# THE DEMAND FROM RESIDENTIAL RENOVATION FOR SELECTED WOOD BASED BUILDING PRODUCTS

Prepared For

Converted Wood and Paper Products Division

Forest Products Directorate

Resource Processing Industries Branch

Department of Regional Industrial Expansion

By

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# EXECUTIVE SUMMARY

Residential renovation has become an increasingly important part of total residential construction activity in Canada over the past decade and is likely to account for an even larger share of total activity during the remainder of the century. Recognizing the importance of renovation work to the industries which supply construction materials and products, the Department of Regional Industrial Expansion commissioned Clayton Research Associates Limited to examine the extent, characteristics and outlook for renovation in Canada with particular emphasis on the demand from residential renovation work for the following wood based building products: kitchen cabinets; windows; doors; mouldings; flooring; interior wood panelling; and wood housing components.



The main findings of this report are as follows:

## TOTAL RESIDENTIAL RENOVATION ACTIVITY

- Total estimated residential renovation expenditures in Canada have exceeded expenditures on new residential construction since 1982. In 1985, expenditures on new residential construction were $11.6 billion while renovation expenditures totalled $12.6 billion. Renovation expenditures are estimated to have accounted for approximately 55 percent of total 1985 residential construction expenditures in Quebec, the Prairies and the Atlantic regions. In Ontario and British Columbia, renovation work accounted for about half the total residential construction expenditures.

- Residential renovation spending has more than doubled in the past fifteen years. Expressed in constant 1985 dollars, expenditures on residential renovation totalled $4.9 billion in 1971; they increased progressively to $12.6 billion in 1985.

- Increased spending on improvements accounted for most of the rise in renovation spending. Average improvement expenditures per dwelling doubled from approximately $500 in 1971 (expressed in 1985 dollars) to approximately $1,086 in 1985. In contrast, annual repair expenditures per dwelling were relatively stable - they increased by only about 10 percent since 1971 to an average of approximately $335 in 1985.

- Most renovation work in Canada is undertaken by homeowners, renovations by landlords and tenants account for less than 15 percent of total residential renovation expenditures in Canada.

- The majority of homeowner renovation work is done by contractors. Overall, contractors accounted for approximately three-fifths of homeowner renovation expenditures in Canada. About forty percent of all homeowner renovation expenditures were comprised of separate materials cost (work undertaken primarily by do-it-yourselfers).

- According to information from the 1985 HOMES National Survey conducted by Environics Research Group, the most common types of interior renovation work undertaken each year by homeowners are painting (38 percent of all renovating homeowners undertook some interior painting, at an average expenditure of $390), heating/air conditioning work (16 percent of renovating homeowners, at an average expenditure of $1,550) and carpets/flooring (14 percent at an average expenditure of $1,220). In terms of the interior renovation work of most interest to this report, work on kitchens was undertaken by 11 percent of renovating homeowners (at an average expenditure of $2,720). Do-it-yourselfers (DIY) account for 46 percent of homeowner kitchen renovation work.

- The most common types of exterior renovation work undertaken by homeowners, according to the HOMES National Survey, are painting (19 percent of all renovating homeowners undertook some exterior painting, at an average expenditure of $315), landscaping (16 percent at an average expenditure of $780) and roofing (11 percent at an average expenditure of $1,505). In terms of the types of exterior renovation work of most interest to this report, new windows were installed by 9 percent of homeowners undertaking renovations (at an average cost of $1,620) and new doors were installed by 7 percent of renovating homeowners (at an average cost of $735). About one-third of these renovation jobs were entirely DIY.

- Almost all homeowners undertake some renovation work each year. However, both the incidence of renovation activity and the average amount spent on renovation jobs tend to rise with household income and with the value of the dwelling.

- Some types of renovation activities, such as repairs or replacements of wornout equipment, appear to be undertaken by all types of homeowners on an as-needed basis. Other types of renovation activities, however, appear to be more discretionary and therefore subject to lifestyle and affordability considerations. The types of renovations which would stimulate the demand for the building products under study in this report appear likely to be the more discretionary types.

## DEMAND FOR WOOD BASED PRODUCTS FROM RESIDENTIAL RENOVATION

- There is no clearly defined "industry", as such, for all of the building products under study in this report. Most producers are generally involved with the production and sale of only one or two of the products; those that produce more than this tend to be smaller firms operating in a relatively limited market.

- Kitchen cabinets, windows and doors dominate the wood based building products industry accounting for more than 75 percent of the total 1982 output of the types of wood based building products under study. Kitchen cabinet manufacturers tend to specialize, making few other products. Windows and exterior doors are generally marketed together: wood windows are frequently marketed as part of a package including steel (rather than wood) exterior doors. Mouldings, interior doors, flooring, panelling and housing components appear generally to be produced by smaller, more diversified firms.

- Estimates of the shares of the total estimated 1985 Canadian production (plus imports, minus exports) of each of the wood based building products which were used for residential renovation work are:

  - Kitchen Cabinets - half of the estimated total 1985 production ($145 million used in renovation work);
  - Windows - 43 percent of 1985 production ($185 million);
  - Doors - slightly over half the production ($135 million);
  - Mouldings - approximately 50 percent of the production ($65 million);
  - Panelling - 55-75 percent of production, no reliable information is available on total volumes produced;
  - Flooring - 35 percent of production ($19 million); and
  - Housing Components - 20 percent of production ($25 million).

## PROJECTIONS OF RESIDENTIAL RENOVATION AND THE DEMAND FOR WOOD BASED PRODUCTS

- Expenditures on residential renovation work are expected to increase progressively over the next 15 years. Total expenditures are projected to increase from the $12.6 billion in 1985 to an annual average of $14.6 billion during 1986-1991, $17.7 billion during 1991-1996 and $21.2 billion during 1996-2001.

- The expected increases in renovation expenditures result largely from two factors: growth in the housing stock and higher renovation expenditures per dwelling. The occupied dwelling stock is projected to increase to just over 11 million units by 2001 compared to just over 9 million units in 1986. Annual per unit renovation expenditures are expected to increase over the 1986-2001 period.

- Increased renovation expenditures per dwelling are projected to result from higher spending on improvements - projected to rise from an average of $1,086 per dwelling in 1985 to $1,623 per dwelling (in 1985 dollars) on average for the 1996-2001 period.

- The regional distribution of renovation expenditures is expected to remain relatively stable over the 1986-2001 period.

- Based on the projected effects of the changing age structure of owner households and the projected increase in spending on improvements versus repairs, it is expected there will be a slight decrease in the proportion of overall work which is undertaken by DIY.

- Projections of expenditures on each of the wood based products resulting from renovation work undertaken over the 1986-2001 period are as follows:

PROJECTIONS OF RENOVATION EXPENDITURES
ON SELECTED WOOD BASED PRODUCTS
CANADA, 1985-2001

| | Estimated 1985 | Average Annual 1986-1991 | 1991-1996 | 1996-2001 |
|---|---|---|---|---|
| | Millions of 1985 Dollars | | | |
| Total Renovation Expenditures | 12,618 | 14,582 | 17,715 | 21,243 |
| Kitchen Cabinets | 145 | 175 | 229 | 291 |
| Windows | 185 | 220 | 281 | 349 |
| Doors | 135 | 157 | 189 | 227 |
| Mouldings | 65 | 75 | 91 | 109 |
| Flooring | 19 | 22 | 28 | 34 |
| Housing Components | 25 | 29 | 35 | 42 |

Source: Clayton Research Associates.

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# INTRODUCTION

Residential renovation has become an increasingly important part of total residential construction activity in Canada over the past decade and is likely to account for an even larger share of total activity during the remainder of the century.* Recognizing the importance of residential renovation work to the industries which supply construction materials and products, the Department of Regional Industrial Expansion commissioned Clayton Research Associates Limited to examine the extent, characteristics and outlook for residential renovation in Canada with particular emphasis on the demand from residential renovation for the following wood based building products:

- Kitchen cabinets;
- Windows;
- Doors;
- Mouldings;
- Flooring;
- Interior wood panelling; and
- Wood housing components.

The report consists of three major parts:

- Part 1 - Past Trends and Current Characteristics of Residential Renovation in Canada

  This part reviews the volume of residential renovation construction expenditures in Canada during the past decade and examines the size of the main components of these expenditures. It also includes an examination of the types of homeowners who renovate, the types of dwellings renovated, the types of work being done and who does the work - contractors versus do-it-yourselfers (DIY).

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* The term "renovation", as it is used throughout this report, relates to a wide range of activities on existing residential properties including minor and major repairs and maintenance to such properties and improvements to these properties through additions, alterations and new installations. The actual renovation work may be undertaken by a general or specialized trade contractor, a DIY homeowner, a landlord, a tenant or some combination of these.

- **Part 2 - Demand for Wood Based Products From Residential Renovation**

  This part concentrates on the demand for each of the aforementioned wood based products from residential renovation. Estimates of the demand for these products from residential renovation work in 1985 are presented as well as the demand for products which are close substitutes. An examination of the major factors which govern the decision to utilize wood based products in residential renovation work rather than alternative products is also included in this part of the analysis.

- **Part 3 - Projections of Residential Renovation and the Demand for Wood Based Products**

  This part presents projections of the volume of renovation work expected in Canada (and each region) to the year 2001. Projections of the demand for each of the wood based products under study over the same time period are also presented.

There are also several appendices which deal with definitions and provide technical details regarding the surveys that provide the data underlying much of the analysis in this report. These surveys include:

- The Family Expenditure (FAMEX) Survey conducted in 1978 and 1982 by Statistics Canada - the FAMEX Survey results are utilized in this report to determine the propensities of households with differing characteristics to undertake renovation spending.*

- The HOMES National Survey conducted by Environics Research Group in June and July, 1985 - the HOMES National Survey results are used in this report to illustrate the types of renovation work most frequently undertaken by homeowners, the costs involved in typical renovation jobs, whether the work is done by contractors or DIY and the characteristics of homeowners undertaking renovation work.

- Survey of Building Products Manufacturers and Survey of Building Products Retailers and Distributors conducted by Clayton Research Associates in February, 1986 - these surveys were undertaken to obtain information on the dollar volumes of the building products under study which are directed to residential renovation work, changes in these

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* At the time of the initial writing of this report (March, 1986), the results of the 1984 FAMEX Survey were not available in sufficient detail for inclusion in the analysis.

dollar volumes over the past five years and factors behind the choice of particular types of products (and products made with different materials) for residential renovation work.

- Survey of Renovation Contractors and Architects conducted by Clayton Research Associates in February, 1986 - this survey was undertaken to determine the key factors behind the choice of particular types of products in residential renovation work and factors which may inhibit or promote the use of products of different types in residential renovation work.

More details regarding these surveys are provided in the appendices to this report.

The report was prepared initially in March, 1986. It was updated in August, 1986 to include the major revisions to the Statistics Canada renovation estimates released in July, 1986. More recently available data from both the 1984 FAMEX Survey and the 1986 HOMES Survey were not incorporated into the updated report.

Before proceeding with the main body of the report, a brief discussion regarding the use of the term residential renovation is presented.

## WHAT IS RESIDENTIAL RENOVATION?

Residential renovation can mean different things to different people. The most common usage, and the meaning adopted for use in this report, has residential renovation describing the full range of construction activities on an existing residential building and its surrounding property. These construction activities can range from minor work such as painting and small maintenance jobs through the upgrading of a part of a building (such as a kitchen or bathroom) to meet modern standards to the construction of a fence or the erection of a major addition to a building.

The focus of this report is residential renovation - i.e., renovation work on dwellings and their surrounding properties. The report does not deal with renovation work on non-residential buildings. To avoid redundancy, the term renovation is used throughout the report rather than the (more complete and correct) term residential renovation.

Renovation can be disaggregated into a wide variety of component parts; Appendix A provides the definitions used by Statistics Canada in describing the various types of renovation work. For this report, only two types of renovation work are disaggregated:

- Repairs - work undertaken on an existing structure or piece of equipment to keep it in good working condition and appearance so as to maintain it in "as new" a condition as possible. Also included is work done to repair broken, damaged or malfunctioning components of the structure or equipment. Examples include painting, caulking and various types of repair or maintenance work on buildings and component parts such as furnaces, plumbing and electrical systems.

- Improvements - the construction of structural extensions and conversions, work done to upgrade or modernize the property and installation or replacement of equipment or fixtures. In general, these types of work tend to be more major (and more expensive) than repairs.

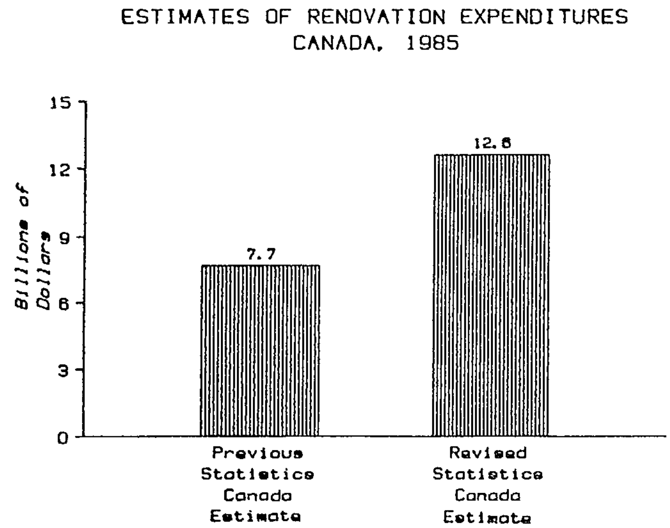
For much of the report, renovation is dealt with in total rather than dealing separately with the individual components. In some cases, this aggregation does not provide as detailed a breakdown as would be desirable; however, it is a recognition of the difficulty (and likelihood of error) associated with attempting to collect information on each component of a complex set of definitions. This is particularly true with survey data which is frequently collected in an aggregated form with no attempt made to distinguish repairs from other types of renovation work due to the complex definitions involved.

# PART 1 - PAST TRENDS AND CURRENT CHARACTERISTICS OF RESIDENTIAL RENOVATION IN CANADA

This part of the report reviews past trends in the volume of renovation in Canada, the typical types of renovation work undertaken by homeowners and the types of homeowners and dwellings which are typically involved in renovations.

## THE VOLUME OF RENOVATION WORK

### Renovation Spending Totalled $12.6 Billion in Canada in 1985




*Source: Statistics Canada.*

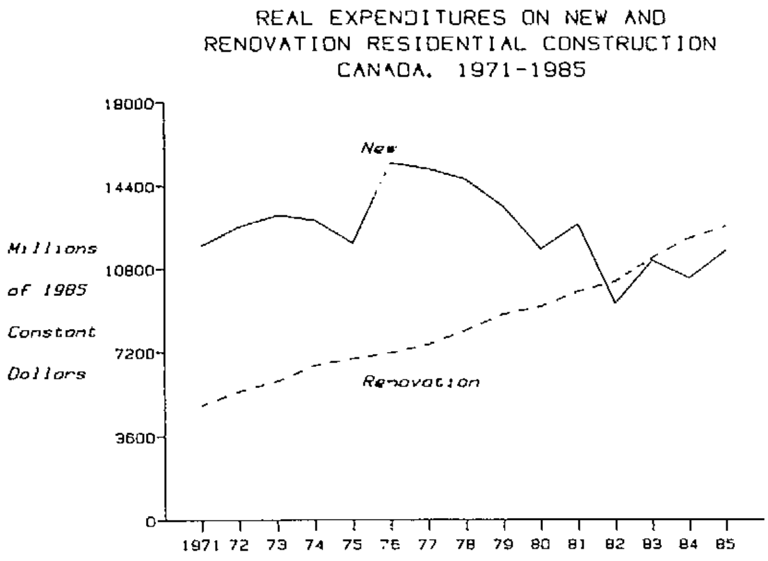
In July, 1986, Statistics Canada released revisions to the National Accounts data which indicated that renovation spending was significantly higher than was previously estimated.

