18	26	--	--	29	10
20 – 24	35	40	4	10	4	21	15	21	33	47	3	60	94	32
25 – 29	23	26	6	16	3	16	8	11	13	19	--	--	53	18
30 – 34	5	6	12	32	1	5	5	7	3	4	1	20	27	9
35 – 44	3	3	9	24	2	11	3	4	2	3	--	--	19	7
45 – 54	1	1	4	10	3	16	7	10	--	--	--	--	15	5
55 – 64	10	11	3	8	2	11	9	12	1	1	1	20	26	9
65 plus	9	10	--	--	1	5	20	27	--	--	--	--	30	10
Totals	88	100	38	100	19	100	73	100	70	100	5	100	293	100
%	30		13		6		25		24		2		100	
X̄ age	33		35		35		42		23				33	
S.D.	17		11		13		21		7				17	

Family Hhlds: Total – 145, % – 49; Non-Family HHlds: Total – 148, % – 51

study area in the use of rental accommodation.

Households By Age Of Head

Profiles of households by age of head were established for rental and owner occupied dwellings in the metropolitan area and the sample areas within central Edmonton (Table 5-3). The comparison accentuates the youthfulness of the renting population. Renters in the metropolitan area are on the average nine years younger than owners but central area renters are younger still. Sampled renters averaged over twenty years younger than owners in the same areas as would be expected. Forty-two per cent of the tenants are under twenty-five while the equivalent figure for owners is 1 per cent.

The standard deviations of the different profiles illustrate that there is a greater variation in the age of households that rent. They contain a smaller proportion of households in the family orientated age groups but a much higher proportion of young households.

The concentration of older individuals that many other studies (Hoffman, 1959; Foote, et. al., 1960; Norcross and Hysom, 1968 and McKeever, 1974) of rental dwellings identify are not present in Edmonton. In fact, the percentage of households that rent over the age of sixty-five in both the metropolitan and the sample area

TABLE 5-3

HOUSEHOLDS BY AGE OF HEAD

Age	Metropolitan Area Household[1]			Sample Area Household	
	Total %	Owner %	Rental %	Owner[2] %	Rental %
15 - 24	11	1	24	1	42
25 - 34	24	17	33	9	27
35 - 44	22	28	16	11	7
45 - 54	18	24	11	20	5
55 - 64	13	16	8	23	9
65 plus	12	14	9	36	10
Total	100	100	100	100	100
$\bar{X}$	42	46	37	55	33
S.D.	15	13	16	14	17

1. Source:--Statistics Canada 1971

2. Source:--Civic Census 1973

is lower than the proportion of households over sixty-

five in the population as a whole. There is, however,

a gradual increase in the proportion of renting households

from age forty-five. This indicates that the shift from

owner to rental tenure that occurs with age according

to many other studies does in fact occur in Edmonton,

if only to a limited extent.

Education, Occupation And Income

The education of household heads spans the

entire range from those who have received less than a

grade eight education to those with one or more post

graduate degrees. On the average, however, the tenants in

the sample were much better educated than the population

as a whole (Table 5-4). Only 12 per cent of the sample

households had grade eight or less compared to 26 per cent

of the total households. At the other end of the scale,

17 per cent of the sample households had taken some uni-

versity courses while 19 per cent had completed at least

one degree. The respective percentages in the population

as a whole are 7 and 10 per cent. The establishments in

the area that generate some of the demand for rental

accommodation such as the University of Alberta, University

Hospital and Northern Alberta Institute of Technology no

doubt influence the education level of these households also.

TABLE 5-4

PERCENTAGE DISTRIBUTION OF HOUSEHOLD HEADS
BY EDUCATION

Education	Metro Area* Households %	Sample Households %
Grade eight or less	26	12
Grades nine - twelve	57	53
Some University	7	17
Completion of Degree	10	19**

*Source:--Statistics Canada

**13 per cent had one degree, 6 per cent more than
one degree

When the household heads that are gainfully employed outside the home are classified by occupation and compared to the occupations of all household heads employed in the metropolitan area, considerable differences are obvious (Table 5-5). In the sample there are far more professional/technical and clerical people than in the population as a whole. The percentages in these groups are approximately double the percentages for the total population. There is also a slightly higher percentage of craftsmen and unskilled labourers in the sample but a smaller percentage of individuals in sales and service occupations.

Even if the occupation of all those working either full or part time in the sample are considered, the picture does not change radically. Professional and clerical people are still over-represented while sales and services are under-represented.

If the sample is taken as a whole, only 66 per cent of the household heads are gainfully employed, 16 per cent are students, 14 per cent are retired and 4 per cent are unemployed (Table 5-6). Many of the 4 per cent, or thirteen households, that were classified as unemployed were not unemployed in the legal sense of the word. Eleven of the thirteen were single parent households

TABLE 5-5

PERCENTAGE DISTRIBUTION OF GAINFULLY EMPLOYED BY OCCUPATION

Occupation	Metropolitan Hhlds Gainfully Employed	Sample Hhlds Heads	Sample Hhlds All Full/Part Time
Managerial	6.9	5.1	4.1
Professional/Technical	14.7	26.2	24.2
Clerical	11.4	25.6	30.2
Sales	11.3	6.7	7.3
Service	10.7	8.7	7.6
Primary Production	2.9	0.5	0.3
Craftsmen/Unskilled	25.4	25.6	25.4
Other	16.7	1.6	0.9
Total	100.0	100.0	100.0

Source:--Statistics Canada

TABLE 5-6

PERCENTAGE DISTRIBUTION OF HOUSEHOLD HEADS BY OCCUPATION OR VOCATION

Total Sample

Occupation/Vocation	Number	Per cent	Occupation/Vocation	Number	Per cent
Managerial	10	3	Miners/Oil Workers	1	0.5
Professional/Technical	51	17	Craftsmen	30	10
Clerical	50	17	Labourers	11	4
Sales	13	4	Students	46	16
Service/Recreation	17	6	Retired	39	14
Transport	11	4	Unemployed	13	4
Farmers	1	0.5	Total	293	100

several of whom were living on welfare or separation

allowances.

The extremities of occupation are reflected
in the income distribution of the households. Approx-
imately 28 per cent of the households had annual incomes
less than $6,000 (Table 5-7). Over 9 per cent earned in
excess of $20,000. Approximately 27 per cent of the
households fell in each of the categories $6,000-$10,000
and $10,000-$15,000. The average income was $9,885.

Compared to the population as a whole, the
average income of central area tenants is considerably
lower. Although it is difficult to get reliable income
data, figures taken from the census and estimates for
1974 prepared by the Research and Long Range Planning
Branch of the Edmonton Planning Department indicate that
the median annual earnings of Edmonton households rose
from $9,160 in 1971 to $11,800 in 1974. Thus, although
the tenants in the sample were better educated and a
higher percentage were in better paying occupations,
the median income is still $2,840 less than all households
in the city. The median is reduced by the high percentage
of student households with limited incomes, the retired
on fixed incomes and those that were not gainfully employed.
It is also possible that the households being much younger

TABLE 5-7

PERCENTAGE DISTRIBUTION OF SAMPLE HOUSEHOLDS
BY INCOME

Income	Number	Per cent
Not Reporting	8	2.7
$0 - $5,999	81	27.6
$6,000 - $9,999	78	26.6
$10,000 - $14,999	78	26.6
$15,000 - $19,999	21	7,2
$20,000 plus	27	9.2
Total	293	100.0
$\overline{X}$		$9,885.00
Median		$8.960.00

Source:--Sample Survey

on the average have not reached the earning capacity of
the population as a whole.

Mobility Characteristics

Mobility was a major feature of the sample
of renters. It was reflected in both the length of
occupancy at their present place of residence and the
length of employment at their present job (Table 5-8).

Forty-three per cent had been at their
place of residence for less than one year, another 28 per
cent stated they had been there only a year. Only 20 per
cent of the sample had been at their present location
three years or longer.

With respect to employment 43 per cent
had worked at their present location for a year or less.
Only 29 per cent had been at their present job location
three or more years.

SPATIAL VARIATION OF THE BASIC CHARACTERISTICS

Tenant and dwelling characteristics varied
from one sample area to another. This variation illustrates
the different sub-markets that exist in the central area.
The sample areas, their locational references and the
basic dwelling and household characteristics of each area
are presented in Figure 3-1, page 60 and Table 5-9.

TABLE 5-8

HOUSEHOLDS BY LENGTH OF OCCUPANCY AND EMPLOYMENT
AT THEIR PRESENT LOCATION

	Occupancy		Employment	
	Number	Per cent	Number	Per cent
Less than one year	125	43	59	24
One year	81	28	46	19
Two years	26	9	62	26
Three years	27	9	19	8
Four years	6	2	11	5
Five or more years	23	8	38	16
Not Reported	5	2	6	2
Total	293	100	241	100

Source:--Sample Survey

TABLE 5-9

SPATIAL VARIATION OF THE BASIC CHARACTERISTICS

Area	Locational Reference	Dwell Type*	Hhld Type**	$\bar{X}$ Age	Educ+ Level	Occpn++ Category	$\bar{X}$ Income	$\bar{X}$ Rent
7023	NE of CBD	c	f/i	47	1	u	$8,187	$123
7063	NE of CBD	s/c	f	40	1	u/r	$6,623	$134
8087	(S of	w/c	s/m	35	w	s	$6,735	$166
8115	(river and	h	m/s/i	30	w	v	$12,900	$217
8122	(near the	w	m/i	34	w	v	$8,203	$158
8124	(University	h/w	m/s	31	w	w	$10,910	$181
9019	SW of CBD)	h	m/i	48	m	r	$11,883	$199
9024	near river valley)	h	m/s/i	42	w	w	$13,172	$200
9032	W of CBD	w/h	i/m	32	m	v	$9,466	$164
9084	NW of CBD	w/c	s	30	m	s	$7,800	$163
9097	N of CBD	w	i	34	1	u	$7,583	$129
9149	near NAIT	w	s/m	25	m	v	$7,838	$157
9192	(suburban	w	f	34	m	b/w	$9,285	$175
7093	(locations	w	f/m	30	m	u/k	$8,318	$153

*h-high rise
w-walk-up
c-converted
s-single detached

**m-married couples
f-families
s-shared
i-single

+w-well educated
m-moderate
l-limited

++w-white collar
b-blue collar
k-semiskilled
u-unskilled

s-student
r-retired
v-varied

Areas 7023 and 7063 immediately north-east of the central business district consist mainly of low rent converted and single detached units. These units contain a high proportion of older families with children. Household heads have a limited education, work in unskilled positions and fall in the low income brackets.

Areas 8087 - 8124 south of the river consist mainly of moderate to high rent high rise and walk-up units. Most are occupied by married couples and shared households. Most heads are young, well educated students or professional people and household income is relatively high. Students and retired individuals lower the income average in some areas.

Areas 9019 and 9024 south-west of the central business district consist basically of high rise units occupied by older married couples and single individuals in the higher income brackets. Household heads are well educated and professionally employed or retired. Rents in the area are among the highest in the sample.

Directly west of the central business district, area 9032 is occupied by young married couples and single individuals of varying occupations and education levels. Incomes and rents are about average for the sample.

Immediately north and north-west of the central business district areas 9084 and 9097 are mainly low rent walk-ups occupied by shared and single person households. Households are in the low to moderate income range and consist mainly of students with limited education or unskilled workers.

Area 9149 near the Northern Alberta Institute of Technology consisted almost entirely of low rent walk-ups occupied mainly by very young married couples and shared households. Most were low income students or clerical workers.

The more suburban areas, 9192 and 7093, in the north-east and extreme west consisted mainly of walk-ups containing a high proportion of families. Incomes and rents were low in the north-east (area 7093) and slightly above average in the extreme west (area 9192). Households in both areas had a moderate level of education but tended to work in unskilled or semi-skilled occupations in the north-east, while those in the west were semi-skilled or professional workers.

There was not, as would be expected, a high correlation between income and rent in the sample areas. The patterns were similar but the value of Spearman's rho is only .75--r^2 is .56 (significant at the

.01 level). The major deviation was in areas containing
students. Rents are high but quite often they are shared
by more than one individual. Incomes, however, are
relatively low.

A few generalizations are evident from the
preceding discussion of the spatial variation of tenant
characteristics. Areas south and west of the central
business district and south of the river near the Univer-
sity of Alberta are moderate to high income areas with the
older more wealthy households associated with high rise
development and younger lower income groups in walk-ups
or converted and single detached units. To the east and
north of the central business district the areas contain
tenants with varying characteristics but incomes are
generally lower, and a larger percentage of the households
contain children.

This general spatial description provides
an overall impression of the characteristics of the
different sample areas and the different sub-markets that
exist but it does not reveal the systematic relationships
that exist between the different variables. Cross
tabulations and the appropriate summary statistics reveal
further relationships.

CROSS CLASSIFICATION OF TENANT CHARACTERISTICS

This section discusses and analyzes cross classifications of the basic variables of age, education, occupation and income of the household head, household and dwelling type. This analysis will attempt to determine if the basic characteristics are related and if so, what is the nature of the relationship. This will add considerable detail to our knowledge of tenant characteristics and at the same time the differences in the characteristics and the nature of the relationships that arise will further clarify the sub-markets that exist in the rental accommodation in the central area.

Statistical Analysis Of Variable Relationships

Three statistical approaches were used to summarize the relationships depicted in the cross tabulation tables. Chi-square was used to determine if systematic relationships existed between the basic variables. However, chi-square, by itself, determines only if variables are independent or related, it does not indicate the strength of the relationship. This was measured by Cramer's V. Cramer's V is a modified version of phi which measures the degree of relationship or association of the variables in a contingency or cross tabulation table and

is defined by $\dfrac{\phi^2}{\min(r-1),(c-1)}$. The value of V ranges from 0 to 1 with a larger value signifying a higher degree of association. High values are unusual because a relationship can exist without there being a high degree of correlation, particularly with the type of data subjected to the chi-square test. However, the coefficient does provide a statistical measure of the relative strengths of the different relationships.

Chi-square and Cramer's V indicate if a relationship exists and provide a measure of the strength of that relationship but neither indicate the manner nor direction the relationship takes. This was achieved by converting the observed frequencies of the contingency table to percentage distributions. Both row and column percentages were calculated.

Table 5-10 illustrates that all the relationships tested were significant at the .05 level and all but one, households by type by type of dwelling at the .01 level. The strongest point to emerge from these calculations is that there is a strong polarization in elements of rental demand with little randomization in the basic tenant characteristics. This polarization is more evident when the individual hypotheses tested in the chi-square calculations are examined and the direction

TABLE 5-10

SUMMARY STATISTICS FOR CROSS TABULATION--CHI-SQUARE
(See calculations in APPENDIX II)

	Degrees Of Freedom	Chi-Square Value	Significant At .05 .01
1. Households By Age of Head By Type of Household	12	92.52	** **
2. Households By Age of Head By Dwelling Type	9	24.16	** **
3. Households By Age of Head By Education of Head	9	69.59	** **
4. Households By Age of Head By Occupation of Head	15	137.07	** **
5. Households By Age of Head By Income of Household	9	33.80	** **
6. Households By Type By Dwelling Type	9	19.38	**
7. Households By Type By Education of Head	9	27.57	** **

TABLE 5-10--Continued

	Degrees Of Freedom	Chi-Square Value	Significant At .05 .01
8. Households By Type By Occupation of Head	15	88.58	** **
9. Households By Type By Income of Household	8	70.28	** **
10. Dwelling Type By Education of Head	9	27.32	** **
11. Dwelling Type By Occupation of Head	15	44.39	** **
12. Dwelling Type By Income of Household	9	28.58	** *

and nature of each relationship discussed.

Manner And Direction Of Relationships

Ho--there is no relationship between the
age of the household head and the type of household.

Ho is rejected at the .01 level (Table II-1,
Appendix II). Table 5-11 illustrates that there is a
relationship and that the type of household changes as the
age of head increases. Under the age of twenty-five the
majority of households are shared by single individuals.
In the twenty-five to thirty-four age group the majority
are married couples without children. Only in the thirty-
five to fifty-four age category do the majority of house-
holds contain children and thereafter the composition
reverts to couples without children and single person
households. Over the age of sixty-five, two-thirds of
the households are occupied by a single individual.

In keeping with this pattern, the average
age of the household head falls from forty-two for single
person households to twenty-three for shared singles
(Table 5-2, page 124). The standard deviations indicate
that variation in the age distribution is greatest for
single persons and married couples without children. The
distribution of these households is, in fact, bi-modal

TABLE 5-11

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE BY AGE OF HEAD

		Married Couples	Households With Children	Single Individuals	Shared Households	Total
Under 25	Row	30	11	17	41	100
	Column	42	23	29	73	
25 - 34	Row	35	29	16	20	100
	Column	32	37	18	23	
35 - 54	Row	12	53	29	6	100
	Column	5	29	14	3	
55 - 64	Row	38	23	35	4	100
	Column	11	10	12	1	
65 and older	Row	30	3	67	--	100
	Column	10	2	27	--	
Total	Column	100	100	100	100	100

peaking in both the younger and older age groups with very few people in the middle age categories. This second peak in the distribution reflects the increasing propensity of older married and widowed households to live in rental accommodation. The distribution for single parents is also bi-modal with the younger age groups consisting mainly of unwed mothers, while the older age groups are divorced or widowed households. Over 70 per cent of the married couples with children were in the twenty-five to forty-four age group with the peak in the early thirties. The standard deviation is smallest for shared singles with 96 per cent of the heads under thirty-seven years of age.

This analysis illustrates the polarization by age and type of the rental households in the central area. The younger households consist mainly of shared singles and couples; the older households consist of single persons and couples. It also illustrates the pronounced lack of couples with children.

Ho--there is no relationship between the age of the household head and the type of dwelling.

Ho is rejected at the .01 level (Table II-2, Appendix II). Although there are many young households in all types of units as expected with such a young population a large percentage of high rise and single detached units

are occupied by households over the age of fifty-five

(Table 5-12). In walk-up and converted units more than

50 per cent are occupied by households under twenty-five.

Conversely, 52 per cent of the households over fifty-five

live in high rise units, 57 per cent of those under

twenty-five live in walk-ups.

The average age falls from thirty-eight

in high rises to thirty-seven in single detached, thirty-

one in walk-ups and thirty in converted units (Table 5-12).

The standard deviations indicate that the greatest variation

in the age distribution occurs in high rise units, with

68 per cent of the household heads under fifty-seven and

96 per cent under seventy-six. The least variation is

found in walk-ups where 68 per cent of the household heads

are under forty-one and 96 per cent under fifty-one.

Converted and single detached units have intermediate

variations.

Ho--there is no relationship between the

age and the education, occupation and income of the

household head.

Ho is rejected at the .01 level (Tables II-3

to II-5, Appendix II). Table 5-13 illustrates that there

is a negative relationship between age and education.

As age increases the education level decreases. Only

TABLE 5-12

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY AGE OF HEAD BY DWELLING TYPE

		Under 25	25-34	35-54	55 plus	Total	Average Age	S.D.
High Rise	Row	28	31	13	27	100	38	19
	Column	24	41	41	52			
Walk-up	Row	53	25	7	15	100	31	10
	Column	57	41	26	34			
Converted	Row	50	22	19	9	100	30	14
	Column	13	9	18	5			
Single Detached	Row	29	29	21	21	100	37	15
and Other	Column	6	9	15	9			
Total		100	100	100	100			

TABLE 5-13

PERCENTAGE DISTRIBUTION OF HOUSEHOLD HEADS BY AGE AND EDUCATION.

		Grade 8 Or Less	Grades 9 - 12	Some University	Completion Of Degree	Total
Under 25	Row	4	62	23	11	100
	Column	15	49	57	27	
25 - 34	Row	5	41	16	38	100
	Column	12	21	27	53	
35 - 54	Row	21	38	15	26	100
	Column	21	8	10	16	
55 plus	Row	32	57	5	5	100
	Column	53	21	6	5	
Total		100	100	100	100	100

15 per cent of the household heads under twenty-five had

grade eight or less but by age fifty-five this percentage

had increased to 53 per cent. Conversely, 34 per cent of

the household heads under twenty-five had university

training. This figure fell to 10 per cent for household

heads over fifty-five.

The relationship between age, occupation

and income is not as clearly defined. Many of the tenants

are students or are retired and as such are not strictly

in the workforce or classified as having an occupation.

These were, however, for the purposes of this study,

considered as occupations.

Households in the twenty-five to fifty-

four age category are more likely to be in a higher

paying occupation (Tables 5-14 and 5-15). Seventy per

cent of the students and approximately 50 per cent of the

clerical, sales, service and unskilled workers were under

twenty-five. On the other hand, 48 per cent of the

professional people were between twenty-five and thirty-

four, another 20 per cent between thirty-five and fifty-

four and only 14 per cent under twenty-five. Over the

age of fifty-five, 66 per cent of the households were

retired. Most of the remainder were employed in low

paying clerical, sales, service and unskilled occupations.

TABLE 5-14

PERCENTAGE DISTRIBUTION OF HOUSEHOLD HEADS
BY AGE AND OCCUPATION

		Under 25	25-34	35-54	55 Plus	Total
Retired and	Row	17	8	4	71	100
Unemployed	Col.	7	5	6	66	
Student	Row	70	24	4	2	100
	Col.	26	14	6	2	
Managerial	Row	28	48	20	5	100
and Tec/Prof	Col.	14	36	35	5	
Craftsmen and	Row	51	26	16	7	100
Trans/Comm	Col.	18	14	21	5	
Clerical	Row	50	28	10	12	100
	Col.	20	18	15	11	
Sales/Service	Row	44	27	15	15	100
and Unskilled	Col.	15	14	18	11	
Total		100	100	100	100	

TABLE 5-15

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY AGE OF HEAD BY HOUSEHOLD INCOME

		$0-5,999	$6,000-9,999	$10,000-14,999	$15,000-19,999	$20,000+	Total	Average Income$
Under 25	Row	30	29	31	7	3	100	9,074
	Column	44	45	47	43	15		
25 - 34	Row	12	28	35	10	15	100	12,186
	Column	11	28	35	38	44		
35 - 54	Row	24	30	27	9	9	100	10,197
	Column	10	13	12	14	11		
55 plus	Row	53	21	9	2	15	100	8,151
	Column	35	14	6	4	29		
Total		100	100	100	100	100		9,885

The twenty-five to thirty-four age group has the highest annual average earnings followed by the thirty-five to fifty-four age group. These age groups have the lowest percentage of households earning under $6,000 and the highest percentage earning $15,000 or more. These age categories contain fewer students and very few retired individuals (Table 5-15) and in many households both husband and wife work.

