THE RESIDENTIAL CONSTRUCTION INDUSTRY: PROBLEMS IN SHIFTING FROM NEW CONSTRUCTION TO RENOVATION ACTIVITIES

by

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Abstract

This thesis studies the response of the residential construction industry to the growing market for residential renovation, and its ability and willingness to transfer operations into renovation activities. The industry includes firms specializing in land development, new house-building, speculative and contract renovation projects. The thesis is concerned with the inherent industry constraints in meeting housing demand.

The increasing importance of residential renovation relative to new housing construction is examined. A review of the new residential and renovation sectors follows, comparing and contrasting the nature and characteristics of both sectors. It is found that small and medium-sized firms within the new residential construction sector are most able to enter into residential renovation activities.

The thesis reveals that the industry has so far shown a small scale response to the potential market for residential renovation, and has been inhibited by a number of barriers to entry. These include rigidities in the institutional approach to the residential renovation construction process. Other barriers arise from the inherent differences between renovation and new construction activities.
Proposals are made to facilitate a more effective and efficient renovation construction process. These should induce the industry to be more able and willing to adjust to the increased pace and scale of residential renovation activity expected in the future. In turn, the maintenance and rejuvenation of the existing housing stock will be facilitated in accordance with future housing demand.
Table of Contents

Abstract .................................................. ii
List of Tables ................................................ vii
List of Figures ............................................... viii
Acknowledgement ............................................. ix

CHAPTER I
INTRODUCTION ............................................. 1
A. RESEARCH FOCUS ......................................... 1
B. BACKGROUND TO THE RESEARCH ......................... 1
C. SIGNIFICANCE OF THE THESIS ......................... 2
D. RESEARCH OBJECTIVES ................................ 3
E. DEFINITIONS ............................................... 4

CHAPTER II
THE INCREASING IMPORTANCE OF RESIDENTIAL RENOVATION 6
A. THE AGEING HOUSING STOCK ............................ 6
B. DEMOGRAPHIC FACTORS ................................. 10
   1. Population Growth .................................... 10
   2. Age Structure ....................................... 12
   3. Household And Family Formation .................... 14
   4. Household Size ..................................... 14
   5. Impact Of Demographic Trends On Housing Demand 15
C. ECONOMIC FACTORS ..................................... 17
   1. The Speculative Renovator: Economic Influences 17
   2. The Homeowner: Economic Influences ............... 21
   3. Economic Trends: Changing Valuation Of The Housing Stock 21
D. LIFESTYLE FACTORS ..................................... 22
E. HOUSING POLICY ......................................... 23
F. SUMMARY .................................................. 26

CHAPTER III
A. INTRODUCTION ............................................. 28
List of Tables

I. Comparison of Age of Stock in 1979 and 2000 ............7
II. New Housing Requirements .................................8
III. The Pattern of Residential Investment in Canada, 1975-1980 ($ thousands) ........................................9
IV. The Pattern of Residential Investment in Canada, 1975-1980 (% of total) ...............................................9
VI. Changes in Age Distribution of the Canadian Population, 1981-2001 ..................................................13
VII. Household Projections For Canada, 1976-2001 ...........14
IX. Size of NHA Operations of Builders Obtaining NHA Loans for New Housing: Canada 1962-73 ............................35
X. Proportion of Firms Composing the Industry by Size Category; 1974-80 ......................................................36
XI. Capture of Construction Investment by Size Category; 1974-80 ..............................................................39
XII. The Pattern of Residential Investment in Canada, 1975-1980 .................................................................42
List of Figures


2. Fluctuation In The Number of Establishments by Size Category: Canada 1974-1980 ..................33

3. Proportion of Firms by Size Class Category: Canada 1974-1980 ........................................37

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CHAPTER I. INTRODUCTION

A. RESEARCH FOCUS

The purpose of this thesis is to identify obstacles that limit the ability and willingness of the residential construction industry to shift from new construction to renovation activities. Based on these findings, actions are recommended that government and other institutions could take to facilitate and encourage industry adjustment.

B. BACKGROUND TO THE RESEARCH

In the 1950's, 1960's and 1970's, Canadian housing demand was met through a dramatic increase in the housing stock by new construction. Future housing market conditions to the year 2000 will change in response to changing demands. Demographic trends indicate a slower rate of population growth which will result in a declining demand for new housing. Consequently, an increasing proportion of future housing demand will be met by the existing housing stock, rather than through the construction of new housing.

Other factors that will make renovation of the housing stock attractive include:

- economic factors that favor re-use of the housing stock, as opposed to demolition and replacement;
- a shift in taste toward an appreciation of urban lifestyles and older homes found within urban locations; and
- the recognition by the Federal housing agency, CMHC, that the conservation and intensification of
the housing stock is one way of meeting future housing demand.

Despite the growing demand for renovation work, the residential construction industry is displaying inertia in transferring operations to renovation activities. As a proportion of the total residential renovation industry the renovation segment is insignificant both in scale and capture of investment. This thesis sets out to discover if there are any impediments to industry transition and, if so what measures are needed to overcome these obstacles. Specifically, the thesis addresses the ability and willingness of the industry to adapt to renovation construction.

C. SIGNIFICANCE OF THE THESIS

The residential construction industry's function in the housing market is to supply housing to meet demand. It is essential therefore, to ensure that the industry responds to factors changing the underlying demand for housing. One housing analyst suggests that in order to maintain and renew the existing housing stock to meet the future demand for housing, the industry must increase both its pace and scale of renovation activities (Hulchanski: 1982, p.56). Therefore, an understanding of the industry's willingness and ability to adapt to renovation activities is critical.
D. RESEARCH OBJECTIVES

The objectives of this thesis are:

1. To review the literature on the role of the renovation of the existing housing stock compared to new construction in meeting future housing demand.

2. To use data on the residential construction industry from 1962-1982 to compare the structure and operations of the new housing construction and residential renovation construction sectors.

3. To identify the obstacles impeding industry transition to renovation activities. This will be based on two sources of information: a review of the literature directly relevant to the subject, and informal interviews of ten medium sized house-building firms active in the Greater Vancouver area.

4. To suggest ways that government and other institutions could encourage and facilitate adaptation by the residential construction industry to residential renovation activities, thereby facilitating an increased pace and scale of renovation activity.
E. DEFINITIONS

There is no commonly accepted definition of "renovation". The term is used interchangeably with rehabilitation, repair, refurbish, retrofit and renewal. For purposes of this thesis, the following definitions will be used.

The terms (a-d) are derived from the Ontario Ministry of Housing (1980a) definitions; the last term (e) is derived from Frenette (1978).

a. Rehabilitation: improving a building up to minimum property standards.

b. Renovation: improving a building to a standard beyond minimum property standards.

c. Conversion: converting existing detached or semi-detached single family dwellings to multiple dwellings.

d. Redevelopment: demolishing residential and non-residential buildings in built-up, serviced parts of urban areas and replacing them with new residential units.

e. Gentrification: renovation involving the transfer of occupancy from low-income households to middle or upper-income households.

Terminology defining the types of firms in the residential construction industry includes:

g. **Developer-Builder**: a well organized construction operation that aims to maintain a continued sales volume of new houses. The firm operates as a land development company to create its own lots, or it may buy lots from others (Anderson et. al.: 1980, p. 90).

h. **Speculative Renovator**: purchases a property, redesigns and rehabilitates or renovates it and then sells it on the market. The renovator aims to maintain a continuous sales volume.

i. **Contract Renovator**: contracts services to homeowners to renovate or rehabilitate their property to design specifications. It may function as a general contractor in organizing and supervising trade work or it may operate on its own performing minor repair work.
CHAPTER II. THE INCREASING IMPORTANCE OF RESIDENTIAL RENOVATION

This chapter shows that renovation will become increasingly important in the next 20 years relative to new construction, and that market demand for renovation will increase at a faster rate than the capacity of the industry to renovate the housing stock, unless some supply side actions are taken. The factors contributing to the increasing importance of renovation include: the ageing housing stock; demographic factors; economic factors; lifestyle factors; and housing policy. Since these factors influence each other, overlapping references to them will be made throughout the discussion. Predictions are based on the relative, not absolute increase of residential renovation, since it is difficult to make long range projections of the absolute level of housing supply activity.

A. THE AGEING HOUSING STOCK

In contrast to post World War II decades when housing demand was met through new housing, the supply of future demand will depend more on the existing housing stock. As new construction has slowed relative to the total supply, the housing stock has been ageing, and this trend is expected to continue. The increasing proportion of older housing creates a larger potential for renovation.

There is no definite, critical age at which a building must be rehabilitated because deterioration of building components is a function of the causes of deterioration to which they are exposed (weather, wear and tear, etc.) and the quality of construction and maintenance of these components. (Peter
and modernization of a building's components, its life is virtually infinite. Notwithstanding these considerations, the benchmark age for major rehabilitation is 50 years and 25 years for repair work (CMHC: 1980c, p.24, Housing Ontario: October 12, 1981, p.20). The table below, derived from the 1974 national Survey of Housing Units, illustrates that housing built after WW II is in need of repair and approaching the major rehabilitation stage. Twenty percent of the housing stock is over 50 years old, at the critical age needing major rehabilitation. Fully 55 percent of the current total housing stock is over 20 years of age, increasing to 63 percent by the year 2000.

Table I - Comparison of Age of Stock in 1979 and 2000

<table>
<thead>
<tr>
<th>Age (Yrs)</th>
<th>Stock 1979</th>
<th>Stock 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>8,005,079</td>
<td>11,556,557</td>
</tr>
<tr>
<td>Over 20</td>
<td>4,131,564</td>
<td>7,292,581</td>
</tr>
<tr>
<td>Over 50</td>
<td>1,589,376</td>
<td>2,637,215</td>
</tr>
</tbody>
</table>

Source: Survey of Housing Units, 1974

According to the 1974 Survey of Housing Units, of the national total of 7.5 million housing units, approximately 13.4 percent were in need of rehabilitation at that time. No more current estimate is available. By tenure, 66 percent of those units needing rehabilitation were rental and 34.3 percent were non-rental units (Tsang: 1979,p. 44).

Compounding the problem of the ageing housing stock is the decrease in demand for new housing due to demographic changes as shown in the following section. Consequently, according to one
housing analyst, 73 percent of the housing stock required in 2001 is already built (Brown: 1981, p.19). New housing starts relative to the total housing stock are expected to decline from 2.5 percent in 1981 to 0.9 percent in 2001 (Brown: 1981, p.21). Clayton Research Associates speculates that new housing construction will decline to an average annual level of 220,000 units in 1981-1986 compared to 229,000 units in 1976-1981 and 257,000 units from 1971-1976 (1981, p.1). Of future new housing demand, rental units will experience the most dramatic decline, as shown in Table II.

Table II - New Housing Requirements

<table>
<thead>
<tr>
<th>Year</th>
<th>Rental</th>
<th>Ownership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>69,700</td>
<td>144,200</td>
<td>213,900</td>
</tr>
<tr>
<td>1986</td>
<td>58,800</td>
<td>142,700</td>
<td>201,500</td>
</tr>
<tr>
<td>1987</td>
<td>47,400</td>
<td>141,600</td>
<td>189,000</td>
</tr>
<tr>
<td>1988</td>
<td>37,400</td>
<td>139,300</td>
<td>176,700</td>
</tr>
<tr>
<td>1989</td>
<td>28,900</td>
<td>136,800</td>
<td>165,700</td>
</tr>
<tr>
<td>1990</td>
<td>28,000</td>
<td>128,200</td>
<td>156,200</td>
</tr>
<tr>
<td>1991</td>
<td>29,500</td>
<td>120,100</td>
<td>149,600</td>
</tr>
</tbody>
</table>


In reviewing housing stock trends J.E. Smith, CMHC's Rehabilitation Program Development Officer comments:

...this shift away from new construction means that for the first time in our history, there are more existing units being renewed than there are new units being built (Smith, J.E. in Second Canadian Building Congress Proceedings: 1979, p.127).

Housing analysts suggest that potential housing
rehabilitation investment could be as high as $230 billion (1978$) between 1980 and 2001 (CMHC: 1980c, p. 39). The trend toward increasing rehabilitation and renovation investment is revealed by tracing recent patterns of residential investment, Tables III and IV.

Table III - The Pattern of Residential Investment in Canada, 1975-1980 ($ thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Housing Construction</th>
<th>Major Renovation</th>
<th>Repair</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>5,896,316</td>
<td>1,217,541</td>
<td>1,575,805</td>
<td>8,689,662</td>
</tr>
<tr>
<td>1976</td>
<td>8,384,939</td>
<td>2,467,593</td>
<td>1,816,814</td>
<td>12,669,346</td>
</tr>
<tr>
<td>1977</td>
<td>8,360,132</td>
<td>2,571,822</td>
<td>2,018,674</td>
<td>12,950,628</td>
</tr>
<tr>
<td>1978</td>
<td>8,861,704</td>
<td>2,588,846</td>
<td>2,329,408</td>
<td>13,779,958</td>
</tr>
<tr>
<td>1979</td>
<td>8,736,614</td>
<td>2,745,146</td>
<td>2,329,408</td>
<td>14,152,695</td>
</tr>
<tr>
<td>1980</td>
<td>8,595,350</td>
<td>2,934,170</td>
<td>3,010,836</td>
<td>14,540,356</td>
</tr>
</tbody>
</table>

Table IV - The Pattern of Residential Investment in Canada, 1975-1980 (% of total)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Housing Construction</th>
<th>Major Renovation</th>
<th>Repair</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>67.9</td>
<td>14.0</td>
<td>18.1</td>
<td>100.0</td>
</tr>
<tr>
<td>1976</td>
<td>66.2</td>
<td>19.5</td>
<td>14.3</td>
<td>100.0</td>
</tr>
<tr>
<td>1977</td>
<td>64.5</td>
<td>19.9</td>
<td>15.6</td>
<td>100.0</td>
</tr>
<tr>
<td>1978</td>
<td>64.3</td>
<td>18.8</td>
<td>16.9</td>
<td>100.0</td>
</tr>
<tr>
<td>1979</td>
<td>61.8</td>
<td>19.3</td>
<td>18.9</td>
<td>100.0</td>
</tr>
<tr>
<td>1980</td>
<td>59.1</td>
<td>20.1</td>
<td>20.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In summary, the combination of an ageing housing stock with declining levels of new housing construction means that greater emphasis will be placed on the existing housing stock to accommodate future housing demand.