According to the revised figures, for the year 1985, renovation spending in Canada totalled $12.6 billion. This is $4.9 billion higher than the previous estimate of 1985 renovation spending.

The understatement of the previous renovation estimates progressively worsened over the past 15 years. Whereas the revised 1985 estimate is 64 percent above the previous figure, for 1971, the difference was only 12 percent.

### Renovation Accounts for Larger Share of Construction Expenditures Than New Work

Expenditures on renovation have exceeded expenditures on new residential construction since 1982. In 1985, total expenditures on new residential construction (including cottages and acquisition costs), according to Statistics Canada, were $11.6 billion. For renovation work, the official estimate from Statistics Canada is $12.6 billion.

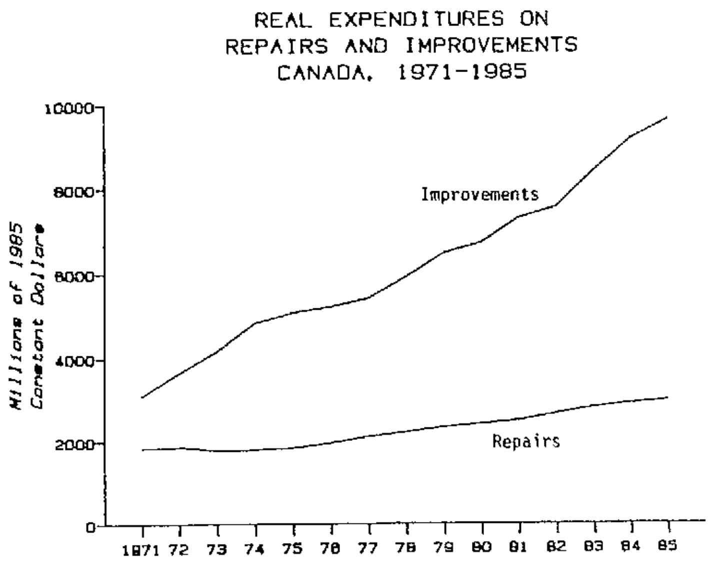



Source: Statistics Canada and Clayton Research Associates.

Expressed in real 1985 dollars, expenditures on renovation work are estimated to have increased progressively from approximately \$4.9 billion in 1971 to \$12.6 billion in 1985. Real renovation expenditures increased by \$514 million from 1984 to 1985, an increase of 4.2 percent.

Compared to the steady rise in expenditures on renovation, new residential construction expenditures have declined significantly since the mid-1970s. In 1982, the level of new construction activity dropped dramatically and estimated renovation expenditures exceeded new construction expenditures for the first time.

## Improvements Accounting for Greater Share of Total Renovation Spending



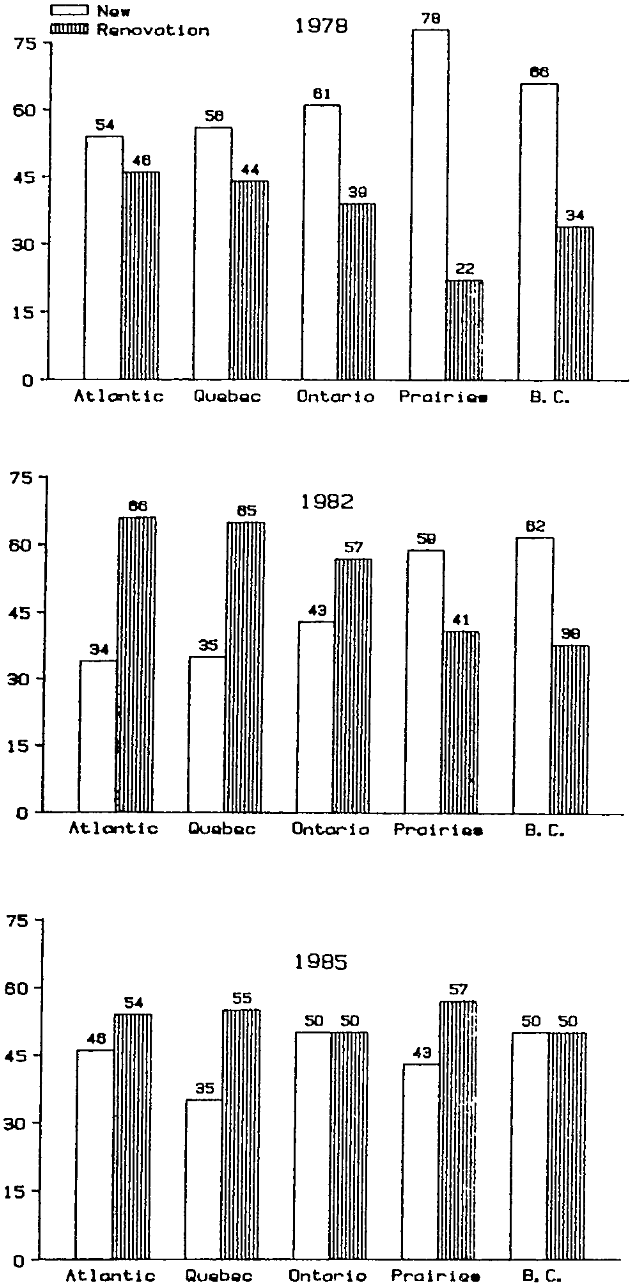

Source: Statistics Canada and Clayton Research Associates.

As a share of total expenditures on renovation in Canada, improvements accounted for 76 percent in 1985 - a significant increase from the 63 percent share in 1971. Spending on repairs, correspondingly, declined as a share of total renovation spending.

The reason behind the increased share of renovation work accounted for by improvements over the past 15 years (and also the main reason behind the growth in renovation spending) is the substantial increase in the average spending per dwelling on improvements over this period. Expressed in 1985 dollars, average improvement expenditures per dwelling in Canada increased from slightly more than $500 in 1971 to about $1,086 in 1985 - more than double. In contrast, the average repair expenditure per dwelling increased by only about 10 percent over the same period to an average of approximately $335 in 1985.

## Renovation Most Important in Quebec, Prairies and Atlantic Rising in Importance in All Regions

NEW AND RENOVATION PERCENT SHARES OF TOTAL RESIDENTIAL CONSTRUCTION EXPENDITURES BY REGION, CANADA, 1978, 1982 AND 1985




*Source: Statistics Canada and Clayton Research Associates.*

In all regions, renovation accounted for at least half of all residential construction expenditures in 1985.

Renovation expenditures in Quebec, the Prairies and the Atlantic regions accounted for around 55 percent of total expenditures on residential construction in 1985. Renovation expenditures in Ontario and B.C. accounted for about 50 percent of total residential expenditure.

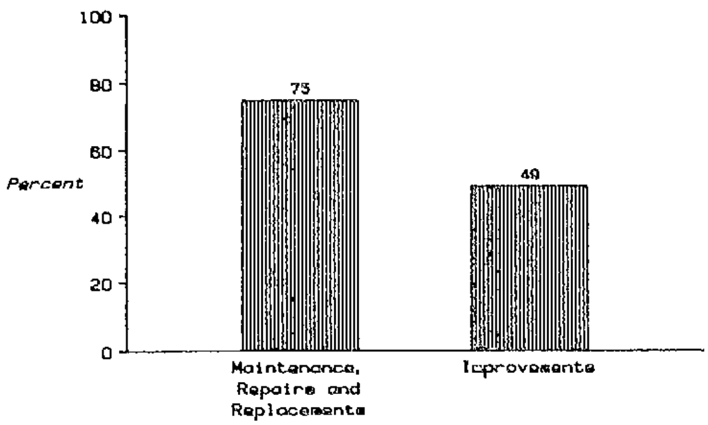
In all regions, renovation activity in 1985 accounted for a much larger proportion of total residential construction activity in 1985 than in 1978. With the exception of the two western regions, however, 1985 renovation expenditures accounted for a lower proportion of total activity than was the case in the recession year of 1982 when new construction fell to very low levels in eastern Canada. New construction in the Prairies and B.C. in 1985 had still not reached the activity levels of 1982.

## WHAT TYPES OF RENOVATION WORK ARE DONE AND WHO DOES THE WORK?

The vast majority of spending on renovations is undertaken by homeowners; landlords and tenants are estimated to account for less than 15 percent of total renovation expenditures. This section examines the types of work undertaken by homeowners and the average expenditures on each type of work as well as the relative proportions of renovation work which are undertaken by DIY homeowners as opposed to contractors.

### Repairs Most Frequent Type of Renovation Work But Only Relatively Small Average Expenditure

INCIDENCE OF RENOVATIONS BY TYPE OF WORK
CANADA, 1982




*Source: Statistics Canada 1982 FAMEX Survey.*

Repairs are by far the most frequent type of renovation expenditure by Canadian homeowners. In 1982, about three-quarters of Canadian homeowners undertook some type of maintenance, repair or replacement work. Less than half of all homeowners undertook improvements. The available FAMEX data does not allow the estimation of the proportion of homeowners who undertook any type of renovation (either repair or improvement or both).

In the HOMES National Survey, on which much of the analysis on the following pages is based, an estimated 85 percent of homeowners undertook renovations in the twelve months prior to the survey.* This is broadly consistent with the FAMEX results presented here.

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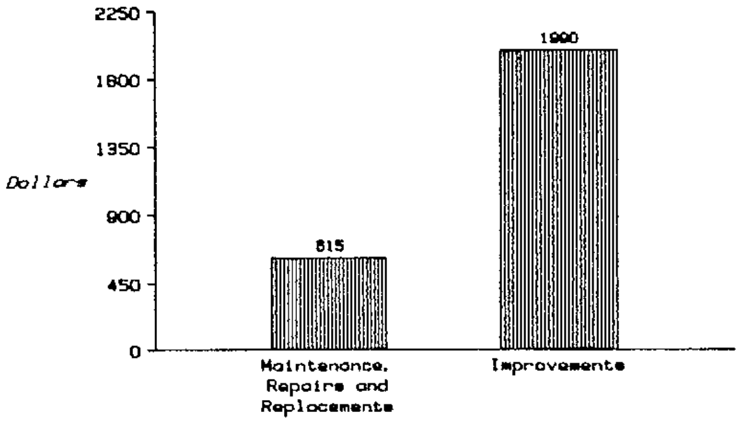
* The HOMES National Survey question on renovations was asked in two parts: "Thinking back over the past 12 months, have you done or are you currently doing any repairs or renovations to the exterior of your home?" and essentially the same question with respect to the inside of the home. A large proportion of the respondents (30 percent) did not answer the question - either they did not know or they refused to answer. In calculating the proportion of homeowners who undertook renovations, these 30 percent were excluded from the analysis; 85 percent of those who answered the question replied that they had done renovations on either the exterior or inside of their home.

AVERAGE RENOVATION EXPENDITURE BY TYPE OF WORK
CANADA, 1982




Source: Statistics Canada 1982 FAMEX Survey.

The average expenditures by homeowners on repairs were, however, much lower than the expenditures on improvements. For the homeowners undertaking repair work in 1982, the average amount spent was $615 while the average expenditure for homeowners undertaking improvements was $1,990.

Most of the renovation expenditures tend to be small. Only 18 percent of the homeowners undertaking repair work in 1982 spent more than $1,000. Data are not available on the value ranges of all improvements by homeowners (taken together); however, the expenditure information on additions, alterations and new installations individually indicates that most improvement expenditures, while larger than repairs, are still relatively small.

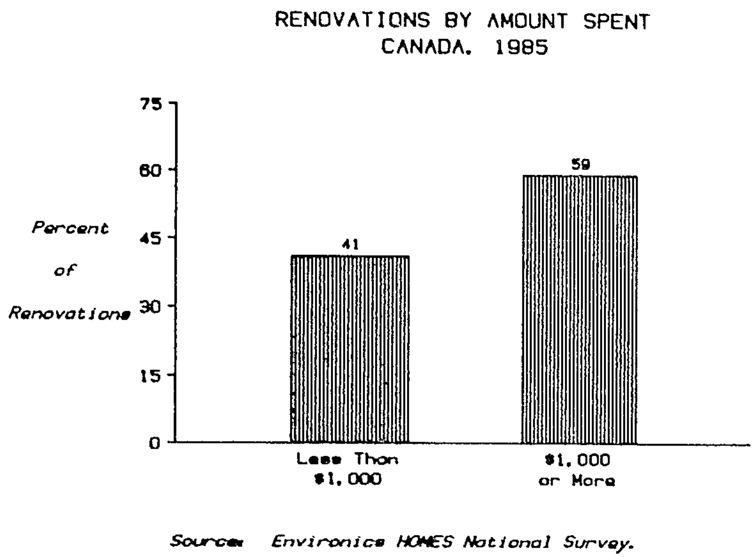
HOMEOWNER RENOVATION WORK BY VALUE
CANADA, 1982

| Type of Work | $1-$999 | $1,000-$9,999 | $10,000+ | Total | Average Expenditure ($) |
|---|---|---|---|---|---|
| | | Percent | | | |
| Maintenance, Repairs and Replacements | 82 | 18 | 0 | 100 | 620 |
| Improvements | | | | | |
| Additions | 60 | 37 | 3 | 100 | 1,708 |
| Alterations | 57 | 41 | 2 | 100 | 1,672 |
| New Installations | 77 | 23 | 0 | 100 | 798 |

Source: Statistics Canada, 1982 FAMEX Survey.

The definitions of the three categories of improvements used in the FAMEX Survey are:

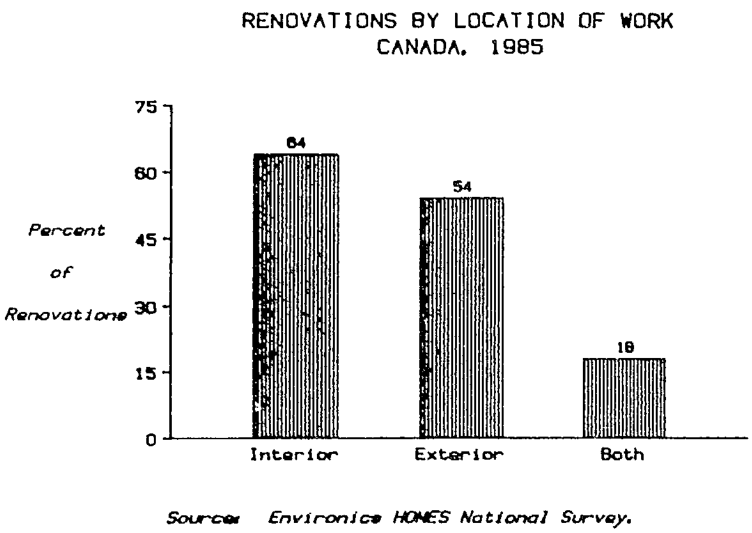
- Additions - the construction of structural extensions, enclosures or additional facilities on the property;
- Alterations - work done to upgrade the property to acceptable living or building standards, to rearrange the interior space or to modernize existing facilities in order to meet changing needs; and
- New installations - work undertaken to install equipment or fixtures which did not previously exist either to the inside or the outside of the property.