Households with heads fifty-five and over have the lowest annual average and the highest percentage (53 per cent) earning under $6,000. There are, however, a fairly high percentage earning over $15,000. All but two of these high income individuals were under the age of sixty-five. Many low income elderly individuals have only pension income.

Ho--<u>there is no relationship between the type of household and type of dwelling.</u>

Ho is rejected at the .05 level (Table II-6, Appendix II). The distribution of units by type of household is presented in Table 5-16. In high rise apartments the largest percentage (34 per cent) of units are occupied by married couples, the lowest percentage (16 per cent) by families with children. There is not as much variation in walk-ups but married couples still occu

TABLE 5-16

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE BY DWELLING TYPE

		Married Couples	Households With Children	Single Individuals	Shared Households	Total
High Rise	Row	34	16	26	24	100
	Column	41	27	38	36	
Walk-up	Row	33	21	24	22	100
	Column	49	45	42	41	
Converted	Row	9	19	34	38	100
	Column	3	10	15	17	
Single Detached and Other	Row	25	46	13	17	100
	Column	7	18	4	6	
Total		100	100	100	100	

154

155

the highest percentage of units, families with children
the lowest. Converted units are occupied almost entirely
by single persons and shared single households while
single detached and other units are occupied mainly by
families with children and married couples.

Ho--there is no relationship between the
type of household and the education, occupation and
household income.

Ho is rejected at the .01 level (Tables II-7
to II-9, Appendix II). Households containing shared
singles and married couples without children are the best.
educated (Table 5-17). Over 40 per cent have received at
least some university training. For household heads in
the other two categories less than 30 per cent have
university training, over 20 per cent have attained only
grade eight or less.

There is also a significant relationship
between occupation and household type (Table 5-18). The
occupations of heads of married households without
children and heads with children tend to be fairly evenly
distributed. The highest percentage of the former are
employed in professional occupations, the latter as
craftsmen. Heads of single person and shared households,
however, are much more concentrated in certain occupations.

TABLE 5-17

PERCENTAGE DISTRIBUTION OF HOUSEHOLD HEADS BY TYPE BY EDUCATION OF HEAD

		Married Couples	Households With Children	Single Individuals	Shared Households	Total
Grade eight or less	Row	21	35	44	---	100
	Column	8	21	21	--	
Grades nine to twelve	Row	29	19	24	28	100
	Column	51	51	51	57	
Some University	Row	37	10	14	39	100
	Column	20	9	10	25	
At least one degree	Row	32	20	25	23	100
	Column	20	19	19	17	
Total		100	100	100	100	100

TABLE 5-18

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE
BY OCCUPATION OF HEAD

		*M.C.	*H.C.	*S.I.	*S.H.	Total
Retired and	*R	19	21	58	2	100
Unemployed	*C	11	19	41	1	
Student	*R	24	15	4	57	100
	*C	13	12	3	35	
Managerial	*R	38	13	30	20	100
and Tec/Prof	*C	26	14	25	16	
Craftsmen and	*R	42	33	7	19	100
Trans/Comm	*C	20	25	4	11	
Clerical	*R	28	12	26	34	100
	*C	16	11	18	23	
Sales/Service	*R	29	27	17	27	100
and Unskilled	*C	14	19	10	15	
Total		100	100	100	100	

*R Row *H.C. Households with Children

*C Column *S.I. Single Individuals

*M.C. Married Couples *S.H. Shared Households

Nearly half the single person households are retired, another 25 per cent are employed as professionals. Thirty-five per cent of the heads in shared households are students, 23 per cent are employed in clerical occupations.

Married households have the highest average income (Table 5-19). The average is $11,735--with 22 per cent earning over $15,000 and only 9 per cent earning under $6,000. Single person households have the lowest average income, $6,438--with only 5 per cent earning over $15,000 and 57 per cent earning under $6,000. Shared households are intermediate with an average of $10,286. The low income of single person households is a reflection of the number of retired individuals that have limited incomes. In shared households there are often two or even three wage earners which explains the relatively high average as many of these households are students or people in low paying occupations. Many married households also contain more than one wage earner, but more of them are also employed in higher paying occupations.

Ho--there is no relationship between dwelling type and education, occupation and household income.

Ho is rejected at the .01 level (Tables II-10 to II-12, Appendix II). Tenants in high rise units are better educated, employed in higher paying occupations

TABLE 5-19

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE BY HOUSEHOLD INCOME

		$0-5,999	$6,000-9,999	$10,000-14,999	$15,000-19,999	$20,000+	Total	Average Income $
Married	Row	9	34	34	11	11	100	11,735
	Column	14	54	54	67	48		
Single Persons	Row	57	22	15	3	2	100	6,438
	Column	63	26	17	14	7		
Shared Singles	Row	26	22	31	5	16	100	10,286
	Column	23	21	29	19	44		
Total		100	100	100	100	100		9,885

and have the highest annual average household income.

Generally, walk-ups occupy the intermediate position with converted and single detached units occupied by the lower income, lower paid households.

In high rises, 47 per cent of the household heads have obtained university training. The equivalent figure is 30 per cent for walk-ups, 29 per cent for converted units and 4 per cent for single detached dwellings. Only 8 per cent of household heads in high rise units have grade eight or less. This figure increases to 11 per cent for walk-ups, 22 per cent for converted and 25 per cent for single detached units (Table 5-20).

In high rises, 47 per cent of the heads are employed as either professionals or craftsmen (Table 5-21). This figure falls to 42 per cent for single detached units, 29 per cent for walk-ups and 22 per cent for converted units. Tenants in walk-ups were quite evenly distributed throughout the occupations but most in converted units were students or individuals in low income occupations. Single detached units present a bi-modal picture. Some were occupied by high salaried professionals, others by low income sales, service, unskilled, student or retired households.

Given their education and occupation, it is

TABLE 5-20

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY DWELLING TYPE BY EDUCATION OF HEAD

		Grade 8 Or Less	Grades 9 - 10	Some University	Completion of Degree	Total
High Rise	Row	8	45	14	33	100
	Column	23	31	31	63	
Walk-up	Row	11	59	18	12	100
	Column	40	50	49	29	
Converted	Row	22	50	16	13	100
	Column	20	10	10	7	
Single Detached	Row	25	50	21	4	100
	Column	17	8	10	2	
Total		100	100	100	100	

TABLE 5-21

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY OCCUPATION
BY DWELLING TYPE

		*H.R.	*W.U.	*Con.	*S.D.	Total
Retired and	*R	46	42	6	6	100
Unemployed	*C	23	17	9	13	
Student	*R	20	54	20	7	100
	*C	8	19	28	13	
Managerial	*R	54	30	5	11	100
and Tec/Prof	*C	31	14	9	29	
Craftsmen and	*R	40	44	9	7	100
Trans/Comm	*C	16	15	13	13	
Clerical	*R	36	52	12	--	100
	*C	17	20	19	--	
Sales/Service	*R	12	51	17	20	100
and Unskilled	*C	5	16	22	33	
Total		100	100	100	100	

*R Row   *W.U. Walk-up

*C Column   *Con. Converted

*H.R. High Rise   *S.D. Single Detached and Other

not surprising that tenants in high rises have by far the highest average household income (Table 5-22), $2,469 higher than the average for all households and $3,509 higher than tenants in walk-ups which have the second highest average. In high rises 30 per cent of the households earn over $15,000 per annum. This figure drops to 11 per cent in walk-ups, 6 per cent in converted units and 4 per cent in single detached and other dwellings. The reverse of this situation occurs in the lower income brackets. Only 38 per cent of high rise tenants earn under $10,000. This figure increases to 63 per cent in walk-ups, 68 per cent in converted and 74 per cent in single detached and other dwellings.

Relative Strength Of Relationships

The relative strengths of the various relationships as indicated by Cramer's V (Figure 5-1) illustrates that some of the variables are much more strongly related than others. There is a relatively weak relationship between dwelling type and the other basic variables. The relationship between age and household type is much stronger (V = .32) and with the exception of age and income (V = .20) there is a much stronger relationship between age and household type and the other basic variables than there is between dwelling type and

FIGURE 5-1.   SUMMARY STATISTICS FOR CROSS
               TABULATION--CRAMER'S V

	Age	Household Type	Dwelling Type	Education	Occupation	Income
Age		.32	.17	.28	.39	.20
Household Type	.32		.15	.18	.32	.35
Dwelling Type	.17	.15		.18	.22	.22
Education	.28	.18	.18		.45	.23
Occupation	.39	.32	.22	.45		.44
Income	.20	.35	.22	.23	.44	

these basic variables. Future analysis will thus centre
around sub-markets defined by age and household type
rather than dwelling type as the former are stronger
controlling variables.

Summary

The majority of rental households in the
central area are small non-family units without children.
The age distribution is bi-modal, peaking in both the
younger and older age groups but tenants in the
central area are on the average nine years younger than
all household heads in the metropolitan area. Tenants
are better educated and a higher percentage are employed
in better paying occupations but the average income is
lower because of the significant number of students and
retired individuals with limited incomes.

The different sample areas (Figure 3-1,
page 60 and Table 5-9, page 136) represent areal sub-
markets of rental demand as the basic characteristics of
age, household type, education, occupation and income
vary spatially. Areas south and west of the central
business district and south of the river near the University
of Alberta are moderate to high income areas with the older
more wealthy households associated with high rise develop-
ment and younger lower income groups in walk-ups or

converted and single detached units. To the east and north

of the central business district the areas contain tenants

with varying characteristics but incomes are generally

lower and a larger percentage of the households contain

children.

Cross tabulation of the basic variables and

the associated summary statistics illustrate the systematic

relationships that exist between the variables and the

direction of these relationships. Within the bi-modal age

distribution the young households consist mainly of singles

sharing units and childless couples; the older households

consist of childless couples and one person households.

With respect to the life cycle the majority of the house-

holds are in the pre-marriage, young married without

children or the post child stages. The majority of the

shared households are students on limited incomes or

young singles employed in low paying clerical, sales,

service and unskilled occupations. A much lower percentage

of the young childless couples are students and close to

50 per cent are employed in higher paying craft and

professional occupations. Approximately two-thirds of the

older one person households are retired, the majority low

income widows and widowers. Older childless couples are

employed in high salaried occupations. Younger households

tend to be better educated, perhaps a reflection of the
number of students. Households between twenty-five and
fifty-four, although they have less education, are employed
in higher paying occupations and as a result have higher
incomes. The older households have received very little
education and have the lowest annual income as for many
the only source of income is the pension.

Although there is polarization by age,
tenants do not consist entirely of the "newly weds" and
"nearly deads" so often referred to by the development
industry. A large segment of the market consists of young
singles either sharing units or living as individuals.
Family households, although they are a minority are also
represented, many of them single parent households on
limited incomes.

Cramer's V analysis indicates that the
basic characteristics are more strongly related to age
and household type but they also vary with the type of
dwelling. Tenants in high rises are older, have fewer
children, are better educated and employed in better paying
occupations. Tenants in walk-ups are much younger and
are slightly more family orientated with more moderate
incomes and education levels. Tenants in converted units
are younger still and consist almost entirely of low

income shared and single households. Single detached
units are occupied mainly by families of varying ages
and incomes.

CHAPTER 6

TENANT ACTIVITY PATTERNS

TENANT MOBILITY

An analysis of tenant mobility provides answers to such questions as: What type of dwellings do these households come from? Why and how often do they move? And, to what type of dwelling do they expect to move? This provides valuable insights into the source of demand for rental accommodation and hence the characteristics of central area tenants. It also provides the data to determine what elements of the demand regard rental housing as transitional and rent because it is more convenient given their present circumstances and status in the life cycle and what elements regard it as permanent accommodation.

Previous Dwelling

One third of the sample had moved to their present dwelling from a walk-up (Table 6-1), 15 per cent from each of the three categories; owned single detached, converted and other dwellings. Included in the "other" category were households who had previously lived with

TABLE 6-1

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY AGE OF HEAD BY PREVIOUS DWELLING TYPE

	Total Units	Owned Single Detached %	Rented Single Detached %	High Rise %	Walk -up %	Converted %	Other %	Total %
Under 25	121	5	8	5	38	18	26	100
25 – 34	80	6	11	19	43	9	13	100
35 – 54	34	18	18	15	21	21	9	100
55 plus	56	50	11	9	16	13	1	100
Total Units	291*	45	31	31	96	43	45	
Percentage		15	11	11	33	15	15	100

* 2 persons did not respond

relatives, at home with their parents or in an institutional

residence, plus a very small number of households that had

moved from row houses or condominiums. Approximately 10

per cent had moved from rented single detached or high rise

units.

There was no significant relationship

between the type of household and the previous dwelling--

the determining factor was age. When the relationship

between age and dwelling type was tested, chi-square was

significant at the .01 level (Table 6-2). Households over

fifty-five moved in significant numbers from owner occupied

single detached dwellings (Table 6-1). The previous

residence of households under twenty-four tended to be

walk-up or converted units although a significant number

came from the parental home and institutional residences.

The majority of households between twenty-five and thirty-

four came from rental accommodation--basically walk-ups

and high rises. The middle-aged households were much more

evenly distributed with respect to previous dwelling than

the other groups.

Expected Moving Behaviour

Mobility among renters is high. Past

mobility is documented in Chapter 5, Table 5-8, page 135

and when households were questioned on expected moving

TABLE 6-2

SUMMARY STATISTICS FOR CROSS TABULATION
TENANT ACTIVITY PATTERNS
(See calculations in APPENDIX III)

	*DF	*C-S	Significant at .05 .01
Type of Household/ Previous Dwelling	15	22.48	
Age of Household Head/ Previous Dwelling	15	92.55	** **
Type of Household/ Moving Expectations	3	6.81	
Age of Household Head/ Moving Expectations	3	30.06	** **
Type of Household/ Expected Dwelling Type	12	58.62	** **
Age of Household Head/ Expected Dwelling Type	12	52.75	** **
Type of Household? Expected Tenure	3	24.54	** **
Age of Household Head/ Expected Tenure	3	17.07	** **
Method of Travel by Household Income	9	26.30	** **
Method of Travel by Occupation of Head	15	74.50	** **
Distance Travelled by Method of Travel	10	138.50	** **

*DF--Degrees of freedom   *C-S--Chi-Square value

behaviour, over 40 per cent indicated they intended to move within a year, 55 per cent said they had no plans to move in the near future and 2 per cent had no response (Table 6-3).

There was no significant relationship between household type and intention to move (Table 6-1) but mobility declined rapidly with age (Table 6-3). Over 50 per cent of the households under thirty-five planned to move within a year but this figure dropped to 13 per cent for households over fifty-five.

Although the reasons for moving varied substantially several were reported consistently including; completion of education, excessive rent, not enough space, job transfer and closer to work (Table 6-4). Approximately 40 per cent, however, have numerous other reasons including; getting married, buying a home, moving into university residence, receipt of an eviction or termination notice and dislike of neighbourhood tenants.

The importance of the reasons recorded most consistently varied with the age and type of the household (Table 6-4). Many households with children and young married couples planned to move because the unit was too small. The couples indicated they were expecting or planning to have a child. Expense was a major concern

TABLE 6-3

TENANT MOVING EXPECTATIONS
(PERCENTAGE DISTRIBUTION)

	Yes %	No %	Total Households
By Age			
Under 25	52	48	122
25 - 34	56	44	79
35 - 54	35	65	31
55 plus	13	87	54
Total Households	125	161	286*
Percentage	43	55	
By Type			
Married Couples No Children	40	60	87
Households With Children	54	46	56
Single Persons	33	67	69
Shared Singles	50	50	74
Total Households	125	161	286*
Percentage	43	55	

* 7 persons, (2%) did not respond.

TABLE 6-4

MOVING EXPECTATIONS BY REASON FOR MOVING
(PERCENTAGE DISTRIBUTION)

	*S %	*E %	*C %	*T %	*F %	*O %	Total Hhlds
By Age							
Under 25	18	17	4	4	22	35	63
25 - 34	12	10	6	16	12	44	44
35 - 54	9	18	--	27	--	45	11
55 plus	--	43	--	14	--	43	7
Total Households	18	20	6	15	20	46	125
Percentage	14	16	5	12	16	37	100
By Type							
Married Couples No Children	23	20	--	8	10	40	35
Households With Children	18	12	6	15	12	36	30
Single Person	4	12	4	12	12	56	23
Shared Singles	10	17	7	10	26	31	37
Total Households	18	20	6	15	20	46	125
Percentage	14	16	5	12	16	37	100

*S Unit too small   *T Job transfer

*E Unit too expensive   *F Finishing education

*C Closer to job   *O Other

for all categories but of greatest concern for married

couples and shared households. The younger shared house-

holds also placed considerable emphasis on completion of

education while middle-aged households were more likely to

be moving because of a job transfer. Older households,

if they planned to move at all, indicated expense was the

major concern.

Expected Dwelling Type And Tenure

All households in the sample were questioned

on their expected dwelling type and tenure if they were to

move again. The single detached dwelling remains the most

popular form of accommodation. Thirty per cent of the

households that responded to the question indicated they

planned to move into a single detached unit, 26 per cent

chose a walk-up, 19 per cent a high rise and 13 per cent a

converted unit (Table 6-5).

There were significant relationships

between the expected dwelling type and the age and type of

household (Table 6-2). The percentage that expect to move

into a single family dwelling increases into middle-age

but drops off rapidly after fifty-five (Table 6-5). Over

fifty-five the percentage that expect to move into high

rise and walk-up units rises rapidly, particularly in

high rise units. Very few households over the age of

TABLE 6-5

EXPECTED DWELLING TYPE (PERCENTAGE DISTRIBUTION)

	*S %	*W %	*H %	*C %	*R %	*O %	Total Hhlds
By Age							
Under 25	24	33	11	22	4	7	120
25 - 34	45	24	11	7	9	5	76
35 - 54	48	13	16	10	1	3	31
55 plus	12	24	52	2	2	8	50
Total Households	84	73	52	35	16	17	277**
Percentage	30	26	19	13	6	6	100
By Type							
Married Couples No Children	43	19	14	14	4	8	80
Households With Children	52	27	7	4	11	--	56
Single Persons	9	30	34	7	3		67
Shared Singles	20	31	19	23	7	--	74
Total Households	84	73	52	35	16	17	277**
Percentage	30	26	19	13	6	6	100

*S   Single Detached   *C   Converted
*W   Walk-up   *R   Row/Town House, Condominium
*H   High Rise   *O   Other

** 16 persons did not respond

twenty-five expect to move into converted units.

When the type of household is considered, the largest percentage of married couples and households containing children expect to move into single detached units (Table 6-5). Walk-ups are the second choice. For single, divorced or widowed households high rise units tend to be the choice of the majority, followed closely by walk-ups. For shared households the distribution is more uniform. The majority expect to move into walk-ups but a significant number also plan to move into converted, single detached or high rise units.

Although there is an overall preference for single detached units much of the movement within the rental market is to a unit similar in type to the one presently occupied by the household. When the present dwelling of the household is compared with their expected dwelling following their next move (Table 6-6) the pattern illustrates that the majority (41 per cent) of households in high rises expect to move to another high rise unit. Twenty-six per cent expect to move into a single detached unit. The pattern is repeated by households in walk-ups, as the majority (34 per cent) expect to move into another walk-up and 25 per cent expect to move into single detached units. Over 70 per cent of the households in single

TABLE 6-6

EXPECTED DWELLING BY PRESENT DWELLING OF HOUSEHOLDS (PERCENTAGE DISTRIBUTION)

Present Dwelling	No. Of Hhlds	Expected Dwelling						
		Single Detached %	Walk -up %	High Rise %	Converted %	Town House/ Condominium %	Other %	Total %
High Rise	100	26	10	41	10	7	6	100
Walk-up	126	25	34	8	19	4	10	100
Converted	29	39	32	7	13	3	6	100
Single Detached and Other	22	71	13	--	8	4	4	100
Total Households	277	84	73	52	35	16	17	
Percentage	100	30	26	19	13	6	6	100

detached and other units expect to occupy the same type
of unit. The figures indicate that converted units are
not a popular form of accommodation. Only 13 per cent of
the households occupying converted units expect to move
to a similar type of unit as most households would prefer
to live in single detached or walk-up units. A small
percentage (6 per cent) expect to move into condominiums
or town houses and an equivalent percentage indicated other
dwellings which included additional accommodation such
as the university residences and nursing homes for the
aged.

In spite of the preference for single
detached dwellings, when the households were questioned
on their expected tenure following the next move, 74 per
cent (216) said they expected to rent. Only 22 per cent
(64) indicated they expected to purchase a dwelling while
4 per cent (13) had no response (Table 6-7).

There were significant relationships between
the expected tenure and the age and type of household
(Table 6-2). The percentage of households that expect to
rent is very high in the under twenty-five and over fifty-
five age categories (Table 6-7) but lower for middle-aged
households. Approximately 90 per cent of the single-person
and shared households expect to continue to rent and

TABLE 6-7

HOUSEHOLDS BY EXPECTED TENURE
(PERCENTAGE DISTRIBUTION)

	Expect To Rent		Expect To Buy		Total	
	No.	%	No.	%	No.	%
By Age						
Under 25	97	81	23	19	120	100
25 - 34	51	66	26	34	77	100
35 - 54	20	65	11	35	31	100
55 plus	48	92	4		52	100
Total	216	74	64	22	280	*96
By Type						
Married Couples No Children	50	61	32	39	82	100
Households With Children	39	71	16	29	55	100
Single Persons	64	93	5	7	69	100
Shared Singles	63	85	11	15	74	100
Total	216	74	64	22	280	*96

* 13 persons (4%) did not respond

although the proportion drops for married couples and

family households it is still well over 50 per cent.