B. DEMOGRAPHIC FACTORS

The demand for housing is shaped by such demographic factors as population, age structure, household size and rates of household formation. It is important to examine Canadian demographic trends and their impact on the housing stock in the next 20 years.

The birth of the baby boom in the post war years, resulting in dramatic population growth, has been a major demographic event. The following discussion of demographic trends involves a tracing of the patterns of household and family formation of the baby boom generation.

1. Population Growth

Relative to previous periods, population growth rates are expected to be low and declining due to the falling birth rate and international migration rates.
<table>
<thead>
<tr>
<th>Year</th>
<th>Population ('000's)</th>
<th>Average Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976(Census)</td>
<td>22,992.6</td>
<td>1.26 (1971-1976 Actual)</td>
</tr>
<tr>
<td>1981(Census)</td>
<td>24,343.0</td>
<td>1.17 (1976-1981 Actual)</td>
</tr>
<tr>
<td>1986</td>
<td>25,405.5</td>
<td>0.87 (1981-1986)</td>
</tr>
<tr>
<td>1991</td>
<td>26,619.4</td>
<td>0.96 (1986-1991)</td>
</tr>
<tr>
<td>1996</td>
<td>27,784.5</td>
<td>0.88 (1991-1996)</td>
</tr>
<tr>
<td>2001</td>
<td>28,860.6</td>
<td>0.77 (1996-2001)</td>
</tr>
</tbody>
</table>


It is expected that natural increase will be the principle source of population growth which is currently at the lowest level ever in Canada.
Figure 1 - Components of Population Growth, Canada 1951-2001


2. Age Structure

Canada's population is ageing. The 1980's will see a large percentage increase in the 35-44 (45.9 percent) and 65+ (25.1 percent) age groups relative to the previous decade (see Table VI). The 1990's is expected to witness substantial increases of 45-54 year olds (46.5 percent) and small increases of 55-64 year

**Table VI - Changes in Age Distribution of the Canadian Population, 1981-2001**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute</td>
<td>% Change</td>
<td>Absolute</td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td></td>
<td>Change</td>
</tr>
<tr>
<td>0-14</td>
<td>+353.2</td>
<td>+6.4</td>
<td>+442.0</td>
</tr>
<tr>
<td>15-24</td>
<td>-942.2</td>
<td>-20.5</td>
<td>+165.0</td>
</tr>
<tr>
<td>25-34</td>
<td>+559.0</td>
<td>+13.1</td>
<td>-1014.6</td>
</tr>
<tr>
<td>35-44</td>
<td>+1357.1</td>
<td>+45.9</td>
<td>+566.9</td>
</tr>
<tr>
<td>45-54</td>
<td>+395.7</td>
<td>+16.0</td>
<td>+1333.0</td>
</tr>
<tr>
<td>55-64</td>
<td>+142.9</td>
<td>+6.7</td>
<td>+378.8</td>
</tr>
<tr>
<td>65+</td>
<td>+569.8</td>
<td>+25.1</td>
<td>+370.2</td>
</tr>
<tr>
<td>Canada</td>
<td>+2435.5</td>
<td>+10.1</td>
<td>+2241.3</td>
</tr>
</tbody>
</table>

3. Household And Family Formation

The dramatic growth of non-family households is expected to continue from 1981 to the year 2001. According to Brown, non-family households are expected to increase by 58 percent while family households will increase by 31 percent during this period (1981, p. 12). Although household formation is increasing at a declining rate, it is expected to remain greater than the average annual growth rate of the population.

Table VII - Household Projections For Canada, 1976-2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Households</th>
<th>Average Annual Growth Rate</th>
<th>Average Annual Population Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976(Census)</td>
<td>7,166.1</td>
<td>3.40 (1971-1976)*</td>
<td>1.29*</td>
</tr>
<tr>
<td>1981(Census)</td>
<td>8,281.5</td>
<td>2.94 (1976-1981)*</td>
<td>1.04*</td>
</tr>
<tr>
<td>1986</td>
<td>9,329.7</td>
<td>2.42 (1981-1986)</td>
<td>0.99</td>
</tr>
<tr>
<td>1991</td>
<td>10,236.9</td>
<td>1.87 (1986-1991)</td>
<td>0.94</td>
</tr>
<tr>
<td>1996</td>
<td>10,895.0</td>
<td>1.25 (1991-1996)</td>
<td>0.86</td>
</tr>
<tr>
<td>2001</td>
<td>11,387.9</td>
<td>0.89 (1996-2001)</td>
<td>0.76</td>
</tr>
</tbody>
</table>

* Actual

4. Household Size

The source of non-family household growth derives from increases in one and two person households. This trend towards "undoubling" and "singling" reflects current attitudes to divorce and marriage which are expected to remain unchanged in the future (Miron: 1982, p. 67-80). Household size is projected to further decline from 2.9 persons per household in

5. Impact Of Demographic Trends On Housing Demand

The above demographic changes will have an impact on type, tenure and amount of housing demanded from 1981-2001. The literature makes a number of observations on this point:

- The model constructed by Brown predicts that the average annual requirement for home ownership will decline by 41 percent from 1981-2001 while the average annual requirement for rental accommodation will decline by 70 percent. However, the proportion of owner occupied housing will increase from 59 percent to 74 percent from 1981-2001 (Brown: 1981, pp. 14-16).

- The increase in one and two person households implies a decreasing demand for the single family home (which composes close to 60 percent of the housing stock) and a greater demand for smaller sized housing with less and cheaper maintenance (Levenson: 1979, p.10). The traditional preference by Canadian households for single family homes however, will ensure continued demand for single family units.

- With decreasing numbers of child-oriented households as the population middle ages (increasing numbers of households in the 35-44 age groups in the 1980's and 45-54 age groups in the 1990's), there will be less demand for "starter" homes. Given that the majority of the baby boom generation will have purchased their starter home by the mid-1980's, their future housing options will be to either to "trade up" to a more expensive home or alter their existing home to suit their needs.

- The ageing of the housing stock in concert with declining population growth rates implies that there will be less demand for new housing units from 1981-2001. A key component of total housing demand to 2001 will be the growth of one and two person households, which is expected to outpace the growth rate of the

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1 Brown arrives at estimates for housing requirements by tenure by calculating the distinct occupancy patterns by unit types and tenure for different age and household types. Data are drawn from the 1976 census and applied to the demographic projections (1981:p.13).
population as a whole. Hulchanski notes that these households tend to have larger incomes and prefer family type urban housing units. Those small-sized households who either cannot afford or do not prefer larger family type units, will tend to prefer the smaller sized units typically provided by conversion and renovation.


Other factors which support the adaptation of the existing housing stock in response to future housing consumption trends includes economic and lifestyle factors discussed in detail in the following sections. Renovation can be more economic than new construction. In addition, many housing consumers prefer an urban lifestyle and have an appreciation for older homes found in urban locations.

The extent to which demographic changes will have an impact on the demand for renovated and converted housing units will be determined by a number of unpredictable factors. Briefly these include:

- The level of economic growth will determine the disposable income of individuals and their propensity to purchase housing.
- The level of household formation as determined by prevailing attitudes towards marriage and divorce.
- The extent to which "empty nesters" (elderly households without children) free up single family housing by finding accommodation in rental, or condominium and cooperative units.
- The level of international migration which is volatile because of its fluctuation with federal immigration policies.
- The low fertility rate.
C. ECONOMIC FACTORS

There are two economic arguments supporting renovation as opposed to replacement of the housing stock. First, a number of economic reasons underlie the decision of the speculative renovator and home owner to renovate a structure. Second, certain larger economic trends, toward conservation of limited resources, support renovation of the housing stock.

1. The Speculative Renovator: Economic Influences

The decision of a speculative renovator to renovate a building as opposed to demolishing it and replacing it with a new structure is dependent upon which alternative offers minimum cost to produce a given standard of product (Tsang: 1979, p.29). Factors which enter into the decision framework include:

- cost of financing - the rate of interest on capital;
- future economic life of a renovated building compared to a new building;
- differences between annual operating and maintenance costs of renovated compared to a rebuilt property;
- the form and amount of government loans, grants and tax incentives and disincentives; and
- the difficulty in complying with building and zoning standards and the increased time required to obtain approvals compared to new construction.

Renovation construction enjoys a higher rate of return on investment on average compared to new construction (16.2 percent and 10.4 percent in 1975 respectively). Along with increasing rates of return are increasing measures of risk (Tsang: 1979, p. 7-8). Therefore, lenders generally extend credit to renovators at higher interest rates than for new construction (McKee: 1979, p. 33-34).
• differences between estimated market prices and expected sales period for a renovated building compared to a new building.

In choosing to renovate rather replace a structure the speculative renovator will balance the potential benefits of his choice. He will assess whether he can achieve higher market value, lower operating and maintenance costs and longer economic life compared to the potential costs including interest, property taxes, inconvenience and income loss through renovation (Rahra and Wilson: 1979, p.3).

Generalized statements concerning investment costs and benefits of renovation are difficult to make because of variable conditions and costs. A number of studies discuss the cost-effectiveness of renovating a building to its "highest and best use" and describe conditions or criteria which are essential for the success of renovation projects.

Bell in "How to Recycle Real Estate Successfully", urges the speculative renovator to spend sufficient "up front" time and expense to reach a thorough understanding of the physical property and the potential target market (1977, p.30). The speculative renovator should review such criteria as:

• The site and building: would the renovated building be economically and physically compatible with the neighbourhood?

• Zoning: what is the floor space ratio permitted for the renovated building compared to a new structure?

• Suitability of the shell for conversion: what are the estimated costs of bringing the structure up to current standards?
• Design potential: are there unique design features in the existing building?

• Feasibility of the renovation project: what are the costs and returns on a per dwelling unit basis or cost per rentable square foot (1977, p. 26-30).

Downs, in "Investing in Housing Rehabilitation Can Be Successful", confirms Bell's argument that renovation can be profitable provided certain rules are followed. He notes four principles of a successful major or "gut" residential renovation project:

• The building target market should shift from a low-rent to high-rent paying occupant to provide a reasonable return.

• The building should be purchased in a neighbourhood undergoing transition from a low to high income market.

• Renovation should be carried out on a small scale, one project at a time.

• The renovator must be intensively involved with all actors in the renovation project - the contractors, various trades and the architect.

Downs concludes that although renovation work consumes more time, involves higher costs of design, and has inefficient space utilization, higher front-end and management costs than new construction, renovation can still give sufficient return on investment (1976, p.68-73).

Listokin and Sternlieb performed a cost-benefit analysis of three renovation projects differing in the amount and extent of costs involved. They found that on average the total project cost of renovation (development + construction) is 20 percent cheaper than new construction. This estimate however varies
with the degree of renovation undertaken. If the choice is between replacement or renovation, greatest cost saving are made with "light" renovation construction in stable neighbourhoods. Conversely, given the same choice, replacement is a more favourable choice if extensive "gut" levels of renovation in blighted neighbourhoods is the alternative. Listokin concludes that based on the study findings, "a strong emphasis on renovation is warranted" (1976: p.1034).

McKee, Clatworthy and Frenette found that residential renovation was cost-effective, based on costings of recent public and third sector projects involving 1,500 dwelling units in Winnipeg, Manitoba. Data analysis revealed:

Relative to new housing construction, which costs about $30-35,000/unit, major renovation can be accomplished for approximately one third of the cost. Acquisition and renovation of structures from the existing stock can be accomplished for approximately two thirds of the cost of new development (1979: p.47).

The Canadian Association of Housing and Renewal Officials (CAHRO) also found that residential renovation was cost-effective. Further, they found that cost effectiveness could be improved with large scale construction efforts through the simultaneous renovation of groups of buildings. (CAHRO and CMHC: 1981, p. 7). This conclusion contradicts Bell's recommendation that renovation should be carried out on a small scale, one building at a time.

In summary, although these studies differ in approach to renovation projects (scale, target market, degree of renovation
effort) they agree that renovation can offer the speculative renovator the opportunity to obtain greater returns on investment through renovation than through redevelopment. However, it is important to note that speculative renovation carries greater risks than new construction.

2. The Homeowner: Economic Influences

Uncertain economic factors such as mortgage interest rates, future income flows and the recessionary economic climate have prompted homeowners and purchasers of housing to act cautiously in the housing market. Improvements to existing housing are perceived by the homeowner as adding to the potential value of an investment. The purchase of older homes located close to employment, services and amenities is also viewed by many potential homeowners as a way of cutting down on transportation costs. Collectively, these factors have contributed to many home owners' decision to retain and renovate their existing home rather than trade-up to a more expensive home (CHMC: 1980c, p.2; Levenson: 1979, p.24; Financial Post: August, 1983, p.29; Canadian Building Magazine: April 1981, p.14).

3. Economic Trends: Changing Valuation Of The Housing Stock

Current and projected economic trends are changing the speculative renovator's, homeowner's and housing analyst's valuation of the housing stock. In times of economic turbulence
marked by recession, inflation, and expected future levels of diminishing prosperity, emphasis is placed on making more efficient use of the existing stock of housing. James Ripley, the former editor of Canadian Building Magazine, encourages builders to view the building stock as "...the most enduring investment base and the real 'estate' of the nation" (April 1979: p.1). Housing analysts such as Reid Levenson further add:

To destroy "obsolescent" housing consumes valuable materials, equipment, labor, energy, money and time...resources we can ill afford to mismanage (1979, p.17).