Of the homeowners who had undertaken renovation work in the past 12 months, according to the HOMES National Survey in the summer of 1985, slightly less than three-fifths spent $1,000 or more in total. The remainder spent less than $1,000.

The average expenditure of the homeowners who had undertaken renovations was about $3,000, according to the HOMES data. This is higher than the FAMEX data presented on the previous page would suggest; however, the FAMEX data relates to a recession year (1982) when many homeowners appear to have cut back on renovation spending. Inflation may also account for part of the apparent difference in the levels of renovation spending reported by homeowners in the two surveys.

## More Renovation Jobs Involve Interior Work Than Exterior Work




Almost two-thirds of homeowners undertaking renovations did at least some work on the interior of their home. This compares to slightly more than half of renovating homeowners who did exterior work.

Slightly less than one-fifth of renovating homeowners did work on both the exterior and the interior of their dwelling.

## Painting, Landscaping and Roofing Most Common Types of Exterior Renovation Work

The main types of exterior renovation work undertaken by homeowners are outlined below in a table based on the results of the HOMES National Survey. The table presents the proportion of renovating homeowners which undertook each of the types of work and the average expenditure by those who undertook such work.

MOST COMMON TYPES OF EXTERIOR RENOVATION WORK
IN LAST 12 MONTHS
CANADA, 1985

| Renovation | Percent of Renovators Undertaking Work | Average Expenditure (Dollars) |
|---|---|---|
| Exterior Painting | 19 | 315 |
| Landscaping | 16 | 780 |
| Roofing | 11 | 1,505 |
| New Windows | 9 | 1,620 |
| Fencing | 8 | 775 |
| New Doors | 7 | 735 |
| Driveway/Walkway Paving | 7 | 975 |
| Verandah/Porch/Sundeck | 7 | 1,105 |
| Siding or Walls | 6 | 2,800 |
| Eavestrough/Soffit | 6 | 725 |
| Patio | 4 | 805 |
| Weatherstripping | 3 | 55 |
| Entrance Steps | 3 | 535 |
| Chimney | 2 | 530 |
| Garage | 2 | 2,970 |
| Addition of Room | 2 | 20,385 |
| Pool/Hot Tub | 1 | 6,365 |
| Other | 2 | 1,750 |

Source: Environics HOMES National Survey.

Almost one-fifth of renovating homeowners did some exterior painting in the twelve months prior to summer, 1985. Almost as many undertook landscaping but both these types of work entailed only relatively small expenditures.

The next two most common types of exterior renovations were roofing (11 percent of renovators) and, significantly for this report, windows (9 percent). These tended to be more expensive - an average of $1,505 and $1,620 respectively.

Other types of exterior renovation work which are important for this assignment are new doors (7 percent of renovators at an average cost of $735), siding or walls (6 percent of renovators at an average cost of $2,800) and the addition of a room (2 percent of renovators at an average cost of $20,285).

Regionally, the Atlantic Provinces had a higher than average proportion of renovators undertaking work on windows: 13 percent compared to the national figure of 9 percent. However, the Atlantic Provinces had a very low average expenditure ($740) for those undertaking work on windows. Only 6 percent of renovators in B.C. did work on windows. Other regions had figures similar to the national average, except Quebec renovators who spent more ($2,285) than the national average on windows.

For exterior work involving doors, most regions had figures near the national averages except the Prairies (9 percent) had a higher incidence of exterior door work among renovators and the Atlantic Provinces ($420) and Quebec ($945) had significantly different average expenditures.

Siding work was relatively more prevalent in B.C. (8 percent of all renovators); Ontario ($2,045) and the Prairies ($4,770) had average siding expenditures different from the national average.

## High Concentration of DIY in Exterior Renovation Work

There is considerable variation among the different types of exterior renovations in who actually does the work. The table below presents three separate categories for each type of exterior renovation work: hired all - the proportion of jobs where someone was hired to do all the work; hired part - the proportion of jobs where someone was hired to do part of the work; and do-it-yourselfers (DIY) - the proportion of jobs done entirely by the homeowner.

WHO DOES THE WORK?
MOST COMMON TYPES OF EXTERIOR RENOVATION WORK
IN LAST 12 MONTHS
CANADA, 1985

| Renovation | Hired All | Hired Part | Do-It-Yourselfers | Total* |
|---|---|---|---|---|
| | Percent | | | |
| Exterior Painting | 21 | 6 | 74 | 100 |
| Landscaping | 17 | 12 | 71 | 100 |
| Roofing | 61 | 8 | 31 | 100 |
| New Windows | 56 | 10 | 34 | 100 |
| Fencing | 29 | 6 | 65 | 100 |
| New Doors | 57 | 10 | 33 | 100 |
| Driveway/Walkway Paving | 57 | 12 | 31 | 100 |
| Verandah/Porch/Sundeck | 29 | 13 | 58 | 100 |
| Siding or Walls | 58 | 5 | 37 | 100 |
| Eavestrough/Soffit | 63 | 1 | 36 | 100 |
| Patio | 12 | 12 | 76 | 100 |
| Weatherstripping | 16 | 3 | 81 | 100 |
| Entrance Steps | 30 | 7 | 63 | 100 |
| Chimney | 65 | 5 | 31 | 100 |
| Garage | 16 | 23 | 61 | 100 |
| Addition of Room | 32 | 30 | 38 | 100 |
| Pool/Hot Tub | 54 | 28 | 18 | 100 |
| Other | 41 | 5 | 54 | 100 |

* Totals may not add due to rounding.

Source: Environics HOMES National Survey.

In half of the types of exterior renovations shown on the adjacent table, more than half the work was done entirely by DIY. In some cases, such as weatherstripping, patio work and painting, three-quarters or more of the jobs were entirely DIY.

The types of work which tended to have a higher proportion of hired help included chimney work (65 percent done totally by hired people), eavestrough and soffit work (63 percent) and roofing (61 percent).

For the types of work of most interest to this report, hired help does more than half the work while about one-third is totally DIY. For window work, 56 percent of the jobs were entirely contracted out, 10 percent were done partly by hired help and DIY accounted for 34 percent. The Atlantic Provinces had a much higher proportion of DIY window work (67 percent) as did B.C. (46 percent). Quebec and Ontario were near the national average while, in the Prairies, DIY accounted for only 16 percent of window work.

The pattern was almost exactly the same with exterior door work: nationally, 57 percent of the work was contracted out entirely and 33 percent was DIY. Almost two-thirds of the exterior door work in the Atlantic Provinces was entirely DIY; B.C. also had a high proportion of DIY (50 percent). The only major difference between window and door renovations was in the Prairies where the proportion of DIY was 29 percent for doors, much higher than the 16 percent for windows.

For siding, DIY accounted for 37 percent of all homeowners undertaking such work while 58 percent of the work was totally contracted out. The Atlantic Provinces had a lower proportion of DIY siding work (29 percent) while B.C. had the highest (56 percent).

The number of homeowners undertaking additions was too small to yield reliable regional information on the proportion contracted out versus DIY.

## Painting, Heating/Air Conditioning and Carpet/Floor Work Most Common Types of Interior Renovations

Painting is the most prevalent type of interior renovation work; almost two-fifths of renovating homeowners undertook some interior painting in the 12 months prior to the HOMES National Survey. The average expenditure of those undertaking painting work was only $390.

MOST COMMON TYPES OF INTERIOR RENOVATION WORK
IN LAST 12 MONTHS
CANADA, 1985

| Renovation | Percent of Renovators Undertaking Work | Average Expenditure (Dollars) |
|---|---|---|
| Interior Painting | 38 | 390 |
| Heating/Air Conditioning | 16 | 1,550 |
| Carpets/Floors | 14 | 1,220 |
| Bathroom | 12 | 1,195 |
| Kitchen | 11 | 2,720 |
| Insulation | 10 | 575 |
| Family/Rec. Room | 6 | 2,175 |
| General Plumbing | 5 | 470 |
| New Light Fixtures | 5 | 240 |
| General Rewiring | 4 | 680 |
| New Bedroom/Living Quarters | 4 | 1,440 |
| Fireplace | 2 | 1,525 |
| Other | 4 | 1,075 |

Source: Environics HOMES National Survey.

Work on heating and air conditioning systems was the next most common type of interior renovation - 16 percent of renovating owners did work on these systems at an average cost of $1,550.

Carpet and flooring work was undertaken by 14 percent of homeowners who renovated; unfortunately, there is no disaggregation of the proportion of these who did actual floor work as opposed to carpeting.

Work on bathrooms and kitchens was undertaken by 12 percent and 11 percent of renovating homeowners, respectively. Kitchen work was significantly more expensive ($2,720 on average) than bathroom work ($1,195). Cupboard and cabinet work was a significant component of these renovations: two-thirds of the homeowners who did kitchen work indicated that they installed or replaced cupboards or cabinets as part of the work; slightly more than half of those doing bathroom work installed or replaced countertops, lighting, cupboards or cabinets - since these were all included as one question, it is not possible to disaggregate the amount of work on cupboards and cabinets separately.

Ten percent of renovating homeowners undertook insulation work at an average expenditure of $575.

Regionally, the Prairies (14 percent) and Atlantic Canada (10 percent) have incidences of bathroom work different from the national average of 12 percent. Substantially less was spent on bathroom work ($625 on average) in Atlantic Canada, while homeowners who undertook bathroom work in both B.C. ($1,600) and Quebec ($1,475) spent more than the national average of $1,195.

For kitchen renovations, Quebec (13 percent) and B.C. (9 percent) had different incidences of work among renovating homeowners than the national average of 11 percent. Again, substantially less was spent on average in Atlantic Canada ($1,375) while average kitchen renovation expenditures in B.C. ($3,385) and the Prairies ($3,375) were substantially above the national average of $2,720.

## DIY Accounts for Most Kitchen and Bathroom Work

Kitchen and bathroom work, the types of interior renovation work which are of most interest to this report, tend mostly to be DIY.

WHO DOES THE WORK?
MOST COMMON TYPES OF INTERIOR RENOVATION WORK
IN LAST 12 MONTHS
CANADA, 1985

| Renovation | Hired All | Hired Part | Do-It-Yourselfers | Total* |
|---|---|---|---|---|
| | | | Percent | |
| Interior Painting | 13 | 9 | 78 | 100 |
| Heating/Air Conditioning | 78 | 7 | 15 | 100 |
| Carpets/Floors | 49 | 14 | 38 | 100 |
| Bathroom | 22 | 19 | 60 | 100 |
| Kitchen | 27 | 27 | 46 | 100 |
| Insulation | 46 | 7 | 47 | 100 |
| Family/Rec. Room | 10 | 26 | 64 | 100 |
| General Plumbing | 44 | 9 | 46 | 100 |
| New Light Fixtures | 14 | 2 | 85 | 100 |
| General Rewiring | 49 | 9 | 42 | 100 |
| New Bedroom/Living Quarters | 13 | 19 | 68 | 100 |
| Fireplace | 43 | 6 | 52 | 100 |
| Other | 25 | 13 | 62 | 100 |

* Totals may not add due to rounding.

Source: Environics HOMES National Survey.

Sixty percent of the bathroom renovation jobs (at an average cost of $1,195) were done entirely by DIY. A further 19 percent were partly DIY and partly contracted out; the remaining slightly more than 20 percent of the jobs were totally contracted out.

A lower proportion of kitchen renovation work was totally DIY - 46 percent. But 27 percent was done partly by DIY and partly by contractors. Just over one-quarter of kitchen renovation work was totally contracted out.

DIY appears to account for a much larger proportion of interior renovation work than is the case for exterior work. Only in heating and air conditioning work were more than half the jobs done entirely by contractors (78 percent). Two other types of work (carpet/floors and general rewiring) had almost half the jobs done entirely by hired help.

Regionally, a higher proportion of bathroom renovations are DIY in both Atlantic Canada and B.C. - both had more than two-thirds DIY compared to 60 percent nationally. Kitchen renovations were one of the very few types of work where a lower proportion of DIY work than the national average was reported in Atlantic Canada - 36 percent versus 46 percent. The Prairies also had a low proportion of kitchen DIY (36 percent) while, in Quebec, DIY accounted for 57 percent of kitchen renovation jobs.

## Additions and Kitchens Account for Largest Proportion of Total Ownership Renovation Expenditures

PROPORTION OF TOTAL EXPENDITURES
MOST COMMON TYPES OF RENOVATION WORK
IN LAST 12 MONTHS
CANADA, 1985

| Renovation | Percent of Total Renovation Expenditures |
|---|---|
| Addition of Room | 14 |
| Kitchen | 10 |
| Heating/Air Conditioning | 8 |
| Carpets/Floors | 6 |
| Siding or Walls | 6 |
| Roofing | 6 |
| Interior Painting | 5 |
| New Windows | 5 |
| Bathroom | 5 |
| Family/Rec. Room | 4 |
| Landscaping | 4 |
| Verandah/Porch/Sundeck | 3 |
| Driveway/Walkway Paving | 2 |
| Fencing | 2 |
| Pool/Hot Tub | 2 |
| Exterior Painting | 2 |
| Garage | 2 |
| New Bedroom/Living Quarters | 2 |
| Insulation | 2 |
| New Doors | 2 |
| Eavestrough/Soffit | 1 |
| Other Interior | 1 |
| Other Exterior | 1 |
| Patio | 1 |
| Fireplace | 1 |
| General Rewiring | 1 |
| General Plumbing | 1 |
| Entrance Steps | 1 |
| New Light Fixtures | 0 |
| Chimney | 0 |
| Weatherstripping | 0 |
| Total | 100 |

Source: Environics HOMES National Survey.

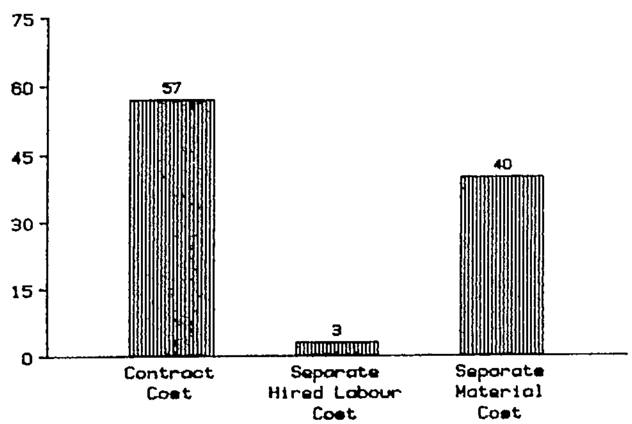
The HOMES National Survey results can be used to estimate the proportion of total homeowner renovation expenditures which accrue to each type of work.