Summary

The source of some of the initial rental

demand is the parental home, or institutional residences

as young individuals set up households of their own. Many

older households sell single detached homes and move into

rental units. Tenant mobility, however, is very high and

once individuals move into the rental market they move

within it several times as circumstances such as getting

married, having a child, finishing their education or

getting a new job require a change in unit size or location.

In this respect rental housing serves as transition housing

for households who for various reasons do not plan to stay

in one location for any length of time. Similar findings

were presented in studies by Rossi (1955), Wilkinson and

Merry (1965), Foote, et. al. (1960) and Pickvance (1973 and

1974).

Mobility, however, does decline with age.

As age increases households tend to move out of the rental

market, then near retirement move back in. Very few of

these older households plan to move again. For them

rental housing can be regarded as the final solution or

at least a solution until they are unable to manage on

their own. Again the above referenced studies presented similar findings.

LOCAL ACTIVITY PATTERNS

A basic assumption of land use theory is that households choose a residence because of its accessibility to employment nodes and shopping outlets. This section will identify the local activity patterns of the tenants and illustrate the relationship between their residential location and other elements of the urban structure. This will help to determine if a central area location is important with respect to central area employment nodes and shopping outlets, or if, in fact, the residential location bears little relationship to these variables. The method of travel during employment and shopping trips will also be analyzed as it provides some indications of the tenants' reliance on their accessibility to nearby facilities.

Car Ownership

Car ownership statistics within the sample areas illustrate that the ratio of cars per household is lower than it is for the population as a whole. There are approximately 0.82 cars per household in the metropolitan area (1971 Census) but in the sample areas the ratio was

0.65 (Civic Census, 1973).

This ratio also varies from one sample area
to another (Table 6-8). Low income areas and areas
containing a high percentage of older tenants do have
lower ratios. In moderate to high income areas with a
younger population the ratios are higher. Car ownership,
however, was not highly correlated with income, or rent
as has been the case in other studies; Voorhees (1963),
Poulin and Ror (1967), Pattilo (1969) and Pendakur (1972).
Spearman's rho (Table 6-9) illustrates that the correl-
ation between car ratios and the average income of the
sample area is very low, r = 0.28. The coefficient between
the ratio and the average rent in the area is considerably
higher, r = 0.53, but there is still not a strong relation-
ship. Nor is there a strong relationship between average
age in an area and the car ratio, r = 0.56.

Journey To Work

Mode Of Travel.--The car, however, was still
the most frequently used mode of travel on the journey to
work (Table 6-10). Over 40 per cent of the household heads
used the car, 32 per cent walked and 22 per cent used
public transit. The method used most frequently varied
from one sample area to another. Walking was very common
in areas south of the river near the University of Alberta

TABLE 6-8

CAR TO HOUSEHOLD RATIOS BY SAMPLE AREA

Area	Number of Tenant Households	Number of Tenant Households With Cars	Car to Household Ratio
7023	125	35	.28
7063	67	32	.48
7093	188	94	.50
8087	311	188	.60
8115	570	414	.73
8122	493	349	.71
8124	423	346	.82
9019	551	300	.54
9024	554	245	.44
9032	495	415	.84
9084	89	60	.67
9097	318	165	.52
9149	573	359	.63
9192	245	171	.70
Total	5,002	3,173	.63

TABLE 6-9

RANK CORRELATION OF CAR RATIO, RENT, INCOME AND AGE

Area	Car Ratio	Rent	Income	Age
7023	14	14	9	13
7063	12	12	14	11
7093	11	11	7	3
8087	8	6	13	10
8115	3	1	2	2
8122	4	9	8	7
8124	2	4	4	5
9019	9	3	3	14
9024	13	2	1	12
9032	1	7	5	6
9084	6	8	11	4
9097	10	13	12	9
9149	7	10	10	1
9192	5	5	6	8

Car Ratio/Income r_{rank} = .28

Car Ratio/Rent r_{rank} = .53*

Car Ratio/Age r_{rank} = .56*

* significant at the .05 level

TABLE 6-10

MODE OF TRAVEL TO WORK (PERCENTAGE DISTRIBUTION)

Area	Car %	Public Transit %	Walk %	Other* %	Total %
7023	17	33	33	17	100
7063	--	100	--	--	100
7093	40	50	10	--	100
8087	22	15	63	--	100
8115	47	6	44	3	100
8122	43	24	29	4	100
8124	45	10	35	10	100
9019	65	10	20	5	100
9024	44	19	33	4	100
9032	40	33	27	--	100
9084	100	--	--	--	100
9097	13	38	38	11	100
9149	43	21	36	--	100
9192	45	45	--	10	100
Total Sample	42	22	32	4	100

* Bicycle, truck, etc.

and near the Northern Alberta Institute of Technology.
Public transit was used most frequently in the low income
areas north and north-east of the central business district
and in the west suburban area. The car was used
extensively in nearly all areas except those with a very
low average income.

There were significant relationships
between the method of travelling to work and the income
of the household and the occupation of the household head.
When tested with chi-square both relationships were
significant at the .01 level (Table 6-2).

Low income groups made greater use of
public transit or walked. Column percentages in Table 6-11
indicate that 44 per cent of those earning under $6,000
walked to work. This percentage dropped progressively as
income increased. The percentage that used the car increased
progressively from 23 per cent for households earning less
than $6,000 to 62 per cent for those earning over $15,000.
Although there is no established pattern for public transit
usage a higher percentage of households earning under
$6,000 did use the bus.

With respect to occupation a very high
percentage of professionals and craftsmen used the car
(Table 6-12), while the majority of the students walked.

TABLE 6-11

PERCENTAGE DISTRIBUTION OF MODE OF TRAVEL BY INCOME OF THE HOUSEHOLD

Mode		Under $5,999 %	$6,000-9,999 %	$10,000-14,999 %	$15,000 plus %	Total %
Car	Row	11	26	35	29	100
	Column	23	37	47	62	
Bus	Row	25	31	25	19	100
	Column	27	23	17	21	
Walk	Row	28	34	29	9	100
	Column	44	37	29	15	
Other	Row	25	25	42	8	100
	Column	6	4	7	2	
Total		100	100	100	100	100

TABLE 6-12

PERCENTAGE DISTRIBUTION OF MODE OF TRAVEL
BY OCCUPATION OF HOUSEHOLD HEAD

Occupation		Car %	Bus %	Walk %	Other %	Total %
Professional	Row	62	11	25	2	100
	Column	38	13	20	8	
Clerical	Row	30	40	30	--	100
	Column	15	38	15	--	
Sales/Service	Row	27	33	30	10	100
	Column	8	19	12	25	
Craftsmen	Row	63	3	25	9	100
	Column	20	2	11	25	
Unskilled	Row	55	23	5	17	100
	Column	12	10	1	33	
Students	Row	17	20	61	2	100
	Column	7	18	41	9	
Total		100	100	100	100	

Public transit was used more extensively by the clerical, sales and service employees. Unskilled workers although they are low income used the car extensively. This was surprising because previous analysis indicated that proximity to a bus route was important in low income areas. Further analysis of the survey data indicated that working wives and other individuals in low income households were very dependent on the bus for transportation to and from work. This would account for its importance as a locational factor in low income areas.

Trip Lengths.--The length of work trips was determined by measuring street distances (the most direct route). The average length of the trips was 2.1 miles (Table 6-13). Approximately 27 per cent travelled less than a mile, 20 per cent more than four miles. The length varied with the sample area, with the lowest averages recorded near the central business district and the University of Alberta (Table 6-14).

As expected there was a very strong relationship between the mode and the length of the trip. Chi-square was significant at the .01 level (Table 6-2). The car was used for longer trips, public transit for intermediate trips and walking for short trips. In Table 6-15 the row percentages illustrate that 59 per cent

TABLE 6-13

LENGTH OF WORK TRIPS

Distance tenths of miles	Number of Households	Percentage
0.2 or less	17	7
0.3 - 0.4	11	5
0.5 - 0.6	23	10
0.7 - 0.8	8	3
0.9 - 1.0	6	2
1.1 - 1.2	17	7
1.3 - 1.4	26	11
1.5 - 1.6	9	4
1.7 - 1.8	8	3
1.9 - 2.0	8	3
2.1 - 2.5	24	10
2.6 - 3.0	11	5
3.1 - 4.0	26	11
4.1 plus	47	20
Total	241	100

Average Trip Length = 2.14

TABLE 6-14

LENGTH OF WORK TRIPS BY AREA

Area	Average Distance To Work (Miles)
7023	2.03
7063	4.00
7093	3.79
8087	1.49
8115	2.27
8122	2.86
8124	2.57
9019	1.76
9024	1.51
9032	1.63
9084	1.63
9097	1.58
9149	2.30
9192	3.37
Total Sample	2.14

TABLE 6-15

PERCENTAGE DISTRIBUTION OF MODE OF TRAVEL BY DISTANCE TRAVELLED TO WORK

Mode		Distance						
		0.0-0.5 %	0.6-1.0 %	1.1-1.5 %	1.6-2.0 %	2.1-2.5 %	2.6 plus %	Total %
Car, Truck etc	Row	3	7	11	9	11	59	100
	Column	10	25	25	48	52	78	
Bus	Row	--	4	23	19	17	37	100
	Column	--	6	25	48	39	22	
Walk	Row	36	29	32	1	2	--	100
	Column	90	69	50	4	9	--	
Total		100	100	100	100	100	100	

of those that used the car drove further than 2.5 miles.
The same figure for public transit was 37 per cent. No
one walked further than 2.5 miles. Column percentages
indicate that up to 1.5 miles walking was the most common
method of getting to work but thereafter the bus and the
car replaced walking almost completely.

Trip Destination.--The two major employment
destinations were the University of Alberta and the central
business district (Table 6-16). Approximately 45 per cent
of all work trips terminated at these two destinations.
Other minor, although significant, destinations included
the Northern Alberta Institute of Technology, the Argyle
Industrial Area, 124th Street and the North-West Industrial
Area. Slightly more than a third of the destinations
were scattered throughout the city with no areas being
the terminus of sufficient trips to rate as a significant
employment node. Approximately 3 per cent of the trips
terminated beyond the metropolitan area.

Figures 6-1, 6-2 and 6-3 illustrate the most
significant destinations for employment trips originating
in each area. Figure 6-1, indicating the most important
terminus for employment trips from each area, illustrates
that for all areas south of the river it is the University
of Alberta. Most of the trips from the remaining areas

TABLE 6-16

WORK TRIP DESTINATIONS

Destination	No. of Trips	Percentage Distribution
University of Alberta	56	23.3
Central Business District	55	23.0
Northern Alberta Institute of Technology	13	5.2
Argyle Industrial Area	10	4.3
124th Street	9	3.8
North-West Industrial Area	8	3.1
Other Metropolitan Edmonton	83	34.3
Outside the Metropolitan Area	7	3.0
Total	241	100.0
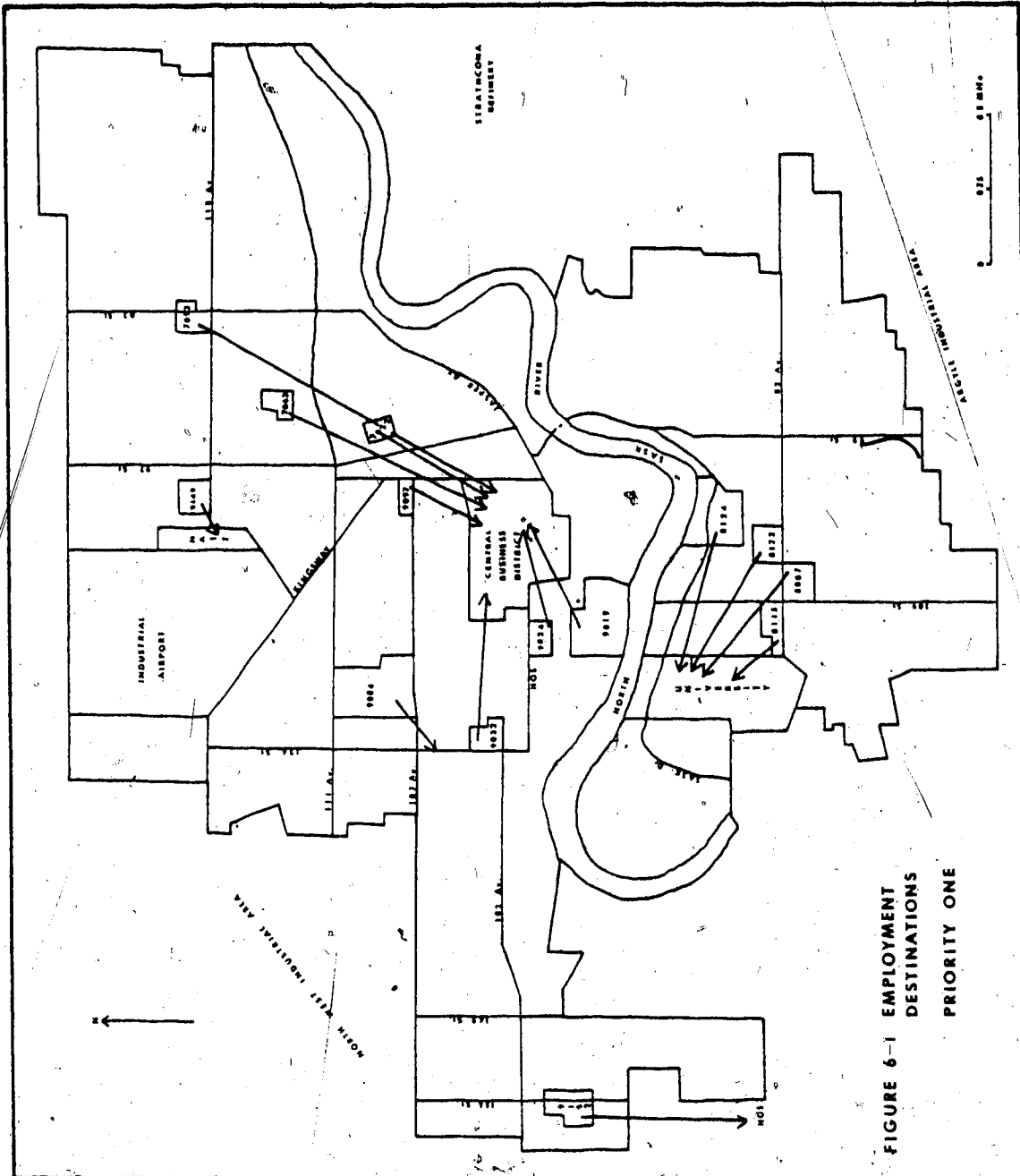
FIGURE 6-1 EMPLOYMENT
DESTINATIONS

PRIORITY ONE
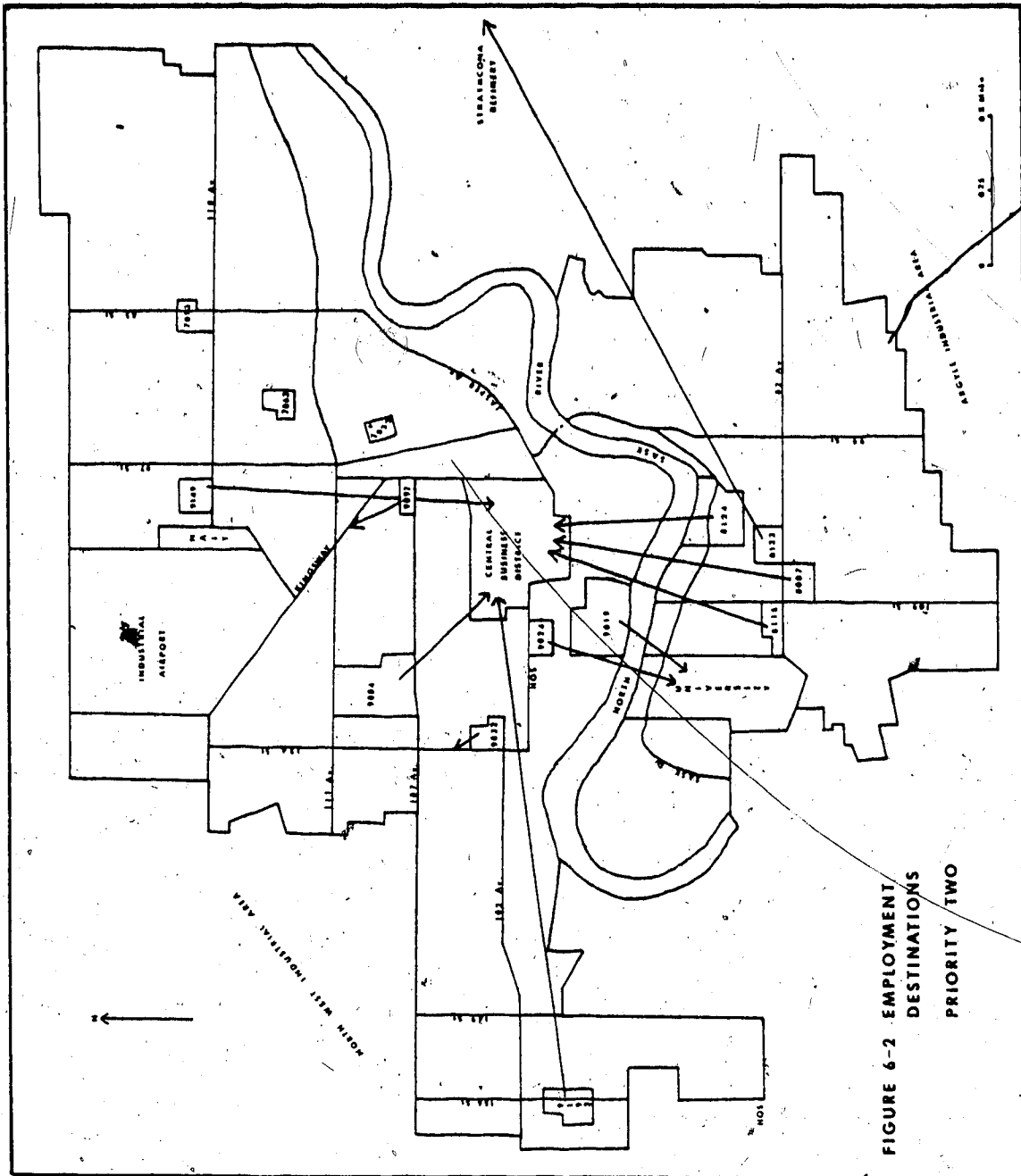
FIGURE 6-2 EMPLOYMENT
DESTINATIONS
PRIORITY TWO
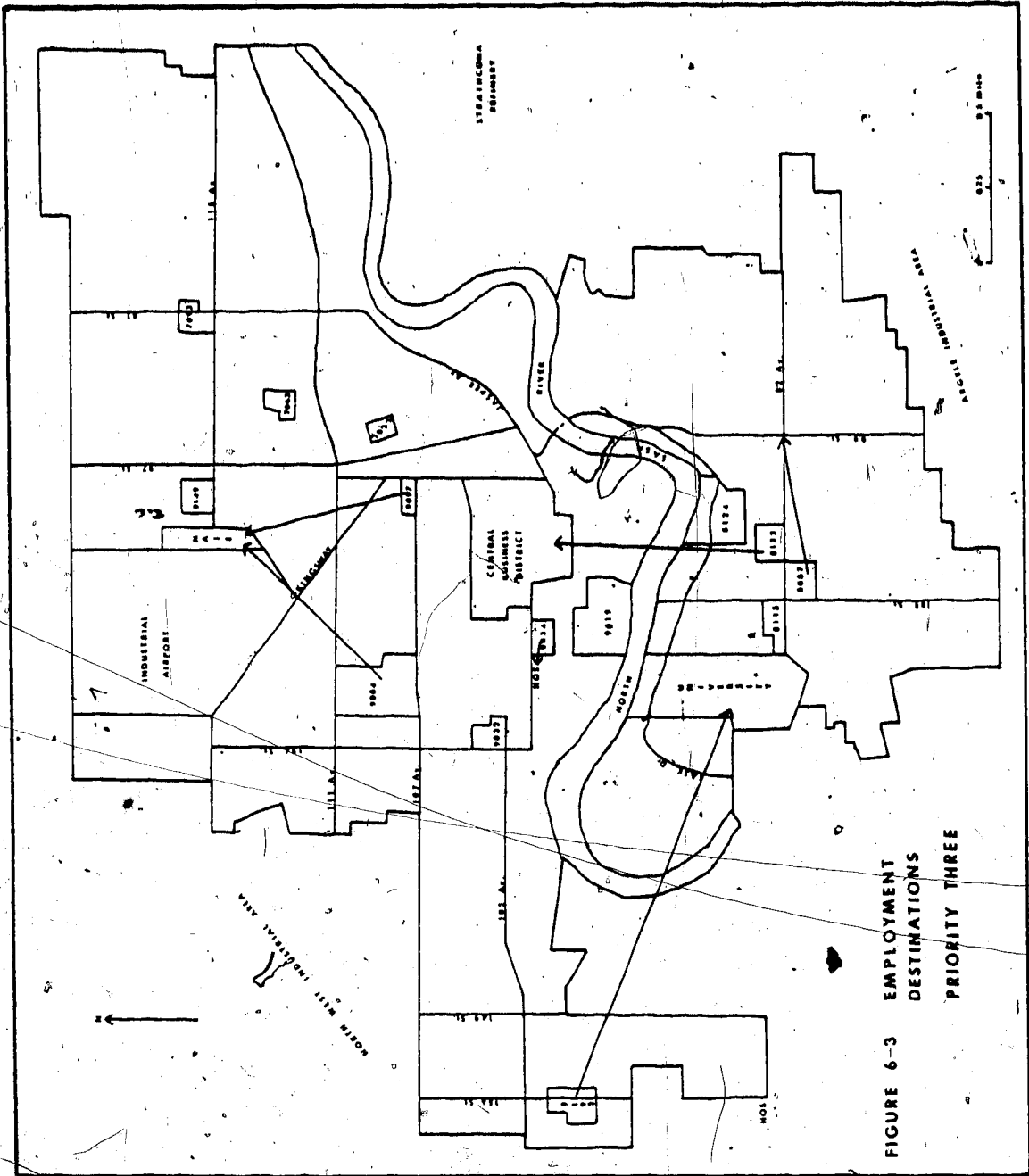
FIGURE 6-3   EMPLOYMENT
DESTINATIONS
PRIORITY THREE

terminate in the central business district. There are three exceptions; the area near the Northern Alberta Institute of Technology which focuses on that institution, the area north-west of the central business district which focuses on 124th Street and the area on 156th Street which focuses on the Misericordia Hospital.