D. LIFESTYLE FACTORS

In contrast to the 1950's and 1960's when suburban areas were preferred locations for housing, the 1970's and 1980's reveal market preference for both suburban and urban locations for housing. Increasingly, housing consumers are resistant to suburban locations because of the time and cost of commuting (Financial Post: Aug. 27, 1983, p.29). One and two person households, where all household heads work, find less time available to maintain a house and property. Also, since households have fewer children or no children, less value is given to child-oriented housing; a fundamental attraction of suburban residential locations.

Complementing the "push" away from suburban locations is the "pull" of the city. Pull factors or attractions of the city
are numerous including proximity to work, shopping, recreation, entertainment and amenities (Insight: 1982, Oct/Nov/Dec., p.2).

Housing consumers who seek an urban lifestyle can choose between rental or ownership units. Condominiums, available since the mid 1970's, offer the household with one or two person salaries "affordable" home ownership and a way of getting into the market.

As part of an appreciation of an urban lifestyle, there is a growing societal desire to preserve and conserve rather than discard what is old.

Recycling the old requires a change in attitude of all the participants, a cultural recognition that to continuously destroy or leave behind what exists as it gets old rather than remodeling, repairing, reshaping is, in the long run, a waste of resources, both natural and human (Whittle, Milgram and Barber, as quoted by McKee: 1977, p. 84).

Many housing consumers prefer the locational advantages and urban amenities offered by housing located in urban areas. The desire for an urban lifestyle, supplemented by an appreciation of older buildings, reinforces the contention that renovation of the housing stock will be increasingly important in the future.

E. HOUSING POLICY

The thrust of Federal housing policy toward "renewal" or rehabilitation has shifted in approach in the last 30 years. "Renewal" of housing in the 1950's and 1960's meant "slum" clearance or replacement of older low income housing with public
housing. Citizen outcry against the physical and socio-cultural bulldozing of their communities brought harsh criticism. With the release of the Federal Task Force on Housing and Urban Development in 1969, the urban renewal program came to an abrupt halt. In its declaration of principles, the Task Force asserted the Federal shift in policy focus: towards renewal of the housing stock through preservation and rehabilitation. Principle 8 spelled out the Federal commitment:

...economic, social, and aesthetic considerations demand that greater care and effort be taken to preserve, and where necessary, rehabilitate the existing housing stock. (CMHC: 1969, p.23)

In 1973, out of the ashes of the urban renewal program, the Neighbourhood Improvement Program (NIP) and the Residential Rehabilitation Assistance Program (RRAP) were born. These programs were established to function as complements to each other in meeting low-income housing needs, with NIP's goal to upgrade the physical and social services and amenities of entire neighbourhoods, and RRAP's goal to preserve and upgrade to minimum standards of individual dwellings located in NIP areas. Although the Federal government, through its housing agency CMHC, initiated NIP and RRAP, administration was dependent upon provincial and municipal cooperation. A cost sharing agreement was formulated: CMHC provided 50 percent of the funds on the condition that provincial and municipal governments would each assume 25 percent of the cost. CMHC took on the role of funder, guide and monitor of NIP and RRAP (Peter Barnard Associates:
In 1978, NIP was phased out, replaced by block funding to municipalities for physical (infrastructure) and social services. NIP was removed primarily in response to government cutbacks in social programs (Willson: 1980, p. 12). Although RRAP was severed from its companion NIP, it survived to function under its original mandate to preserve and upgrade individual dwelling units. It is administered by municipalities in "rehabilitation areas" selected by them.

In May, 1982 the Canada Home Renovation Program (CHRP) was created, geared to moderate and middle income households. In over a year since program funds were made available, $235 million of Federal grant money has been spent generating an estimated $840 million worth of renovation business (Financial Post: Aug 27, 1983, p. 29). Essentially, the program was designed to: (1) aid middle income groups, (2) promote rehabilitation of the housing stock, and (3) create employment for the construction sector and its spin off industries (Financial Post: June 11, 1983, p. 25).

In the late 1970's, the Canada Home Insulation Program (CHIP) was initiated by CMHC to promote residential energy conservation. On April 1, 1981, the program was assumed by Energy, Mines and Resources. CMHC has since acted under contract as this Department's agent in delivering the CHIP Program. In 1980, at the peak of the program, the total amount of grants was $198 million (CMHC: Annual Reports 1980 and 1981, p. 22).
Since the early 1970's, CMHC has increasingly emphasized the rehabilitation of the housing stock through such programs as NIP, RRAP, CHRP and CHIP. The extent to which CMHC will continue to support the rehabilitation and renovation of the housing stock as opposed to its replacement is difficult to predict. Housing policies and programs are determined by a wide range of unpredictable factors, most importantly changes in federal political power. Notwithstanding, this section illustrates that CMHC recognizes the value of maintaining and rejuvenating the existing housing stock. Katherine Willson, author of Housing Rehabilitation in Canada: A Review of Policy Goals and Program Design, states:

The experience gained through these programs (NIP, RRAP) will be important in the 1980's, particularly as rising energy costs, demographic changes and fiscal restraint make the maintenance and the efficient use of the existing housing stock an important priority for housing policy (Willson: 1980, p.i).

F. SUMMARY

This chapter established the premise that renovation of the existing housing stock will become increasingly important to 2001 in accommodating future housing demands. Factors outlined which support this premise include:

- the ageing of the housing stock;
- the expected decline of new housing construction which will compose a declining proportion of the total housing stock, as a result of the declining rate of population
growth;

• economic factors which favor re-use and intensification of the housing stock as opposed to demolition and replacement;

• lifestyle factors which point towards an appreciation of an urban lifestyle and older homes found within urban locations, combined with anticipated smaller household size leading to conversion of the existing housing stock; and

• the recognition by CMHC that rehabilitation and renovation of existing housing is one way to meet future housing demand.

A. INTRODUCTION

This chapter reviews statistical information on the residential construction industry from 1962-1980. The establishment of a statistical background of the industry will lay a foundation for understanding its nature and structure. Following the statistical review, summary statements will be made about industry composition, relative dominance in numbers and investment share by firm size, areas of specialization and response to consumer demand fluctuations.

Statistics to be discussed concerning the Canadian residential construction industry include:

- fluctuations in the number of firms actively involved in construction;
- proportion of firms by size category who compose the industry;
- capture of construction investment by firm size category;
- distribution of dwelling unit completions by firm size category;
- specialization by size of firm in repair and renovation construction.

Unfortunately, consistent statistical measures covering the 1962-1980 period are unavailable. Statistical information covering the 1962-1973 period is derived from data collected on builders who obtained NHA loans for new housing. This information gives an indication of one segment of builder
activity that may not be representative. However, statistics are available for the 1974-1980 period that give a complete and accurate representation of builder activity. Consistent statistical measures from 1962-1980 are also not available to describe many of the industry "features". Therefore, a variety of measures will be used to describe each industry feature. For example, to describe the capture of construction investment by size of builder, measures of both the percentage distribution of dwelling unit completions by size of builder, and capture of construction dollar output by size of builder will be used.


Table VIII provides data on residential construction firms in the years 1974, 1976, 1978 and 1980. Looking specifically at the change in total firms by size category, the following percentage fluctuations were derived (see also Figure 2):

<table>
<thead>
<tr>
<th></th>
<th>Total Establishments</th>
<th>Small Firms ($10,000 - $499,000)</th>
<th>Medium Firms ($500,000 - $999,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>151.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Large Firms ($1,000,000 and over)

1974-76  + number of firms by 128.0%
1976-78  + 5.1%
1978-80  - 10.4%

(+ increase / - decrease)
Table VIII - Residential General Building Construction
Industry Operating Statistics Classified by Size of Group:

<table>
<thead>
<tr>
<th>1974</th>
<th>Total</th>
<th>$10,000-$499,999</th>
<th>$500,000-$999,999</th>
<th>$1,000,000 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>321</td>
<td>2665</td>
<td>270</td>
<td>276</td>
</tr>
<tr>
<td>Total</td>
<td>8070</td>
<td>6897</td>
<td>543</td>
<td>630</td>
</tr>
<tr>
<td>Type of construction:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>2951</td>
<td>2515</td>
<td>223</td>
<td>213</td>
</tr>
<tr>
<td>Double</td>
<td>63</td>
<td>33</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Row housing</td>
<td>61</td>
<td>31</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Apartments</td>
<td>136</td>
<td>86</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>Type of work:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New construction</td>
<td>3036</td>
<td>2498</td>
<td>265</td>
<td>273</td>
</tr>
<tr>
<td>Repair construction</td>
<td>175</td>
<td>167</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Total value of construction output:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,000-$499,999</td>
<td>$652,245,231</td>
</tr>
<tr>
<td>$500,000-$999,999</td>
<td>$310,577,736</td>
</tr>
<tr>
<td>$1,000,000 and over</td>
<td>$1,677,115,023</td>
</tr>
<tr>
<td>Total</td>
<td>$2,639,937,990</td>
</tr>
<tr>
<td>Year</td>
<td>Total</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>1978</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Type of construction:</td>
</tr>
<tr>
<td></td>
<td>Single</td>
</tr>
<tr>
<td></td>
<td>Double</td>
</tr>
<tr>
<td></td>
<td>Row housing</td>
</tr>
<tr>
<td></td>
<td>Apartments</td>
</tr>
<tr>
<td></td>
<td>Type of work:</td>
</tr>
<tr>
<td></td>
<td>New construction</td>
</tr>
<tr>
<td></td>
<td>Repair construction</td>
</tr>
<tr>
<td></td>
<td>Total value of construction output:</td>
</tr>
<tr>
<td></td>
<td>Classification</td>
</tr>
<tr>
<td></td>
<td>$10,000-$499,999</td>
</tr>
<tr>
<td></td>
<td>$500,000-$999,999</td>
</tr>
<tr>
<td></td>
<td>$1,000,000 and over</td>
</tr>
<tr>
<td>1980</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Type of construction:</td>
</tr>
<tr>
<td></td>
<td>Single</td>
</tr>
<tr>
<td></td>
<td>Double</td>
</tr>
<tr>
<td></td>
<td>Row housing</td>
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<tr>
<td></td>
<td>Apartments</td>
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<td></td>
<td>Type of work:</td>
</tr>
<tr>
<td></td>
<td>New construction</td>
</tr>
<tr>
<td></td>
<td>Repair construction</td>
</tr>
<tr>
<td></td>
<td>Total value of construction output:</td>
</tr>
<tr>
<td></td>
<td>Classification</td>
</tr>
<tr>
<td></td>
<td>$10,000-$499,999</td>
</tr>
<tr>
<td></td>
<td>$500,000-$999,999</td>
</tr>
<tr>
<td></td>
<td>$1,000,000 and over</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

Fig 2: Fluctuation In The Number of Establishments by Size Category: Canada 1974–1980

Size Of Firm
- Total Establishments
- Small ($10,000 - $499,999)
- Medium ($500,000 - $999,999)
- Large ($1,000,000 and over)
The industry is subject to volatility in the numbers of firms active in construction. In the extreme case of small-sized firms, numbers increased by 159 percent during one time period (1974-1976) and decreased by 31 percent during the next time period (1976-1978). Small-sized firms exhibit the greatest volatility while large firms exhibit the least volatility. The number of firms who enter and exit the market place reveals an inherent flexibility to respond to economic conditions. Small-sized firms are more responsive to varying economic conditions than large-sized firms, possessing the "flexibility" to exit the industry in slow economic periods and enter during times of economic growth.

C. PROPORTION OF FIRMS BY SIZE CATEGORY (1962-1980)

1. 1962 - 1973

Table IX outlines the size of builders obtaining NHA (National Housing Act) loans for new housing in Canada, 1962-1973. Small-sized firms compose the bulk of the industry, averaging 86 percent of firms in the industry over the time period. In contrast, large-sized firms over the same period averaged 2.75 percent of the industry.
Table IX - Size of NHA Operations of Builders Obtaining NHA Loans for New Housing: Canada 1962-73

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Small Firms</th>
<th>Medium Firms</th>
<th>Large Firms</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#B</td>
<td>%B</td>
<td>#U</td>
<td>%U</td>
</tr>
<tr>
<td>1962</td>
<td>2264</td>
<td>89.2</td>
<td>6.2</td>
<td>19.5</td>
</tr>
<tr>
<td>1963</td>
<td>2481</td>
<td>88.6</td>
<td>6.4</td>
<td>17.5</td>
</tr>
<tr>
<td>1964</td>
<td>2226</td>
<td>87.4</td>
<td>6.6</td>
<td>17.3</td>
</tr>
<tr>
<td>1965</td>
<td>2334</td>
<td>88.1</td>
<td>6.9</td>
<td>19.7</td>
</tr>
<tr>
<td>1966</td>
<td>2158</td>
<td>89.3</td>
<td>6.4</td>
<td>19.4</td>
</tr>
<tr>
<td>1967</td>
<td>2206</td>
<td>89.1</td>
<td>7.2</td>
<td>21.8</td>
</tr>
<tr>
<td>1968</td>
<td>1763</td>
<td>88.2</td>
<td>5.6</td>
<td>14.8</td>
</tr>
<tr>
<td>1969</td>
<td>1154</td>
<td>86.3</td>
<td>6.7</td>
<td>14.8</td>
</tr>
<tr>
<td>1970</td>
<td>2151</td>
<td>84.2</td>
<td>7.5</td>
<td>13.2</td>
</tr>
<tr>
<td>1971</td>
<td>2344</td>
<td>80.0</td>
<td>10.1</td>
<td>16.3</td>
</tr>
<tr>
<td>1972</td>
<td>2419</td>
<td>80.9</td>
<td>8.9</td>
<td>15.1</td>
</tr>
<tr>
<td>1973</td>
<td>1816</td>
<td>81.1</td>
<td>8.4</td>
<td>14.2</td>
</tr>
</tbody>
</table>

B - builders  U - units

Source: Canadian Housing Statistics Centre, (1962-1973), Ottawa
2. 1974 - 1980

The following figures, which express the proportion of firms by size category, are derived from Table VIII. A graphic illustration of these figures is shown on Figure 3.