According to the results of the survey, additions accounted for 14 percent of total homeowner expenditures on renovation work. Kitchen work was the next largest component - such work accounted for 10 percent of the total estimated expenditures on homeowner renovation.

Other types of work of most interest to this report were siding and wall work (6 percent), new windows and bathroom work (5 percent each) and new exterior doors (2 percent).

## Contractors Account for More Than Half of All Renovation Work

PERCENT SHARES OF RENOVATION WORK
BY TYPE OF COSTS, CANADA, 1982

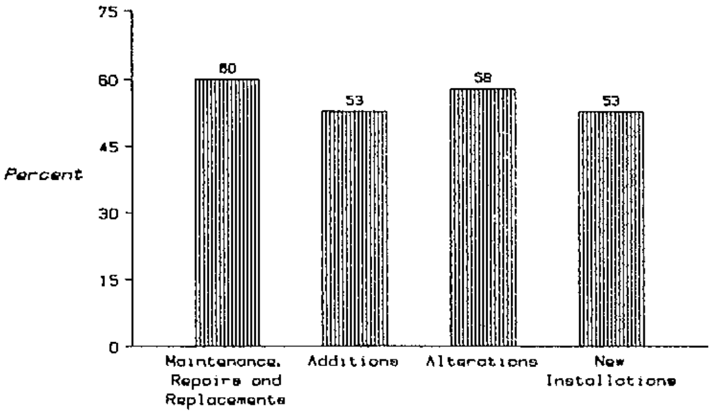



*Source: Clayton Research Associates based on Statistics Canada 1982 FAMEX Survey data.*

Contractors accounted for an estimated 57 percent of all homeowner renovation expenditures in Canada in 1982.

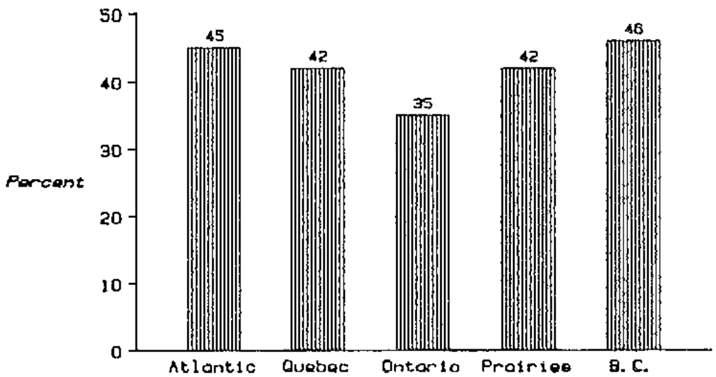
Forty percent of homeowner renovation expenditures was comprised of separate material costs. These renovations would predominantly be undertaken by DIY. Three percent of total homeownership renovation expenditures were on separate hired labour costs.

CONTRACTOR SHARE OF RENOVATION ACTIVITY
BY TYPE OF WORK, CANADA, 1982




*Source: Clayton Research Associates based on Statistics Canada 1982 FAMEX Survey data.*

DIY SHARE OF RENOVATION BY REGION
CANADA, 1982




*Source: Clayton Research Associates based on Statistics Canada 1982 FAMEX Survey data.*

The share of total homeowner renovation expenditures comprised of payments to contractors does not vary greatly for the four major types of renovation work. The converse is, of course, also true: the share of homeowner renovation work done by DIY is also similar for each of the major types of work.

As information presented earlier confirms, however, there is a substantial variation in the proportions of individual types of renovation work (e.g., new windows versus roofing) which are done by contractors versus DIY.

By region, the proportion of homeowner renovation work which is DIY varies substantially. British Columbia and the Atlantic Provinces had the highest proportion of DIY work in 1982 at 46 and 45 percent, respectively. Ontario had the lowest proportion at 35 percent with the Prairies and Quebec slightly below B.C. and the Atlantic Provinces.

HOMEOWNER RENOVATION WORK BY TYPE OF COST
CANADA, 1982

| | $ Millions | | | | Percent Share | | | |
|---|---|---|---|---|---|---|---|---|
| Type of Work | Contract Cost | Hired Labour Cost | Separate Material Cost | Total Expenditure | Contract Cost | Hired Labour Cost | Separate Material Cost | Total |
| Maintenance, Repairs and Replacements | 1,453 | 60 | 898 | 2,411 | 60 | 3 | 37 | 100 |
| Additions | 911 | 47 | 756 | 1,714 | 53 | 3 | 44 | 100 |
| Renovations and Alterations | 1,500 | 57 | 1,016 | 2,573 | 58 | 2 | 40 | 100 |
| New Installations | 432 | 31 | 351 | 814 | 53 | 4 | 43 | 100 |
| Total | 4,296 | 195 | 3,021 | 7,512 | 57 | 3 | 40 | 100 |

Source: Clayton Research Associates based on Statistics Canada 1982 FAMEX Survey data.

## WHO RENOVATES?

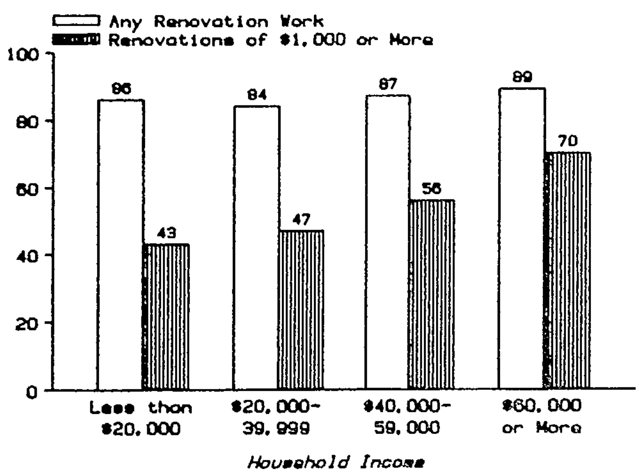
This section examines the characteristics of homeowners who undertake renovation work on their dwellings. As with the previous section, the analysis is based mainly on the results of the HOMES National Survey conducted by Environics Research Group in June and July, 1985. Some of the analysis is also based on the results of the 1982 FAMEX Survey and other sources reviewed by Clayton Research during the course of this assignment.

The presentation here is descriptive - the analysis summarizes the highlights of a series of more detailed tabulations which are presented in Appendix B.

### High Incidence of Renovation for All Types of Owners Most Significant Correlation is With Income

The HOMES National Survey found that 85 percent of homeowners who answered the question about whether they had renovated in the past 12 months had, in fact, undertaken some renovations. Only 15 percent indicated that they had not done any such work.

PERCENT OF ALL HOMEOWNERS UNDERTAKING RENOVATION WORK BY HOUSEHOLD INCOME CANADA, 1985




Source: Environics HOMES National Survey.

With this high overall number, it is clear the majority of owners in virtually all socio-economic groups undertake renovation work. However, there are differences in the proportions of different types of homeowners who do renovations.

As might be expected, the most significant correlation is with the homeowners' household income - though only for large renovations. For renovation work costing $1,000 or more, there is a much higher incidence of such work among homeowners with higher incomes than for those with low incomes.

Seventy percent of renovating homeowners with incomes of $60,000 or more did renovations of $1,000 or more in the 12 months prior to the HOMES National Survey; only 43 percent of homeowners with incomes of less than $20,000 did such work. There was no major difference in the incidence of any renovations among homeowners of different income groups.

Other observations with respect to the incidence of renovations by different types of homeowners based on the HOMES National Survey results include:*

- For all household head age groups, over 80 percent of all owners undertake renovation work. There appears to be a higher incidence of all renovation work (as well as renovations of $1,000 or more) among the relatively small proportion of owners aged less than 25 years. A significantly lower proportion of households with heads aged 65 years or more undertake renovations of $1,000 or more.

- There is no significant difference among the propensities of households of different types (single, married with children and married without children) to undertake renovation work.

- Homeowners who own their home outright do not undertake a significantly different amount of renovation work than those who have mortgages. Those with large mortgage payments ($800 and over) appear to have a somewhat higher incidence of renovation expenditures of $1,000 or more - 56-60 percent compared to 49-51 percent for those households with mortgage payments of less than $600 and 49 percent for those with no mortgage.

- The age of the dwelling is not as significant a determinant of renovation work as might be expected. In terms of any renovations, 76 percent of dwellings aged less than five years had some work undertaken on them, somewhat below the overall average of 85 percent; however, half the dwellings aged less than five years had more major renovations of $1,000 or more - exactly the same proportion as for all ownership dwellings. Only 42 percent of dwellings aged six to ten years had renovation work of $1,000 or more; a slightly higher incidence of renovation work costing $1,000 or more occurs with successively older dwellings, 58 percent of those aged more than 40 years had renovations of $1,000 or more.

- As with income, there appears to be a correlation between renovations and dwelling value - though only for renovations of $1,000 or more. Less than half the dwellings with values of less than $80,000 had renovation work of $1,000 or more done; more expensive dwellings had a higher incidence of such work - two-thirds of dwellings valued at $200,000 or more had renovations of $1,000 or more in the past year. There is no significant difference in the incidence of all renovations by dwelling value.

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* The observations presented here are based on information from the HOMES National Survey which is presented in Appendix B.

- Dwellings purchased new have a lower incidence of renovation work than those which were previously owned. Eighty-seven percent of dwellings previously owned had some renovation work done on them compared to 82 percent of dwellings which were purchased new by their current owners. For renovations of $1,000 or more, 54 percent of previously owned dwellings had such work compared to only 43 percent for those purchased new.

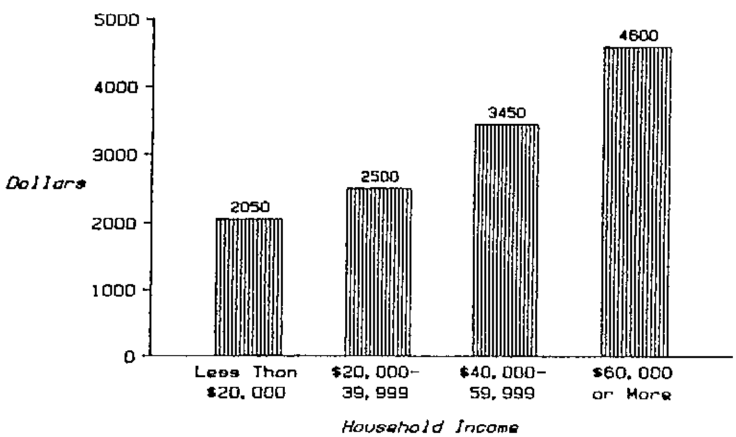
- The length of time that the owners have lived in the dwelling does not appear to have an influence on the incidence of renovation work.

- Owners planning to move within the next two years have a higher incidence of renovation work (53-68 percent of those moving or probably moving had renovations of $1,000 or more) than those not planning to move (43-49 percent).

## Correlation Also Between Household Income and Average Amount Spent on Renovations

The correlation between the incidence of homeowners undertaking renovations of $1,000 or more and household income was illustrated previously. Not only do higher income owners have a higher incidence of renovation work, they also tend to spend significantly more on these renovations.

AVERAGE EXPENDITURES OF OWNERS UNDERTAKING RENOVATIONS BY HOUSEHOLD INCOME CANADA, 1985




Source: Environics HOMES National Survey.

The average expenditure of homeowners doing any renovation work was $3,000. For homeowners with household incomes of less than $20,000 who undertake some renovations, $2,050 was the average amount spent.

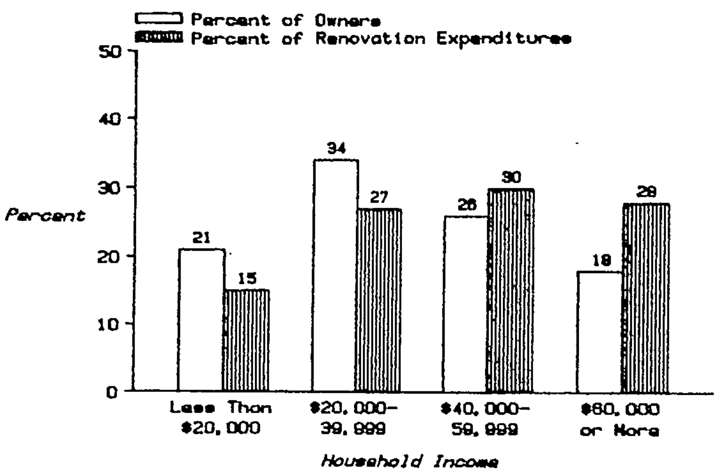
This average rises substantially for higher income levels. Renovating homeowners with household incomes of $60,000 or more spent an average of $4,600 - more than double the average expenditure of the lower income owners.

For owners spending $1,000 or more on renovations, the average amount spent by those with incomes of less than $20,000 was $3,450; owners with income of $60,000 and greater spent an average of $5,475.

- Plans to move do not appear to have a significant effect on the average renovation expenditures undertaken by homeowners.

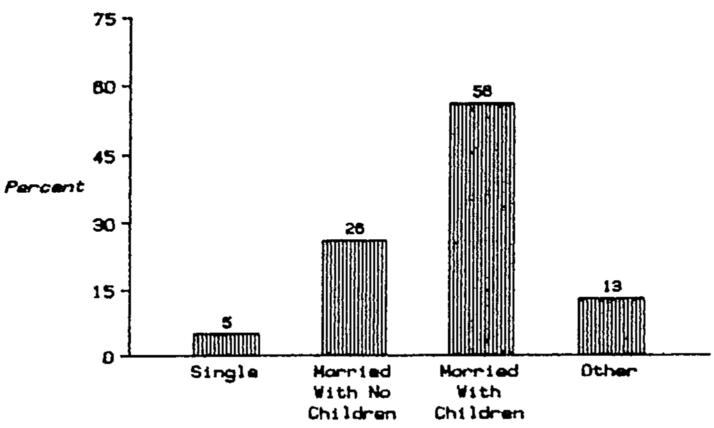
## Ownership Renovation Market Concentrated Among Families With Children and Households With High Incomes

DISTRIBUTION OF OWNERSHIP RENOVATION EXPENDITURES BY HOUSEHOLD INCOME, CANADA, 1985




Source: Clayton Research Associates.

DISTRIBUTION OF OWNERSHIP RENOVATION EXPENDITURES BY HOUSEHOLD TYPE, CANADA, 1985




Source: Clayton Research Associates.

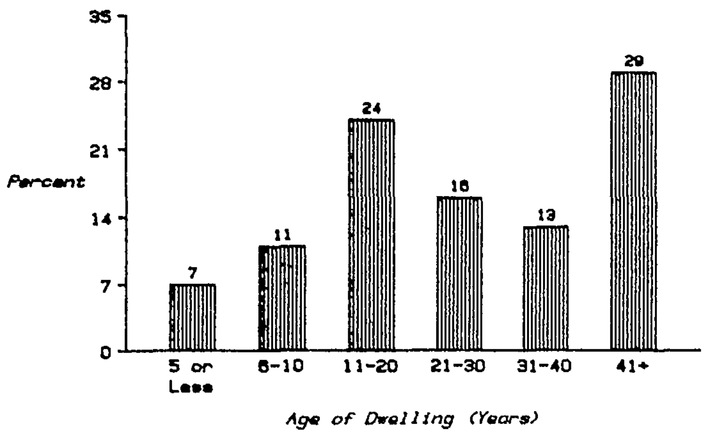
The distribution of total ownership renovation expenditures among different groups can be estimated through the use of the HOMES Survey data.