Figure 6-2, illustrating the second most important terminus, emphasizes the importance of the central business district as a focal point. Trips from the areas south of the river terminate in the central business district as does the area near the Northern Alberta Institute of Technology, the area on 156th Street and the area north-west of the central business district. The two areas south-west of the central business district focus on the University of Alberta.

Minor focal points that appear on Figures 6-2 and 6-3 include the Strathcona refinery, 124th and 82nd Streets, the Kingsway Office/Commercial area and the General Hospital.

Shopping Patterns

The shopping patterns of households were also examined. The data collected and analyzed included the length and destination of the trips and the method of travel. These variables were cross-classified by

sample area and the type of goods purchased--convenience
or durable.

Convenience Goods.--The average length of
convenience trips for the sample was 0.63 miles (Table 6-17),
20 per cent of the households travelled no more than one
tenth of a mile, 60 per cent less than half a mile. The
majority of households do use the closest or most accessible
outlet. There was a very high correlation between the
average distance travelled in each area and the distance to
the area's nearest grocery outlet (corner stores were not
included). The value of Spearman's rho was 0.95 (Table
6-18). In spite of the fact that convenience trips were
short and the majority of households used their nearest
outlet over 50 per cent of the households still used the
car, 11 per cent used public transit and 35 per cent
walked.

Durable Goods.--People naturally travelled
much further for durable goods, i.e. clothes, furniture,
hardware and appliances. The average distance travelled
was 1.9 miles. The average varied from a low of 1.17
miles to 2.67 miles (Table 6-19).

Table 6-20 illustrates where the majority
of households shop. Although there is a general trend

TABLE 6-17

DISTANCE DISTRIBUTION OF CONVENIENCE
SHOPPING TRIPS (TWO WEEK PERIOD)

Distance (miles)	Trips	Percentage
0.1	53	20
0.2	36	13
0.3	44	16
0.4	29	11
0.5	6	2
0.6	21	8
0.7	7	3
0.8	7	3
0.9	6	2
1.0	4	1
1.1-1.5	16	6
1.6-2.0	5	2
2.0 plus	33	12
Total Trips	267*	100

Average Trip Length = 0.63 miles

* 26 persons did not respond

TABLE 6-18

CONVENIENCE SHOPPING--NEAREST OUTLET AND
AVERAGE DISTANCE TRAVELLED

Area	Distance To Nearest Major Outlet	Average Distance Travelled
7023	.55	.97
7063	.80	.95
7093	.50	.83
8087	.25	.60
8115	.30	.70
8122	.45	.78
8124	.40	.66
9019	.65	1.10
9024	.25	.43
9032	.20	.34
9084	1.40	1.23
9097	.35	.41
9149	.10	.23
9192	1.20	1.02

$r_{rank} = 0.95*$

* significant at the .01 level

TABLE 6-19

DURABLE GOODS SHOPPING

Area	Distance To Nearest Centre (miles)	Distance To Downtown (miles)	Average Distance Travelled (miles)
7023	1.30	1.30	1.37
7063	1.70	1.70	2.37
7093	1.20	2.90	2.67
8087	2.00	2.55	2.49
8115	2.40	2.80	2.43
8122	1.90	2.50	2.23
8124	1.80	2.00	2.27
9019	1.15	1.15	1.26
9024	1.10	1.10	1.30
9032	1.65	1.65	2.06
9084	1.75	1.75	1.54
9097	.80	.80	1.17
9149	.15	1.90	1.54
9192	1.10	4.30	1.90
Total Sample			1.90

Nearest To Average r_{rank} = .65*

Average To Downtown r_{rank} = .78*

* significant at the .01 level

TABLE 6-20

DESTINATION OF SHOPPING TRIPS FOR DURABLE GOODS (PERCENTAGE DISTRIBUTION)
(ONE MONTH PERIOD)

Area	*DT	*BD	*SG	*NG	*LD	*WM	*CP	*CT	*ML	*OT	Total
7023	80	--	--	--	--	--	20	--	--	--	100
7063	67	--	--	--	--	--	33	--	--	--	100
7093	42	4	--	12	19	--	12	--	--	12	100
8087	32	10	29	--	--	7	2	5	--	15	100
8115	32	11	34	1	9	5	4	--	2	2	100
8122	27	21	21	1	8	4	9	--	1	7	100
8124	30	16	25	2	6	5	5	--	--	11	100
9019	46	3	19	2	5	14	--	3	6	2	100
9024	47	3	8	3	11	17	2	5	5	--	100
9032	30	6	5	10	15	9	5	11	9	1	100
9084	45	--	9	9	18	--	--	--	--	18	100
9097	40	2	2	9	15	12	4	6	4	6	100
9149	31	4	4	10	17	7	3	1	3	20	100
9192	27	--	--	--	6	15	--	33	18	--	100
Total Trips	244	54	102	29	68	56	31	31	27	44	686
%	36	8	15	4	10	8	5	5	4	6	100

* DT--Downtown   BD--Bonnie Doon   SG--Southgate   NG--Northgate   LD--Londonderry
WM--Westmount   CP--Capilano   CT--Centennial   ML--Meadowlark   OT--Other

towards the closest centre, households shop around a great
deal more for durable than for convenience goods. There
is a significant relationship (r = 0.65) between the
average distance travelled in each area and the distance
to the nearest centre (Table 6-19), but the relationship
with the distance to downtown was considerably higher
(r = 0.78).

Table 6-20 illustrates the importance of the
central business district as a focal point for shopping.
Out of a total of 686 trips recorded, 244 or 36 per cent
terminated in the downtown area. This is more than double
the figure for Southgate, the next most important centre.
Approximately a third or more of all the trips in each area
were to the central business district. Over 80 per cent
of these trips were for shopping although they were often
combined with personal business, medical or dental trips
or entertainment.

Summary

The analysis confirms that there is a
physical and functional relationship between the tenants'
residential location and the central or local employment
and shopping nodes. Although more than one third of the
employment destinations terminated in areas that had no
relationship to the residential location the majority of

tenants do utilize their proximity to employment and
work in the central employment nodes. The same conclusion
holds true for tenant shopping activity. For convenience
shopping there is a very high correlation between the
distance to the closest centre and the distance tenants
travelled. For durable goods tenants shop around more but
the trend is still to the closest centre.

The car, however, is still the most
frequently used mode of travel for both work and shopping
even though tenants have fewer cars per household than the
population as a whole. Although there was not a high
correlation between income and car ownership low income
tenants do rely more on walking and public transport.
These modes of travel were used most extensively in low
income areas and areas near the University of Alberta
that contain many students with limited incomes.

One inference is very obvious from the
analysis, the central business district and the University
of Alberta are the focus of much of the tenant activity
with respect to employment and shopping. As there is a
physical and a functional relationship between residence
and these activity nodes it may seem safe to conclude
that accessibility does play a role in the household's
residential location decision. However, further

examination of this premise by actually analyzing the

location decision of the tenants is necessary before

confirming or denying the conclusion. The fact that an

individual lives very close to his place of employment

may not bear any relationship to his reason for choosing

that place as a residence. Chapin (1974) has pointed

out that activity patterns as they are perceived in a

physical sense may not always accurately represent the

needs and preferences of those involved.

CHAPTER 7

THE LOCATION DECISION PROCESS OF CENTRAL AREA TENANTS

The review of existing literature indicates that there are many relevant variables in the residential location decision. However, very few of the variables that may be important in the decision making process have been extensively tested in the central area. Also, there has not been a great deal of research on how the variables in the decision making process vary with the character- istics of the tenant! The emphasis on accessibility may be easier to handle, particularly when it centres on the journey to work and shopping but it may also be divorced from reality.

This chapter will examine the role that accessibility plays in the location decision process of central area tenants but it will also test the role of other variables associated with the actual site and structure, managerial policy, social and physical aspects of the surrounding neighbourhood and financial consider- ations. The study will also attempt to determine if the actual variables considered or the importance of specific variables varies with tenant characteristics.

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THE LEVELS OF DECISION MAKING

For the tenants there are at least two
levels of decision making when choosing a residence,
first at the contextual level the decision to rent or buy,
then within the context of this decision the more specific
processes of selecting a particular area and an actual
dwelling unit. The decision making process at all levels
varies with the characteristics of the decision makers.

The Contextual Level

The Reasons For Renting.--When questioned
on why they chose to rent 41 per cent of the households
stated they could not afford to buy (Table 7-1). Nearly
30 per cent indicated they were renting because they
considered their presence in Edmonton as temporary. They
were finishing their education, expecting to be transferred
to another job or preferred to live elsewhere. Other
reasons included the reduction in responsibility associated
with renting, the fact that less space was needed, and a
preference for apartment living.

There were significant relationships
between the age and type of household and the reasons for
renting. Chi-square was significant at the .01 level
(Tables 7-1 and 7-2). A high percentage of all households

TABLE 7-1

PERCENTAGE DISTRIBUTION OF REASONS FOR RENTING BY TYPE OF HOUSEHOLD

Households	No.	Can't Afford To Buy %	Temporary Location %	Prefer Apt. Living %	Less Space Required %	Less Respons-ibility %	Other %	Total %
Married Couples	88	39	27	6	13	10	6	100
Hhlds With Children	57	60	19	4	4	7	7	100
Single Persons	73	25	21	12	16	21	5	100
Shared Singles	75	45	43	5	1	3	3	100
Total	293	120	82	20	26	30	15	
Percentage	100	41	28	7	9	10	5	

Chi-square = 52.31*   *significant at .01 level

TABLE 7-2

PERCENTAGE DISTRIBUTION OF REASONS FOR RENTING BY AGE OF HEAD

Age	No.	Can't Afford To Buy %	Temporary Location %	Prefer Apt. Living %	Less Space Required %	Less Respons- ibility %	Other %	Total %
Under 25	123	49	39	4	--	3	5	100
25 - 34	80	48	34	6	1	8	4	100
35 - 54	34	44	18	9	9	15	6	100
55 plus	56	11	4	13	36	30	7	100
Total	293	120	82	20	26	30	15	
Percentage	100	41	28	7	8	11	5	

Chi-square = 112.09*   *significant at .01 level

reported that they rented only because they felt they could not afford to buy but the lack of purchasing power was most important for households containing children (Table 7-1). For shared households the temporary location was a significant element. The lack of responsibilities, reduced space requirements and a preference for apartment living were more common among single person households.

As age increased the percentage who stated that they could not afford to own as their primary reason for renting declined--from 49 per cent for households under twenty-five to 11 per cent for households over fifty-five (Table 7-2) this was not because income increased with age (sample figures prove it does not) but because the primary reasons for renting change with age. The percentage that see their location as temporary declines while the proportion that prefer apartment living, require less space and dislike the responsibilities of ownership increase.

Why Households Will Continue To Rent.--When asked whether they expected to rent or buy following their next move 216 (74 per cent) households indicated they would rent, 74 (25 per cent) expected to buy while 3 (1 per cent) households could not express an opinion. Nearly half of the reasons given were associated with the fact that households could not afford to buy (Table 7-3).

TABLE 7-3

EXPECTED TENURE BY REASONS FOR TENURE

Reasons For Continuing To Rent	Percentage
1. Can't afford to buy	44
2. See location as temporary	25
3. Retired, too old to buy	11
4. Dislike responsibilities of ownership	5
5. Interest rates, prices too high	5
6. Other (includes--too young to buy, prefer apartment living and very little space required)	10
Total	100

Reasons For Entering The Ownership Market	
1. Freedom, independence	34
2. Renting is money wasted	17
3. Investment purposes	15
4. More privacy and space	13
5. Other (includes--reasons associated with security of ownership and family planning)	21
Total	100

Another 25 per cent were associated with the tenants'
temporary location, 11 per cent with the fact that tenants
were too old to buy, 5 per cent with a dislike of the
responsibilities of home ownership and another 5 per cent
with the high initial prices and cost of debt financing.
The remaining 10 per cent of the reasons included too
young to buy, a preference for apartment living and the
fact that the household did not require the space available
in a single family home.

Thirty-four per cent of the reasons given
by the households who planned to buy were associated with
the freedom and independence of ownership, 17 per cent
with the fact that renting was money wasted, 15 per cent
with ownership as an investment and 13 per cent with the
privacy and space offered by a single family home. The
remaining 21 per cent of the reasons were associated with
the security of ownership and family planning. Over 80
per cent of those who planned to buy were married couples
or households with children. Over 95 per cent of those
planning to buy intended to buy a single detached dwelling.
This preference may be biased by the fact that there is
very little to choose from other than single detached units
in Edmonton. Many indicated they would prefer a country
(acreage) or small town location.

Specific Site Selection

The Variables Tested.--A total of sixty-
three variables was tested in the more specific process
of selecting an actual residential site (see Appendix IV).
These variables dealt with the unit, the associated
structure and site and the location relative to other
elements of the urban infrastructure. They were selected
by reference to other research in the same area of study,
and by talking to individuals associated with the develop-
ment and management of rental property. This included
discussions with officials of the Edmonton Real Estate
Board, some of the city's major investment firms such as
Canada Permanent Trust and Royal Trust; development
companies such as Humford Developments Limited and Aldritt
Apartments Limited; companies involved in property
management such as Mid-West Property Management and
Weber Brothers Realty and firms involved in apartment
construction such as Bird and Batoni Bowlen. A complete
list of these firms is included as Appendix V. Interviews
with five resident managers of apartments and five owners
of converted dwellings were also conducted. These inter-
views were conducted on an informal basis and no structured
questionnaire was developed. However, they did provide
valuable information with respect to the location and

development of central area rental housing in general and the specific variables that are significant in the location decision.

Twenty-five per cent of the variables dealt with aspects associated with the interior of the unit, 21 per cent with the accessibility of the location to other facilities and 19 per cent with aspects associated with the site and structure (Table 7-4). The remaining 35 per cent were associated with the physical appearance of surrounding development, aspects of management, financial or special considerations and social aspects of the neighbourhood.

During the survey households were first presented with a list of the variables. The variables were not organized into the groups as indicated above because such a method of organization could bias the results. For example, households could look at the heading "ASPECTS OF MANAGEMENT" and if they felt management was important or had formed a definite opinion with respect to the management they might be more inclined to check all or none of the associated variables regardless of how important they were in the location decision. Therefore, the factors were randomized as indicated in Appendix VI. The households were asked to check those

TABLE 7-4

CATEGORIZATION OF LOCATION DECISION VARIABLES

Variables	Distribution of Variables	
	Number	Percentage
Interior of the unit	16	25
Associated aspects of site and structure	12	19
Aspects of management	6	10
Physical aspects of surrounding development	7	11
Social aspects of the neighbourhood	4	6
Accessibility to other facilities	13	21
Financial considerations	5	8
Total	63	100

variables that they considered in their choice of a

location but initially they were not required to rate

them in order of importance. However, actual ratings will

be discussed later in the chapter.

The Variables Considered.--The first step

in analysis was to determine which group of variables

received the greatest attention in the location decision.

To do this a system of weighted rankings was employed.

Each group of variables was weighted to account for the

different number of variables each contained. This was

done by multiplying the number of variables in each group

by the number of households in the sample. The result is

the total possible number of times a group could be

considered (Table 7-5). The actual number of times each

group was checked was then expressed as a percentage of

this total and ranked as illustrated.

Overall, variables associated with the

interior of the unit received the greatest consideration

in the location decision, followed closely by access-

ibility to other facilities. The physical characteristics

of the neighbourhood were third in importance closely

followed by financial aspects. The associated aspects of

site and structure, aspects of management and social

aspects of the neighbourhood followed in that order.

TABLE 7-5

CONSIDERATION OF VARIABLE CATEGORIES TESTED IN THE LOCATION DECISION PROCESS

Group	# of Variables	# of Hhlds	Possible Considerations	Actual Considerations	Actual/ Possible %	Rank
Interior of the unit	16	X 293 =	4,688	1,440	31	1
Associated aspects of site and structure	12	X 293 =	3,516	635	18	5
Aspects of management	6	X 293 =	1,758	268	15	6
Physical characteristics of the neighbourhood	7	X 293 =	2,051	473	23	3
Social aspects of the neighbourhood	4	X 293 =	1,172	118	10	7
Accessibility to other facilities	13	X 293 =	3,809	1,064	28	2
Financial or special considerations	5	X 293 =	1,465	337	23	4

The results also indicate that there are
some specific variables which are considered far more ●
often than others by a majority of the households. These
variables and the number and percentage of households
that considered them are presented in Table 7-6. The
literature review illustrates that several of the variables
such as proximity to work and shopping, the size of the
unit and monthly rent, have been identified in several
previous studies. However, others, such as the presence
of appliances, carpeting, laundry facilities, storage and
parking and access to a bus route have not been extensively
tested previously. They are mentioned in economic liter-
ature on hedonic prices (Ball, 1973; Rosen, 1974; Grether
and Mieszkowski, 1974; Berry and Bednarz, 1975 and Chinloy,
1975) but not specifically related to tenants, particularly
central area tenants.

The variables listed in Table 7-6 were
considered by at least 50 per cent of the households. The
consideration given to the remaining variables is presented
in Appendix IV. The condition of the unit was considered
by 48 per cent of the households, proximity to downtown
by 34 per cent but the remaining variables received very
little consideration, in fact, 65 per cent were considered
by less than 25 per cent of the households.

TABLE 7-6

VARIABLES CONSIDERED IN DECISION TO TAKE
PRESENT DWELLING UNIT

Variables	Number	Percentage
1. Presence of appliances	181	62
2. Monthly rent	180	61
3. Close to bus route	170	58
4. Carpeting	169	58
5. Close to shopping	167	57
6. Size of unit	165	56
7. Presence of laundry facilities	164	56
8. Close to work	158	54
9. Storage space	154	53
10. Parking space	149	51

Some of the variables received little
consideration for obvious reasons. For variables assoc-
iated with single detached units, children or disabled
people the sample was small. Others such as air condit-
ioning and feature walls existed in very few units.
However, several that received very little attention
have been singled out by other studies as important
elements in the residential location decision. These
include management policy on the age and sex of tenants
and social aspects associated with income and nationality
(Frieden, 1951; Lansing and Muellar, 1964; Leaman, 1967;
Home Builders Association, 1969; Gobar, 1973 and McKeever,
1974). These aspects were also considered significant by
some of the individuals associated with the development
and management of rental property that were interviewed.
Some were important in certain sample areas and their
spatial significance is discussed in a later section.

Space was provided for additional variables
that may have been important to some households but were
not included in those listed on the questionnaire. Several
were mentioned but not with any consistency and many
turned out to be variations of those already listed.
For example, some households indicated a preference for
a unit with a specific number of bedrooms or a unit in a

complex which had a swimming pool. These variables are

mutations of the size and arrangement of units and

recreational facilities in the complex which were on the

survey form. Other households said they preferred a

certain area of the city but this was usually related to

aspects associated with the particular neighbourhood

i.e. it was quiet, clean, spacious or it was close to

shopping, work or friends.

In summary, in the residential location

decision, households consider a wide range of variables.

Some are considered by a much higher percentage of the

households and can be considered as very basic require-

ments in the choice of a place to live.

The Ranking Of Variables.--After the

households had checked those variables that they took

into consideration during their locational choice they

were asked to list, in order of importance, what they

considered as the three most important variables in their

decision. The ten most important variables ranked according

to the number of households that listed them as either

the first, second or third most important variable in

their decision are listed in Table 7-7.

Six of the ten variables were associated

with the unit's accessibility to other elements of the

TABLE 7-7

RELATIVE IMPORTANCE OF LOCATION DECISION VARIABLES

	First Reason		Second Reason		Third Reason		Total	
	#	%	#	%	#	%	#	%
1. Monthly rent	42	14	36	12	34	12	112	38
2. Close to work	50	17	29	10	12	4	91	31
3. Close to bus route	6	2	23	8	17	6	46	16
4. Close to Univ. NAIT	25	9	14	5	6	2	45	15
5. Size of rooms	8	3	9	3	20	7	37	13
6. Close to shopping	6	2	11	4	13	4	30	10
7. Condition of the unit	8	3	12	4	9	3	29	10
8. Close to friends	5	2	12	4	5	2	22	8
9. Quiet surroundings	9	4	3	1	10	3	22	8
10. Close to downtown	6	2	5	2	10	3	21	7

urban structure. Proximity to work was rated as the most important reason by fifty of the households. Another twenty-five listed the proximity of the University of Alberta or Northern Alberta Institute of Technology which is, in effect, their place of employment although many are students. So, in effect, seventy-five households, or slightly more than one quarter of the sample, indicated that their primary reason for choosing the location was its proximity to employment. Several other households that listed the proximity of a bus route indicated that they did use the bus to get to work, so this variable was also related to employment.

Two of the variables, size of the rooms and condition of the unit, were associated with the interior of the unit and one, the quiet surroundings, with the physical aspects of the surrounding development. Considerable importance was placed on financial aspects and more households ranked monthly rent as the first, second or third most important reason for the choice of residence than any other single factor.

When Table 7-7 is compared with Table 7-6 only five variables are repeated; the monthly rent, the size of the unit, proximity to a bus route, shopping and work. The variables not repeated are the presence of

appliances, carpeting, laundry, storage and parking.
These variables are basic in terms of what most households
require when seeking a dwelling but their occurrence in
a high percentage of units on the market means that a
great deal of significance need not be attached to them.

Later in the questionnaire the households
were asked what two factors they liked most about their
present location. This question was asked to see if the
previous ranking of factors was confirmed and the location
had lived up to its initial expectations. In general, the
important factors were confirmed although the order varied
considerably (Table 7-8). The importance of monthly rent
fell from first to third place while proximity to work
moved from second to first. Quiet surroundings jumped from
ninth to second while proximity to the University of Alberta
or Northern Alberta Institute of Technology remained in
fourth.