Table X - Proportion of Firms Composing the Industry by Size Category; 1974-80

<table>
<thead>
<tr>
<th>Year</th>
<th>Small Firms $10,000-$499,000</th>
<th>Medium Firms $500,000-$999,999</th>
<th>Large Firms $1,000,000 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>83.0%</td>
<td>8.4%</td>
<td>8.6%</td>
</tr>
<tr>
<td>1976</td>
<td>85.0</td>
<td>6.7</td>
<td>7.9</td>
</tr>
<tr>
<td>1978</td>
<td>78.0</td>
<td>11.4</td>
<td>10.4</td>
</tr>
<tr>
<td>1980</td>
<td>86.0</td>
<td>8.1</td>
<td>6.2</td>
</tr>
</tbody>
</table>

During this time period, small-sized firms continued to dominate the industry on a numerical basis, comprising an average 83 percent of the industry from 1974-1980. Large and medium-sized firms continued to be numerically weak, with large firms comprising an average 8.4 percent of the industry. Large-sized firms however, have grown in number relative to the 1962-1973 time period.
Fig 3: Percentage of Firms Composing the Industry by Size Class Category: Canada 1974–1980
D. CAPTURE OF CONSTRUCTION INVESTMENT BY SIZE CATEGORY (1962-1980)

To describe the distribution of construction investment by size category of firm, two measures are used:

1) percentage distribution of dwelling unit completions by size class of builder, 1962-73 (Table IX); and,
2) capture of construction dollar output by size class of builder, 1974-1980. (Table VIII)

1. Distribution Of Dwelling Unit Completions By Size Class Of Builder, 1962-73

From 1962-73, small, medium and large-sized builders each averaged about 32 percent take-up of NHA dwelling unit completions. Breaking this period into two time periods; 1962-1967 and 1968-1973, an interesting reversal becomes evident. Small-sized firms averaged 39 percent of total dwelling unit take-up from 1962-67 and 26.5 percent in the 1968-1973 period. Meanwhile, large-sized firms averaged 25.5 percent of total dwelling unit completions from 1962-1967 and 40.4 percent from 1968-1973. Large-sized firms then toward the end of this period, assume dominance in dwelling unit completions and ability to capture investment dollars, once held by small-sized firms.
2. Capture Of Construction Investment By Size Category; 1974-1980

Using Table VIII data, the capture of construction investment by size category of firms was derived. The following figures express the distribution of construction investment by size on a percentage basis.

Table XI - Capture of Construction Investment by Size Category; 1974-80

<table>
<thead>
<tr>
<th>Year</th>
<th>Small Firms $10,000-$499,000</th>
<th>Medium Firms $500,000-$999,999</th>
<th>Large Firms $1,000,000 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>24.7%</td>
<td>11.8%</td>
<td>64.0%</td>
</tr>
<tr>
<td>1976</td>
<td>20.8</td>
<td>9.8</td>
<td>69.4</td>
</tr>
<tr>
<td>1978</td>
<td>16.5</td>
<td>8.7</td>
<td>72.8</td>
</tr>
<tr>
<td>1980</td>
<td>21.5</td>
<td>11.6</td>
<td>64.8</td>
</tr>
</tbody>
</table>

Although small-sized firms dominate in numbers of firms in operation, they capture only a small amount of construction output. While on average from 1973-1980 small-sized firms compose 83 percent of the industry, they captured only 21.3 percent of total construction investment. In contrast, while large-sized firms in the same time period composed on average 8.4 percent of the industry, they captured the lions share of construction output: 67.8 percent. This continues the trend of the previous time period 1962-1973, when small-sized firms also lost ground to large-sized firms. Generally, large-sized firms since the mid 1960's expanded operations, exhibiting increased strength and dominance in the industry (see Figure 4).
Fig 4: Capture of Total Dollar Value of Construction Output By Size Class of Firm: Canada 1974–1980

Percentage Capture of Construction Output

Year


Size Of Firm
△ Small ($10,000 - $499,999)
× Medium ($500,000 - $999,000)
□ Large ($1,000,000 and over)
E. **DWELLING TYPE SPECIALIZATION BY SIZE CATEGORY 1974-1980**

All size classes of builders specialize in the construction of single detached dwellings. Small and medium-sized firms tend to be active in single detached construction to a greater degree with 93.4 percent and 85.6 percent respectively active from 1974-1980 (see Table VIII). Of large-sized firms, 75.4 percent reported single detached construction as the principle type of construction. Large and medium-sized firms are active in multifamily housing construction to a greater extent than small-sized firms.

F. **REPAIR CONSTRUCTION BY SIZE CATEGORY; 1974-1980**

Of all firms active in repair construction since 1974, small-sized firms played the greatest role: 94 percent of all firms active in repair work were small-sized firms. A report prepared for the Canada Mortgage and Housing Corporation entitled, "An Examination of the Characteristics of Rehabilitation Contractors: Pilot Study for Ottawa" concurs with these findings. The repair industry was found to be the largest "cottage" industry in Canada. The majority of contractors surveyed were small (gross income under $499,999), not listed in the phone directory, and obtained employment by word of mouth contact (Clark: 1981, p. 38).

Repair and renovation construction since 1975 has grown, comprising a greater proportion of total construction investment in Canada (CMHC: 1980c, p. 33) (see Table XII).
Table XII - The Pattern of Residential Investment in Canada, 1975-1980

($ thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Housing Construction</th>
<th>Major Renovation</th>
<th>Repair</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>5,896,316</td>
<td>1,217,541</td>
<td>1,575,805</td>
<td>8,689,662</td>
</tr>
<tr>
<td>1976</td>
<td>8,384,939</td>
<td>2,467,593</td>
<td>1,816,814</td>
<td>12,669,346</td>
</tr>
<tr>
<td>1977</td>
<td>8,360,132</td>
<td>2,571,822</td>
<td>2,018,674</td>
<td>12,950,628</td>
</tr>
<tr>
<td>1978</td>
<td>8,861,704</td>
<td>2,588,846</td>
<td>2,329,408</td>
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<tr>
<td>1979</td>
<td>8,736,614</td>
<td>2,745,146</td>
<td>2,670,935</td>
<td>14,152,695</td>
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<td>1980</td>
<td>8,595,350</td>
<td>2,934,170</td>
<td>3,010,836</td>
<td>14,540,356</td>
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</table>

(% of total)

<table>
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<tr>
<th>Year</th>
<th>New Housing Construction</th>
<th>Major Renovation</th>
<th>Repair</th>
<th>Total</th>
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<tr>
<td>1975</td>
<td>67.9</td>
<td>14.0</td>
<td>18.1</td>
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<td>1976</td>
<td>66.2</td>
<td>19.5</td>
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<td>1977</td>
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<td>1978</td>
<td>64.3</td>
<td>18.8</td>
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<tr>
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<td>61.8</td>
<td>19.3</td>
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<td>1980</td>
<td>59.1</td>
<td>20.1</td>
<td>20.8</td>
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Source: CMHC, 1980c, p.33.

G. CONCLUSION

A number of summary statements can be made about the residential construction industry based on the previous discussion:

• The industry fluctuates greatly in the number of firms actively involved in construction. This reveals a "flexibility" to respond to consumer demand for housing; expanding operations during high demand periods and contracting operations during periods of low demand.
Large-sized firms are less vulnerable to cyclical fluctuations in demand.

- The industry is principally composed of small-sized firms compared to the small number of medium and large-sized firms. From 1962-1980 the proportion of small sized firms ranged from 80-90 percent.

- The numerical strength of small-sized firms is not reflected in their ability to attract construction investment dollars. Large-sized firms since the mid 1960's matched and surpassed the former dominance of small-sized firms. Small-sized firms lost their competitive edge and were outpaced by large-sized firms in dwelling unit completions. Large-sized firms are a dominant force in the industry in capturing both a greater portion of construction investment and dwelling unit completions.

- The industry, despite differentiation by size class, tends to specialize in single detached construction. Most dwelling unit take-up for multifamily housing is shared between medium and large-sized firms.

- Small-sized firms are responsible for almost 100 percent of repair construction.

Using this statistical review of the residential construction industry, the following chapter will discuss the characteristics of the industry in terms of various firm size classes and the new versus renovation construction sectors.
CHAPTER IV. CHARACTERISTICS OF THE HOUSE-BUILDING AND RESIDENTIAL RENOVATION SECTORS OF THE INDUSTRY

A. INTRODUCTION

This chapter highlights the key features of the house-building and residential renovation sectors of the construction industry. For purposes of discussion, the industry will be divided into the following categories:

- large development-building firms
- medium-sized firms
- small-sized firms
- speculative renovation firms
- contract renovation firms.

Each firm category will be discussed in terms of access to financing, the construction process and organization and management structure.

Comprehensive, scholarly literature on the industry is sparse. Perhaps an underlying reason for this is due to the fragmented and diverse nature of the industry. Scale, scope of operations and decision-making procedures vary greatly with each category of firm, creating distinctive corporate personalities (Chamberlain: 1972, p.45). Adding to this is the plethora of actors related to the industry: innumerable trades and subcontractors, architects, materials manufacturers, lending institutions, building inspectors and so on. These factors
greatly complicate the task of industry classification. Notwithstanding, for the purpose of this thesis simplified, systematic categorization of the industry is essential to gain an understanding of its inner workings and as a basis for making comparisons between firm types.

B. CHARACTERISTICS OF THE LARGE DEVELOPER-BUILDER

Almost all major housebuilders are also large land developers (Gluskin: 1976, p.124). Although many of these firms differ in location of operation, scope and corporate management procedures, most large developer-builders produce minimum volumes of 100 housing units yearly, employing relatively few staff: fifty-seven people on average (Charney: 1971, p.116).

Generally, the developer-builder follows this essential step-by-step approach to residential construction:

- arrange financing;
- acquire land;
- initiate planning, engineering and design work;
- initiate materials purchasing and subcontracting of trades, or use an in-house division for these tasks;
- supervise construction;
- retain product as income property or sell upon completion.

The characteristics of large developer-builders will be described through a discussion of residential construction financing, economies of scale and corporate integration.
1. Financing

Capital is the lifeblood of developer-builders' operations. In a report prepared by The Royal Commission on Corporate Concentration, a survey of thirty-five land and housing companies revealed that on average 13.8 percent of assets were represented by equity (Gluskin: 1976, p.183). Due to the industry's dependence on highly leveraged investments, the availability of financing is crucial. During inflationary periods of increasing house and land prices, leverage contributes greatly to high profit returns. Leverage then functions as an important and extensively used profit making tool (Rudin: 1978, p.50). Having secured high debt-equity ratios for a project, large developer-builders may assume increased risks and expect potentially greater returns on investment. Ira Gluskin, a security analyst states:

A company with $100 million of equity can logically undertake projects that a $10 million company cannot (Gluskin: 1976, p.17).

In contrast to small builders who are limited to interim loans, large developer-builders can obtain financing in a variety of ways, through blocks of unsecured rates and debentures, bank credit and stock warrants.

If companies are stable, with a sound record of financial strength, and maintain business dealings with one or two banks, they may obtain loans at rates of one or two per cent above prime (Grebler: 1973, p.37).
Another source of large developer-builder's growth and prosperity, in addition to capital availability, is their ability to take advantage of certain tax concessions. Given continued growth, firms can defer income tax payment by maintaining capital cost allowances (CCA). Such deferrals essentially serve as an interest free loan from the government (Rudin: 1974, p.24). However, in the absence of growth, developers are required to pay deferred taxes.

2. Economies Of Scale

The advantages of economies of scale - the achievement of decreased costs per unit through volume production - are available to large sized firms (Spurr: 1976, p.193).

i. Land Acquisition

Continuity of volume production is ensured through the purchase of large tracts of land well in advance of development. Large sized firms possess the financial resources, not available to smaller builders, to acquire and bank such tracts of land (Grebler: 1973, p.147). Equipped with a constant source of land supply, developer-builders can roll-over inventory next to existing urban areas using capital appreciation to acquire land having cheaper land prices further out (Spurr: 1976, p.212). Given this constant flow of development, continuity is ensured in production volume, sales, realization of potential profits and retention of staff. Firms can therefore undertake long term
development projects, permitting greater flexibility in timing of development, knowing that location and costs are established. Relative to returns of almost any other type of real estate venture, or returns from income property, land development receives the highest returns (Spurr: 1976, p. 243; Gluskin: 1976, pp.124,145).

Coupled with capital availability, large land inventories are paramount to the existence and growth of the large developer-builder. This has become evident in Vancouver which has a scarcity of large tracts of land. Medium sized developer-builders who produce between 25-100 units annually predominate. No indigenous developer-builders are active and branches of large developer-builders function as slightly enlarged medium-sized firms (Price: 1970, p.91).

ii. Public Policy Requirements

Planning policy has served to promote and necessitate developer-builder's large land inventories and large scale development. Regional planning policy has encouraged "packaged" development, emphasizing the construction of new housing simultaneously with the construction of industrial, commercial and recreational facilities (Spurr: 1976, pp.180-181). Municipal regulations have increasingly required developer-builders to pay for initial servicing charges prior to development. (Greenspan: 1978, p.161). Public policy and regulation requirements have placed medium sized developer-builders, who lack the large land inventory and financial
capability, at a competitive disadvantage.

iii. Construction

In the process of converting large tracts of raw land to housing, economies of scale in residential production come in play, including:

- direct bulk purchase of materials at or near cost;
- greater opportunities for labour specialization;
- increased labour familiarity with the product through routine production;
- increased efficiencies in scheduling contractors and organizing the work on-site;
- opportunities to provide for a central purchase and storage facility (Eichler: 1982, pp.63-78);
- lower bids from subcontractors and lower fees for professional services; planning, architecture, and engineering;
- use of standardized, pre-fabricated parts (Grebler: 1973, p.41).