Due to both a higher incidence of renovation expenditures and larger average renovation expenditures, high-income homeowners account for a disproportionate share of all renovation spending. Of the total ownership renovation spending in Canada, almost 60 percent is estimated to come from owners with household incomes of $40,000 or more - despite the fact that this income group is estimated to account for only 44 percent of all owners.

Lower income groups account for a correspondingly smaller share of all renovation expenditures.

By type of household, expenditures by owners on renovation are dominated by families with children. These households account for an estimated 56 percent of all renovation spending by homeowners - about the same proportion these households represent of all homeowner households.

DISTRIBUTION OF OWNERSHIP RENOVATION EXPENDITURES
BY DWELLING AGE, CANADA, 1985




*Source: Clayton Research Associates.*

Almost 60 percent of total ownership expenditures on renovation work is estimated to be spent on dwellings more than 20 years old. This is higher than their estimated share of the total ownership dwelling stock (53 percent).

Dwellings more than 40 years old account for an estimated 29 percent of total ownership renovation spending - well above their estimated 22 percent share of the ownership dwelling stock.

## Who Renovates? Everybody, But Some Do More Than Others - General Conclusions

Some general conclusions that arise from the above analysis, as well as other information available on what types of owners renovate, are presented below:

- There is a positive correlation between renovation work and both the income of the owner and value of the dwelling. Clearly, much renovation spending is discretionary; it is related to the ability of the owner to afford to undertake changes which make the dwelling more suitable to needs and lifestyle. At the same time, some renovation work, albeit at a lower average cost, was also undertaken on the vast majority of dwellings owned by lower income households as well as on dwellings of lower value - much of this work was likely not of a discretionary nature.

  Research into ownership renovation has concluded that homeowners' perceptions of the condition of their dwellings and the ability of the household to finance the work considered to be required are more critical in determining renovation expenditures than the actual physical condition of the dwelling.* Affluent owners have a greater ability to translate their desires into positive action than do owners with lesser means.

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* See, for example, Ekos Research Associates Inc., The Determinants of Homeowner Renovation, 1982.

- Owners of very old dwellings tend to have higher average renovation expenditures than do other owners. The reasons behind this are likely related to the upgrading work undertaken to bring the dwelling up to more modern standards or to replace equipment in the dwelling.

- Recent homebuyers often undertake work on their dwellings even if the dwelling is new. Much of this work is likely undertaken to make the dwelling more suitable to their needs.

- There is little evidence that a prime consideration of homeowners in undertaking renovations is to improve the value of the dwelling for resale. In most cases, this would likely be a consideration, but it does not appear to be the most important factor - making the dwelling more suitable to the needs and lifestyles of the owners appears to be most important.

- Finally, renovation comprises such a wide range of activities that it is difficult to formulate general conclusions about it. Some types of renovation activities such as repairs or replacements of wornout equipment appear to be undertaken by all types of homeowners on a more or less as-needed basis. Other types of renovation activities have a more discretionary element to them and are subject to lifestyle and affordability considerations. The types of renovation activities which would stimulate the demand for the products under study in this report are likely the more discretionary types.

## PART 2 - DEMAND FOR WOOD BASED PRODUCTS FROM RESIDENTIAL RENOVATION

This part of the report discusses the demand for the following products arising from residential renovation work: kitchen cabinets, windows, doors, mouldings, wood flooring, interior wood panelling and wood housing components. It is divided into the following major sections:

- A brief explanation as to how the analysis was undertaken, including the roles of the surveys and other data sources in estimating the shares of the total production of each product going to residential renovation versus other types of construction;
- A brief review as to how the various products are produced and sold in Canada; and
- Sections on each of the wood based products under study including comments on:
  - The main non-wood based competitors of each of the products;
  - Key considerations in the selection of the products for use in residential renovation;
  - Regulations (if any) which impinge on the usage of these products in residential renovation;
  - Recent trends in the usage of these products as perceived by manufacturers, sellers and users of the products; and
  - Estimates of the dollar volume of each of the products being used in residential renovation work.

### THE METHODOLOGY FOR PRODUCING ESTIMATES OF THE DEMAND FOR WOOD BASED PRODUCTS FROM RESIDENTIAL RENOVATION

There is comparatively little information available on the usage of different types of products in renovation work. Thus, this study is in many ways a pioneering effort in this area. It brings together information on the types of building products used in renovation work derived from a variety of sources. These include:

- The HOMES National and FAMEX Surveys which (as described in Part 1) provide information on the types of work undertaken by homeowners in renovation work. From these and other sources, broad inferences as to the types of building products involved in renovation work can be drawn and, combined with estimates of the overall volume of renovation activity, a rough approximation of the likely volume of demand for typical products can be deduced.

- The input-output model of the Canadian economy prepared by Statistics Canada does not have a specific renovation component but a similar model for the United States prepared by the Department of Commerce does. An input-output model provides information on the volume of different types of goods and services which are required to yield a given level of output for any particular activity. In the U.S. model, it is possible to disaggregate residential improvements and repairs separately from new residential construction and thus ascertain the differences in the inputs of various building products for each activity. This information can be roughly adjusted to reflect differences between the U.S. and Canada by comparing the input-output results for all residential construction between the the two countries. When applied to overall estimates of renovation activity in Canada, this information can be used to derive estimates of the demand for building products from renovation work.

- As part of the work for this study, mail-back surveys were undertaken of manufacturers of each of the building products under consideration. Among other items, these companies were asked what proportions of their products were sold through distributors and retailers versus direct sales to contractors (new and renovation separately) and do-it-yourselfers. A separate mail-back survey asked distributors and retailers what proportions of their sales of these products were accounted for by other retailers versus new and renovation contractors and do-it-yourselfers. All respondents to the surveys were also asked their estimates of the final distribution of their total sales of the products under study to renovation construction versus new construction or other uses. This information can be used to provide a rough breakdown of total industry output into each of these categories.

Each of these sources were used as guides in formulating estimates of the shares of production of each of the building products under study which are directed to renovation work. The sources are complementary in that each provides a distinctive insight into the probable volume of each product used in renovation work from a different perspective; analysed together, the different methods provide a much more powerful tool for formulating the required estimates than any one method would provide on its own. The resulting estimates are still considered to be relatively rough and should be treated as such; however, it is considered that they represent a reasonable approximation of the usage of each of the building products in renovation work. Details behind the formulation of the estimates are presented in Appendix D.

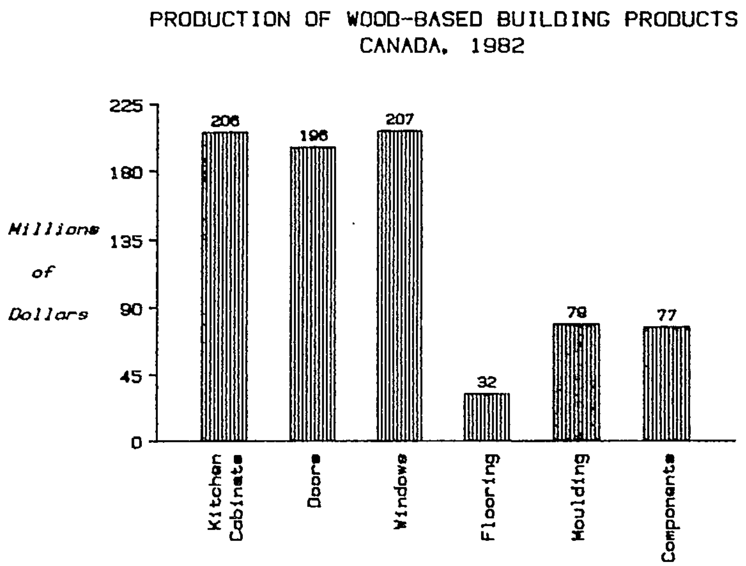
## THE PRODUCTION AND SALE OF WOOD BASED BUILDING PRODUCTS IN CANADA

### Manufacturers of Wood Based Building Products Not a Distinct Industry

In terms of the building products under consideration in this study, there is no clearly defined "industry", as such, in Canada. Generally, most producers are involved with the production and sale of only one or two of the products; those that produce more than one or two of these products tend to be smaller firms in a relatively limited market. The large firms tend to specialize in producing a limited range of products but provide a wider range of models and sizes.

The main methods of sale also vary widely from product to product and company to company. Some products such as wood housing components (e.g., trusses, shelving, siding, etc.) tend generally to be sold by relatively small manufacturers directly to contractors or end users within a fairly limited market area. Others, such as windows and doors tend more to be marketed through distributors or retail outlets - particularly in the cases of larger companies; smaller companies often sell directly to contractors or end users. Mouldings are produced by a variety of small companies spread across the country and are sold mostly through retailers.

### Kitchen Cabinets, Windows and Doors Dominate the Wood Based Building Products Industry




*Source: Statistics Canada Census of Manufactures.*

Kitchen cabinets, windows and doors account for more than seventy-five percent of the total output of the types of wood based products under study in this report.

Each of these three major product groups accounted for about one-quarter of the total 1982 output of all the wood based products under study. While more limited data are available for later years, 1982 is the most recent year for which comprehensive data on the production of these products are available.

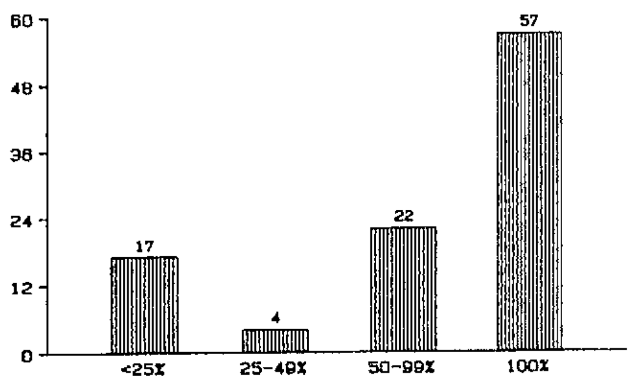
Mouldings and housing components each accounted for less than 10 percent of total 1982 output of the products under study.

Wood flooring accounted for less than 5 percent of the total output of the wood based products under study. Information on the production of interior wood panelling is not available, however, it is estimated to account for a relatively small proportion.

The following pages review the predominant means of production and sale for each of the products under consideration. The information was drawn mainly from discussions with knowledgeable industry officials and the surveys of manufacturers and retailers/distributors. This production and sale information is presented in this section (prior to the individual sections on the use of each of the products in renovation) to point out that there is relatively little in common among many of the sectors producing the products under study - other than the fact that their products are made predominantly of wood. It is therefore often difficult to make generalizations about these industries and this is equally true with respect to the use of their output in renovation work.

### Kitchen Cabinet Makers Tend to Specialize Few Make Other Products

PERCENTAGE OF TOTAL SALES COMPRISED OF KITCHEN CABINETS, CANADA, 1985




*Source: Survey of Building Products Manufacturers.*

Over half of the manufacturers surveyed who made kitchen cabinets did not make any other product.* All of the firms with sales of $5 million or more who manufactured kitchen cabinets did not manufacture other products.

Only one-fifth of the firms that manufactured kitchen cabinets indicated that cabinets comprised less than half of their total manufactured output. These were predominantly small firms, however. For most of

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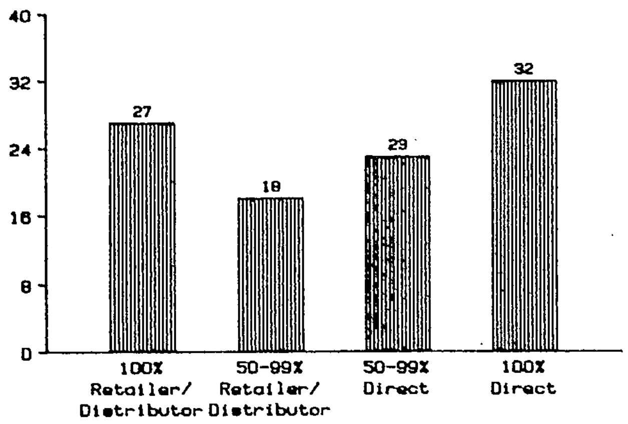
* The survey asked only whether the firm produced or sold any of the products under study. There could be instances where firms produced other products, however, in the case of kitchen cabinets, the numbers of such producers are unlikely to be large.

PERCENTAGE OF TOTAL KITCHEN CABINET SALES
BY TYPE OF PURCHASER, CANADA, 1985



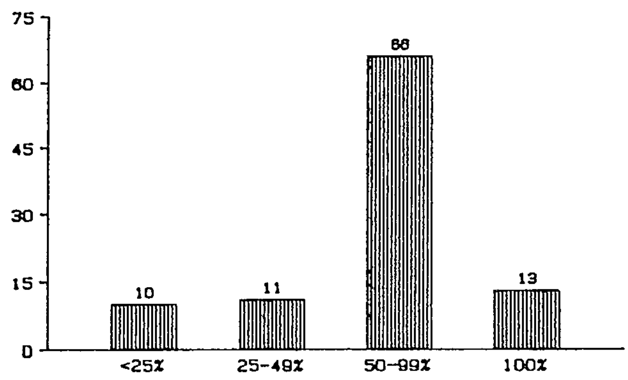

*Source: Survey of Building Products Manufacturers.*

them, kitchen cabinets represented less than 10 percent of their total output.

About one-third of the firms which manufacture kitchen cabinets market all of their output direct to contractors or end users (DIY). For the other wood based products under study, a larger proportion of firms generally reported all direct sales. Correspondingly more of the firms producing kitchen cabinets sell their output either exclusively or mainly through retailers or distributors.

## Window Manufacturers Generally Also Sell Other Products - Mainly Exterior Doors

PERCENTAGE OF TOTAL SALES COMPRISED OF WINDOWS
CANADA, 1985

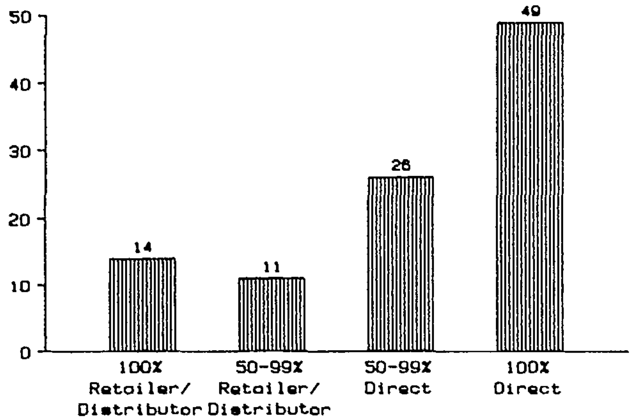



*Source: Survey of Building Products Manufacturers.*

Two-thirds of the firms surveyed which produced windows indicated that windows represented over half their sales volume, but not 100 percent of their sales. Most window manufacturers market a window and exterior door package - often including steel exterior doors which are produced by another company.