Instead of households saying they were
easily accessible to shopping, friends, downtown or a bus
route they tended to speak in terms of their "good" or
"central" location. Three new factors; privacy, view from
the unit and availability of recreational facilities did
appear on the list. In general, however, the reasons for
choosing the location in the first place were confirmed

TABLE 7-8

REASONS TENANTS LIKE THEIR PRESENT LOCATION

	First Choice		Second Choice		Total	
	#	%	#	%	#	%
1. Close to work	27	9	8	3	35	12
2. Quiet surroundings	22	8	8	3	30	10
3. Monthly rent	15	5	9	3	24	8
4. Close to Univ., NAIT	19	6	4	1	23	8
5. Privacy	18	6	3	1	21	7
6. Central	17	6	3	1	20	7
7. Size of rooms	13	4	7	2	20	7
8. View from unit	8	3	10	3	18	6
9. Recreational facilities in complex	5	2	10	3	15	5
10. Good location	9	3	3	1	12	4

by the reasons given for liking their particular dwelling.

Evidence indicates that centrality is of paramount importance to tenants. Later in the questionnaire households were asked what they felt were the advantages and disadvantages of a suburban location. Residential areas on or near the periphery of Edmonton such as Mill Woods, Beverley Heights, Petrolia, Duggan and Westlawn were given as examples of suburban areas. Table 7-9 illustrates the results.

Approximately 42 per cent of the households felt there were no advantages. Advantages that were mentioned included the cheaper rents; the quieter, cleaner atmosphere; more space and privacy and better planning and provision for children. Only 5 per cent said it was closer to work.

With respect to disadvantages only 25 per cent felt there were no disadvantages. Approximately 35 per cent mentioned the travel time or distance to work. The other reasons given--road conditions in winter, the distance from downtown, lack of good bus service and the distance from facilities such as shopping, entertainment and health services--like the distance from work, are all associated with the tenants' relationship to central area employment, shopping, entertainment and other facilities.

TABLE 7-9

ADVANTAGES AND DISADVANTAGES OF SUBURBAN LIVING

Advantages	Percentage Distribution
1. None	42
2. Cheaper Rent	9
3. Quieter	25
4. More Space--Clean Air	9
5. More Privacy	3
6. Better For Children	4
7. Better Planned	4
8. Closer To Work	2
9. Other	2
Total	100

Disadvantages	Percentage Distribution
1. None	25
2. Travel Time--Distance To Work	35
3. Transportation Difficulties	13
4. Road Conditions In Winter	2
5. Too Far From Friends, Family	5
6. Too Far From Downtown	6
7. Lack Of Good Bus Service	2
8. Too Far From Facilities	8
9. Other	4
Total	100

THE SPATIAL PATTERN OF RESPONSE

During the analysis, cross tabulations were constructed and summary statistics for cross tabulations calculated. The resulting statistics illustrate the relationships that exist between the variables considered in the locational choice and other elements in the urban structure.

First the responses to the variables were tested to determine if they illustrated a spatial pattern. If the importance of a certain variable was related to a particular aspect of the urban spatial structure the households which gave consideration to that variable should have a related spatial pattern. For example, living close to people of the same nationality should appear as being more important to households living in areas where a particular ethnic group dominate. To test this three methods were used. Chi-square was used to determine if a spatial relationship existed; the strength of the relationship was tested by calculating values for Cramer's V and the contingency coefficient; and, as a third step, a spatial concentration ratio was calculated. The ratio was arrived at by dividing actual by expected frequencies. Expected frequencies for each area were calculated by multiplying the total number of times a variable was considered by the

percentage of sample households living in the area. The

actual number of households in the area that considered the

variable was then divided by the expected frequency.

An example is set out below:

The variable CLOSE TO RIVER VALLEY was considered by 47 of

the 293 households;

Area 9019 contains 31 households

Expected frequency $\frac{31}{293} \times 47 = 5$

Actual frequency = 20

Spatial concentration ratio $\frac{\text{Actual}}{\text{Expected}} = \frac{20}{5}$ or 4.0

Those variables illustrating a systematic

spatial relationship are tabulated in Figure 7-1. Values

for Cramer's V and the contingency coefficient are also

presented. Figure 7-2 illustrates the spatial concentration

ratios. Any variable that has a ratio greater than is

concentrated or has greater significance in that particular

area than would be expected--given the area's percentage

of the total households in the sample.

The spatial variation is not coincidental

but is associated with tenant characteristics in the area

or with elements of the urban spatial structure. Groups

of variables illustrate the same spatial pattern, others

have individual patterns.

FIGURE 7-1. SPATIAL RELATIONSHIP OF LOCATION DECISION
VARIABLES

Variable	*CS	*LS .01	.05	*CV	*CC
INTERIOR					
Air Conditioning	21.8	**	**	.27	.26
Carpeting	31.3		**	.33	.31
Drapes	40.6		**	.37	.35
Balconies	39.2		**	.37	.34
View	68.1		**	.48	.43
Soundproofing	47.9		**	.40	.37
EXTERIOR					
Recreational Facilities	110.6		**	.61	.52
Play Space	32.4		**	.33	.32
High Rise	62.2		**	.46	.42
Walk-up	50.1		**	.41	.38
Single Detached	22.6	**	**	.28	.27
Size of Lot	44.9		**	.39	.36
MANAGEMENT					
Security Service	44.0		**	.39	.36
Children Allowed	29.3		**	.32	.30
Children Not Allowed	24.0	**	**	.29	.28
PHYSICAL					
Privacy	25.6		**	.30	.28
Quiet Surroundings	25.9		**	.30	.29
SOCIAL					
Same Nationality	34.3		**	.34	.32
ACCESSIBILITY					
Close to Children's School	28.4		**	.31	.30
Close to Univ., NAIT	57.9		**	.44	.41
Close to Church	54.8		**	.43	.40
Close to Bus Route	40.1		**	.37	.35
Close to River Valley	83.4		**	.53	.47
Close to Downtown	85.0		**	.54	.47
Close to Relatives	53.8		**	.43	.39
FINANCIAL					
Monthly Rent	33.3		**	.34	.32

*CS--Chi-square Value   *CV--Cramer's V

*LS--Level of Significance   *CC--Contingency Coefficient

FIGURE 7-2. SPATIAL CONCENTRATION OF LOCATION DECISION VARIABLES

	7023	7063	7093	8087	8115	8122	8124	9019	9024	9032	9084	9097	9149	9192
INTERIOR														
Air Conditioning	1.87						2.26	3.35						1.24
Carpeting	1.26			1.28				1.16						1.12
Drapes	2.54					1.14	1.18	1.74						1.28
Balconies				1.77	1.22		1.64	1.08						
View				1.73			1.04	2.72	1.58					
Soundproofing				2.05			1.41	1.75	1.42					
EXTERIOR														
Recreational Facilities	3.95						1.58	1.80						3.49
Play Space	6.12	4.16	2.98	1.92										
High Rise	2.35						1.38	2.81	2.64					
Walk-up		1.58	2.76				2.82			1.28	2.35	1.23		
Single Detached		8.69	1.58								3.44	2.72		1.23
Size of Lot	4.16	16.66	3.03				1.42				6.45	1.72		2.32
MANAGEMENT														
Security Service	2.64						1.48	1.26			1.22			
Children Allowed	2.67	2.42	1.25								1.17		2.00	1.53
Children Not Allowed					1.55		2.25	1.69	1.09				1.47	
PHYSICAL														
Privacy			1.63			1.17	1.79	1.56				1.58		
Quiet Surroundings		1.08	1.56			1.32	1.81	1.17						1.13

FIGURE 7-2.--Continued

	7023	7063	7093	8087	8115	8122	8124	9019	9024	9032	9084	9097	9149	9192
SOCIAL														
Same Nationality	9.37	2.22							3.89					
ACCESSIBILITY														
Close to Children's School	4.83		1.16	2.25			1.66					1.19		3.67
Close to Univ.													1.56	
NAIT						1.76	1.98	1.73	1.30					
Close to Church	5.83			1.86	2.01			1.10	1.24	1.71				
Close to Bus Route	1.30			1.57	1.11		1.28		2.69		1.36	1.48		
Close to River Valley								4.02	2.07	1.17				
Close to Downtown	1.29							1.90	1.48	1.60	1.55	2.16		
Close to Relatives	6.32	4.63								1.27	2.04		1.26	2.17
FINANCIAL														
Monthly Rent	1.20	1.48				1.21	1.27			1.22			1.29	1.12

Several variables are associated with the high rent, high income areas including the presence of air conditioning, carpeting, drapes, balconies, soundproofing, security service, recreational facilities in the complex and the view from the unit. The view from the unit was most significant in area 9019, the area overlooking the river valley, but it also received consideration in other areas containing high rise units. Because it was a high rise, as expected had ratios greater than one in most of these areas. Many of these variables, although not exclusively found in high rise units, are more often associated with them and people may choose a high rise unit if these variables are important to them.

Other variables were closely associated with areas containing families with children. These included play space, the size of the lot or site, the fact that management allowed children in the units or the fact that they were close to a school. Also illustrating a similar pattern was the variable, "because it is a single detached unit". The above were, however, not associated exclusively with areas containing a relatively high percentage of single detached units as other dwelling types also contained families with children.

Although spatial patterns of the remaining

factors do not necessarily bear a relationship to each other they can be explained. Their association with certain characteristics of the tenants or aspects of urban structure is obvious.

Generally associated with low to moderate income areas was the proximity of the bus route. As explained in Chapter 6, the car was used quite extensively in these areas but members of the household other than the head depended extensively on the bus to get to work. Not unexpectedly, the monthly rent was also a significant variable in the location decision in these areas. In areas that were close to the University of Alberta or the Northern Alberta Institute of Technology, near the downtown area or close to the river valley, people indicated that proximity to these elements was considered in their location decision.

Nationality and the presence of the church was significant in areas north-east of the central business district containing a slavic ethnic majority, however, the church was also significant in areas containing many elderly people. The presence of relatives was generally more important in areas containing families with children and very important in the ethnic areas. Quiet surroundings, privacy and the fact that children were not allowed in by

management was of greatest importance in areas containing

single or elderly individuals.

The Strength Of The Spatial Relationships

Based on the values of Cramer's V and the

contingency coefficient the presence of recreational

facilities in the complex illustrated the greatest degree

of association. This is a reflection of the fact that

their distribution is very localized, being confined to

high rise, high rent units.

The next strongest association was illust-

rated by proximity to downtown, followed by proximity to

the river valley, view from the unit, and proximity to

the University of Alberta or the Northern Alberta Institute

of Technology. This is as expected as none of the

variables are ubiquitous in the urban area but it does

illustrate that households living in close proximity to

these variables or where elements such as the view are

available do attach significance to them.

Summary

In summary, some variables considered

important in the decision to take a dwelling have a

definite spatial pattern within the urban area. This

spatial variation is not coincidental but is associated

with tenant characteristics or elements in the urban structure. These elements are often controlling variables in the decision to take a dwelling, i.e. they have the drawing power necessary to stimulate residential change.

TENANT CHARACTERISTICS AND THE LOCATION DECISION MAKING PROCESS

Variation By Household Type And Age Of Head

Several approaches were taken to determine if the variables considered in the site selection varied with the age and type of household. First the system of weighted rankings was employed. Rankings were established for households by age and type (Tables 7-10 and 7-11). There was considerable consistency in the way different variable groups were ranked but differences did exist. Spearman's rho was computed and used to determine the degree of similarity between the overall ranking and the rankings established for the different types of households and households in the different age groups.

The greatest deviation from the overall pattern is illustrated by married couples with children followed by households shared by single individuals (Table 7-10). Married couples, single parents and single persons conformed very closely to the pattern for the entire sample.

TABLE 7-10

RANKING OF VARIABLE CATEGORIES BY TYPE OF HOUSEHOLD

	All Households	Married Couples	Married With Children	Single Parents	Single Person	Shared Households
Interior	1	1	2	1	2	1
Exterior	5	4	4	6	5	5
Management	6	6	6	5	6	6
Physical	3	3	7	4	3	4
Social	7	7	5	7	7	7
Accessibility	2	2	1	2	1	3
Financial	4	5	3	3	4	2
r_{rank}		.96	.41	.93	.96	.89

TABLE 7-11

RANKING OF VARIABLE CATEGORIES BY AGE OF HEAD

	All Households	0-19	20-24	25-29	30-34	35-44	45-54	55-64	65+
Interior	1	4	1	1	2	2	1	1	2
Exterior	5	7	5	5	4	4	6	5	6
Management	6	5	6	6	5	7	5	6	4
Physical	3	2	4	4	6	5	2	2	1
Social	7	6	7	7	7	6	7	7	5
Accessibility	2	1	2	2	3	1	3	3	3
Financial	4	3	3	3	1	3	4	4	7
r rank		.68	.96	.96	.41	.82	.93	.96	.57

With respect to age, households in the thirty to thirty-four age group illustrated the greatest deviation. This is consistent with the deviation by married couples with children, many of whom fall in this age bracket. The thirty-five to forty-four age bracket, a family oriented group, also illustrated considerable deviation but not as much as the very young and the very old (Table 7-11).

Interior.--Treating each group of variables individually all households, except those under twenty, ranked the interior characteristics of the unit either first or second. The very young households placed very little emphasis on the interior of the unit, ranking it only fourth (Table 7-11). Very few of the individual variables within the group illustrated a significant relationship with either the age or the type of household (Figure 7-3). The variables that were given the greatest consideration tended to be important to nearly all ages and types of households. Soundproofing and the condition of the unit were significantly related to the type of household, while view was significantly related to both age and type of household.

The distribution of actual, as compared to expected, frequencies in the contingency table (Appendix VII)

FIGURE 7-3. SUMMARY STATISTICS FOR CROSS TABULATION--
THE DECISION MAKING PROCESS

	Age			Household Type		
	Chi-Square Value	Signif. Level .01	.05	Chi-Square Value	Signif. Level .01	.05
INTERIOR						
Condition	1.51			12.01	*	*
View	17.39	*	*	8.92		*
Soundproofing	2.88			11.72		*
EXTERIOR						
Parking Space	6.48			10.49		*
Play Space	11.67		*	54.50	*	*
High Rise	34.35	*	*	13.91	*	*
MANAGEMENT						
Security Service	3.17			16.60	*	*
Pets Allowed	7.36			2.60		
Pets Not Allowed	19.64	*	*	8.44		*
Children Allowed	7.51			82.42	*	*
Children Not Allowed	30.53	*	*	12.03	*	*
Age/Sex Policy	17.63	*	*	18.27	*	*
PHYSICAL						
Appearance	9.12		*	3.07		
Privacy	10.73		*	6.05		
Quiet Surroundings	13.79	*	*	10.58		*
Absence of Traffic Noise	10.26		*	9.37		
ACCESSIBILITY						
Close to Work	11.40	*	*	4.26		
Close to Children's School	24.27	*	*	86.92	*	*
Close to Univ., NAIT	26.81	*	*	21.20	*	*
Close to Church	24.28	*	*	8.16		*
Close to Traffic Route	12.68	*	*	7.94		*
Close to Entertainment	10.87		*	1.84		

indicates that childless couples and single persons over forty-five place a higher priority on view. Previous analysis illustrated that the importance of view had a distinct spatial distribution i.e. it was strongly associated with the high rise, high income areas on the north side of the river valley. Households in these areas are older than average the sample and this would account for the fact that view from the unit was significantly related to age.

Married couples illustrated a greater interest in condition than expected and soundproofing was important to all types of households except those with children. It was particularly important to shared households.

Site And Structure.--Aspects of site and structure ranged from fourth to seventh (Tables 7-10 and 7-11). Married households and households with children, particularly those between the ages of thirty and forty-four, placed greater emphasis on this aspect of the location decision than the young and the elderly that tend to live in shared or single person households.

Only a limited number of the variables exhibited a significant relationship with the age and type of household. Play areas were important to the family

oriented age groups (twenty-five to thirty-four) and the
fact that it was a high rise was significant to childless
couples and single persons over the age of fifty-five.
Many of the elderly who had sold their own homes indicated
they preferred the high rise because of the elevator as
opposed to the stairs in walk-ups. Parking was very
significant to married couples without children because
many of them had more than one car.

Management.--Management was relatively
unimportant to all households but achieved its greatest
significance with single parent and older households
(Tables 7-10 and 7-11). Many management variables were,
however, significantly related to the age and type of
household. The fact that security service was provided
and pets and children were not allowed was significant to
the older married couples and single person households.
Family households expressed greater concern about the
children being allowed while the younger shared households
were more concerned with the policy of management with
respect to renting to groups of younger men or women or a
combination of the sexes as many of them had difficulty
finding landlords who would rent to such groups (Appendix
VII).

Physical Aspects Of The Neighbourhood.--

There was a wide variation in the way physical aspects of

the neighbourhood were viewed in the location decision.

With age there was an obvious pattern. It received high

priority with the very young but its importance declined

until age thirty-five and then increased until it ranked

number one with households over the age of sixty-five.

With the type of household it was most important to

married couples and single person households and least

important to couples with children.

There was a significant relationship between

the age of the household and appearance, privacy, quiet

surroundings and absence of traffic noise. Surprisingly,

younger households were much more concerned with appearance

but as expected older households were more concerned with

privacy, peace and quiet. Two of the variables, quiet

surroundings and absence of traffic noise were significantly

related to the type of household with married couples and

single person households expressing the greatest concern.

Social Variables.--Social aspects of the

neighbourhood received little attention and ranked last

very consistently. None of the factors were significantly

related to the age or type of household. The greatest

importance was placed on friendly neighbours and even this

factor was considered by only 16 per cent of the house-
holds. From general information collected and opinions
expressed during the interviews the lack of attention to
social variables may be attributed to the fact that most
households regard rental housing as transition housing
and plan to move in the very near future so they did not
take the same interest in their neighbours as they would
had they been more permanent residents. On the other
hand, it may reflect the lack of social conflict in
Edmonton's central area. Other households indicated they
preferred not to know their neighbours socially because
doing so under a situation of such close proximity as
exists in an apartment building created privacy problems.

Accessibility.--Accessibility was quite
important to all households but received greater priority
from young single individuals and couples with children
(Tables 7-10 and 7-11).

Several of the individual variables were
significantly related to the age and type of household.
Families with children were concerned about the proximity
of schools and young shared households, because many were
students, were concerned with accessibility to the University
of Alberta or the Northern Alberta Institute of Technology.
Proximity to a church was significant to older single person

households. Accessibility to a major traffic route was significant to younger married couples and shared households. Accessibility to entertainment and to work illustrated a significant relationship with young households but was not significantly related to a particular type of household (Appendix VII).

Financial Variables.--Financial aspects were the only group of variables to span the entire range of rankings, although there was more consistency by age than type of household (Tables 7-10 and 7-11). It was important to households with children and this was reflected in the thirty to thirty-four age group but in general its importance declined with age. With respect to the type of household, those shared by single individuals placed a higher emphasis on financial aspects than other household types. None of the individual financial variables were significantly related to the age or type of household.

Summary

At the contextual level the reasons households rent vary with the age and household type. Many young married couples and households shared by single individuals rented because of their temporary circumstances.

The significance of this reason, however, declined with age and older single person households rent because they want fewer responsibilities and require less space. A much higher percentage of the households at this age prefer apartment living.

Most households, except those over fifty-five, would not rent if they could afford to buy. The economic analysis of Chapter 4 illustrated that the percentage who can afford ownership has been shrinking rapidly since the early 1970's. The survey results reflect this and approximately one third of the households indicated that although they would prefer to buy when they next moved the cost of homeownership would prevent this. This increases the demand for rental accommodation as until recently many of these households would have moved into the homeownership market.

The lack of purchasing power is extremely significant for households that contain children. Although only a small percentage of rental units contain children an increasing number of families with children find it impossible to get out of the rental market. This is likely to result in an increase in the percentage of units that contain children in the future.

The more specific process of selecting an

actual unit and a specific location depends on a wide

range of variables. Some aspects of the actual unit such

as appliances, carpeting and the presence of a laundry,

storage and parking are basic requirements and are

considered by a large percentage of the households.

However, a great deal of importance is not attached to

these variables perhaps because they are ubiquitous. When

those variables that are considered are ranked in order of

importance the variables referring to the location of the

site relative to other elements in the urban structure

rate very high, particularly the relationship of the site

to employment. The households attached considerable

importance to their central location and a large percentage

were quick to stress the disadvantages of suburban living.

Several of the variables considered in the

decision to take a dwelling illustrated a significant

spatial relationship with tenant or dwelling character-

istics or other aspects of the urban structure. A

significant number of variables relating to the more

luxurious aspects of the interior of the unit had a spatial

pattern similar to the distribution of high rise units,

which in turn corresponds very closely to the distribution

of high rent, high income areas.

The consideration of variables that one

would expect to be important to families with children

had a spatial distribution similar to areas containing a

high percentage of families with children. Some of these

areas also contained a higher percentage of single

detached units. Other factors, although they could not be

put into groups with similar spatial patterns were

individually associated with other characteristics. The

proximity of a bus route and monthly rent were very

important in low income areas, nationality and the church

in ethnic areas and quiet surroundings, privacy and absence

of children in areas containing a high percentage of

elderly households. These variables were controlling

elements in the decision to take a unit.

The variables considered varied significantly

with the age and type of household. Interior aspects of

the unit were of considerable significance to all households

except the very young. Variables associated with the site

and structure were not of outstanding importance to any

of the households although families with children were

concerned about the facilities available for children.

Only the older households who favoured strict control with

no children and single parents who were often discriminated

against expressed concern on policies of the management.

With respect to the physical aspects of the

neighbourhood, younger households were more concerned with appearance, older households with privacy, peace and quiet. Minor importance was placed on friendly neighbours and a few families were concerned with whom their children associated but in general social variables received very little attention. As many households regarded their location as temporary they did not seem overly concerned about their neighbours or the type of neighbourhood they lived in.

Accessibility was significant to all households but most important to young single person households as many did not have access to a car. In shared households containing young people there was usually at least one car available. Accessibility was also more important to families with children. They were particularly concerned about the proximity of schools and as very few were two car families the wife was more dependent on easy access to many facilities than were other households.