Through the use of scale economics, developer-builders avail themselves to efficiencies in costs, timing and organization.

iv. Geographical Diversification

Scale economies also come into effect when firms undertake multi-area operations spread geographically across a variety of regional markets. Developer-builders then possess the flexibility to adapt to cyclical fluctuations of the market, transferring operations to productive markets while slowing production in down-turned markets (Rudin: 1978, p.13).
v. Individual Project

Once projects are nearing completion, developer-builders often mount a large scale, sophisticated advertising campaign, making use of television and radio media. Again, large developer-builders possess a competitive advantage relative to medium and small-sized builders since per unit advertising expenses decrease over the large size of the project (Grebler: 1973, p.62).

The literature generally supports the argument that large developer-builders possess a comparative advantage relative to small builders through scale economies. However, one dissenting study challenges this view. The Task Force on the Supply and Price of Serviced Residential Land found by undertaking a survey of development projects that large scale projects were equally as profitable as small scale projects. It was concluded that large developer-builders are not more inherently profitable than small builders (Greenspan: 1978, p.108). However, the Task Force Survey examined land development projects solely, and did not deal with potential returns to scale available through large scale residential construction. No other studies have researched and reported on this issue.
3. Corporate Integration

In the process of growing into large land and housing firms, a structural threshold is reached where management reorganization through vertical and horizontal integration can take place. Vertical integration constitutes the adoption of functions in house such as construction, financing and property management that was once contracted out. Greater efficiencies in scheduling and administrative costs result. The potential then exists for realization of higher profits and construction of a superior product at a given price (Spurr: 1976, p.216).

Horizontal integration involves the diversification of activities beyond residential development into office, commercial and industrial development. Such expansion affords developers flexibility to shift operations from a lagging venture into a more profitable one.

Management economies of scale may be achieved not only through vertical and horizontal integration, but through conglomerate integration as well. Joint ventures with other firms permits pooling of specialized skills and shared subcontracts. Spurr notes that such integrations can:

...lower production and finance costs, improve access to capital, increase the marketability of new housing, and provide specialized management for different phases of development (1976, pp.217-18).

As a firm becomes integrated and expands, management becomes more sophisticated. It becomes more capable of undertaking such diverse tasks as land acquisition, development
planning, government negotiation and project marketing (Rudin: 1978, p.39). In addition, management skills can be brought to bear in altering housing types or designs in response to quick shifts in demand. Given sufficient financial resources, large development-building firms tend to be more willing to take risks than medium-sized firms in promoting innovative housing design and type (Rudin: 1978, p.55).

4. Diseconomies Of Size

The following diseconomies may affect the profits, growth and potentially the very existence of large development-building firms:

(a) Since residential construction is management intensive, relying upon day-to-day decision making and supervision, a strain on management expertise may result in poor, inappropriately timed decisions or inadequate supervision of ongoing construction.

(b) Unlike other commodities that are factory produced and sold nationally, house-building is local market dependent, with each market area varying in demand. Diseconomies may occur through horizontal integration (the use of multi-project, multi-area operations). Supplying a standard product in a variety of local
markets carries potential pitfalls. The developer-builder must adjust his product and mode of operations in accordance with planning regulations indigenous to each municipality. Consequently, maintaining a steady production flow is a major task (Grebler: 1973, p. 70-71).

(c) Diseconomies may also arise through vertical integration. During periods of market slow-down the firm may experience losses or decreasing profit returns if it retains under-utilized staff. It may choose to bear these costs in preparation for a return to normal market conditions.

5. Industry Restructuring

Despite large developer-builders' strengths and advantages, these firms have suffered a serious setback in the recent (1981) cyclical down-turn in the economy.

This occurrence has defied conventional wisdom regarding their ability to sustain their operations, if not grow, during economic downturns:

While the output of large builders may drop somewhat during market slowdowns it is the small builder who is most affected by cyclical declines. This occurs for two reasons: during the more competitive downturn periods large developers are better able to utilize the various economies of scale available to them to make their inventories saleable; and secondly, large developers are better able to anticipate and weather
these fluctuations financially (Herzog, as quoted by Rudin: 1978, p.44).

If as it seems likely, large developers in the Toronto area are similarly able to improve their relative positions during market slowdowns, this represents a significant change in the growth dynamics of the industry where once the cyclical nature of the housing market limited growth of large corporations because of the high costs of maintaining idle capacity, this barrier to growth has essentially been overcome; if not in most cases reversed (Rudin: 1978, p.44).

Although the industry is generally able to weather economic cyclical fluctuations, many firms were caught off guard by a downturn of depression proportions. Some larger firms have diversified out of housing all together, while almost all are involved in asset and debt reduction programs through sales of their land inventories. For example, one major western based land and housing developer-builder has entered into a three year plan with financial institutions to defer loan principle payment with payments at a 5 percent interest rate, the remaining interest payable along with the principle out of future earnings. Loans relating to particular properties will be paid when those properties are sold, with the shortfall also paid out of a portion of future earnings (Financial Post: June 25, 1978, p.26). This is representative of many agreements made between developer-builders and lenders. Often asset sales have not resulted in significant improvements in the firms' financial
situations. Despite asset disposal, another western based developer-builder has carried a debt load in 1982 essentially equivalent to that in 1981. An analyst from Merrill Lynch, Royal Securities Ltd. comments on the firm's difficult financial position:

The liabilities are so large and their ability to service those liabilities has been very, very significantly reduced by the sales of existing land inventory (Financial Post: June 25, 1983, p.26).

No comprehensive evaluation or analysis has been conducted on the impact of the recession on the residential construction industry. Taking a look backward, conventional wisdom attributes developer-builder growth in the 1970's to long term debt, leverage and inflation (Financial Post: April 17, 1983, pp.1-2). During the inflationary period of the 1970's, highly leveraged land purchases increased in value once converted into housing, rising more quickly than the cost of money to purchase the land. In this way, with the inflation rate remaining at par or above the interest rate, developer-builder's financial strength and source of growth - land inventories - furthered future corporate growth. Gluskin notes, along with an attached caveat:

The crucial part of the equation is that all of these companies (the large firms) have a cushion to fall back on if times get rough: their inherent land profits. Often before they start building they already have a profit in the lands... We have assumed in our basic assumption that the level of land prices is going to remain high (Gluskin: 1976, p.134).
The recession, however dramatically shifted the relative rates of inflation and interest: during 1981 reaching 12.5 percent and 23 percent respectively. Consequently, developer-builders were caught with high short-term debt-to-equity investments (often debt made up by floating rate money), with inadequate cash flows to service debts (Financial Post: November 6, 1982, p.36). The former sources of strength and competitive advantage relative to medium and small-sized firms - high levels of capital infusion and large land inventories - quickly turned into liabilities, threatening the future survival of large developers-builders. The size of their debt load is massive. In 1982, eight of the major public real estate companies owed $12 billion (Financial Post: November 6, 1982, p.36).

A number of media sources and trade journals offer predictions regarding future prospects of developer-builders. These predictions are based on changing trends in financing:

- Analysts don't believe that lenders will pull the plug on any of these large, public firms (Financial Post, April 17, 1982, p.2).

- Developers are forecast to become in the 1980's merely the construction arms of the groups providing their financing (Globe and Mail, September 21, 1982, p.B9).

- Equity financing will replace debt financing (Canadian Building: (Toft) November/December, 1981).

- Developers face dramatic changes in real estate financing: they may end up building for financial institutions for a fee... Institutional lenders, particularly insurance and pension companies prefer long-term equity in the building rather than repayments tied to interest rates (Financial Post: July 25, 1981, pp.57-58).

- Institutions have seen the light. In return for long term funding, they want partial ownership, and in some
instances, they are actually competing with us to buy development sites. Then, the ownership role is passing out of our hands... As their risk exposure increases, so will their skills. As they become our partners, they will learn increasing to hire and train our substitutes, and as they grow an in-house development bureaucracy, they will lose their need for us.' (Canadian Building: (Lurz) November/December, 1982, p.24) Consequently, developer-builders that will survive face structural changes in their companies and the way they do business (Globe and Mail: September 21, 1982, p.B9).

• Large developer-builders will be a lot smaller; they'll all be a lot wiser (Financial Post: April 17, 1982, pp. 1-2).

On the basis of these predictions, developer-builders will increasingly take on the role of merchant builder, whose function is essentially that of development consultant. The merchant builder, like the developer-builder, assembles land and builds houses. However, he uses capital provided by financial investors such as pension funds and insurance companies. The developer-builder relies on capital lent by conventional financial institutions.

In addition to changing sources of financing, the developer-builder must also respond to the fall-off in housing starts and decline in demand referred to in Chapter 2. These changes will further restructure large developer-builder's corporate operations and capability to supply large scale developments with adequate returns on investment. Opportunities to use economies of scale and expand through integration, both vertically and horizontally, are expected to be severely restricted in the future.
C. CHARACTERISTICS OF THE MEDIUM-SIZED FIRM

Medium-sized firms are defined as producing volumes of 25-100 units per year, employing on average seventeen people (Charney: 1971, p.116). Firms may develop land in preparation for building or may specialize in house-building only.

Unfortunately, the literature is sparse on medium-sized firms and much of it is out of date.

1. Financing

As with large firms, capital availability via lending institutions is critical. Capital is made available on the basis of financial stability, performance and assets (Price: 1970, p.28). Financial problems are similar to those of the large developer-builder because of the risk associated with a high debt-equity ratio of leveraged investments. Capital is required to assume the risks of construction and hold completed units until sold (Price: 1970, p.27).

2. Economies Of Scale

Since many of these firms do not carry extensive land inventories, economies of scale comparable to large firms are inaccessible. Land availability is a major restraining factor to the expansion of medium-sized firms, especially small, growing firms with a capital shortage (Price: 1970, p.30).

Medium-sized firms may build at the suburban fringe or
scattered urban sites. In suburban locations, land is purchased near to existing developed areas, working with 10-50 lots at a time. Unlike large scale developer-builders, medium-sized firms possess neither the financial nor the land capability to supply major community facilities such as shopping and recreation centres. Firms aim to build in sufficient volume to obtain reduced costs for materials and subcontracting.

3. Corporate Organization-Management

The overhead of medium-sized firms remains low through use of in-house staff and subcontracting of trades, while retaining the carpentry or general contracting function. Rarely are firms vertically or horizontally integrated, preferring to specialize in a definable market area.

Due to size limitations, market analysis tends to be informal, based on "back of the envelope" estimations. Also, lack of funds and sufficient scale prevent mounting of an extensive advertising campaign of completed units.

The essential factors which serve as barriers inhibiting medium-sized firm expansion into large scale operations are summarized by Price:

...land problems, lack of credit and an unwillingness to assume greater risks, preferring a degree of security in their operations are probably the main restraints... (Price: 1970, p.32).

Medium-sized firms have also reached a management threshold
which requires, for large scale volume expansion, employing additional managers and staff thereby removing the original partners or owners from field operations. Owners would be required to coordinate land assembly, arrange financing, and work with consultants. Eichler comments:

...no change was more wrenching than the jump in annual volume from 50 to 100 units to about 300 units per year (Eichler: 1982, p.109).

Many builders chose to remain at existing volumes, preferring the reasonable certainty of direct control of operations, profit margins and a relatively simple organizational structure.

D. CHARACTERISTICS OF THE SMALL-SIZED HOUSEBUILDER

A small housebuilding firm is characterized by low volume of under twenty-five units per year and a small staff, employing at most four persons (Charney: 1971, p.116). Because the housebuilding business is a small scale operation, requiring no lumpy-fixed capital expenditures common to other industries such as manufacturing and mining, there are no barriers to entry (Grebler: 1973, p.155). Since entry is easy, so is exit (see Chapter 3). According to Gluskin, "...when things get tough they [housebuilders] simply go bankrupt" (1976, p.133). In contrast to larger scaled builders, they neither have sufficient economies of scale during economic down-turns to make inventories more saleable nor the financial cushioning to
anticipate or weather such down-turns (Herzog: 1963, p.135). It is for these reasons that small scale house-building is intensively competitive.

1. **Financing**

Credit is extended to small builders through interim loans via mortgage money on a property; the amount determined by its final sale price.

2. **The Construction Process**

The small housebuilder may construct custom or speculative houses. Builders on the lowest volume scale (under ten houses per year) usually specialize in custom construction. They build to design specifications on a lot purchased by the owner, accepts incremental payment as work progresses and risk little of his own capital. In contrast, the speculative builder purchases the lot, provides his own financing and chooses a standard house design compatible with surrounding residences. Typically skilled in carpentry, the housebuilder retains this function while acting as a general contractor in subcontracting and scheduling various trades: framers, plumbers, electricians, finishing carpenters and so on. Because a standard house design conforms to the intent and specification of a zoning bylaw, generally requiring no variances, building permit approval is swift. Thus, approval delays costing builders time and money
are avoided.

Firms tend to operate seasonally, for only the warm or dry periods of the year.

As a general rule, an excessive number of builders compete with each other for serviced lots. They purchase land at retail prices from private developers in suburban or scattered urban locations (Spurr: 1976, p.242). They do not engage in land development themselves because of the large financial requirement. Land is purchased in small quantities, from one to three lots at a time. Due to the small scale of operations and volume no opportunities for scale economies in construction come into play. A possible exception to this rule is the achievement of minor returns to scale in the repeated construction of a standard product.

The completed house is usually offered for sale by an independent real estate firm.

3. Organization And Management

As would be expected of a small business, firm management is at a simple, informal level. Functioning as a proprietorship or partnership, the small sized housebuilder operates with little overhead, using his home as an office (Grebler: 1973, p.67). Operations use few exact records and limited construction cost estimates and marketing information. Construction is based on short term demand horizons. Ryan, in Canadian Builder notes:
...there is a tendency to build whenever they can get mortgage money and have lots available without possibly paying as much attention to the marketing end as would be good for them (December, 1976, p.24).

The essential tasks performed by the housebuilder are arranging financing, obtaining building permit approval, scheduling trades and supervising construction to completion.

Similar to the medium-sized firm, the small housebuilder has reached a management plateau or threshold preventing firm or production expansion. To accomplish this, firms would need increasing outlays of management capacity and skills to match an increase in volume in order to keep costs competitive. Given their limited capital, many builders prefer to limit risks and retain their low overhead (Price: 1970, pp.24-25).