Only about one-fifth of the firms producing windows indicated that windows comprised less than half their total output. These were mainly small companies in rural areas which made a wide variety of wood based products

PERCENTAGE OF TOTAL WINDOW SALES
BY TYPE OF PURCHASER, CANADA, 1985



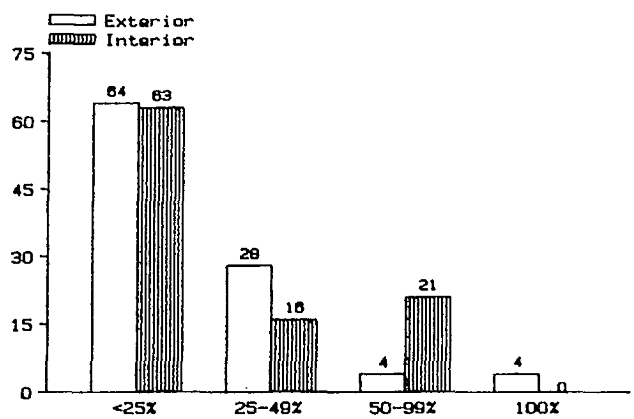

*Source: Survey of Building Products Manufacturers.*

(often including mouldings, components and wood doors).

About half the window manufacturers indicated that direct sales, mostly to contractors, are the only way they sell their product. A further one-quarter sold most of their product direct - most small manufacturers sell their products direct. Approximately one-quarter of the window manufacturers sell their product mainly through a retailer or distributor.

## Doors are Secondary Product for Most Producers

PERCENTAGE OF TOTAL SALES COMPRISED OF WOOD EXTERIOR
AND INTERIOR DOORS, CANADA, 1985



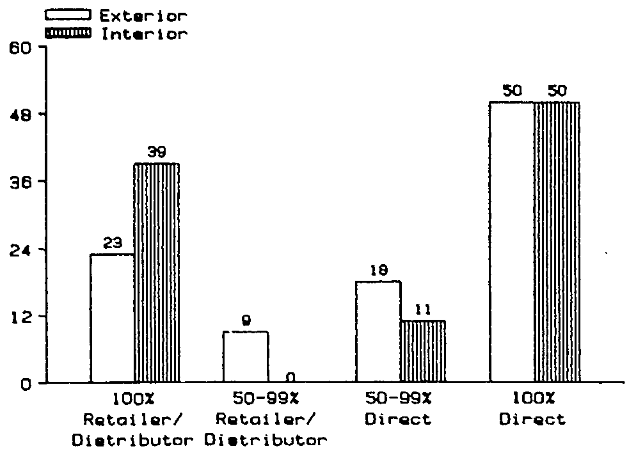

*Source: Survey of Building Products Manufacturers.*

Wood doors are not the primary product for most firms. Almost two-thirds of the firms who produced interior or exterior wood doors indicated that less than one-quarter of their production was comprised of each type of door. Very few indicated that doors comprised more than half their sales.

Most of the producers of wood doors do so as an allied product to either windows or other wood based products such as mouldings or housing components.

Manufacturers indicated that most sales of wood doors are direct sales to contractors or DIY - mostly contractors. About one-quarter of exterior door manufacturers and two-fifths of interior door manufacturers who responded to the survey sell their product exclusively through retailers or distributors.

PERCENTAGE OF TOTAL WOOD EXTERIOR AND INTERIOR DOOR SALES BY TYPE OF PURCHASER, CANADA, 1985




*Source: Survey of Building Products Manufacturers.*

Most firms either sell all their doors direct or all through retailers or distributors. Few firms sell through both types of outlets.

As noted previously, many wood window firms do not market wood doors. They sell a framed metal door along with their wood windows as a package.

## Wood Mouldings, Flooring, Panelling and Housing Components Made by Smaller, More Diversified Firms

The number of building product manufacturing firms responding to the survey which manufactured wood mouldings, flooring or panelling was not sufficiently large to yield reliable data, however, general conclusions can be drawn from their responses.

Wood mouldings, panelling and flooring are generally not the main products produced by these manufacturers, they tend to be produced in tandem with other products such as wood windows and doors by small firms selling in a local market. Most of their sales tend to be direct to builders rather than through retailers or distributors.

Wood housing components are also frequently produced by small firms producing a variety of wood based products, though almost half of those responding to the survey produced only components - mostly trusses. The vast majority of sales of wood housing components are made direct to contractors.

## A Good Understanding of the Renovation Market by Manufacturers and Retailers of Wood Based Products

The survey of manufacturers and retailers/distributors of wood based building products asked whether the respondent believed the firm had a sufficient understanding of the renovation market to sell products effectively to that market. Eighty percent of the manufacturers responding to the survey and over 90 percent of the retailers responding to the survey indicated they believed their firm had such an understanding of the market. A smaller proportion of respondents (two-thirds of the manufacturers and about 80 percent of the retailers/distributors) indicated they had products which they considered to be targetted specifically at the renovation market.

While the manufacturers and retailers/distributors indicated they believed their firm understood the renovation market and had products targetted specifically at the market, many contractors and architects surveyed (though not the majority) expressed dissatisfaction with the range of products available. Most contractors and architects indicated there was little difference between the products available for new construction and renovation work, though only a minority considered this to be much of a problem. Some expressed frustration at what they considered to be a limited range of product lines compared to what is available in Europe and the United States but indicated that this was not so much a problem particular to renovation work as for construction work generally.

The following sections present discussions of the use of each of the building products under consideration in renovation work, their competition, important considerations in the choice of the product and estimates of the use of each product in the Canadian renovation market in 1985.

## KITCHEN CABINETS

### Kitchen Cabinets All Made of Wood Based Products Most Purchased from Local Manufacturers

There is little or no competition from non-wood based products in the kitchen cabinet market. Virtually all cabinets are made of some type of wood based product though the countertops, and frequently the doors, are sheathed in formica or some other surface material which masks the wood laminate of the remainder of the countertops, doors and the cabinets themselves.

The kitchen cabinet industry also tends to be relatively localized. Most manufacturers indicate that they sell the vast majority of their output to the region in which their plant is located and, according to Statistics Canada figures, imports of kitchen cabinets comprise only 1-2 percent of total Canadian production.

Contractors indicate that they tend to purchase cabinets directly from manufacturers (who also frequently arrange their installation as well). Contractors prefer to deal with kitchen cabinet makers situated in their local market because this decreases potential delivery problems and provides more flexibility in the event of problems with installation of the cabinets.

Some manufacturers do export kitchen cabinets to other regions. About 10 percent of those surveyed indicated they shipped between one-quarter and one-half their output to another region. Most retailers indicated they purchased from suppliers situated in the same region; however, there were some cases of imports from other regions, particularly from Quebec into Ontario.

## Most Kitchen Renovations Involve Cabinet Work

According to the HOMES National Survey, two-thirds of homeowners renovating their kitchen install or replace at least some of their kitchen cabinets as part of the job. Clearly, homeowners undertaking kitchen renovations regard the upgrading of their kitchen cabinets as a major priority. A survey of U.S. homeowners who remodelled their kitchens confirms this - many of the main reasons for remodelling had to do with upgrading their kitchen cabinets:*

- More cabinet storage space;
- More counterspace;
- Improve layout of kitchen so room functions better;
- More up-to-date cabinets;
- Increase the value of the home;
- Floors, walls or ceiling in bad shape;
- Needed new appliances; and
- More kitchen space required.

While the installation of kitchen cabinets is a very common feature of kitchen renovations, according to both manufacturers and retailers, it is not one which has a high proportion of DIY activity. As opposed to many renovation activities, kitchen cabinets are a very visible part of the home and most homeowners appear to prefer professionally-installed cabinets.

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* See Kitchen and Bath Business, September, 1984, page 73.

**Price Not Prime Consideration in Kitchen Cabinet Selection for Most Homeowners Renovating Kitchens**

There was a wide divergence of opinion among the contractors, retailers and manufacturers involved in kitchen renovations as to the main factors in homeowners' minds with respect to the choice of kitchen cabinets when renovating a kitchen. Quality and appearance (which reflects the consumers' perception of quality as well as style and design) appear generally to be the most important considerations with price a less important factor. Other important factors include service, reputation of the company providing and/or installing the cabinets and availability of the product within an appropriate timeframe.

In general, it would appear that Canadian homeowners' reasons for purchasing a particular brand of kitchen cabinet reflect those of U.S. kitchen remodellers.* The most common features American consumers appear to look for when choosing kitchen cabinets (in order of mention) include:

- Quality,
- Construction,
- Exterior finish and colour,
- Door material,
- Price,
- Door style,
- Interior finish,
- Delivery time,
- Adjustable shelves,
- Storage aids such as lazy susans, breadboxes, roll-out shelves, towel bars, etc.

As in Canada, virtually all the U.S. kitchen cabinets were made of wood based products. However, the U.S. appears to have a greater degree of wood doors than Canada: 87 percent of homeowners who remodelled their kitchen indicated they had selected

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* See Kitchen and Bath Business, September, 1984, page 78.

wood doors and only 12 percent selected laminate doors; in Canada, it would appear that laminate doors have a much larger share of the market than in the U.S. though, from available information, it is not possible to estimate the actual share.

While price does not appear to be the main consideration for homeowners, this is not necessarily true for contractors. Manufacturers indicate that contractors tend to go for lower quality (and less expensive) cabinets than do homeowners or kitchen cabinet dealers who tend to be more value-conscious than price-conscious.

There are no general rules with regard to the styles of kitchen cabinets selected, these vary according to the taste of the consumer and the style of the home in question. It would appear, however, that European style cabinets are more popular in urban centres than in rural areas where homeowners appear to opt predominantly for cabinets with traditional wood doors.

## Government Codes and Regulations Present No Problems for Kitchen Cabinets

No contractor, manufacturer or retailer/distributor noted any problems with government codes or regulations which would apply to kitchen cabinets.

## Use of Kitchen Cabinets in Renovation Increasing

According to both manufacturers and retailers/distributors, sales of kitchen cabinets to the renovation market have increased significantly during the past five years. More than one-third of kitchen cabinet manufacturers and one-quarter of retailers indicated their sales of kitchen cabinets had increased by 30 percent or more in the past five years. A further one-third of manufacturers and one-quarter of retailers said sales had increased by between 10 and 30 percent.

Less than one-quarter of retailers/distributors and less than 10 percent of manufacturers indicated that sales of kitchen cabinets had declined in the past five years. In many cases, these declines were attributed to the fact that companies were not aggressive in addressing the kitchen cabinet renovation market rather than a decline in activity in this market. In some regions, notably the Prairies and Atlantic Provinces, some observers cited the poor economy and high interest rates as factors behind an apparent decline in sales.

**Kitchen Cabinet Sales to Renovation Market Estimated at $145 Million in 1985**

The proportion of 1985 kitchen cabinet sales which went to the renovation market is estimated at approximately half the total Canadian production - or $145 million worth of kitchen cabinets. This estimate is based on information from the surveys of manufacturers and retailers/distributors as well as the results of an analysis of the U.S. input-output model and the HOMES National Survey information.

## WINDOWS

**Wood Windows Face Stiff Competition from Aluminum in Renovation Work - Wood Preferred by DIY**

There is strong competition in the window market between wood and aluminum windows. Aluminum windows tend generally to be less expensive than wood, traditionally have been easier to maintain and require no finishing work such as staining or painting. Wood windows with vinyl or aluminum exterior cladding are also relatively easy to maintain on the exterior; they also retain the high quality wood interior finish and the added advantage of non-conductivity of cold through the sash during the winter months - a feature not available in all aluminium windows. However, cladded wood windows are relatively new products and are more expensive than traditional wood windows.

Aluminum windows tend to be favoured by specialist window replacement contractors because they can be easily manufactured to fit into odd size spaces. Special sizes of wood windows generally need to be preordered from the manufacturer many weeks in advance.

Vinyl windows (solid vinyl as opposed to vinyl clad) are a relatively new product and do not account for a significant share of the Canadian replacement window market. They share similar non-conductivity attributes of wood windows.

Wood windows are generally perceived by homeowners to be of higher quality in terms of appearance and insulation value and are also favoured by the DIY market because wood is a material which is familiar to most handymen. Aluminum, in contrast, is not as easy for most homeowners to work with and is therefore not used as extensively by the DIY market. Aluminum windows also suffer a general market perception from consumers (especially outside of Quebec) that they are inferior to wood windows in terms of quality.

## Many Window Manufacturers Ship to Other Regions

While virtually all window manufacturers sell more than half their output in the region where their manufacturing facilities are located, many ship a substantial proportion of their output to other regions as well. As would be expected, most of the small manufacturers confine their output to the nearby market, while many of the window manufacturers with total sales of $10 million or more sell their product in other regions.

This limited market for most manufacturers is a reflection of the difficulties inherent in producing a variety of types and sizes of products and shipping them long distances. In the case of windows, especially replacement windows where the products are not of standard dimensions and therefore cannot be stockpiled at points away from the plant, problems such as damage during shipment or ill-fitting components cannot be as quickly rectified by a distant manufacturer as they can with a local one. Long delays in installation can result. The problem is compounded if shipments to a given destination must await the accumulation of a sufficient sized order to fill a truck.

About half the window manufacturers sell all or virtually all their windows directly to contractors or the DIY market rather than through retailers or other distributors. In general, it would appear that most of the smaller wood window manufacturers sell their product direct while a greater proportion of the larger wood window manufacturers sell their product through retailers and distributors.

## Price - An Important Consideration in Window Choice But Other Factors Important Also

Consumers have a wide variety of reasons for choosing different types of replacement windows: price, energy efficiency, ease of maintenance and operation, appearance and availability of supply all are considerations. There is no clear consensus among manufacturers and retailers/distributors as to the most important factors in choosing a particular type of window, however, for the renovation market as a whole, price is a more important consideration in the choice of windows than, for example, kitchen cabinets.

Price, ease of maintenance and availability of supply (in odd sizes as well as more common sizes) have been the major reasons behind the success of aluminum windows in the renovation market. The increasing usage of aluminum and vinyl clad wood windows is a reflection of the importance, in consumers' minds, of having windows which are maintenance-free.

Energy efficiency has been an important reason why many homeowners have replaced windows, so clearly this factor is important in the minds of most homeowners - even with the decline in energy prices. With regard to energy efficiency, and in terms of appearance, the common perception among consumers is that wood windows are superior to aluminum windows.

Contractors tend to put a much greater emphasis on price and availability of supply than homeowners - particularly in the price-competitive new starter house market. Most of the specialist window replacement contractors work with aluminum windows because of the relatively low cost (both for the window itself and in terms of the finishing required following installation) and the fact that they can readily obtain windows of most sizes within a short time frame.

For large renovation jobs which involve more than the replacement of windows, wood windows tend to be preferred over aluminum for a variety of reasons:

- A homeowner undertaking major renovations is likely to be less price-conscious as far as the windows alone are concerned since they will comprise only a part of the entire renovation job;

- Wood windows are more consistent with the quality image that most homeowners are trying to achieve with major renovation jobs;

- Larger renovation jobs take a longer period to complete so the slower delivery time on odd sizes of wood windows is less of a disadvantage than on small jobs;

- Most renovation jobs do not require the replacement of all windows in the dwelling, homeowners and contractors therefore prefer to use windows which match those in the rest of the dwelling - according to contractors, these are mainly wood; and

- The maintenance-free aspect of wood windows clad with vinyl or aluminum overcomes the problem of having to undertake the periodic exterior maintenance required for unclad wood windows.