CHAPTER 8

SUMMARY AND CONCLUSIONS

INTRODUCTION

The study was stimulated by what was recognized as an information gap--the paucity of evidence on the characteristics of central area tenants and on their reasons for choosing a central as opposed to a suburban residential location. The study had three main objectives:

1) to identify the socio-economic characteristics of those sectors of the population actually creating the demand for rental housing in the central area of Edmonton;

2) to identify the variables responsible for the decision of these households to locate in the central area; and

3) to determine how the relevant set of variables in the residential location decision varied with the socio-economic characteristics of the household.

The findings reported here will hopefully prove to be of some value in advancing the understanding of the rental housing market and policy formation in urban planning and housing alternatives. These aspects

will be further developed in a later section of this summary.

THE FORCES RESPONSIBLE FOR INCREASING RENTAL DEMAND

Rental demand in Edmonton can be attributed to a multiplicity of interrelated processes working within the urban area. Although these processes do not have specific spatial implications they cannot be divorced from the events which have been or are occurring in the rental market of central Edmonton.

The study determined that basic demand stems from a rapidly expanding population but within this expanding population there have been even greater increases in the type of households most likely to rent. The many individuals born in the late 1940's and early 1950's, during the post war "baby boom", began to form households in substantial numbers in the mid to late 1960's. As households under the age of twenty-five are more likely to rent than buy these younger people have substantially increased the demand for rental housing. In Edmonton this demand was intensified by the many migrant households attracted by the rapidly expanding economy. Also significant in the demand for rental units have been the increases in the number of single parent households, late middle-aged and

elderly couples and individuals who rent. There has also been a shift in the nature of demand with the increase in the relative importance of non-family households which has added even greater impetus to construction of rental accommodation.

The study also found that demographic demand has been reinforced by economic change. Rising incomes of the young and old, particularly women, allow more of them to maintain their own household. The more rapidly rising cost of homeownership has made rental accommodation more attractive and at the same time has forced many households to remain in rental accommodation as they cannot afford to purchase a home.

On the supply side, although not a specific part of the study, it was found that the rising cost of land has shifted construction to higher density development which is usually rental accommodation. Improved technology has also allowed developers to build larger apartments more rapidly and economically. Investors have also been cognizant of the fact that the past couple of decades has been a period of rising inflation and many have hastened the pace of change by building in advance of demand. They have been prepared to accept initial losses in return for much higher long term gains.

Political processes have also played a role in residential change. Public policy to maintain and strengthen the downtown core has increased the demand for inner city housing. The city has facilitated the development of inner city housing by re-zoning large areas around the central business district to allow multi-family development. This re-zoning has often been a response to the request of developers who are very much aware of the role played by a strong downtown core in the demand for housing.

THE CENTRAL AREA TENANT

The study determined that the majority of rental households in the central area are small non-family units without children. The age distribution is bi-modal, peaking in both the younger and older age groups but the average age of tenant heads in the central area is much lower than the average for all household heads in the metropolitan area. Tenants are better educated than metropolitan households in general and a higher proportion are employed in higher salaried occupations but their average income is lower. This can be attributed to the significant number of students and retired individuals with limited incomes.

Within the bi-modal age distribution younger households consist mainly of singles sharing units and newly married couples without children. The older households consist of couples whose children have left home or older widowed individuals. With respect to the life cycle, the majority of the households are in the pre-marriage, young married without children or the post child stage. Most shared households consist of individuals on limited incomes, students or young single individuals in unskilled occupations. A lower percentage of the newly married childless couples are students and a higher proportion are employed in higher salaried occupations. Two-thirds of the older one person households are retired and the majority are in the lower income bracket. Many of the older couples without children, however, have not yet reached retirement age and are employed in higher salaried occupations. In general, income increases with age until close to retirement but the older households have the lowest annual income as, for many the only income source is the pension, although some may have substantial assets.

Although there is a polarization by age there is not the concentration of "newly weds" and "nearly deads" that discussions on the rental market so often

emphasize. A large segment of the market consists of young singles either sharing a unit or living as individuals. Families with children, although they are in a minority, are also represented. Many are single parent households on limited incomes.

The study indicates that the basic characteristics did vary with the type of dwelling. High rise tenants are older, have fewer children, are better educated and have higher incomes. Tenants in walk-ups are much younger and slightly more family orientated with more moderate levels of education and income. Tenants in converted units are younger still and consist almost entirely of low income shared and single households. Single detached units are occupied by families of varying ages and incomes.

The characteristics of the tenants do vary spatially. The tenants in areas south and west of the central business district and near the University of Alberta consist of moderate to high income households with older more wealthy households associated with high rise development and younger lower income groups in walk-up or converted units. East and north of the central business district tenant households had lower incomes, were on the average older and contained more children. Tenants in the more suburban locations had moderate incomes and a

higher proportion consisted of families with children.

PARAMETERS OF SPATIAL CONTROL

One question that must be answered is what are the parameters which control the spatial pattern of residential choice? Why, for example, is so large a percentage of rental housing concentrated in the central city? Many young households view rental housing as transition housing as it suits their temporary circumstances. Older households rent because they want less space and fewer responsibilities. Is a central location also important?

Undoubtedly the City has influenced the location of change through its zoning policy as redevelopment is one way of regenerating decaying areas. However, unless there is consumer demand for this type of housing in this particular location developers would not build it. An examination of the variables households consider in their decision to take a unit illustrates that many actively seek a central location.

This study has illustrated that centrality is important to many households. They see distinct disadvantages in a suburban location. They want easy access to the employment possibilities that the central

area provides. However, the accessibility of a central area location that they desire need not mean accessibility to employment. The role of employment in the location decision has been overemphasized in many studies at the expense of other important variables. Accessibility to shopping, entertainment, the downtown area in general, the church, the river valley, family and friends also play a role.

The decision to take a dwelling is not always tied to spatial variables. Some households take a unit because of the rental structure or characteristics of the unit or the complex which contains the unit including its size and condition, the facilities such as parking and recreation and the appliances present. Further analysis should be undertaken to determine if these households would take any location to get the characteristics they desire in the unit or complex. Given that many households place considerable emphasis on centrality they might forego these elements if it meant sacrificing the central location.

The analysis indicated that the relevant set of variables in the location process varied with tenant characteristics. The different sub-markets have different requirements with respect to type and location of

residence. At the contextual level many young married couples and households shared by single individuals rent because of their temporary circumstances. Older households rent because they want fewer responsibilities and require less space. A much higher percentage of households in the older age bracket prefer apartment living. The majority of households, however, do not regard renting as their final housing objective and plan to enter the owner-ship market providing they can afford to buy. Many, however, have realized that lack of the required purchasing power may keep them in rental accommodation indefinitely.

The more specific variables considered in the actual selection of a unit and a location varied significantly with the age and type of household. Interior aspects of the unit were of considerable significance to all households except the young. Families were concerned about the facilities within the structure or on the site that were available for children. Older households who favoured strict controls with no children and single parent households who were often discriminated against, expressed concern on management policies. With respect to the physical aspects of the neighbourhood, younger house-holds were concerned with appearance, older households with privacy, peace and quiet. Only minor importance was

attached to social variables as most households did not

seem overly concerned with the neighbours or the type of

neighbourhood. Accessibility was significant to all

households but most important to young single persons who

did not have access to a car. Families with children

were concerned about the proximity of schools, older

households felt proximity to church, family and friends

were important. Households shared by young single individ-

uals placed the greatest emphasis on financial aspects but

thereafter the importance of the monthly rental payment

declined with age although it was of considerable importance

to families with children.

POLICY AND THEORETICAL IMPLICATIONS

Policies related to urban development and

housing must be based on a clear understanding of the

characteristics, motivations and preferences of consumers

or proper planning alternatives cannot be provided. A

better understanding of past economic and demographic

changes and identification of present trends and their

effects on the housing market is also needed. The housing

market is always in a state of over or under reaction.

Policy makers and developers alike have been too slow to

respond to change in the past because they have no firm

understanding of the processes. The evidence presented in this study helps further our understanding of these processes and the motivations and housing preferences of rental consumers in the central city area.

Developers and planners sometimes forget the consumer--the human element in this process of change. They must be aware of who the consumer is, what he finds attractive about renting and what aspects of consumer demand are and are not being satisfied. This study provides reliable information to help answer these questions and in so doing provides an expanded data base that can be used in future policy formation. The study also helps correct some weak assumptions about consumer sub-markets and their decision making process. The location decision is made by considering various aspects of location and design. It is seldom a simple decision based on one aspect. As a result, the planning process must involve people with special skill or knowledge of all aspects considered in the location decision. Too often, particularly in the private market, one aspect is overemphasized at the expense of others.

If changes in demographic and economic trends, consumer motivations and preferences are constantly monitored future planning policy can be structured to

accommodate new trends that appear. Rental housing, for
most households, has in the past been regarded as trans-
ition housing. In the face of recent economic changes
rental housing may become a much more permanent part of
the lives of many households as they will never be able to
afford homeownership. With this in mind a greater effort
should be made to provide housing that satisfies living
requirements at all stages of the life cycle. Rental
housing to date has not been designed with children in
mind as in the past there have been few families in the
rental market. This is now changing and must be a
consideration for future development.

It is also evident from the study that
market and land use theory must be expanded by behavioural
analysis to more fully explain housing market behaviour.
Both consumers and producers of housing make locational
decisions on the basis of their information of real world
events, their expectations or personal wants and needs.
Neither the consumer nor the producer, however, is an
economic robot making decisions strictly on the basis
of accessibility to employment and transportation costs or
a complete understanding of demand supply economics. Often
location decisions are based on parameters that have little
economic or spatial significance. In future theories

introduced in this study. Instead, the main purpose has

been to relate empirical findings to existing theories to

illustrate the shortcomings of these theories.

The study illustrates that many of the

variables that central city renters consider in their

residential location decision are not of an economic

nature. Therefore, theories that are strictly economic

cannot hope to fully explain the actions of housing

consumers. A more behavioural approach must be adopted.

The literature review illustrates that to a certain extent

this has been done. However, there is still room for

much more work in this area. Economic factors should

not be ignored, they are relevant, but they must be

tempered by other variables which recognize that a

household's goal may depend on elements that have little

immediate economic significance. The study has shown

that various aspects associated with the physical design

of the unit or complex, management of the complex and the

physical and social aspects of the neighbourhood are also

important. More testing of these concepts must be under-

taken and other variables related to these concepts included.

There must also be future research on a

micro level. Most past work has focused on homeowners or

renters in the city as a whole or in suburban areas.

Understanding would be enhanced by focusing work on more limited groups or sub-markets. The present study can also be accused of too broad an approach. It focuses on renters in the central area. However, if future work was to take a sub-group from the study, i.e. renters in walk-ups, renters in low income areas or renters in walk-ups in low income areas and conduct a similar study focusing on a specific group, a truer understanding of their characteristics, motivations and preferences could be obtained.

A micro level study could also benefit from the approach outlined by Chapin and Hightower (196), Chapin (1968, 1970 and 1974), Chapin and Logan (1968) and Anderson (1971) in their discussion of activity patterns and time budgets. This approach is dynamic. It studies a household's activities over a period of time rather than trying to capture the picture w████tatic approach as in the current study. A household's activities can be broken into different systems, that is, those related to employment or income producing activities, those related to child raising and family activities, educational activities, religious activities, homemaking activities, socializing activities and recreational activities. There activities studied over a period of time and combined with background

socio-economic data on the household would provide a more complete understanding of a household's current behaviour, preferences and motivations. It is a much more thorough way of measuring human interaction and behaviour although it is a much more time consuming and costly approach and the researcher needs greater monetary and support facilities at his disposal.

Other aspects that could have improved the study and supplemented its present findings include trade-off analysis. The study did determine the importance of variables and how they were ranked by the households but trade-off analysis determining which variables households would retain at the expense of others would more clearly identify the most important variables in the residential location decision.

Although the sample used was as large as could be handled in a reasonable time span by one individual the study may also benefit from a larger sample. This would provide a more extensive data base. Also, if only tenants that had recently occupied their dwelling had been interviewed their recall of the reasons for choosing the dwelling may have been more reliable. An approach such as Michelson (1977) used which included a follow-up to determine if the new location met the household's expectations

would also ████ and our knowledge of the central area

renters' location decision process.

Future research with the suggested improve-

ments should start with the understanding that economic

factors are relevant but they must be tempered by a more

behavioural approach. It must also recognize at the

outset that decision makers do not have a complete under-

standing of demand supply economics. They are often

uncertain about future events and only partly unde

real world conditions and possess a poor underst████ of

their needs and preferences.

Regardless of its micro or macr█████proach

future research can also play a role in improving our

understanding of the processes and causes of residential

change in the central city. To a large extent the

combined choices of households with respect to where they

live determines the physical and social character of urban

residential neighbourhoods. As the character of the central

residential area changes with the movement of households in

and out of the central area this in turn affects the levels

of demand for ancillary services such as retail outlets,

educational and recreational facilities, churches and

hospitals. Understanding the processes and causes of change

within the residential context will assist planners and

city officials in their efforts to plan for the level of

such services as change progresses.

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APPENDIX I

THE SURVEY

DEPARTMENT OF GEOGRAPHY
TELEPHONE (403) 432-3274

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA T6G 2H4

Dear Tenant:

As a PhD. student in the Geography Department I am undertaking a survey of tenants of rental housing. The survey is designed to determine the age and family composition of tenants and why they have chosen the particular dwelling unit in which they live. You are not asked to give your name. All the information that you provide on the survey form will be treated as confidential.

The results of this survey will be made available to those concerned with the location and planning of rental housing and the information you provide, when combined with that of other tenants who will be approached during the survey will help to inform them of tenants' housing needs and preferences.

If you wish you may confirm the validity of the study at the above address and phone number or by contacting the University of Alberta Public Relations Office.

Thanking you for your cooperation

Tom Carter

APPENDIX I--Continued

<u>SECTION ONE</u>

In this first section of the survey you are asked to provide household and employment data.

1. How many persons live in this dwelling unit? _____ (no.)

2. In what year did this household start living in this dwelling unit? _ _ _ _ (year)

3. What type of household occupies this dwelling unit? (tick appropriate box)

- [ ] married couple
- [x] married couple with children
- [ ] single parent with children
- [ ] single person only
- [ ] shared by single persons
- [ ] other (please specify) _____

4. In the following table list the birth date of <u>each person in the household</u> and the level of education reached by <u>each member of the household over 16 years of age</u>. If you wish you may use the educational categories given below the table as a guide.

Person No.	Birth Date (year only)	Education Level Reached (see categories below)
1	_ _ _ _	_____
2	_ _ _ _	_____
3	_ _ _ _	_____
4	_ _ _ _	_____
5	_ _ _ _	_____
6	_ _ _ _	_____

A. Grade 8 or less   D. Some University
B. Grades 9-12   E. Bachelor's Degree
C. Technical or Vocational   F. Post Graduate Degree

5. For all persons working outside the home (including part time workers) or for students attending post secondary institutions such as the University or N.A.I.T. would you please list in the table below the occupation, the location of employment, the length of employment at that location, the method used to travel to work and the length of time it takes to get to work.

Person No.	Occupation (if student list as such)	Location (name and address of firm or institution)	Length of Employment (years and months)	Method of Travel to Work (car, bus, walk, bicycle)	Time to Work (minutes)
1					
2					
3					
4					
5					
6					

APPENDIX I--Continued

6. For those persons who <u>do not</u> work outside the home please specify the number that fall into any of the following categories.

_____ home maker

_____ retired

_____ unemployed

_____ children under 16

_____ other (please specify) _____

SECTION TWO

The remainder of the survey is designed to determine why you have chosen this particular dwelling. Most people have a few factors that they consider important when they are moving into a new dwelling unit. The following pages contain a list of factors that people often take into consideration. Please place a tick (✓) in the box beside those factors that you were looking for, or took into consideration, when you were evaluating this dwelling as a place to live. REMEMBER, tick only those factors that you were looking for or took into consideration when you were considering <u>this</u> unit as a place to live.

7a) The first set of factors focus on the <u>interior</u> characteristics of the dwelling unit.

☐ air conditioning ☐ condition of the unit

☐ carpeting on the floors ☐ arrangement of rooms

☐ drapes included ☐ size of rooms

☐ major appliances present ☐ view from the unit

☐ spacious closets and storage space ☐ unit was fully furnished

☐ patios or balconies present ☐ temperature control in unit

☐ cable TV connection ☐ good soundproofing

☐ feature wall present ☐ none of these

☐ intercom provided

7b) The next section deals with the exterior of the unit or complex if it is an apartment building.

☐ recreational facilities in the complex ☐ because it is a walk up

☐ daycare centre in the complex ☐ because it is a single detached dwelling

☐ parking space ☐ appearance of the dwelling

☐ play area for children ☐ size of the lot

☐ laundry facilities ☐ landscaping of the lot or complex

☐ quality of construction ☐ none of these

☐ because it is a high rise

APPENDIX I--Continued

7c) This section deals with policies of the management.

☐ security service provided   ☐ children not allowed

☐ pets allowed   ☐ policy regarding age or marital status of tenants

☐ pets not allowed

☐ children allowed   ☐ none of these

7d) This section deals with the physical characteristics of the neighbourhood.

☐ street lighting   ☐ clean surroundings

☐ appearance of surrounding development   ☐ spacious surroundings

☐ privacy   ☐ absence of traffic noise

☐ quiet surroundings   ☐ none of these

7e) This short section focuses on the social characteristics of the neighbourhood.

☐ neighbourhood reputation   ☐ neighbours of the same nationality

☐ friendly neighbours   ☐ none of these

☐ neighbours of similar income level

7f) This section focuses on accessibility to other people, places or activities which may have been a factor in your decision to choose this dwelling unit.

☐ close to work   ☐ close to recreational facilities

☐ close to shopping   ☐ close to a major traffic route

☐ close to children's school   ☐ close to downtown

☐ close to University, NAIT etc.   ☐ close to entertainment

☐ close to church   ☐ close to friends

☐ close to bus route   ☐ close to relatives

☐ close to river valley   ☐ none of these

7g) Finally, were any of the following important in your decision to take this dwelling unit?

☐ monthly rent   ☐ a physical disability or handicap

☐ amount of damage deposit   ☐ only alternative available

☐ conditions of the lease   ☐ none of these

8. If there are any other factors that were important in your decision to take this dwelling which are not included in the preceding question would you please list them below.

_____   _____

_____   _____

_____   _____

APPENDIX I—Continued

9. Would you please list below what you feel were the three most important factors from those you have chosen in questions 7 and 8?

1. _____

2. _____

3. _____

10. Before you moved here what type of dwelling were you living in?

☐ owned single detached   ☐ row house

☐ rented single detached   ☐ condominium

☐ high rise apartment   ☐ town house

☐ walk up apartment   ☐ basement suite in a house

☐ other apartment (please specify)   ☐ other (please specify)

_____   _____

11. Why are you renting as opposed to owning? (you may tick more than one)

☐ can't afford to buy

☐ see location as temporary (because of possible change in employment, completion of education, etc.)

☐ prefer apartment living

☐ family has left home so less space is needed

☐ dislike the responsibilities of home ownership (care of lawn, repairs, clearing driveway of snow, etc)

☐ other (please specify) _____

12. Have you ever considered renting in the outer suburbs? ☐ yes ☐ no

13. Do you see any disadvantages in an outer suburban location? _____

_____

14. What about advantages? _____

_____

15. If you were to move again would you want to locate closer to the city centre, further out from the centre, or at about the same distance?

☐ closer to the city centre   ☐ the same distance

☐ further out   ☐ no preference

16. How do you do the majority of your shopping?

☐ bus   ☐ walk

☐ car   ☐ other (please specify) _____

APPENDIX I--Continued

17. Where have you done your grocery shopping within the past

week? _____

two weeks? _____

three weeks? _____

18. How often do you go downtown other than for work?

☐ never*   ☐ once a week

☐ a few times a year   ☐ twice a week or more

☐ once or twice a month

    *if never, skip to question 20

19. For what purpose do you go downtown?

☐ shopping   ☐ go to restaurants or bars

☐ personal business (banking etc)   ☐ go to movies, plays or concerts

☐ use of medical or dental facilities ☐ other (please specify) _____

20. Where do you buy the following? (you may tick more than one location)

	Clothes	Furniture	Appliances	Hardware
Downtown				
Bonnie Doon				
Southgate				
Northgate				
Londonderry				
Westmount				
Eastgate				
Capilano				
Centennial Village				
Meadowlark				
Grandin Shoppers Park				
Other				

APPENDIX I--Continued

21. Here is a list of activities that people do in their spare time. Would you tick those that are important to you or your family?

☐ watch TV

☐ attend movies, concerts etc.

☐ reading

☐ gardening

☐ sports activities - participate

☐ sports activities - spectator

☐ visiting friends/relatives

☐ attend clubs, restaurants, bars

☐ belong to civic groups, service or professional clubs or neighbourhood groups

☐ other (please specify) _____

22. Which of the activities listed in question 21 occupy most of your spare time?

_____

23 What are the things you like most about your present living accomodation? -

_____

24. Would you consider living in any other part of the city?

☐ only this part   ☐ other parts (specify)_____

24a. Why? _____

25. Are you thinking of moving in the near future? ☐ yes ☐ no

*if no, skip to question 27

26. Why are you thinking of moving?

☐ dwelling is too small   ☐ job transfer

☐ dwelling is too expensive   ☐ finishing education

☐ closer to job   ☐ other (please specify)_____

_____

27. If you were to move or are moving would you be likely to move into a

☐ single family home   ☐ row house

☐ walk up   ☐ condominium

☐ high rise   ☐ town house

☐ other apartment   ☐ basement suite in a house

                                   ☐ other (please specify)_____

_____

APPENDIX I--Continued

28. Do you expect to rent or buy your next dwelling?

☐ rent ☐ buy

28a. Why? _____

29. How much rent do you pay per month? (Include rent paid for a car park or utilities, but indicate how much extra this is over the rent paid)

$_____ rent $_____ extra

30. What is the approximate gross annual income of this household?

☐ under $5,999.00

☐ $6,000.00 - $9,999.00

☐ $10,000.00 - $14,999.00

☐ $15,000.00 - $19,999.00

☐ over $20,000.00

31. Would you say you are very satisfied, moderately satisfied or unsatisfied with your present residential accommodation?