Although small-sized house-builders possess none of the advantages of scale economies or corporate integration, their principle competitive advantage is their scale of operations. Low volume of a standard product, minimal overhead, organization simplicity and direct control over construction afford house builders a measure of certainty and flexibility in operations.

E. CHARACTERISTICS OF THE RESIDENTIAL RENOVATION SECTOR

The residential renovation sector is described by Tsang as:

...small, informal, profitable but risky, extremely labor intensive and insignificant as a sub-industry in the residential construction industry (1979, p.8).
It is disaggregated in nature, consisting of a collection of professionals: contractors, lending institutions, planners, architects, materials manufacturers and so on (Levatino: 1979, pp.4-5; McKee (ed.): 1977, p.142; Housing Rehabilitation: Proceedings of the Canadian Conference on Housing Rehabilitation: 1973, p.47). Consequently, this ill-defined and difficult to trace sector has been more commonly referred to as, one of, if not the, largest cottage industry in the country in its current stage of maturity (Clark: 1981, p.38).

Like small house-building operations, renovation is a hands-on business demanding intensive management of construction and business operations. As a result, the typical renovation firm is small both in number of employees and production capabilities. There are few barriers to entry into the renovation sector because of its small scale of operations. This is another characteristic shared with the small house-building firm. However, the skill required of management and labour in renovation activities is greater than in new housing construction.

Renovation may take place at a variety of levels: at the individual unit, at the multiple unit, or at the large scale neighborhood level, involving a range of types of units. There are two types of renovation firms defined by their area of specialization:

• renovation on a contract basis, typically of single family dwelling units, and;
• renovation of dwelling units for purpose of resale (Building Towards 2001 Conference Proceedings: 1981,
Renovation work involves varying degrees of effort ranging from:

- partial or cosmetic renovation; to
- total rebuilding, which often entails major structural changes and conversion or deconversion of units.

1. Financing

Financial institutions perceive renovation construction as a high risk relative to new construction for a number of reasons:

- Renovation construction enjoys a higher rate of return on investment on average compared to new construction (16.2% and 10.4% in 1975 respectively). It is generally viewed that along with increasing rates of return are increasing measures of risk (Tsang: 1979, p.7-8).

- Although there is no statistical evidence to support or refute this claim, it is generally viewed that the ratio of bad debts are greater for renovation than new construction (Tsang: 1979, p.8).


- The residential renovation industry suffers from a poor reputation. Consumer and Corporate Affairs cite residential renovation work as the number two complaint after car repairs. (Canadian Building: April 1981, p.26).

The fundamental basis for financial institutions'
reluctance to finance renovators revolves around risks associated with re-construction of older structures. Renovators cannot, with great certainty, estimate costs of construction because of the difficulty of determining a building's structural soundness and the extent of renovation required. As a result, renovators cannot predict the amount of time needed to renovate a structure. Lenders are also wary because of the fickle, trendy market for renovated housing and the limited life expectancy of older housing (McKee et al.: 1979, p.34).

McKee confirms the difficulty in obtaining adequate capital for renovation ventures in a survey of 50 lending institutions in the City of Winnipeg:

There is a major obstacle to providing financing for acquisition and/or renovation of older apartment buildings and to a lesser extent improvements to older residential properties in general (McKee et al.: 1979, p.34). ¹

Lenders were reluctant to extend credit unless the borrower could provide a higher proportion of equity in investment than that expected for new construction investment. Lenders did lend capital but at higher interest rates (3% above prime) to compensate for a risky investment (Mckee; 1979, pp.33-34).

In a recent study of fifteen renovators active in the City of Toronto, similar findings were reached. Although securing financing was not perceived by renovators as a problem (except

¹ This survey was conducted regarding inner city residential renovation opportunities.
for very small or new firms), credit was extended in the form of
demand loans several percentage points above prime. Often
financing was secured on the basis of a personal guarantee by
the principal(s) of the firm, or extended in the form of a
demand loan several percentage points above prime.
Consequently, business failure would result in personal
bankruptcy. The study notes that to cope with the uncertainties
inherent in residential construction:

...successful renovation companies have sympathetic

2. The Construction Process

There are major differences between new and renovation
construction. New construction is relatively uncomplicated to
undertake compared to renovation construction. The Chairman of
the Canadian Conference on Housing Rehabilitation comments:

...we start with virgin territory, a plan to follow,
an operational sequence that is generally predictable,
and - most important - no occupants (Conference

Canadian Building Magazine issued a warning in an article
for builders considering switching operations from new to
renovation construction:

...watch out! Renovation and new construction are two
completely different ball games, and while the
differences maybe subtle, not knowing what they are
can make for disaster (Canadian Building: (Toft)
i. Difficulties Of Residential Renovation Construction

Renovation construction is different in construction approach and potential problems encountered in the following ways:

• Each renovation project is unique, requiring a specific blend of labour skills not available to all contractors or labourers: better structural, detail, material and craft knowledge versus new construction.

• There is less continuity of work within a unit and from unit to unit due to the uniqueness of each structure.

• It is difficult and time consuming to acquire adjacent units/structures, permitting joint or scale renovation.

• It is difficult to accurately predict costs or type of work required before construction actually begins.

• It is labour and management intensive.

• It requires coordination and scheduling of interdependent trades for small outlays of work.

• There is a confined work site to perform structural changes through demolition.

• Construction in one part of the structure may damage another part of the adjacent building(s).

• Adjacent areas to those being worked on require protection.

• Removal of debris is often difficult.

• Daily clean-up is required if the unit is occupied.

• Renewal of existing surfaces to present day building code standards often requires more work than the application of new surfaces.

• Access to on site storage is often difficult.
• Materials waste can be high.

• There is a scarcity of modern materials that can be adapted to the appearance and detailing of older buildings.

• Tenant problems arise in renovating rental buildings, often requiring eviction or displacement of tenants to temporary accommodation.


ii. Scale Economies

As a result of the above cited difficulties associated with renovation construction, opportunities for scale economies are almost nil. Since each project is unique, continuity of operations based on production of a standard product is not possible. Efficiencies in labour and materials scheduling and costing are not available since most small scale renovation projects are located at scattered sites. Such efficiencies are also difficult to take advantage of given the unanticipated structural and construction problems common to renovation. These factors led one renovator to comment on the difficulty of attaining large volume output in the absence of returns to scale opportunities:

If you are a house builder, you've been used to having one of your finest superintendents go onto a new housing site and he can put together a 125 unit subdivision without thinking twice. When he goes into the renovation business, he can (only) do five jobs at a time. Give him seven and he'll mess-up two (Building Toward 2001: 1981, p.29).
A New York city renovator attempted to achieve some degree of scale economies through "instant" rehabilitation of a house in 48 hours. Efficiencies were expected to be achieved through the use of prefabricated materials and continuous scheduling of labour activities. A host of problems emerged including unanticipated delays in construction creating numerous labour scheduling problems, incurring excess costs in transportation, storage and handling, and difficulties in fitting prefabricated parts. Despite a continual flow of construction activities and time savings, final costs were not lower nor was the quality improved relative to that achieved by conventional approaches to renovation construction. (Housing Rehabilitation: Proceedings of the Canadian Conference on Housing Rehabilitation: 1973, pp.51-42).

iii. **Construction Organization**

Renovation on a contract basis, compared to a speculative basis, differ in scale and management complexity. The contract renovator operates as a small scale house-builder in evaluation of labour and material costs and deciding between alternative construction methods and products (Peter Barnard Associates: 1973, p.53). The speculative renovator engages in a more complex construction process. For the purpose of this thesis, more emphasis is placed on the later type of renovation firm. Since little documented information exists relating to the organization of the construction process, I will draw upon the

The majority of renovation firms have in-house construction arms employing few staff. Owners of the firm often possess some special skill such as contracting, architecture or real estate brokerage, and function essentially as a general contractor, in scheduling trades and supervising construction progress. The owner(s) intensive contact with construction through to completion is an essential element of a successful project.

Few in-house staff are employed, relying upon subcontracted trades who are preferrably familiar in renovation work. As in small scale house-building, operations carpentry is the most valued trade, particulary finishing or craft carpentry. Skilled trades accustomed to the complexities of renovation work are in short supply.

3. Firm Organization And Management

As mentioned previously, intensive management control is a critical element of the renovation process.

The renovation industry is a tough one. It is a hands-on industry, where on-site supervision, quality control and decision making is an everyday matter (Canadian Building: (Toft) January/February, 1982, p.19).

By comparison to the small-sized house-builder, the management skills of the speculative renovator are extended
further, demanding expertise beyond on the spot day-to-day decision making, site supervision and cost-estimating, branching into marketing, public relations and design skills (Downs: 1976, p.73).

Reflecting management skill differences, firm structure and organization varies from the contract renovator to the speculative renovator. The contract renovator parallels the small housebuilder in this respect. The contract renovator operates a small scale firm employing no permanent staff, and uses his home as an office. Since contract renovators obtain work through personal reference, they rarely have a business telephone and a business listing in the yellow pages (Clark: 1981, p.35). In contrast, the speculative renovator operates a larger scaled business with an office employing permanent, albeit minimum number of staff. Their aim is to ensure continuity of operations, maintain a steady flow of construction volume, retain reliable staff and control the quality of the final product (W.G. Anderson et al.: 1980, p.93). Unlike new housing developer-builders, the speculative renovation firm is neither vertically nor horizontally integrated. In addition, the renovated product is geared solely to the resale ownership market. Units are not produced and held by the firm for rental purposes in order to generate a constant source of income revenue. Firms are too small and simplified in organization to cope with diverse types of tenure products (W.G. Anderson et al.: 1980, pp.97-98).

As mentioned previously, the speculative renovator requires
a variety of expertise to ensure firm survival: managerial, construction, design, marketing and public relations expertise. Design alterations of a structure based on working drawings are usually performed by the renovator rather than by architectural services. The renovator also must rely on his interpretation of the target market and product promotion since market research and advertising services are not used (W.G. Anderson et al.: 1980, p.113). The renovator takes on more of these tasks in an effort to be cost effective.

The renovator should ideally possess public relations skills in dealing with councils, boards of variance and citizens groups; all part of the process frequently necessary to obtain development approval. The study of the renovation business in Toronto found that the development approval process was a significant hurdle for firms. Generally, zoning bylaws were erected to facilitate the application of consistent, uniform standards to new construction. Therefore, the task of applying zoning regulations to the nuances of an older structure, constructed on the basis of building standards of a past time, is a difficult one. Given this lack of clarity, obtaining development approval is uncertain both in the time taken to receive approval and the whether approval for variances to the zoning bylaw are granted. Consequently, the high risk associated with renovation is further amplified. Should the continuity of construction operations be interrupted, problems could arise creating difficulties in maintaining a steady flow and scheduling of reliable subtrade labour experienced in

In summary, the residential renovation construction sector is ill-defined and poorly organized as a representative body. Unlike its counterpart in new housing construction, the renovation sector possess a fraction of the representative, publicly recognizable, organizations. This reflects the stage of development and growth of the sector as whole. Despite the small scale of the renovation firm, it must possess a myriad of skills typically expected of a larger scaled firm, perhaps the nearest equivalent in new housing construction being the medium sized developer-builder. Renovation then is a risky venture, affording few opportunities for returns to scale to compensate for this risk.

1 Organizations representing new house-building and land development firms include the Urban Development Institute (UDI), the Home Building Association of Canada (CHBAC), and the Canadian Institute for Private Real Estate Companies (CIPRC).
CHAPTER V. BARRIERS TO ENTRY INTO RESIDENTIAL RENOVATION ACTIVITIES

This chapter examines the barriers to entry preventing the transition of house-building firms into renovation operations and the expansion of currently active renovation firms. Future prospects toward maturation of the residential renovation sector are also discussed.

As was established in Chapter 2, there will be, in the next two decades, a larger potential for renovation of the housing stock, primarily due to:

- The ageing of the housing stock,
- The expected decline of new housing construction which will compose a declining percentage of the total housing stock, as a result of the declining rate of population growth,
- Economic factors which favor re-use and intensification of the housing stock as opposed to demolition and replacement,
- Lifestyle factors which point toward an appreciation of an urban lifestyle and older homes found within urban locations, combined with anticipated smaller household size leading to conversion of the existing housing stock, and
- The recognition by the federal housing agency (CMHC) that rehabilitation and renovation of the housing stock is one way to meet future housing demand.

A study designed to assess the potential market for renovations, alterations and conversions in Canada to the year 1990, found that twice the current rate of renovation construction could be sustained, accounting for $191 Billion in
single family dwelling renovations and $49 Billion in multifamily dwellings (CMHC: 1980c, p.39).

Given the potential rise in residential renovations in the next two decades, concern has been expressed regarding the residential construction industry's ability and willingness to transfer and/or expand operations into residential renovations (Hulchanski: 1983, p.56). In addition, housing analysts have questioned the possibility of reallocating the "idle resources" of the declining new housing construction industry into renovation activities (Tsang: 1979, p.3).

A study commissioned by CMHC notes:

A critical ingredient in the success of the transition process will clearly be the degree to which repair, rehabilitation and conversion activity can take the place of new construction. The potential for rehabilitation, modernization and improvement will therefore continue to grow and will provide a market for those firms in the construction industry who may, by choice or necessity, have to redirect their activities away from new construction (CMHC: 1980c, p.37).

This is echoed by financial institutions, as Peter Carter, spokesman for the Royal Bank of Canada at a HUDAC conference in Manitoba (1979) commented:

...the housebuilding industry will...have to change direction to some extent in order to remain healthy. The new direction will involve concentrating at least part of its efforts on renovation, rather than insuring that new starts each year average at least 250,000 units as has been the case for the past three years (Carter, 1979).
In addition to government and financial institutions, a leading industry trade magazine strongly supports the need for the new housing construction industry to transfer operations into renovations activities.

Renovation, restoration and retrofitting are the new 'three R's' that forward-thinking urban developers are learning in a big way these days. If you are exclusively a new building developer, it's probably time to think about joining the renovators. It doesn't seem to be a passing fancy, but rather a new growth industry...a tail that may soon be wagging the whole development industry dog (Canadian Building: April, 1981, p.15).