Lack of familiarity with aluminum impedes the usage of aluminum windows by the DIY market. Handymen feel more confident in their ability to overcome installation problems with wood windows since they are used to planing, sawing or shiming wood products to make them fit whereas aluminum requires more specialized knowledge.

As with most products which have an effect on the appearance of the dwelling, the choice of windows is often a matter of taste on the part of the consumer. Contractors and architects indicated that of all the products under study, windows were the ones where homeowners most frequently expressed a preference, not only for wood versus aluminum, but often for a particular brand of wood window as well. These preferences generally relate to the more expensive renovation jobs and often result in the use of top of the line brands.

**Little Problem for Windows in Terms of Codes and Regulations Except in Montreal**

Except in the City of Montreal, where survey respondents noted that the use of wood windows appears to be discouraged in some types of buildings due to fire regulations, there appear to be no restrictive codes or regulations which either inhibit or promote the use of wood windows in residential construction in Canada.

**Renovations Involving Windows Increasing**

Less than 10 percent of the manufacturers surveyed indicated that their window sales to the renovation market declined in the past five years. One-quarter of window manufacturers indicated that their sales to this market had increased by 30 percent or more, and half said their sales had increased between 10 and 30 percent. The retailers/distributors surveyed reported similar sales levels.

**Renovation Work Accounted for an Estimated 43 Percent of Wood Window Sales in 1985**

Estimates prepared by Clayton Research based on the results of the surveys of wood window manufacturers and retailers/distributors and other information available about window usage in new and renovation construction in Canada and the United States indicate that approximately 43 percent of the total sales of wood windows in Canada in 1985 went to renovation construction. This proportion of total sales amounted to approximately $185 million.

## DOORS

### Exterior Doors Mostly Steel Interior Doors Made of Wood

There are two separate door markets: exterior doors and interior doors. Pre-hung pressed steel doors with an insulated core have a much larger share of the exterior door market than wood doors whereas virtually all interior doors are made of wood. The two types of doors are also marketed separately, exterior doors are generally sold as part of a window/door package whereas interior doors are generally sold as part of the interior trim package along with mouldings, stair railings, etc.

Many wood window manufacturers sell only steel exterior doors or a choice of steel or wood doors - some of the largest wood window manufacturers sell only steel doors. In many cases, these steel doors are purchased from a specialist steel door manufacturer and fitted into a wood frame by the window manufacturer. Wood exterior and interior doors are produced by a large number of manufacturers across the country, frequently as part of a product line that produces a variety of wood based products.

### Most Wood Door Manufacturers Serve Local Markets

Most companies producing wood interior or exterior doors are geared to serving the market in their region. However, there are some large manufacturers of both types of doors who sell a substantial share of their output in other regions as well as their own.

### Poor Insulation - Major Reason Behind Lack of Use of Wood Exterior Doors

The superior energy efficiency of the pressed steel door with an insulated core appears to be the major reason behind the predominance of steel exterior doors over wood exterior doors. Complaints regarding the loss of a weather-tight seal on wood doors due to warpage were also cited as reasons for not using wood exterior doors by contractors and architects involved in renovation. Most considered the wood doors to be superior in terms of appearance but many would not consider them unless they had a guarantee against warpage and an improved insulation factor. Another feature of the steel doors that was often noted is that they are purchased pre-hung which saves time and avoids potential problems during installation.

For interior doors, price is the main consideration in most consumers' minds since there is not perceived to be a great deal of difference among the doors produced by most manufacturers. Some consumers do opt for a higher quality colonial style interior door (such as those utilized extensively in higher-priced new housing), however, most purchase the less expensive versions.

**Fire Regulations Restrict Wood Exterior Door Usage in Some Areas**

There are no apparent problems with regard to government codes and regulations over the usage of wood interior doors. Some observers indicated that fire regulations restrict the usage of wood exterior doors to some extent, particularly in Quebec.

**Increased Usage of Wood Doors in Renovation Work**

Most manufacturers indicated there has been a significant increase in the usage of wood doors in renovation construction in the past five years. For both interior and exterior wood doors, about one-third of manufacturers reported that sales for renovation work increased by 30 percent or more and a further one-third said sales were up between 10 percent and 30 percent. Only one interior door manufacturer reported declining renovation sales over the past five years; about 15 percent of the exterior wood door manufacturers said renovation sales were down over this period.

Retailers and distributors were less positive regarding sales of wood doors to the renovation market. About 10 percent of retailers/distributors indicated that sales of wood doors had increased by 30 percent or more, while almost half said they had increased by between 10 and 30 percent. About 10 percent reported that renovation sales were down compared to five years ago.

**An Estimated $135 Million in Sales of Wood Doors to Renovation Market in 1985**

It is estimated that slightly over half the 1985 Canadian sales of wood doors were accounted for by sales to the renovation market. This estimate is based on the surveys of manufacturers and retailers/distributors as well as other available data in Canada and the United States. The total estimated expenditures on wood doors used in renovation work in 1985 is $135 million.

## WOOD FLOORING, PANELLING, MOULDINGS AND HOUSING COMPONENTS

### Most Wood Flooring, Panelling, Mouldings and Components Made by Local Manufacturers

While it is difficult to generalize, it would appear that manufacturers of wood flooring, panelling, mouldings and housing components are predominantly relatively small firms which produce several of these products - frequently in combination with wood windows, doors or kitchen cabinets. These firms also tend to sell to a fairly localized area, few ship their products outside their region of manufacture.

Manufacturers of mouldings are particularly diversified - many small wood window and door, kitchen cabinet or component manufacturers make mouldings as a sideline. Mouldings are generally purchased by contractors as part of the trim package which includes other items such as interior doors. Often, such firms also manufacture flooring or panelling though some firms do specialize in flooring or panelling exclusively. Many firms specialize in making only housing components but these tend mostly to concentrate on rough products like trusses which they sell directly to contractors. Producers of more finished components, such as shelving or staircases, tend to make other (more finished) products such as windows and doors as well.

Few of the firms surveyed indicated they sold a significant proportion of their output of wood flooring, panelling, mouldings or components outside their region of manufacture. Most retailers/ distributors also indicated their suppliers of these products tend mostly to be located in the region where the retailer is located. In terms of out-of-region sales, manufacturers in Quebec and Ontario appear to be the most active in selling mouldings and wood flooring - particularly in the three eastern regions. Some eastern retailers reported that their major source of supply of wood panelling was British Columbia.

### Availability of Varieties and Finishes Important Factors in Sales of Mouldings, Panelling and Flooring

As minor products for most manufacturers and retailers/distributors, fewer comments were received from survey respondents with respect to the key factors in marketing these products to the renovation market. Since it is often necessary to attempt to match existing shapes and finishes in renovation work, the availability of different varieties and finishes of these products can be a key consideration in many cases. If such matching is not necessary, price appears to be the most important factor in the choice of which products to use.

Wood housing component manufacturers reported that only a relatively small proportion of their output goes to renovation - generally 15-20 percent. Much of this would be wood siding which, while it faces a cost and maintenance disadvantage compared to vinyl and aluminum siding, is preferred by many homeowners due to its aesthetic qualities.

Wood panelling has traditionally been a DIY product but this appears to be a less fashionable product than in the past. More homeowners are becoming familiar with drywall application and it is perceived to have a significant aesthetic advantage over wood panelling.

## Few Problems with Building Codes and Regulations

As with most of the products under consideration in this report, government building codes and regulations present little problem for the use of wood mouldings, flooring, panelling and housing components in renovation work. Wood siding does face some fire-related restrictions in terms of required separations from other buildings, however, the same restrictions apply to both new and renovation construction.

## Increasing Use of Most of These Products in Renovation Work

According to both manufacturers and retailers/distributors, there appears to have been a general increase in the volume of wood flooring, panelling, mouldings and housing components used in renovation work. The possible exception is interior wood panelling: almost one-quarter of the retailers reported they had experienced declines in sales of wood panelling to the renovation market in the past five years; a further one-third indicated either no change in sales volumes to renovation or an increase of less than 10 percent over this period.

In contrast, less than 10 percent of the retailers indicated declines in renovation sales of mouldings, wood flooring or components over the past five years. More than half of all retailers reported sales of these products to the renovation market to have increased by more than 10 percent since 1980.

**Significant Renovation Sales for Mouldings and Panelling Smaller Shares of Market for Flooring and Components**

Estimates based mainly on the surveys of manufacturers and retailers/distributors indicate significant differences in the renovation markets' share of the sales of mouldings, panelling, flooring and components:

- Mouldings - approximately half of all mouldings produced in Canada in 1985 are estimated have been used by the renovation market. This would total an estimated $65 million of output.
- Panelling - reliable base information on the volume of production of interior wood panelling is not available; it is believed that 55-75 percent of the panelling produced in Canada is used for renovation work.
- Flooring - only 35 percent of the production of wood flooring is believed to go to the renovation market. This would total an estimated $19 million in 1985.
- Housing Components - renovation work is estimated to account for approximately 20 percent of the housing components produced. This would total an estimated $25 million in 1985.

## PART 3 - PROJECTIONS OF RESIDENTIAL RENOVATION WORK AND THE DEMAND FOR WOOD BASED PRODUCTS

This part of the report presents estimates of the volume of renovation work in Canada over the 1986-2001 period and the resulting demand from this work for each of the wood based products under consideration in this report: kitchen cabinets, windows, doors, mouldings, wood flooring, interior wood panelling and wood housing components.

This part is divided into the following two major sections:

- Projections of the volume of renovation work in Canada and each of the five economic regions over the 1986-2001 period; and

- Projections of the volume of demand for each of the wood based products under study arising from this renovation work.

The analysis presented in this part of the report is relatively short. It is a summary of the more detailed analyses which are described in Appendix D.

### RESIDENTIAL RENOVATION WORK - 1986-2001

This section presents projections of the volume of renovation expenditures in Canada and the five economic regions over the 1986-2001 period. The projections are based on the expected changes in the volume of renovation activity from the base year of 1985.

#### Two Main Factors Behind Expected Changes in Renovation Activity

Total expenditures on renovation work are expected to increase significantly over the next fifteen years. There are two major factors behind this trend:

- Growth in the housing stock; and

- Higher average renovation expenditures per dwelling.

Each of these factors has contributed to the growth in renovation expenditures during the past decade and will continue to do so in the future. Each is discussed separately below.

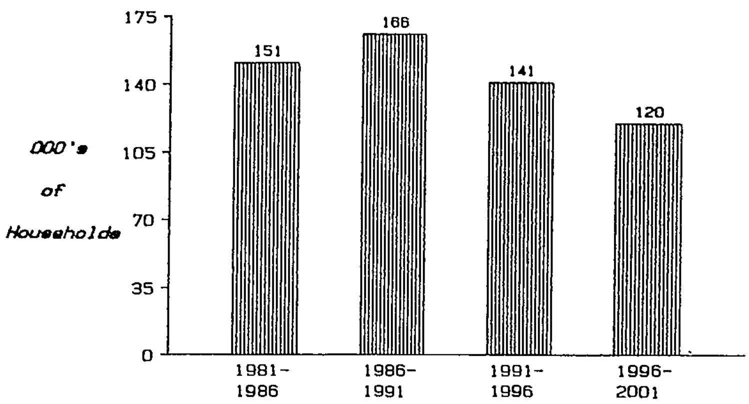
## Larger Housing Stock Means More Renovations

As was outlined in Part 1, renovation expenditures are not confined to the older housing stock. Renovation work is undertaken on all types and ages of dwellings each year - even the newest portion of the stock. Therefore, simply by increasing in numbers, the housing stock can be expected to generate a larger volume of renovation activity.

Over the 1981-1985 period, total renovation expenditures in Canada are estimated to have increased by $2.8 billion on a 1985 constant dollar basis. The average renovation expenditure per dwelling in 1981 is estimated to have been $1,185 (in 1985 dollars); if this had stayed constant throughout the 1981-1985 period, total renovation expenditures would have increased by $0.7 billion - due simply to the increase in the size of the housing stock over that period.

Therefore, about one-quarter of the increased renovation expenditures over the 1981-1985 period was due simply to increases in the housing stock. The remainder was due to increased average expenditures on renovation work - to an estimated $1,421 in 1985. As indicated in Part 1, most of the increase in average renovation expenditure is due to higher spending on improvements.

AVERAGE ANNUAL HOUSEHOLD GROWTH
CANADA, 1981-2001




*Source: Clayton Research Associates.*

Over the next five years, the increase in the size of the total occupied housing stock is expected to be above that of the 1981-1986 period.* Annual household growth in Canada is projected to average 166,000 households over the 1986-1991 period but then decline to 141,000 households in 1991-1996 and 120,000 households in 1996-2001.

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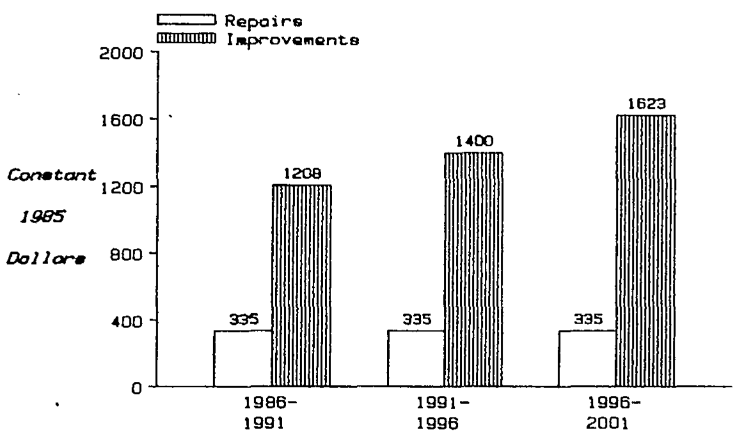
* The projections of growth in households (occupied housing stock) presented here were formulated for this report by Clayton Research. Details are presented in Appendix D.

Therefore, growth in renovation expenditures resulting from increases in the number of households should be higher in 1986-1991 compared to the 1981-1986 experience. However, after 1991 growth should be lower than it was during the 1981-1986 period, due to lower household growth.

**Further Increases in Average Renovation Expenditures Per Dwelling Expected in 1986-2001**

The average expenditure on renovation work in Canada is estimated to have increased from an average of $1,185 per dwelling in 1981 to $1,421 per dwelling in 1985 - for the total dwelling stock in 1985 dollars. Further increases in average renovation expenditures per dwelling are expected over the next fifteen years.

AVERAGE ANNUAL REPAIR AND IMPROVEMENT SPENDING PER DWELLING, CANADA, 1986-2001




*Source: Clayton Research Associates.*

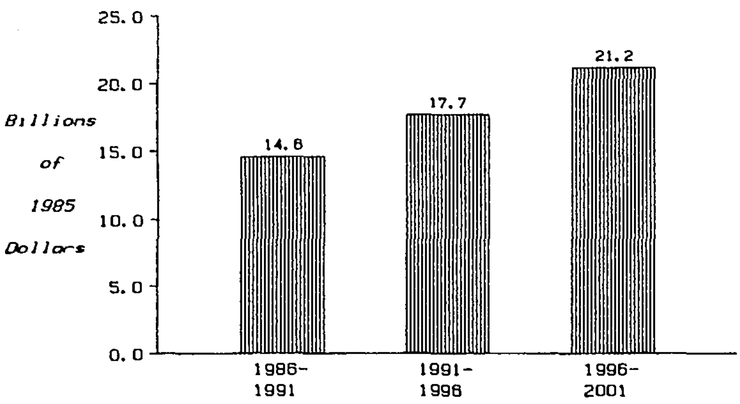
Average repair expenditures per dwelling appear to be relatively constant in real dollar terms. Based on an analysis of expenditures over the 1971-1985 period, annual repair expenditures per dwelling are projected to remain at $335 (in 1985 dollars) for the 1986-2001 period.