☐ very satisfied ☐ moderately satisfied ☐ unsatisfied

Thank you

APPENDIX II

CHI-SQUARE CALCULATIONS FOR TENANT CHARACTERISTICS

TABLE II-1

HOUSEHOLDS BY AGE OF HEAD BY TYPE OF HOUSEHOLD

Ho--there is no relationship between the age of the
household head and type of household

	Married Couples	Families	Single Person	Shared Hhlds	Total
Under 25	37 (37)	14 (26)	21 (31)	51 (29)	123
25 - 34	28 (24)	23 (17)	13 (20)	16 (19)	80
35 - 54	4 (11)	18 (7)	10 (8)	2 (8)	34
55 - 64	10 (8)	6 (5)	9 (7)	1 (6)	26
65 plus	9 (9)	1 (6)	20 (8)	-- (7)	30
Total	88	62	73	70	293

APPENDIX II--Continued

TABLE II-1--Continued

$$x^2 = \frac{(37-37)^2}{37} + \frac{(14-26)^2}{26} + \frac{(21-31)^2}{31} + \frac{(51-29)^2}{29} +$$

$$\frac{(28-24)^2}{24} + \frac{(23-17)^2}{17} + \frac{(13-20)^2}{20} + \frac{(16-19)^2}{19} +$$

$$\frac{(4-11)^2}{11} + \frac{(18-7)^2}{7} + \frac{(10-8)^2}{8} + \frac{(2-8)^2}{8} +$$

$$\frac{(10-8)^2}{8} + \frac{(6-5)^2}{5} + \frac{(9-7)^2}{7} + \frac{(1-6)^2}{6} +$$

$$\frac{(9-9)^2}{9} + \frac{(1-6)^2}{6} + \frac{(20-8)^2}{8} + \frac{(0-7)^2}{7}$$

$$= 92.52 \quad (\text{Ho rejected at .05 and .01 level})$$

APPENDIX II--Continued

TABLE II-2

HOUSEHOLDS BY AGE OF HEAD BY DWELLING TYPE

Ho--there is no relationship between the age of the
household head and type of dwelling

	Under 25	25-34	35-54	55 +	Total
High Rise	30 (45)	33 (29)	14 (12)	29 (20)	106
Walk-up	70 (55)	33 (35)	9 (16)	19 (25)	131
Converted	16 (13)	7 (9)	6 (4)	3 (6)	32
Single Detached and Other	7 (10)	7 (7)	5 (3)	5 (4)	24
Total	123	80	34	56	293

$$x^2 = \frac{(30-45)^2}{45} + \frac{(33-29)^2}{29} + \frac{(14-12)^2}{12} + \frac{(29-20)^2}{20} +$$

$$\frac{(70-55)^2}{55} + \frac{(33-35)^2}{35} + \frac{(9-16)^2}{16} + \frac{(19-25)^2}{25} +$$

$$\frac{(16-13)^2}{13} + \frac{(7-9)^2}{9} + \frac{(6-4)^2}{4} + \frac{(3-6)^2}{6} +$$

$$\frac{(7-10)^2}{10} + \frac{(7-7)^2}{7} + \frac{(5-3)^2}{3} + \frac{(5-4)^2}{4}$$

$$= 24.16 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-3

HOUSEHOLDS BY AGE OF HEAD BY EDUCATION OF HEAD

Ho--there is no relationship between the age and education
   of the household head

	Grade 8 Or Less	Grades 9 - 12	Some Univ.	At Least One Degree	Total
Under 25	5 (14)	76 (65)	28 (21)	14 (23)	123
25 - 34	4 (9)	33 (42)	13 (13)	30 (16)	80
35 - 54	7 (5)	13 (17)	5 (6)	9 (6)	34
55 plus	18 (6)	32 (29)	3 (10)	3 (11)	56
Total	34	154	49	56	293

$$x^2 = \frac{(5-14)^2}{14} + \frac{(76-65)^2}{65} + \frac{(28-21)^2}{21} + \frac{(14-23)^2}{23} +$$

$$\frac{(4-9)^2}{9} + \frac{(33-42)^2}{42} + \frac{(13-13)^2}{13} + \frac{(30-16)^2}{16} +$$

$$\frac{(7-5)^2}{5} + \frac{(13-17)^2}{17} + \frac{(5-6)^2}{6} + \frac{(9-6)^2}{6} +$$

$$\frac{(18-6)^2}{6} + \frac{(32-29)^2}{29} + \frac{(3-10)^2}{10} + \frac{(3-11)^2}{11}$$

$$= 69.59 \quad \text{(Ho is rejected at .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-4

HOUSEHOLDS BY AGE OF HEAD BY OCCUPATION OF HEAD

Ho--there is no relationship between the age and occupation
of the household head

	Under 25	25-34	35-54	55 plus	Total
Retired Unemployed	9 (22)	4 (14)	2 (6)	37 (10)	52
Student	32 (19)	11 (13)	2 (5)	1 (9)	46
Managerial Prof/Tech	17 (26)	29 (17)	12 (7)	3 (11)	61
Craftsmen Trans/Comm	22 (18)	11 (12)	7 (5)	3 (8)	43
Clerical	25 (21)	14 (14)	5 (6)	6 (9)	50
Sales/Service Unskilled	18 (17)	11 (11)	6 (5)	6 (8)	41
Total	123	80	34	56	293

APPENDIX II--Continued

TABLE II-4--Continued

$$x^2 = \frac{(9-22)^2}{22} + \frac{(4-14)^2}{14} + \frac{(2-6)^2}{6} + \frac{(37-10)^2}{10} +$$

$$\frac{(32-19)^2}{19} + \frac{(11-13)^2}{13} + \frac{(2-5)^2}{5} + \frac{(1-9)^2}{9} +$$

$$\frac{(17-26)^2}{26} + \frac{(29-17)^2}{17} + \frac{(12-7)^2}{7} + \frac{(3-11)^2}{11} +$$

$$\frac{(22-18)^2}{18} + \frac{(11-12)^2}{12} + \frac{(7-5)^2}{5} + \frac{(3-8)^2}{8} +$$

$$\frac{(25-21)^2}{21} + \frac{(14-14)^2}{14} + \frac{(5-6)^2}{6} + \frac{(6-9)^2}{9} +$$

$$\frac{(18-17)^2}{17} + \frac{(11-11)^2}{11} + \frac{(6-5)^2}{5} + \frac{(6-8)^2}{8}$$

$$= 137.07 \quad (\text{Ho rejected at .05 and .01 level})$$

APPENDIX II--Continued

TABLE II-5

HOUSEHOLDS BY AGE OF HEAD BY INCOME OF HEAD

Ho--there is no relationship between age and income of the
household head

	$0-5,999	$6,000 -9,999	$10,000 -14,999	$15,000 +	Total
Under 25	36 (34)	35 (33)	37 (33)	13 (21)	121
25 - 34	9 (22)	22 (21)	27 (21)	20 (14)	78
35 - 54	8 (9)	10 (9)	9 (9)	6 (6)	33
55 plus	28 (15)	11 (14)	5 (14)	9 (10)	53
Total	81	78	78	48	285

$$x^2 = \frac{(36-34)^2}{34} + \frac{(35-33)^2}{33} + \frac{(37-33)^2}{33} + \frac{(13-21)^2}{21} +$$

$$\frac{(9-22)^2}{22} + \frac{(22-21)^2}{21} + \frac{(27-21)^2}{21} + \frac{(20-14)^2}{14} +$$

$$\frac{(8-9)^2}{9} + \frac{(10-9)^2}{9} + \frac{(9-9)^2}{9} + \frac{(6-6)^2}{6} +$$

$$\frac{(28-15)^2}{15} + \frac{(11-14)^2}{14} + \frac{(5-14)^2}{14} + \frac{(9-10)^2}{10}$$

$$= 33.80 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-6

HOUSEHOLDS BY TYPE BY DWELLING TYPE

Ho--there is no relationship between type of household and
type of dwelling

	Married Couples	Families	Single Person	Shared Hhlds	Total
High Rise	36 (32)	17 (23)	28 (26)	25 (25)	106
Walk-up	43 (40)	28 (28)	31 (33)	29 (30)	131
Converted	3 (9)	6 (7)	11 (8)	12 (8)	32
Single det. Other	6 (7)	11 (5)	3 (6)	4 (6)	24
Total	88	62	73	70	293

$$x^2 = \frac{(36-32)^2}{32} + \frac{(17-23)^2}{23} + \frac{(28-26)^2}{26} + \frac{(25-25)^2}{25} +$$

$$\frac{(43-40)^2}{40} + \frac{(28-28)^2}{28} + \frac{(31-33)^2}{33} + \frac{(29-30)^2}{30} +$$

$$\frac{(3-9)^2}{9} + \frac{(6-7)^2}{7} + \frac{(11-8)^2}{8} + \frac{(12-8)^2}{8} +$$

$$\frac{(6-7)^2}{7} + \frac{(11-5)^2}{5} + \frac{(3-6)^2}{6} + \frac{(4-6)^2}{6}$$

$$= 19.38 \quad (\text{Ho rejected at .05 but accepted at .01 level})$$

APPENDIX II--Continued

TABLE II-7

HOUSEHOLDS BY TYPE BY EDUCATION OF HEAD

Ho--there is no relationship between the type of household
and the education of the household head

	Married Couples	Families	Single Person	Shared Hhlds	Total
Grade 8 or less	7 (10)	12 (6)	15 (9)	-- (9)	34
Grades 9 - 12	45 (46)	29 (30)	37 (38)	43 (40)	154
Some University	18 (15)	5 (9)	7 (12)	19 (13)	49
At least One Degree	18 (17)	11 (11)	14 (14)	13 (14)	56
Total	88	57	73	75	293

$$x^2 = \frac{(7-10)^2}{10} + \frac{(12-6)^2}{6} + \frac{(15-9)^2}{9} + \frac{(0-9)^2}{9} +$$

$$\frac{(45-46)^2}{46} + \frac{(29-30)^2}{30} + \frac{(37-38)^2}{38} + \frac{(43-40)^2}{40} +$$

$$\frac{(18-15)^2}{15} + \frac{(5-9)^2}{9} + \frac{(7-12)^2}{12} + \frac{(19-13)^2}{13} +$$

$$\frac{(18-17)^2}{17} + \frac{(11-11)^2}{11} + \frac{(14-14)^2}{14} + \frac{(13-14)^2}{14}$$

$$= 27.57 \quad \text{(Ho rejected at both .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-8

HOUSEHOLDS BY TYPE BY OCCUPATION OF HEAD

Ho--there is no relationship between the type of household
and the occupation of the household head

	Married Couples	Families	Single Person	Shared Hhlds	Total
Retired Unemployed	10 (16)	11 (10)	30 (12)	1 (14)	52
Student	11 (14)	7 (9)	2 (11)	26 (12)	46
Managerial Prof/Tech	23 (18)	8 (12)	18 (15)	12 (16)	61
Craftsmen Trans/Comm	18 (13)	14 (8)	3 (11)	8 (11)	43
Clerical	14 (15)	6 (10)	13 (12)	17 (13)	50
Sales/Serv. Unskilled	12 (12)	11 (8)	7 (10)	11 (11)	41
Total	88	57	73	75	293

APPENDIX II--Continued

TABLE II-8--Continued

$$x^2 = \frac{(10-16)^2}{16} + \frac{(11-10)^2}{10} + \frac{(30-12)^2}{12} + \frac{(1-14)^2}{14} +$$

$$\frac{(11-14)^2}{14} + \frac{(7-9)^2}{9} + \frac{(2-11)^2}{11} + \frac{(26-12)^2}{12} +$$

$$\frac{(23-18)^2}{18} + \frac{(8-12)^2}{12} + \frac{(18-15)^2}{15} + \frac{(12-16)^2}{16} +$$

$$\frac{(18-13)^2}{13} + \frac{(14-8)^2}{8} + \frac{(3-11)^2}{11} + \frac{(8-11)^2}{11} +$$

$$\frac{(14-15)^2}{15} + \frac{(6-10)^2}{10} + \frac{(13-12)^2}{12} + \frac{(17-13)^2}{13} +$$

$$\frac{(12-12)^2}{12} + \frac{(11-8)^2}{8} + \frac{(7-10)^2}{10} + \frac{(11-11)^2}{11}$$

$$= 88.58 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-9

HOUSEHOLDS BY TYPE BY INCOME OF HOUSEHOLD

Ho--there is no relationship between household income and type of household

	$0-5,999	$6,000-9,999	$10,000-14,999	$15,000-19,999	$20,000 +	Total
Married	11 (35)	42 (33)	42 (33)	14 (9)	13 (12)	122
Single Persons	51 (25)	20 (24)	13 (24)	3 (8)	2 (8)	89
Shared Hhlds	19 (21)	16 (20)	23 (20)	4 (6)	12 (7)	74
Total	81	78	78	21	27	285

APPENDIX II--Continued

TABLE II-9--Continued

$$x^2 = \frac{(11-35)^2}{35} + \frac{(42-33)^2}{33} + \frac{(42-33)^2}{33} + \frac{(14-9)^2}{9} +$$

$$\frac{(13-12)^2}{12} + \frac{(51-25)^2}{25} + \frac{(20-24)^2}{24} + \frac{(13-24)^2}{24} +$$

$$\frac{(3-8)^2}{8} + \frac{(2-8)^2}{8} + \frac{(19-21)^2}{.21} + \frac{(16-20)^2}{20} +$$

$$\frac{(23-20)^2}{20} + \frac{(4-6)^2}{6} + \frac{(12-7)^2}{7}$$

$= 70.28$ (Ho rejected at both .05 and .01 level)

APPENDIX II--Continued

TABLE II-10

DWELLING TYPE BY EDUCATION OF HOUSEHOLD HEAD

Ho--there is no relationship between dwelling type and the education of the household head

	Grade 8 Or Less	Grades 9 - 12	Some Univ	At Least One Degree	Total
High Rise	8 (13)	48 (55)	15 (18)	35 (20)	106
Walk-up	14 (16)	77 (68)	24 (22)	16 (25)	131
Converted	7 (5)	16 (16)	5 (5)	4 (6)	32
Single det Other	6 (3)	12 (12)	5 (4)	1 (5)	24
Total	35	153	49	56	293

$$x^2 = \frac{(8-13)^2}{13} + \frac{(48-55)^2}{55} + \frac{(15-18)^2}{18} + \frac{(35-20)^2}{20} +$$

$$\frac{(14-16)^2}{16} + \frac{(77-68)^2}{68} + \frac{(24-22)^2}{22} + \frac{(16-25)^2}{25} +$$

$$\frac{(7-5)^2}{5} + \frac{(16-16)^2}{16} + \frac{(5-5)^2}{5} + \frac{(4-6)^2}{6} +$$

$$\frac{(6-3)^2}{3} + \frac{(12-12)^2}{12} + \frac{(5-4)^2}{4} + \frac{(1-5)^2}{5}$$

$$= 27.32 \quad (\text{Ho rejected at .05 and .01 level})$$

APPENDIX II--Continued

TABLE II-11

DWELLING TYPE BY OCCUPATION OF HOUSEHOLD HEAD

Ho--there is no relationship between occupation of the
household head and type of dwelling

	High Rise	Walk -up	Converted	Single Det and Other	Total
Retired Unemployed	24 (19)	22 (24)	3 (5)	3 (4)	52
Student	9 (16)	25 (21)	9 (5)	3 (4)	46
Managerial Prof/Tech	33 (22)	18 (27)	3 (7)	7 (5)	61
Craftsmen Trans/Comm	17 (15)	19 (19)	4 (5)	3 (4)	43
Clerical	18 (18)	26 (22)	6 (5)	-- (5)	50
Sales/Serv Unskilled	5 (15)	21 (18)	7 (5)	8 (3)	41
Total	106	131	32	24	293

APPENDIX II--Continued

TABLE II-11--Continued

$$X^2 = \frac{(24-19)^2}{19} + \frac{(22-24)^2}{24} + \frac{(3-5)^2}{5} + \frac{(3-4)^2}{4} +$$

$$\frac{(9-16)^2}{16} + \frac{(25-21)^2}{21} + \frac{(9-5)^2}{5} + \frac{(3-4)^2}{4} +$$

$$\frac{(33-22)^2}{22} + \frac{(18-27)^2}{27} + \frac{(3-7)^2}{7} + \frac{(7-5)^2}{5} +$$

$$\frac{(17-15)^2}{15} + \frac{(19-19)^2}{19} + \frac{(4-5)^2}{5} + \frac{(3-4)^2}{4} +$$

$$\frac{(18-18)^2}{18} + \frac{(26-22)^2}{22} + \frac{(6-5)^2}{5} + \frac{(0-5)^2}{5} +$$

$$\frac{(5-15)^2}{15} + \frac{(21-18)^2}{18} + \frac{(7-5)^2}{5} + \frac{(8-3)^2}{3}$$

$$= 44.35 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX II--Continued

TABLE II-12

DWELLING TYPE BY INCOME OF HEAD

Ho--there is no relationship between income of the
household and type of dwelling

	$0-5,999	$6,000 -9,999	$10,000 -14,999	$15,000 plus	Total
High Rise	19 (29)	21 (28)	32 (28)	31 (18)	103
Walk-up	41 (36)	38 (34)	33 (34)	14 (22)	126
Converted	13 (9)	9 (9)	8 (9)	2 (5)	32
Single Det Other	8 (7)	10 (6)	5 (6)	1 (5)	24
Total	81	78	78	48	285

$$x^2 = \frac{(19-29)^2}{29} + \frac{(21-28)^2}{28} + \frac{(32-28)^2}{28} + \frac{(31-18)^2}{18} +$$

$$\frac{(41-36)^2}{36} + \frac{(38-34)^2}{34} + \frac{(33-34)^2}{34} + \frac{(14-22)^2}{22} +$$

$$\frac{(13-9)^2}{9} + \frac{(9-9)^2}{9} + \frac{(8-9)^2}{9} + \frac{(2-5)^2}{5} +$$

$$\frac{(8-7)^2}{7} + \frac{(10-6)^2}{6} + \frac{(5-6)^2}{6} + \frac{(1-5)^2}{5}$$

$$= 28.58 \quad \text{(Ho rejected at both .05 and .01 level)}$$

APPENDIX III

CHI-SQUARE CALCULATIONS FOR TENANT ACTIVITY PATTERNS

TABLE III-1

TYPE OF HOUSEHOLD BY PREVIOUS DWELLING TYPE

Ho--there is no relationship between type of household and
   previous dwelling

	Owned Single Det.	Rented Single Det.	High Rise	Walk -up	Con- verted	Other	Total
Married Couples	13 (14)	10 (9)	11 (9)	25 (29)	15 (13)	14 (14)	88
Families	9 (9)	11 (6)	6 (6)	20 (19)	6 (8)	5 (9)	57
Single Persons	18 (11)	5 (8)	6 (8)	25 (24)	10 (11)	9 (11)	73
Shared Hhlds	5 (11)	5 (8)	8 (8)	26 (24)	12 (11)	17 (11)	73
Total	45	31	31	96	43	45	291

APPENDIX III--Continued

TABLE III-1--Continued

$$x^2 = \frac{(13-14)^2}{14} + \frac{(10-9)^2}{9} + \frac{(11-9)^2}{9} + \frac{(25-29)^2}{29} +$$

$$\frac{(15-13)^2}{13} + \frac{(14-14)^2}{14} + \frac{(9-9)^2}{9} + \frac{(11-6)^2}{6} +$$

$$\frac{(6-6)^2}{6} + \frac{(20-19)^2}{19} + \frac{(6-8)^2}{8} + \frac{(5-9)^2}{9} +$$

$$\frac{(18-11)^2}{11} + \frac{(5-8)^2}{8} + \frac{(6-8)^2}{8} + \frac{(25-24)^2}{24} +$$

$$\frac{(10-11)^2}{11} + \frac{(9-11)^2}{11} + \frac{(5-11)^2}{11} + \frac{(5-8)^2}{8} +$$

$$\frac{(8-8)^2}{8} + \frac{(26-24)^2}{24} + \frac{(12-11)^2}{11} + \frac{(17-11)^2}{11}$$

$$= 22.48 \quad \text{(Ho is accepted at the .05 level)}$$

APPENDIX III--Continued

TABLE III-2

AGE OF HOUSEHOLD HEAD BY PREVIOUS DWELLING

Ho--there is no relationship between age of the household head and previous dwelling type

	Owned Single Det.	Rented Single Det.	High Rise	Walk -up	Con- verted	Other	Total
Under 24	6 (19)	10 (13)	6 (13)	46 (39)	22 (18)	31 (19)	121
25 - 34	5 (12)	9 (9)	15 (9)	34 (26)	7 (12)	10 (12)	80
35 - 54	6 (5)	6 (4)	5 (4)	7 (11)	7 (5)	3 (5)	34
55 plus	28 (9)	6 (6)	5 (6)	9 (18)	7 (8)	1 (9)	56
Total	45	31	31	96	43	45	291

APPENDIX III--Continued

TABLE III-2--Continued

$$x^2 \doteq \frac{(6-19)^2}{19} + \frac{(10-13)^2}{13} + \frac{(6-13)^2}{13} + \frac{(46-39)^2}{39} +$$

$$\frac{(22-18)^2}{18} + \frac{(31-19)^2}{19} + \frac{(5-12)^2}{12} + \frac{(9-9)^2}{9} +$$

$$\frac{(15-9)^2}{9} + \frac{(34-26)^2}{26} + \frac{(7-12)^2}{12} + \frac{(10-12)^2}{12} +$$

$$\frac{(6-5)^2}{5} + \frac{(6-4)^2}{4} + \frac{(5-4)^2}{4} + \frac{(7-11)^2}{11} +$$

$$\frac{(7-5)^2}{5} + \frac{(3-5)^2}{5} + \frac{(28-9)^2}{9} + \frac{(6-6)^2}{6} +$$

$$\frac{(5-6)^2}{6} + \frac{(9-18)^2}{18} + \frac{(7-8)^2}{8} + \frac{(1-9)^2}{9}$$

$$= 92.55 \quad \text{(Ho rejected at both .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-3