How has the development industry responded to the increased demand for residential renovation work? Chapters 3 and 4 reviewed the past and present structure and characteristics of the residential construction industry. The industry is dominated by large developer-builders who concentrate on large scale production of new single family homes in suburban locations. Plentiful numbers of small-sized house-builders also specialize in the production of single family dwellings in the suburbs. In contrast, the renovation industry is "immature", or at infancy in its development, being the largest "cottage" industry in Canada (Clark: 1981, p.38). Relative to the residential construction industry, the renovation sector is insignificant, and at a very small scale, with no firms assuming a dominant position. Notwithstanding these observations, renovation work has captured an increasing share of total residential construction investment while new housing construction has declined in relative importance.
The industry has exhibited a great deal of inertia in shifting operations into renovation activities, despite mounting evidence indicating increasing residential renovation investment opportunities in the light of diminishing demand for new housing. A survey initiated jointly by CMHC and HUDAC to determine the major problems of the industry, found that the majority of firms surveyed acknowledged the growing importance of residential renovation but were not contemplating adjustment to such activities (CMHC/HUDAC: 1982, p.1-5). These findings were verified in a similar industry survey in Winnipeg undertaken by the Institute of Urban Studies. Respondents stated that renovations and repairs would continue to increase its share of the market (Newman and Clatworthy: 1982, p.74). The study determined that the industry was unwilling to adjust to long term trends such as declining demand for new construction and increasing demand for renovation construction. Medium and large-sized firms exhibited the greatest degree of inertia (Newman and Clatworthy: 1982, p.78-79).

Alan Greenberg, past chairman of the Toronto Home Builders' Association Renovation Council notes:

The problem is at this time, that there is a need for good, competent general contractors to be able to go out and fill that need... the problem is that there aren't enough of them (Building Toward 2001, Proceedings: 1981, p.27).
Documented evidence is not available outlining the reasons for industry reluctance to become involved in renovation operations. However, one may speculate that it is due to three reasons:

(a) The Federal Government has historically promoted and maintained a high level of new residential construction activity (CMHC: 1980c, p.37). This has occurred both because of electoral pressure for high quality housing and pressure to stimulate and stabilize the economy through new housing starts. Correspondingly, government to this point, has promoted the "handyman", small scale sector of the renovation sector through policies and programs geared to the rehabilitation of single family homes.

(b) Given this focus on new housing construction, the house-building sector has preferred the predictability of familiar modes of operation. The sector, particularly large and medium-sized firms, cannot shift operations easily because of current land holdings and other capital investments in new housing construction. Accustomed to cyclical fluctuations, they may expect a return to pre-recessionary levels of housing demand (Newman and Clatworthy: 1982, p.79).

(c) The most convincing argument supporting industry
reluctance to become involved in renovation activities has to do with the nature of renovation work itself. In my informal interview of ten medium-sized housebuilding firms active in the greater Vancouver area, all responded with concern to the "unknowns" and "uncertainties" of renovation work. They claimed that this was the principle reason for their inactivity in it. At the same time as such concerns were expressed however, acknowledgement of the "fantastic potential" of future residential renovation work was unanimously voiced by respondents.

A. FIRMS WHO POSSESS THE ABILITY TO ADJUST TO RESIDENTIAL RENOVATION ACTIVITIES

Based on the above noted factors, there is a need for an aggressive, mature renovation construction sector to ensure improvement and adaptation of the ageing housing stock to the changing housing demand. The industry must adapt to the increased pace and scale of renovation work expected to the year 2001. This hinges on the ability and willingness of the housebuilding sector to transfer operations into renovation activities, and the ability and willingness of the current renovation industry to expand and increase the pace of its operations.

The firms within the housing-building sector that could potentially transfer operations into renovation construction
include the small, medium and large-sized house-builders. To identify the barriers these firms face shifting operations, a comparison will be made between the approaches, problems and skills of the different sized firms: 1) the small-sized house-builder; 2) the medium-sized house-builder; and the speculative renovation firm 3) the large sized house-builder and 4) the small-sized contract renovator. Discussion will then turn to an identification of the barriers to expansion of the contract renovation firm. This chapter draws together and elaborates on observations made in chapter 4.

1. Barriers To Entry For The Small-size Firms

A comparison between the small-sized house-builder and the contract renovator reveals many similarities in management and firm organization, scale economies and approach to building approval procedures. Differences lie in management and construction skills and the method of operation: the small-sized house-builder operates on a speculative basis; the renovator operates on a contract basis. Due to the nature of renovation work, it is difficult to guarantee a smooth flow of construction and scheduling of labor and materials handling. In addition, the extent of renovation work varies from contract to contract. In contrast, house-building operations face few of these difficulties due to the relative ease of constructing a standard product: the single family home. These differences are a barrier to entry into the renovation construction business if the house-builder does not possess the necessary managerial or
construction skills or the willingness to transfer operations. Many of the existing pool of contract renovators do not possess these skills. One author, in his evaluation of the NIP and RRAP experience notes,

An ongoing hazard is the reliance on a large number of small contractors...The absence of a rehabilitation industry will no doubt plague future projects as well. Overcalling for extras, misleading contracts, supplier credit, non-payment of subcontractors, lack of continuity on the job, dissolution of small partnerships are all part of the daily routine (Lowden: 1973, p.140).

Differences in financing requirements however, may serve as an incentive rather than a barrier to house-builder transition. Rather than risking his own borrowed capital, the contract renovator is paid for services by the homeowner.

By overcoming the skill barriers, small-sized housebuilders can readily transfer operations into small scale renovation activities because of their inherent low overhead, organizational simplicity and high flexibility of operations.

2. Barriers To Entry Affecting Medium-Sized Firms

A comparison between the medium-sized house-builder and the speculative renovator can be made because they possess similarities in scale of production and firm organization. It is assumed because of such similarities, that the medium-sized house-builder could transfer into speculative renovation activities if it appeared reasonably profitable to do so. Chapter 3 noted that the medium-sized firm in 1980 composed only
8.1 percent of all firms active in residential construction, capturing 11.6 percent of investment. Therefore, the potential source of speculative-renovation expansion through the entry of medium-sized new house-building firms is limited.

Barriers to entry by medium-sized builders into renovation construction are due to the uncertainties or "unknowns" inherent in renovation activities. Such uncertainties are translated into difficulties in obtaining a continuous source of financing at rates comparable to new construction, an unpredictable zoning and building by-law approval process, greater demands on management expertise and entrepreneurial skill, and inefficiencies created by a potentially problem-ridden construction process. Of all of these barriers, financing and the uncertain regulatory process constitute the greatest hurdles to overcome.

In contrast to the potential entry of the small-sized house-builder into renovation construction, the medium-sized firm faces a greater degree of risk and uncertainty. In addition, renovation operations of a speculative nature increase both in scale and management complexity relative to contract renovation work (Peter Barnard Associates: 1973, p.53). Therefore, there are major disincentives acting to inhibit the medium-sized house-building firm's shift to renovation activities.
3. **Barriers To Entry Affecting Large-sized Firms**

Renovation construction is best suited to small and medium scaled operations. Large scale operations are not appropriate for a number of reasons. Firstly, several advantages of the large developer-builder do not come into play in renovation construction, namely volume production, use of large land inventories and economies of scale in the repetitive construction of a standard product. Secondly, the large-sized developer-builder's complex corporate structure - through vertical and horizontal integration - are inappropriate for renovation construction. However, the advanced entrepreneurial and managerial skills of the large developer-builder could be of use in renovation construction, since this is one of the many qualities in short supply in this activity.

Because of the dissonance between large scale house-building and residential renovation operations, large-sized firms do not possess the ability to transfer activities into renovation construction successfully.

4. **Barriers To Expansion Affecting Contract Renovation Firms**

As mentioned previously, the medium-sized firm is the largest one that can adapt to the problems and opportunities associated with renovation. This source of expansion is limited, by virtue of the few medium-sized firms in existence. Therefore, a potential source of expansion to adjust to the increasing scale and pace of renovation work is the pool of
renovation contractors. However, there are significant barriers which restrict contract renovators. They have reached a management threshold where the expansion of their operations involves the assumption of increasing degrees of risk. The most significant deterrent is access to capital and assumption of financial risk because the advantage of homeowner financing on a contract basis would no longer be available. Also, the owner would be required to develop management and entrepreneurial skills, suited to speculative renovation activities. Greater increments of management and capital outlays are demanded in the establishment of an office and staff. The principle advantages of the contract renovator: small scale, low overhead and flexibility of operations, cannot be used in speculative renovation. For these reasons, many contract renovators prefer to retain their present scale of operations. It is difficult to estimate the numbers of small firms who would be attracted by potentially greater returns on investment, along with the assumption of greater risks.

B. SYNOPSIS

Briefly, the barriers to entry into residential renovation construction - corresponding to each firm size - via either firm transition from the house-building sector and/or expansion of contract renovation firms are outlined below.

Barriers to entry affecting the small-sized house-building firm:
• Greater demands on managerial capacities;
• Differing construction techniques and skills in the scheduling and use of labor and materials;
• Different mode of operations; on a contract rather than a speculative basis.

Barriers to entry affecting the medium-sized house-building firm:

• Difficulty in obtaining financing at comparable rates to new construction;
• Greater demands on management expertise and entrepreneurial skills;
• A potentially problem-ridden and uncertain construction process where few or no economies of scale can be taken advantage of;
• A more complicated, time consuming and uncertain development approval process.

Significant barriers to entry affect the large developer-house-building firm. Essentially, large scale operations are unsuited to the requirements of renovation construction.

Barriers to expansion limiting the contract renovation firm's shift into speculative renovation activities include:

• The requirement to obtain interim and completion capital from lending institutions;
• Greater demands on management expertise and entrepreneurial skills which are not typically required in contract renovation;
• Significantly greater capital outlays required in the establishment of an office and staff.

In summary, the small-sized house-building firm has the greatest capacity for entering into renovation activities
relative to all other size classes of house-building firms. Given the willingness of such firms to enter into renovation construction, such transition is possible. As the market for new housing declines, further transition of small-sized house-building firms into renovation construction is anticipated. It is assumed then that these firms will adjust to the increased pace expected for renovation construction, and will specialize in the renovation of single family homes. The pace of small scale renovations could also increase in an efficient manner through the use of franchises. For example, in Ontario a "Mister Renovator Ltd." was incorporated in 1980 with the aim:

To become to the renovation industry what Macdonald's is to the fast food business (Canadian Building: April 1981, p.35).

The potential exists then for one "big name" to stand out in the pool of contractor renovators, aimed at maintaining a degree of reliability, stability and certainty of product. Scale economies could occur through collective efforts to advertise, follow standard operations manuals and adhere to standard accounting procedures.

Which firms can assume the increased pace and scale of renovation work required in the renovation of multifamily construction and conversion of single family homes into multi-unit dwellings? There is probably insufficient compensation for small contract renovation firms to expand their present form of operations, particularly so when the market for small scale renovations is burgeoning. Only those firms possessing the
entrepreneurial skill and willingness to assume greater risks (along with the opportunities for potentially greater profit) will expand, increasing their scale of operations. Few firms are expected to do so in the short run.

It is expected then that only medium-sized house-building firms will adapt to the demands of speculative, larger scale residential renovation activities. Significant barriers to entry hinder such transition, making medium-sized house-building firms wary of the unknowns and uncertainties which riddle renovation construction.

At present, the potential realization of profits are perceived by such firms as insufficient compensation for risk. Caution is expressed despite the fact that many see renovation construction as a growing market with "fantastic" potential.

C. CONCLUSION

This chapter has found that small and medium-sized new housebuilding firms possess the ability to transfer into residential renovation activities. Despite being able to adapt to the demands of residential renovation, many of these firms are unwilling to do so. The small-sized firm is faced with the prospect of greater demands on managerial capacities, and use of different construction skills and techniques. Medium-sized firms are faced with another set of obstacles inhibiting transition including financing, the regulatory process, greater demands on management expertise and entrepreneurial skills and
the uncertain construction process. These factors act as barriers to entry and are particularly significant for the medium-sized firm.

Proposals for the nature and scope of government and institutional actions to overcome these barriers are discussed in the following, concluding chapter.
CHAPTER VI. CONCLUSIONS

SUMMARY

This thesis has established that to the year 2001, an increasing proportion of total expenditure in housing construction will be in renovation activities due to:

- The ageing housing stock and the expected decline in new housing construction; 54.6 percent of the housing stock is now over 20 years of age, increasing to 63.1 percent in the year 2000.

- Demographic trends largely shaped by the middle ageing of the baby boom and their projected housing demand.

- Economic factors such as uncertain mortgage interest rates which prompt home owners to improve their homes rather than trade-up to a more expensive home; costs of new construction as opposed to making use of an existing structure, cost of commuting from suburban locations.

- Lifestyle factors which favor an appreciation of an urban lifestyle and older homes found within an urban location.

- The shift in housing policy and programs encouraging rehabilitation and renovation of existing housing as a viable way to meet future housing needs and demands.

Making more efficient use of the housing stock and its related infrastructure will depend on the role of the residential construction industry. In adjusting to the changing housing market the industry will need to transfer some portion of its operations from new residential construction activities into residential renovation activities. This thesis examined both the ability and willingness of the industry to make these adjustments; it did not examine the possibilities of new firms
entering the renovation sector.

A review of the structure of the current residential construction industry revealed that its activities are concentrated in new housing construction. Although small-sized firms compose 80-90 percent of the industry, large-sized firms capture almost two-thirds of all construction investment. It was also found that the industry is making some adjustment to residential renovation, although at a small scale. In the light of the increased pace and scale of residential renovation activity expected in the future, the industry will need to make a more significant adjustment.