On a per unit basis, real expenditures on improvements by households are expected to increase by an average of 3 percent annually over the 1986-2001 period. Improvement expenditures on all dwellings are projected to average $1,208 per dwelling over the 1986-1991 period (in 1985 dollars) increasing to $1,623 per unit during the 1996-2001 period.

This projected increase in improvement expenditures is based on an analysis of changes in the age distribution of both total households and the total housing stock over the next fifteen years as well as a favourable economic scenario of modest rises in real incomes and declines in real mortgage interest rates, and an increasing ownership share of the total housing stock.

## Average Renovation Expenditures of $14.6 Billion Annually Projected During 1986-1991 Period

AVERAGE ANNUAL TOTAL RENOVATION EXPENDITURES
CANADA, 1986-2001




Source: Clayton Research Associates.

Projected volumes of renovation expenditures were derived by combining the projected size of the housing stock and the projected average renovation expenditures per dwelling unit.

Renovation expenditures are projected to average $14.6 billion over the next five years. This compares to 1985 renovation expenditures of $12.6 billion. Further increases in renovation expenditures are projected for the 1991-2001 period: $17.7 billion for the period 1991-1996 and $21.2 billion for 1996-2001.

## All Regions to Share in Increased Renovation Spending

The distribution of renovation expenditures by region is expected to remain relatively stable over the next 15 years, although marginal increases in Ontario's share of renovation expenditures vis-à-vis the remaining provinces are forecast.

## Contract Work to Account for Slightly Larger Share of Total Renovation Expenditures

Based on simulations of the effects of the changing age structure of owner households and the projected increases in spending on improvements versus repairs, it would appear that there will be a modest increase in the proportion of overall renovation work which is undertaken by contractors as opposed to DIY. Despite this, it is expected that DIY work will continue to comprise a major component of renovation work throughout the 1986-2001 period. The effect of these changes is expected to slightly reduce the DIY share of total ownership renovation spending from the estimated 40 percent share in 1985 to perhaps 38-39 percent by the year 2001.

## DEMAND FOR WOOD BASED PRODUCTS FROM RENOVATION WORK - 1986-2001

This section presents projections of the demand for wood based products from renovation work over the 1986-2001 period. The projections are based on the estimated 1985 demand for each of the wood based products presented in Part 2 of this report and an analysis of expected future trends in the demand for each product compared to the projected growth in total renovation spending presented earlier in this part of the report.

### Renovation Demand for Kitchen Cabinets and Windows Expected to be Strong Over the 1986-2001 Period

There is expected to be a significant increase in the volume of demand from renovation work for both kitchen cabinets and wood windows over the next 15 years. These two products are both expected to experience a rate of growth in demand from renovation work which exceeds the growth in total renovation expenditures. Increases in the demand for the other products from renovation work are expected to be closer to the overall rate of increase in renovation spending.

Whereas renovation spending as a whole is projected to increase at an average annual rate of approximately 4 percent (in real terms) over the 1986-2001 period as a whole, the rate of growth in spending on kitchen cabinets is projected to average 5.5 percent annually.* Among the major factors behind this expected increase in renovation spending on kitchen cabinets are:

- Kitchens are one of the first areas that new owners seek to improve in a home after it is purchased. They are also one of the types of renovation expenditures which have the largest return in terms of increased value of the home for resale.
- Kitchens are a very personal item in terms of style and layout. What is functional and pleasant for one owner is not necessarily so for a new owner.
- Kitchen cabinets are one of the main items involved in any renovation work done on kitchens.

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* Total renovation expenditures are projected to average $21.2 billion (in 1985 dollars) over the 1996-2001 period, approximately 68 percent higher than the estimated 1985 expenditures on renovation. This is an average annual rate of increase of about 4 percent over the 1986-2001 period as a whole.

- With the increases in real incomes expected over the 1986-2001 period, owners will have more discretionary income to spend on items such as kitchen renovations which are more a function of fashion than necessity.

- Manufacturers, retailers/distributors and contractors all reported a significant increase in sales of kitchen cabinets for renovation work over the past five years. This increase in sales to the renovation market was larger for kitchen cabinets than for any of the other wood based products under study.

For wood windows, increases in demand as a result of renovation work are expected to average approximately 5 percent annually in real terms over the 1986-2001 period. While slightly below the projected growth in renovation spending on kitchen cabinets, this is still significantly higher than the projected average annual 4 percent real growth in total renovation expenditures. This expected growth in expenditures on windows is based on the following reasons:

- Replacing windows in a dwelling is a function not only of the increased energy efficiency which newer, better insulated windows can achieve but also of the enhanced appearance, superior working order and maintenance-free nature which modern metal or vinyl clad windows offer. The decline in world energy prices is not anticipated to dampen the demand for new windows as energy savings alone do not appear to have been the major reason behind the desire for replacement windows. The appearance, function and maintenance-free aspects of new windows will continue to be powerful incentives for homeowners to replace older windows with a more modern version.

- Increasing discretionary income will further strengthen the demand for wood windows as opposed to the aluminum competition due to the more attractive nature of wood windows and, when clad on the exterior with vinyl or aluminum, their maintenance-free nature.

- Manufacturers and retailers responding to the survey indicated a significant increase in sales of wood windows to the renovation market over the past five years.

## Renovation Expenditures on Other Products Expected to Grow at Rate Similar to Total Renovation Expenditures

The growth in demand from renovation work for the other wood based products under study does not appear likely to match that of kitchen cabinets and windows.

**Windows and Kitchen Cabinets Projected to Remain Biggest Wood Based Products Sellers to Renovation Market**

Sales of windows, kitchen cabinets and, to a lesser extent, doors are projected to continue to dominate the renovation market in terms of the products under study in this report. Average annual sales of wood windows to the renovation market over the 1996-2001 period are projected at $349 million in 1985 dollars, an increase of 89 percent from the estimated $185 million in 1985. Kitchen cabinet sales to the renovation market are projected to average $291 million (in 1985 dollars) over the 1996-2001 period, slightly more than double the estimated 1985 sales. For wood doors, sales to the renovation market during the 1996-2001 period are projected to increase by 68 percent over 1985 sales - an average of $227 million annually in 1985 dollars.

PROJECTIONS OF RENOVATION EXPENDITURES
ON SELECTED WOOD BASED PRODUCTS
CANADA, 1985-2001

| | Estimated 1985 | Average Annual 1986-1991 | 1991-1996 | 1996-2001 |
|---|---|---|---|---|
| | Millions of 1985 Dollars | | | |
| Total Renovation Expenditures | 12,618 | 14,582 | 17,715 | 21,243 |
| Kitchen Cabinets | 145 | 175 | 229 | 291 |
| Windows | 185 | 220 | 281 | 349 |
| Doors | 135 | 157 | 189 | 227 |
| Mouldings | 65 | 75 | 91 | 109 |
| Flooring | 19 | 22 | 28 | 34 |
| Housing Components | 25 | 29 | 35 | 42 |

Source: Clayton Research Associates.

# APPENDICES

# APPENDIX A

# DEFINITIONS

## APPENDIX A - DEFINITIONS

The term renovation describes a wide variety of activities ranging from painting and minor maintenance, through the upgrading of a part of a building (such as a kitchen or bathroom) to meet modern standards, to a major alteration to a building or the erection of a major addition to a building. In most people's minds, there is a general understanding of the activities covered by the term renovation but there is not a clear distinction between what constitutes repairs as opposed to alterations or other types of improvements.

### The Statistics Canada Definitions

The definitions used by Statistics Canada for the Family Expenditure (FAMEX) Survey are as follows:

- Maintenance, repairs and replacements - this category is comprised of two elements:

  - Maintenance and repairs - work undertaken on an existing structure or piece of equipment to keep it in good working condition and appearance so as to maintain it in "as new" a condition as possible. Also included are repairs undertaken on broken, damaged or malfunctioning components of the structure or equipment. Examples include painting, caulking and various types of repairs to buildings and appliances; and
  - Replacements - the installation of equipment which replaces an existing piece of equipment. An example is the replacement of an old oil furnace with a more technically advanced furnace.

- Additions - this includes the construction of structural extensions, enclosures and any additional facilities on the property. Additions include the cost of plumbing, electrical and heating equipment and built-in appliances if these were included as part of the addition.

- Renovations and alterations - this includes work done to upgrade the property to acceptable building or living standards, to rearrange the interior space or to modernize existing facilities in order to suit changing needs. Renovations and alterations may include the cost of plumbing, electrical or heating equipment and built-in appliances if these were included as part of the work.

- New installations - this refers to work undertaken to install equipment or fixtures which did not previously exist either to the inside or outside of the structure or on the property. An example is the installation of a shower stall in what had previously been a powder room or the installation of a new air conditioning system.

The FAMEX Survey presents expenditures on work undertaken by households for each of these four categories separately; however, official annual estimates prepared by Statistics Canada on the overall volume of renovation work are presented in only two categories:

- Repairs - comprised of maintenance and repairs; and
- Alterations and improvements - comprised of replacements, additions, renovations and alterations and new installations. A category called conversions is reported separately by Statistics Canada but it comprises less than one percent of the volume of alterations and improvements. Alterations, improvements and conversions are generally described collectively as improvements in this report.

Neither of these sets of definitions used by Statistics Canada appear to be sufficiently distinct from one another that one can be confident that a particular type of work would be described in the same way by all observers. For example, the ordering of questions in the FAMEX Survey was changed between 1978 and 1982 and this was found to have a very significant impact on the distribution of reported expenditures on maintenance, repairs and replacements as opposed to additions, alterations and new installations.

## The Definitions Used in the HOMES National Survey

The HOMES National Survey uses repairs and renovations as a catch-all definition to cover all the types of work described by Statistics Canada as maintenance, repairs and replacements, additions, alterations and new installations. This definition, while not providing as complete a breakdown of activity as might be desirable, is a recognition of the difficulty (and likelihood of errors) associated with attempting to classify work into a complex set of categories in a relatively short telephone interview.

## The Definitions Used in This Report

Since much of this report is based on the HOMES National Survey results which categorized all non-new residential construction activity together, much of the analysis relates to this total activity - referred to in this report under the term renovations. There are some parts of the report where a disaggregation of total renovation activity based on the Statistics Canada definitions is presented. In these cases, the term "repairs" is used to refer to maintenance and repair activity while "improvements" is used to refer to alterations, additions and new installations (generally, the non-repair component of renovations).

## APPENDIX B

## THE HOMES NATIONAL SURVEY

## APPENDIX B - THE HOMES NATIONAL SURVEY

The HOMES National Survey is undertaken by Environics Research Group. The results presented in this report are based on the HOMES Survey conducted in June and July, 1985. It covered 2,455 homeowners in 27 major centres across Canada. Among other questions, the survey asked homeowners whether they had undertaken any renovations to their homes over the past 12 months. A copy of the relevant parts of the questionnaire used in the survey is included as part of this appendix.

The results of the survey presented in this report are based on a limited sample in each of the 27 centres and are not weighted to reflect the relative sizes of each of these centres - nor does the survey cover non-urban areas. Therefore, the results, while illustrative of the broad trends that apply in urban areas in Canada, may not be strictly representative of homeowner renovation trends in the country as a whole.

Nonetheless, the HOMES National Survey does provide a unique set of information which, recognizing its limitations, is extremely useful in broadly identifying the types of renovation work which are being undertaken by homeowners and the types of homeowners who are undertaking such work. The results which are presented in this report are considered to be illustrative of these broad trends. Due to the relatively small sample sizes involved, a great deal of emphasis should not be placed on small differences in either percentages of different types of renovation work being undertaken or the average amounts spent.

The question on renovations in the HOMES National Survey was asked in two parts: "Thinking back over the past 12 months, have you done or are you currently doing any repairs or renovations to the exterior of your home?" and essentially the same question with respect to the inside of the home. A large proportion of the respondents (30 percent) did not answer the question - either they did not know the answer or they refused to answer. In calculating the proportion of homeowners who undertook renovations, these 30 percent were excluded from the analysis; 85 percent of those who answered the question replied that they had done renovations on either the exterior or the inside of their home.

Data on the types of work undertaken in the course of homeowner renovations are presented on pages 8-16 of the report and are based on the 85 percent of homeowners who indicated they had done renovations in the past 12 months.

The analysis of the characteristics of homeowners who renovate (pages 17-23) is based on the data presented in the tables on pages B-3 through B-6. These data were derived initially from the HOMES National Survey results but were reworked to obtain the information presented. The tables present a standard set of data for each household or dwelling characteristic. They present the following information for homeowners who undertook: (1) any renovation work in the last 12 months; and (2) renovation work in the last 12 months costing $1,000 or more in total. Some of the key components of the tables are:

- Percent of homeowners in each group reporting renovation work in the previous 12 months - frequently described as the incidence of renovation work. This is based on the HOMES National Survey results adjusted to remove the respondents who either did not know or refused to answer the question on whether they undertook renovations to their homes.

- Average expenditure of the homeowners who undertook renovation work - this is based on the HOMES National Survey results for those homeowners who undertook renovation work.

- Estimated distribution of total homeowner renovation expenditures among each group - this is derived by Clayton Research based on the following:

  - The distribution of all homeowners according to the 1981 Census of Canada for variables such as age of owner, income and dwelling value (adjusted to reflect changes since the Census) and other sources for variables where Census data are not available;
  - The incidence of renovation spending in each group based on HOMES data (presented in the table); and
  - The average amount spent by renovating homeowners based on HOMES data (presented in the table).

## APPENDIX C - THE FAMEX SURVEY

The Family Expenditure (FAMEX) Survey results presented in this report are based on the survey undertaken by Statistics Canada in 1982. The data from the 1984 FAMEX Survey were not available in time for inclusion in this report. The 1982 FAMEX Survey collected a great deal of information on expenditures by families in all parts of Canada on different items - among them, maintenance, repairs and replacements, additions, renovations and alterations and new installations. The definitions for these are provided in Appendix A.

The FAMEX Survey was completed by the respondent from a detailed questionnaire and thus is likely to have a greater degree of reliability than th. HOMES National Survey (which is based on telephone interviews). However, the special tabulations obtained from Statistics Canada suppressed all data in which the number of respondents was less than 30. Also, the questions on the FAMEX Survey were less comprehensive for the purposes of much of the detailed analysis of household and dwelling characteristics than were the questions in the HOMES National Survey which was designed to obtain information on housing-related issues.

The FAMEX Survey results presented in the report relate mainly to aggregate numbers for spending on renovations since more data on spending details were available from the HOMES National Survey.

A copy of the FAMEX Survey questions which relate to renovations is provided on the following pages.