TYPE OF HOUSEHOLD BY MOVING EXPECTATIONS

Ho--there is no relationship between type of house-
hold and moving expectations

	Yes	No	Total
Married Couples	35 (38)	52 (49)	87
Families with Children	30 (24)	26 (32)	56
Single Persons	23 (30)	46 (39)	69
Shared Households	37 (33)	37 (41)	74
Total	125	161	286

$$X^2 = \frac{(35-38)^2}{38} + \frac{(52-49)^2}{49} + \frac{(30-24)^2}{24} + \frac{(26-32)^2}{32} +$$

$$\frac{(23-30)^2}{30} + \frac{(46-39)^2}{39} + \frac{(37-33)^2}{33} + \frac{(37-41)^2}{41}$$

$$= 6.81 \quad \text{(Ho is accepted at .05 level)}$$

APPENDIX III--Continued

TABLE III-4

HOUSEHOLDS BY AGE OF HEAD
BY MOVING EXPECTATIONS

Ho--there is no relationship between
   age of household head and moving
   expectations

	Yes	No	Total
Under 25	63 (54)	59 (68)	122
25 - 34	44 (35)	35 (44)	79
35 - 54	11 (14)	20 (17)	31
55 plus	7 (24)	47 (30)	54
Total	125	161	286

$$x^2 = \frac{(63-54)^2}{54} + \frac{(59-68)^2}{68} +$$

$$\frac{(44-35)^2}{35} + \frac{(35-44)^2}{44} +$$

$$\frac{(11-14)^2}{14} + \frac{(20-17)^2}{17} +$$

$$\frac{(7-24)^2}{24} + \frac{(47-30)^2}{30}$$

$$= 30.06 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-5

TYPE OF HOUSEHOLD AND EXPECTED DWELLING TYPE

Ho--there is no relationship between the type of household
and the expected dwelling type following the next move

	Single Detached	Walk -up	High Rise	Con- verted	Other	Total
Married Couples	34 (24)	15 (21)	11 (15)	11 (10)	9 (10)	80
Families	29 (17)	15 (15)	4 (10)	2 (7)	6 (7)	56
Single Persons	6 (20)	20 (18)	23 (12)	5 (8)	13 (9)	67
Shared Hhlds	15 (22)	23 (19)	14 (14)	17 (9)	5 (10)	74
Total	84	73	52	35	33	277

APPENDIX III--Continued

TABLE III-5--Continued

$$x^2 = \frac{(34-24)^2}{24} + \frac{(15-21)^2}{21} + \frac{(11-15)^2}{15} + \frac{(11-10)^2}{10} +$$

$$\frac{(9-10)^2}{10} + \frac{(29-17)^2}{17} + \frac{(15-15)^2}{15} + \frac{(4-10)^2}{10} +$$

$$\frac{(2-7)^2}{7} + \frac{(6-7)^2}{7} + \frac{(6-20)^2}{20} + \frac{(20-18)^2}{18} +$$

$$\frac{(23-12)^2}{12} + \frac{(5-8)^2}{8} + \frac{(13-9)^2}{9} + \frac{(15-22)^2}{22} +$$

$$\frac{(23-19)^2}{19} + \frac{(14-14)^2}{14} + \frac{(17-9)^2}{9} + \frac{(5-10)^2}{10}$$

$$= 58.62 \quad \text{(Ho is rejected at the .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-6

AGE OF HOUSEHOLD HEAD AND EXPECTED DWELLING TYPE

Ho--there is no relationship between the age of the
household head and the expected dwelling type
following the next move

	Single Detached	Walk -up	High Rise	Con- verted	Other	Total
Under 25	29 (37)	39 (32)	13 (22)	26 (15)	13 (14)	120
25 - 34	34 (23)	18 (20)	8 (14)	5 (9)	11 (10)	76
35 - 54	15 (9)	4 (8)	5 (6)	3 (4)	4 (4)	31
55 plus	6 (15)	12 (13)	26 (9)	1 (6)	5 (7)	50
Total	84	73	52	35	33	277

APPENDIX III--Continued

TABLE III-6--Continued

$$X^2 = \frac{(29-37)^2}{37} + \frac{(39-32)^2}{32} + \frac{(13-22)^2}{22} + \frac{(26-15)^2}{15} +$$

$$\frac{(13-14)^2}{14} + \frac{(34-23)^2}{23} + \frac{(18-20)^2}{20} + \frac{(8-14)^2}{14} +$$

$$\frac{(5-9)^2}{9} + \frac{(11-10)^2}{10} + \frac{(15-9)^2}{9} + \frac{(4-8)^2}{8} +$$

$$\frac{(5-6)^2}{6} + \frac{(3-4)^2}{4} + \frac{(4-4)^2}{4} + \frac{(6-15)^2}{15} +$$

$$\frac{(12-13)^2}{13} + \frac{(26-9)^2}{9} + \frac{(1-6)^2}{6} + \frac{(5-7)^2}{7}$$

$$= 52.75 \quad \text{(Ho rejected at the .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-7

TYPE OF HOUSEHOLD AND EXPECTED TENURE

Ho--there is no relationship between the type of house-
hold and expected tenure following next move

	Expect To Rent	Expect To Buy	Total
Married Couples	50 (63)	32 (19)	82
Families	39 (43)	16 (12)	55
Single Persons	64 (54)	5 (15)	69
Shared Households	63 (57)	11 (17)	74
Total	216	64	280

$$x^2 = \frac{(50-63)^2}{63} + \frac{(32-19)^2}{19} + \frac{(39-43)^2}{43} + \frac{(16-12)^2}{12} +$$

$$\frac{(64-54)^2}{54} + \frac{(5-15)^2}{15} + \frac{(63-57)^2}{57} + \frac{(11-17)^2}{17}$$

$$= 24.54 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-8

AGE OF HOUSEHOLD HEAD AND EXPECTED TENURE

Ho--there is no relationship between the age of
the household head and expected tenure
following the next move

	Expect To Rent	Expect To Buy	Total
Under 25	97 (92)	23 (28)	120
25 - 34	51 (59)	26 (18)	77
35 - 54	20 (24)	11 (7)	31
55 plus	48 (39)	4 (13)	52
Total	216	64	280

$$x^2 = \frac{(97-92)^2}{92} + \frac{(23-28)^2}{28} + \frac{(51-59)^2}{59} + \frac{(26-18)^2}{18} +$$

$$\frac{(20-24)^2}{24} + \frac{(11-7)^2}{7} + \frac{(48-39)^2}{39} + \frac{(4-13)^2}{13}$$

$$= 17.07 \quad \text{(Ho rejected at .05 and .01 level)}$$

APPENDIX III—Continued

TABLE III-9

METHOD OF TRAVEL BY HOUSEHOLD INCOME

Ho—there is no relationship between the method of travel and household income

	$0-5,999	$6,000 -9,999	$10,000 $14,999	$15,000 plus	Total
Car	11 (20)	26 (30)	35 (32)	29 (19)	101
Bus	13 (10)	16 (16)	13 (17)	10 (9)	52
Walk	21 (15)	26 (23)	22 (24)	7 (14)	76
Other	3 (3)	3 (2)	5 (2)	1 (5)	12
Total	48	71	75	47	241

$$x^2 = \frac{(11-20)^2}{20} + \frac{(26-30)^2}{30} + \frac{(35-32)^2}{32} + \frac{(29-19)^2}{19} +$$

$$\frac{(13-10)^2}{10} + \frac{(16-16)^2}{16} + \frac{(13-17)^2}{17} + \frac{(10-9)^2}{9} +$$

$$\frac{(21-15)^2}{15} + \frac{(26-23)^2}{23} + \frac{(22-24)^2}{24} + \frac{(7-14)^2}{14} +$$

$$\frac{(3-3)^2}{3} + \frac{(3-2)^2}{2} + \frac{(5-2)^2}{2} + \frac{(1-5)^2}{5}$$

$$= 26.30 \quad (\text{Ho rejected at .05 and .01 level})$$

APPENDIX III--Continued

TABLE III-10

METHOD OF TRAVEL BY OCCUPATION OF HOUSEHOLD HEAD

Ho--there is no relationship between the method of
travel and the occupation of household head

	Car	Bus	Walk	Other	Total
Professional	38 (25)	7 (13)	15 (19)	1 (4)	61
Clerical	15 (21)	20 (11)	15 (16)	-- (2)	50
Sales/Service	8 (12)	10 (6)	9 (9)	3 (3)	30
Craftsmen	20 (13)	1 (7)	8 (10)	3 (2)	32
Unskilled	12 (9)	5 (5)	1 (7)	4 (1)	22
Students	8 (19)	9 (10)	28 (14)	1 (3)	46
Total	101	52	76	12	241

APPENDIX III--Continued

TABLE III-10--Continued

$$X^2 = \frac{(38-25)^2}{25} + \frac{(7-13)^2}{13} + \frac{(15-19)^2}{19} + \frac{(1-4)^2}{4} +$$

$$\frac{(15-21)^2}{21} + \frac{(20-11)^2}{11} + \frac{(15-16)^2}{16} + \frac{(0-2)^2}{2} +$$

$$\frac{(8-12)^2}{12} + \frac{(10-6)^2}{6} + \frac{(9-9)^2}{9} + \frac{(3-3)^2}{3} +$$

$$\frac{(20-13)^2}{13} + \frac{(1-7)^2}{7} + \frac{(8-10)^2}{10} + \frac{(3-2)^2}{2} +$$

$$\frac{(12-9)^2}{9} + \frac{(5-5)^2}{5} + \frac{(1-7)^2}{7} + \frac{(4-1)^2}{1} +$$

$$\frac{(8-19)^2}{19} + \frac{(9-10)^2}{10} + \frac{(28-14)^2}{14} + \frac{(1-3)^2}{3}$$

$$= 74.50 \quad \text{(Ho rejected at the .05 and .01 level)}$$

APPENDIX III--Continued

TABLE III-11

DISTANCE TRAVELLED BY METHOD OF TRAVEL

Ho--there is no relationship between the distance travelled
and the method of travel

	Distance (tenths of miles)						
	0.0-0.5	0.6-1.0	1.1-1.5	1.6-2.0	2.1-2.5	2.6 plus	Total
Car/Truck etc	3 (15)	8 (15)	12 (22)	10 (10)	12 (11)	68 (40)	113
Bus	-- (6)	2 (6)	12 (11)		9 (5)	19 (19)	52
Walk	27 (10)	22 (10)	24 (15)	(6)	2 (7)	-- (28)	76
Total	30	32	48	21	23	87	241

$$x^2 = \frac{(3-15)^2}{15} + \frac{(8-15)^2}{15} + \frac{(12-22)^2}{22} + \frac{(10-10)^2}{10} +$$

$$\frac{(12-11)^2}{11} + \frac{(68-40)^2}{40} + \frac{(0-6)^2}{6} + \frac{(2-6)^2}{6} +$$

$$\frac{(12-11)^2}{11} + \frac{(10-5)^2}{5} + \frac{(9-5)^2}{5} + \frac{(19-19)^2}{19} +$$

$$\frac{(27-10)^2}{10} + \frac{(22-10)^2}{10} + \frac{(24-15)^2}{15} + \frac{(1-6)^2}{6} +$$

$$\frac{(2-7)^2}{7} + \frac{(0-28)^2}{28}$$

$$= 138.5 \quad \text{(Ho rejected at the .05 and .01 level)}$$

APPENDIX IV

VARIABLES TESTED IN THE DECISION MAKING PROCESS AND THE NUMBER AND PERCENTAGE OF HOUSEHOLDS CONSIDERING EACH VARIABLE

Variable	No.	Per cent
INTERIOR OF THE UNIT		
Air conditioning	17	6
Carpeting	169	58
Drapes	56	19
Appliances	181	62
Storage	154	53
Balconies	98	33
Cable TV	39	13
Feature wall	15	5
Intercom	92	31
Condition	140	48
Arrangement	77	26
Size	165	56
View	73	25
Furnished	28	10
Temperature control	56	19
Soundproofing	81	28
None of these	21	7
ASPECTS OF SITE AND STRUCTURE		
Recreational facilities in complex	54	18
Daycare centre in complex	1	--
Parking space	149	51
Play area for children	18	6
Laundry facilities	164	56
Quality of construction	44	15
Because it is a high rise	37	13
Because it is a walk-up	50	17
Because it is a single detached dwelling	17	6
Appearance of dwelling	68	23
Size of the lot	9	3
Landscaping	24	8
None of these	45	15

APPENDIX IV--Continued

Variable	No.	Per cent
ASPECTS OF MANAGEMENT		
Security service provided	60	20
Pets allowed	40	14
Pets not allowed	50	17
Children allowed	54	19
Children not allowed	42	14
Age and sex policy	20	7
None of these	125	43
PHYSICAL CHARACTERISTICS OF THE NEIGHBOURHOOD		
Street lighting	51	17
Appearance of surrounding development	59	20
Privacy	74	25
Quiet surroundings	99	34
Clean surroundings	101	34
Spacious surroundings	25	9
Absence of traffic noise	64	22
None of these	95	32
SOCIAL ASPECTS OF THE NEIGHBOURHOOD		
Neighbourhood reputation	37	13
Friendly neighbours	48	16
Neighbours of similar income	21	7
Neighbours of same nationality	12	4
None of these	199	68
ACCESSIBILITY		
Close to work	158	54
Close to shopping	167	57
Close to children's school	23	8
Close to University, N.A.I.T.	88	30
Close to church	43	15
Close to bus route	170	58
Close to river valley	47	16

APPENDIX IV--Continued

Variable	No.	Per cent
ACCESSIBILITY--Continued		
Close to recreational facilities	40	14
Close to major traffic route	54	18
Close to downtown	114	39
Close to entertainment	45	15
Close to friends	87	30
Close to relatives	29	10
None of these	9	3
FINANCIAL AND OTHER VARIABLES		
Monthly rent	180	61
Amount of damage deposit	43	15
Conditions of the lease	66	23
Physical disability or handicap	12	4
Only alternative available	36	12
None of these	78	27

APPENDIX V

FIRMS INTERVIEWED

1. Edmonton Real Estate Board
   10515 Princess Elizabeth Avenue

2. Edmonton Housing Association
   10053A Jasper Avenue

PROPERTY MANAGEMENT

3. Canada Trust, Huron and Erie
   10150 - 100 Street

4. Weber Brothers Realty Limited
   10012 - 101A Avenue

5. Mid-West Property Management
   3400 Edmonton House

INVESTMENT FIRMS

6. Canada Permanent Trust
   10038 Jasper Avenue

7. Royal Trust
   10039 Jasper Avenue

8. City Savings and Trust
   400 McLeod Building

9. North West Trust Company
   10053A Jasper Avenue

DEVELOPMENT COMPANIES

10. Conanda Corporation Limited
    610 - 10201 104 Street

11. Humford Developments Limited
    2700 Avord Arms

12. Carma Developers (Edmonton) Limited
    320 Macdonald Place

13. Alldritt Apartments Limited
    11305 - 149 Street

APPENDIX V--Continued

DEVELOPMENT COMPANIES--Continued
14. Solano Developments Limited
10350 - 122 Street

CONSTRUCTION FIRMS
15. Stanton Developments Limited
11825 - 145 Street

16. Batoni Bowlen Enterprises Limited
10805 - 120 Street

17. Bird Construction Company Limited
503 Parkington Plaza

APPENDIX VI

RANDOMIZED SURVEY VARIABLES

7. Please place a tick ( ) beside those factors that you
were looking for, or took into consideration, when you
were evaluating this dwelling as a place to live.
REMEMBER, tick only those factors that you were looking
for or took into consideration when you were considering
this unit as a place to live.

YES   NO

___   ___   intercom provided

___   ___   air conditioning

___   ___   only alternative available

___   ___   policy regarding age or marital status of
                 the tenants

___   ___   close to work

___   ___   parking space

___   ___   because it is a high rise

___   ___   drapes included

___   ___   quiet surroundings

___   ___   close to friends

___   ___   absence of traffic noise

___   ___   neighbours of similar income level

___   ___   landscaping of the lot or complex

___   ___   patios or balconies present

___   ___   close to river valley

___   ___   feature wall present

___   ___   major appliances present

APPENDIX VI--Continued

YES   NO

___   ___   neighbourhood reputation

___   ___   close to recreational facilities

___   ___   temperature control in unit

___   ___   appearance of dwelling

___   ___   close to entertainment

___   ___   view from the unit

___   ___   play area for children

___   ___   pets allowed

___   ___   carpeting on the floors

___   ___   security service provided

___   ___   privacy

___   ___   laundry facilities

___   ___   condition of the unit

___   ___   children not allowed

___   ___   close to University, N.A.I.T., etc.

___   ___   recreational facilities in the complex

___   ___   close to relatives

___   ___   clean surroundings

___   ___   size of the lot

___   ___   quality of construction

___   ___   neighbours of the same nationality

___   ___   appearance of surrounding development

APPENDIX VI--Continued

YES   NO

____   ____   monthly rent

____   ____   cable TV connection

____   ____   spacious surroundings

____   ____   close to downtown

____   ____   friendly neighbours

____   ____   children allowed

____   ____   close to bus route

____   ____   a physical disability or handicap

____   ____   because it is a walk-up

____   ____   close to church

____   ____   spacious closets and storage space

____   ____   conditions of the lease .

____   ____   size of rooms

____   ____   street lighting

____   ____   close to children's school

____   ____   amount of damage deposit

____   ____   because it is a single detached dwelling

____   ____   unit was fully furnished

____   ____   daycare centre in the complex

____   ____   arrangement of rooms

____   ____   good soundproofing

____   ____   close to shopping

APPENDIX VI--Continued

YES   NO

___   ___   close to major traffic route

___   ___   pets not allowed

APPENDIX VII

CONTINGENCY TABLE VII-1

DECISION MAKING VARIABLES BY AGE

		0-24	25-34	35-54	55 plus	TOTAL
INTERIOR						
Condition	A	65	39	14	22	140
	E	59	38	16	26	140
View	A	21	15	11	26	73
	E	30	20	9	13	73
Soundproofing	A	35	22	5	19	81
	E	34	22	9	15	81
SITE/STRUCTURE						
Parking Space	A	73	45	12	19	149
	E	62	40	20	28	149
Play Area	A	1	9	6	2	18
	E	7	5	3	3	18
High Rise	A	7	7	3	20	37
	E	16	10	4	7	37
MANAGEMENT						
Security Service	A	26	18	3	13	60
	E	26	17	7	11	60
Pets Allowed	A	21	12	6	1	40
	E	17	11	5	8	40
Pets Not Allowed	A	14	11	4	21	50
	E	21	14	6	9	50
Children Allowed	A	23	19	9	3	54
	E	22	15	7	11	54
Children Not Allowed	A	9	8	4	21	42
	E	18	12	5	8	42

APPENDIX VII--Continued

CONTINGENCY TABLE VII-1--Continued

		0-24	25-34	35-54	55 plus	TOTAL
MANAGEMENT--Continued						
Age/Sex Policy	A	17	3	--	--	20
	E	8	6	2	4	20
PHYSICAL						
Appearance	A	34	15	7	3	59
	E	25	16	7	11	59
Privacy	A	33	11	7	23	74
	E	31	20	9	15	74
Quiet	A	38	18	10	33	99
	E	42	27	11	19	99
No Traffic Noise	A	17	16	12	19	64
	E	27	18	7	13	64
ACCESSIBILITY						
Close To Work	A	67	57	19	15	158
	E	67	44	18	30	158
Close To School	A	2	9	10	2	23
	E	9	6	3	4	23
Close To University/	A	57	23	7	1	88
N.A.I.T.	E	37	24	10	17	88
Close To Church	A	12	5	6	20	43
	E	18	12	5	8	43
Close To Traffic	A	33	14	4	3	54
Route	E	22	15	7	11	54
Close To	A	26	12	6	1	45
Entertainment	E	18	12	5	9	45

APPENDIX VII--Continued

CONTINGENCY TABLE VII-2

DECISION MAKING VARIABLES BY HOUSEHOLD TYPE

		*M.C.	*FAM.	*S.P.	*S.H.	TOTAL
INTERIOR						
Condition	A	59	17	28	36	140
	E	42	27	35	35	140
View	A	33	11	19	10	73
	E	22	14	18	18	73
Soundproofing	A	28	4	24	25	81
	E	24	16	20	20	81
SITE/STRUCTURE						
Parking Space	A	61	19	30	39	149
	E	45	29	37	39	149
Play Area	A	--	17	1	--	18
	E	5	4	4	5	18
High Rise	A	16	1	15	5	37
	E	11	7	9	10	37
MANAGEMENT						
Security Service	A	30	2	13	15	60
	E	18	12	15	16	60
Pets Allowed	A	9	8	8	15	40
	E	12	8	10	11	40
Pets Not Allowed	A	22	5	15	8	50
	E	15	10	12	13	50
Children Allowed	A	9	35	--	10	54
	E	16	11	13	14	54

*M.C.--Married Couples   *FAM.--Families

*S.P.--Single Persons   *S.H.--Shared Households

APPENDIX VII--Continued

CONTINGENCY TABLE VII-2--Continued

		M.C.	FAM.	S.P.	S.H.	TOTAL
MANAGEMENT--Continued						
Children Not Allowed	A	18	2	18	6	42
	E	12	9	11	11	42
Age/Sex Policy	A	4	--	3	13	20
	E	6	4	5	5	20
PHYSICAL						
Appearance	A	18	10	11	20	59
	E	18	12	15	15	59
Privacy	A	29	7	21	17	74
	E	22	15	19	19	74
Quiet	A	38	11	32	18	99
	E	29	19	25	26	99
No Traffic Noise	A	27	11	18	8	64
	E	19	13	15	17	64
ACCESSIBILITY						
Close To Work	A	58	29	31	40	158
	E	47	30	39	41	158
Close To School	A	--	21	2	--	23
	E	7	4	6	5	23
Close To University/	A	27	12	10	39	88
N.A.I.T.	E	26	17	22	22	88
Close To Church	A	13	7	18	5	43
	E	13	9	11	11	43
Close To Traffic	A	21	8	6	19	54
Route	E	16	11	13	14	54
Close To	A	16	5	10	14	45
Entertainment	E	14	8	11	12	45