A review of the characteristics of the new residential industry showed that small and medium-sized firms possess the ability to adapt to residential renovation opportunities because their scale, flexibility and approach to construction operations is compatible with the techniques necessary for residential renovation construction. Large-sized firms do not possess a similar ability to transfer to residential renovation construction because the advantages inherent in large scale operations cannot be utilized including volume production, use of large land tracts and economies of scale in the repetitive construction of a standard product. Large-sized firms who choose to transfer to renovation activities would be forced to down-size operations to the scale of a medium-sized firm. The thesis observes that small and medium-sized firms within the house-building sector are most suited to become involved in
residential renovation activities and adjust to changing demand conditions. These changing conditions will have a major impact on industry structure and will particularly affect large-sized firms. Not only will large-sized firms find their target market - the construction of suburban, single family housing - diminishing, they will also be unable to take advantage of the burgeoning market for residential renovation work.

In examining the willingness of the industry to adjust, it was found that the industry has a great deal of inertia. Reasons for this include:

- Preference for the familiarity and predictability of current operations in new housing construction.
- Promotion by the federal government of the "handyman", small scale sector of the renovation industry through such programs as the Canadian Home Renovation Program and the Canadian Home Insulation Program.
- The uncertainties and additional effort required in renovation work involving a unique set of problem-solving decisions (e.g. since each renovation project is unique there is less continuity of work within a unit and from unit to unit, it is difficult to predict costs or type of work required before construction actually begins, renewal of existing surfaces to present day building code standards often requires more work than the application of new surfaces).

The specific barriers that inhibit industry adjustment to residential renovation activities of both speculative and contract renovation firms were found to be:

1. Zoning and building codes are geared to new residential construction making their application to residential renovation construction complicated, uncertain and time consuming;

2. Difficulties in obtaining financing at comparable
rates and terms as those available for new construction; financial institutions perceive residential renovation projects as of higher risk than new housing projects. This barrier specifically inhibits speculative renovation projects.

3. There is a requirement for greater and a wider range of management, entrepreneurial and construction skills in renovation construction compared to new construction.

4. There are limited opportunities to make use of scale economies. Also, because each renovation project is unique, the construction process is more unpredictable and uncertain compared to new housing projects.

The following proposals are intended to deal with these barriers thereby facilitating the adjustment of the residential construction industry to residential renovation activities, which will in turn facilitate the maintenance and rejuvenation of the existing housing stock and related infrastructure.

PROPOSALS

The intent of the following is to propose ways that federal, provincial and municipal governments, financial institutions, the Canadian Home Builders' Association of Canada, and the Urban Development Institute could change current approaches and attitudes to respond more effectively and efficiently to the increasing trend to such construction, thereby facilitating industry adjustment.

A number of qualifications should be made at this point. Firstly, these proposals intend to encourage renovation projects that are economically viable; where the structures are sound and where there is a market demand for the renovated unit at a
particular location. This qualification however, does not apply when housing is valued not as a commodity but as a social good; where housing is preserved for its heritage merits rather than for its economic viability. In other words, it is beyond the scope of this thesis to deal with the renovation of structures which are not economically feasible, requiring some form of government subsidy. To preserve housing with heritage attributes involves an entirely different set of proposals than those suggested here. Secondly, these proposals are intended to facilitate the processes of residential renovation. They do not intend to promote renovation activities merely for the sake of renovation, but because of the benefits previously stated; facilitating industry involvement in residential renovation activity which will in turn encourage the more efficient use of the housing stock. Thirdly, these proposals assume that the industry is adaptive and able to make adjustments to changing market conditions.

In essence, the proposals call for a change in the perception of institutions towards recognition of the increasing importance of residential renovation construction relative to new housing construction and to adjust their current methods of operation accordingly.
A. THE REGULATORY PROCESS

1. PROBLEM

A critical barrier hindering residential renovation activity, in contract and speculative renovation ventures, is the complicated, time consuming, and uncertain zoning and building code approval process. Planning regulations that deal with residential development are primarily geared to new construction. They set restrictions which do not address existing residential characteristics and are often contradictory and subject to wide and changing interpretations. Building setbacks are specified that do not relate to the existing house location on the lot, or floor space ratios (FSR) are too stringently regulated in the context of permitted bulk and height of buildings. For example, in most municipal zoning by-laws there are building envelope limitations determined by height and setback restrictions, yet the FSR is often less than is allowed under these specifications. This is particularly important for renovation work where small floor spaces such as dormers, bay windows and enclosed porches could be added without by-law variances if the FSR restriction was removed (Canadian Building: (Toft) June, 1982, p. 25).

Building codes create a similar problem as they are geared to new construction and are often applied in a prescriptive, rigid manner. For example, a renovator often experiences difficulty in upgrading an existing structure to meet current fire safety standards. Typically, only one method to upgrade
fire safety is permitted in the Building Code; a method that may be difficult to adapt to an older building. Alternative methods to achieve a similar standard of fire safety are prohibited. The regulatory system therefore acts as a disincentive for conversion, retrofitting and renovation of existing units.

The National Building Code provides no policy guidelines advising provinces or municipalities on how to adapt codes and standards of public safety to existing buildings. Most municipalities adopt the National Building Code along with provincial requirements as well as sections to deal with their particular problems. Some municipalities are beginning to face the problem of adapting their codes to renovation construction and require guidelines and alternative approaches to deal with the problem (Hulchanski: 1982, p. 87).

2. PROPOSAL

Actions are needed to make the municipal regulatory process more effective in dealing with residential renovations: making the process flexible, simplified and potentially less time consuming, reducing the need for variance approval. Revisions in the regulatory framework should not relax public safety standards in application to existing structures, but rather offer alternative measures to achieve these standards.

In general, the difficulties in adapting the existing system of regulation to renovation construction are known. Little work has been initiated to identify the specific issues
and formulate suitable alternatives.

A major research effort is needed as advocated by Hulchanski. It should follow three steps:

1. Identify the specific ways in which the existing regulatory framework constrains or prohibits potentially desirable forms of residential land use intensification/conservation;

2. Develop new standards and model bylaws designed to permit and encourage residential intensification/conservation; and

3. Closely monitor the success and impacts of the cases where new standards have been implemented (1982, p. 73).

As suggested by the Toronto Home Builders' Association Renovation Council in their review of the City of Toronto's zoning and building codes, new standards and bylaws are needed, ...

which will not dramatically change existing density standards; relates bulk and location of buildings as much as possible to the nature and size of the property and its relationship to its neighbors; and offers an easy to use reference system which allows built form standards which can be easily and quickly determined (Canadian Building: (Toft) July/August 1983, p. 36).

In addition, such a system should allow renovation of existing structures as a legal right, without the need for variance approval (Canadian Building: (Toft) June, 1983, p. 28).

Achievement of a simpler, more flexible and certain regulatory system will take place slowly, having a gradual effect on residential renovation construction over time. Nevertheless, municipalities should begin to revamp their codes
in accordance with the housing requirements of the present and future.
B. **FINANCING**

1. **PROBLEM**

A key barrier associated with speculative residential renovation activities is obtaining financing at similar interest rates and conditions as new construction. Although securing credit does not appear to be a problem, rates at which credit is extended are; often in the form of demand loans several percentage points above prime. This reflects financial institutions perception of the risk in residential renovation construction. Because the market for residential renovation construction is growing, it is the contention of this thesis that financial institutions possess an outmoded view of the riskiness of residential renovation projects.

2. **PROPOSAL**

A financing scheme is required which would promote a change in perception of financial institutions towards investment in the residential renovation market and provide capital for those projects which offer the greatest potential for return on investment.

A financing scheme proposed by Clayton Research Associates in the recent *Study of Residential Intensification and Rental Housing Conservation* (1983) commissioned by the Ontario Ministry of Municipal Affairs and Housing, presents a promising approach. Their scheme would be:

. . . established by mortgage insurance firms . .
whereby an additional premium, for example, 1/2 of 1 percent would be charged to an applicant requiring both interim and completion loans for renovation purposes (Clayton Research Associates in Klein & Sears et al: 1983, p. 132-3).

Under this scheme, private financing would continue to provide capital for renovation activity while mortgage insurers, through a mortgage insurance package, would cover the risk factor. Since the initial risk is high, a reserve fund supplied by the federal government would be required to finance defaults. The Mortgage Insurance Company of Canada estimates that the value of defaults would exceed the aggregate value of premiums until approximately the end of the fifth year (Clayton Research Associates in Klein & Sears et al: 1983, p. 133). Therefore, a federal reinsurance scheme would be needed for the initial five year period until the reserve could be self-sustaining.

This proposal would involve the outlay of private capital in supplying credit for both construction expenditures and insurance. It would remain the function of financial institutions to fund projects which meet their criteria of market feasibility. Government involvement would be limited to provision of a reserve fund, for mortgage insurance for the initial five year period.
C. MANAGERIAL, ENTREPRENEURIAL AND CONSTRUCTION SKILLS

1. PROBLEM

The third barrier deterring involvement in residential renovation construction are the broad range and more intensive use of managerial, entrepreneurial and construction skills required in renovation compared to new construction. These vary with the type of renovation work undertaken. A project undertaken by a contract renovator requires construction and managerial skills that can deal with the complexity and unpredictability of the renovation construction process. Projects undertaken by speculative renovators require a wider range of skills including construction, managerial and entrepreneurial skills demanding expertise in financing, marketing, public relations, interpretation of building and zoning codes and design.

2. PROPOSAL

Training programs and information dissemination programs are needed for two reasons:

1. To adapt new housebuilder's skills (of those who choose to transfer to renovation construction) and renovator's skills to the requirements of renovation construction, addressing the problem mentioned earlier in this thesis:

The renovation industry suffers from a poor reputation. Consumer and Corporate Affairs cite residential renovation as the number two complaint after car repairs. (Canadian Building: (Toft) April 1981, p. 26).
2. To make the process of maintaining and rejuvenating the existing housing stock more effective and efficient.

Such programs would involve the efforts and energies of such institutions as provincial governments, the Canadian Homebuilders Association (CHA) and the Urban Development Institute (UDI). CHA defines its role, among other things, to offer seminars and newsletters to keep members informed of housing market conditions and opportunities and to liaise with government on issues of concern to the industry (HomeWord: April/May, 1983, p. 15). UDI defines its role in a similar way. Provincial governments, in their role to promote education, aim among other things, to provide construction training programs at the community college level to ensure that labor and subtrade skills meet the requirements of the industry.

The following proposals show how the above institutions, in their self-assigned roles and methods of operation, can respond more effectively and efficiently to the increasing market for residential renovation construction.

1. CHA and UDI could play an essential part in adapting member's skills and abilities to cope with residential renovation construction. They could also make members aware of the opportunities created by the growing residential renovation market. Through the use of workshops, seminars, newsletters and manuals, both CHA and UDI could inform members of specific aspects and pitfalls of the residential renovation construction
process including:

a. Financing
b. Marketing and public relations
c. Interpretation of building and zoning codes
d. Cost estimation
e. Estimation of the target market in a particular location
f. Special structural problems associated with renovation such as assessing physical condition of a building and estimating the extent of renovation required, ranging from cosmetic renovation to total or gut renovation
g. Design: how to make the best use of professional assistance
h. Managerial skills related to:
   • controlling costs of construction
   • maintaining schedules
   • maintaining quality control though constant on-site supervision and decision making
   • developing an effective workforce that is skilled in its approach to solving construction problems; including structural, detail, material and craft knowledge
   • the achievement of scale economies through the simultaneous renovation of several units of a similar type at one time

These programs should be geared specifically to the skill requirements of the contract or speculative renovator.

2. CHA and UDI should lobby provincial governments to provide funding to community colleges to mount or expand residential renovation construction training courses as part of labor and subtrade education programs. Such courses would equip tradesmen with
better structural, detail, material and craft knowledge and on-site decision making ability specifically required in residential renovation construction. Courses could be modelled after the CMHC course "Training in Rehabilitation Skills" originally designed to train RRAP personnel and building inspectors.

CONCLUSIONS

Recommendations proposed in this chapter include:

- The development of new standards and model zoning and building by-laws that aim to permit and encourage residential renovation construction, making the regulatory process flexible, simplified and potentially less time consuming, reducing the need for variance approval.

- The formulation of a financing scheme to make the lending process for residential renovation construction more effective and efficient; or, in other words, more responsive to changes in the housing market that make residential renovation a promising investment opportunity.

- The development of training and information dissemination programs designed to adapt renovator's and house-builder's skills (of those who choose to transfer into residential renovation) to the particular requirements of residential renovation construction.

It is in these areas that government and institutional actions are needed to facilitate and encourage the adjustment by the housing construction sector to residential renovation activities. Should these recommendations be implemented, the process of maintaining and rejuvenating the existing housing stock, to match future demand and need for housing, will be made more effective and efficient.
AREAS OF FURTHER RESEARCH

1. An important area of future research is to identify the financial risk of speculative renovation activities. It would be necessary to determine whether financial institutions possess an outmoded view of the riskiness of renovation activities in the light of its growing investment potential.

2. A critical area of investigation is to assess the impact of zoning and building codes on residential renovation projects and to suggest proposals for how this regulatory process could facilitate such projects more effectively and efficiently.

3. Another important research topic would be to examine the planning implications of large scale renovation or rehabilitation of low-moderate income housing. Research should address how rents can be maintained at affordable levels after renovation and what methods can be used to prevent gentrification by middle-upper income groups.
POSTSCRIPT

Subsequent to this thesis being prepared in draft form the following announcement was made in Canadian Building Magazine:

Backed by the Ontario government (Ministry of Municipal Affairs and Housing), the mortgage Insurance Company of Canada (MICC) will provide renovators with mortgage financing at prevailing interest rates... The new program, in addition to providing financing, will set up a training and information training program... (May, 1984: p. 7).
BIBLIOGRAPHY


Corporate Background Report, Royal Commission on Corporate Concentration, Study No. 3, Ottawa: The Commission.


Vancouver. (1973). The Layman's Home Improvement Guide: Section 1, Permits, Codes and City Hall; Section 2, Materials, Quantities and Cost; Section 3, The Cost of Borrowing to Purchase or Renovate a Home. Prepared by The Urban Design Centre: Vancouver.


