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**WMC CFB**  
Wood Manufacturing Council  
Conseil des fabricants de bois

# Advancing Wood Manufacturing in Canada

Canada's Advanced Wood Manufacturing Sector:  
2015-2016 Labour Market Information Update

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## Executive Summary

### At a Glance

- The advanced wood manufacturing sector is an important contributor to Canada's economy. It employs approximately 88,000 workers today, and is predicted to add 7,900 workers by 2020.
- The sector's workforce is predominately male, and is older than the Canadian average. Wages in the sector are typically below those of other manufacturing sectors in Canada.
- Businesses in the sector face several human resources challenges, including a lack of qualified workers, the need for new workforce skills, difficulty attracting new workers, and difficulty replacing retiring workers.
- Businesses in the sector are taking a number of steps to overcome these challenges, including providing more in-house training, increasing wages, and developing more flexible work arrangements. However, more concerted efforts are needed if the sector is going to reach its full growth potential in the years ahead.

### Major Trends and Issues in the Advanced Wood Manufacturing Sector

The advanced wood manufacturing sector is an important contributor to Canada's economic performance. The sector employs approximately 88,000 workers, and the Conference Board of Canada predicts that it will add 7,900 more workers by 2020. However, there are concerns among businesses, industry associations, labour groups, educational institutions, and governments that businesses in the sector will not have enough qualified workers to leverage these opportunities. Results from the Conference Board's *Advanced Wood Manufacturing Sector: Human Resources Trends and Issues Survey* show that businesses in the sector lack qualified workers, have trouble attracting new workers, and need workers with more up-to-date skills. Recruiting and retaining workers with the right skills is critical if the sector is to maximize its potential for growth.

Skills and labour shortages affect advanced wood manufacturing businesses in several ways. These include reduced productivity, reduced profitability, reduced sales, and an inability to leverage new opportunities. Skills and labour shortages can also increase costs, especially when employers need to use overtime to complete projects on time. Skills and labour shortages also increase the effort needed to maintain existing lines of businesses, which reduces opportunities for innovation, and delays investments in new technology.

The sector's human resource challenges will worsen if businesses and sector stakeholders do not take action to address them. Many businesses and stakeholders are aware of these challenges, and have taken steps to address them. To address these challenges properly, businesses and stakeholders need relevant, accurate information about economic trends, skills and occupational needs, recruitment barriers, training programs, and potential solutions.

## Advancing the Skills and Labour Discussion

To help close information gaps, and to set the stage for action, the Conference Board of Canada undertook a labour market information study that draws on several perspectives and methods:

- A review of labour market statistics, drawn from three surveys conducted by Statistics Canada: the Labour Force Survey (LFS), the Survey of Employment Payroll and Hours (SEPH), and the National Household Survey (NHS).
- Original economic analysis, used to generate a 5-year labour demand forecast. The projected results include employment level and growth rates by sub-sectors at both the national and provincial levels from 2011 to 2020.
- An online survey of 185 employers, industry experts, industry associations, educational institutions, labour groups, government, and other stakeholders. Employers surveyed represent a minimum of 6,350 employees (7 per cent of the advanced wood manufacturing sector's labour force).
- Saine Marketing's 2015 study on workforce and training needs in Quebec's windows and doors, furniture, and kitchen cabinets sectors.
- Interviews with 39 employers, industry associations, educational institutions, academic experts, and other stakeholders to learn more about the sector human resource trends and issues, and possible ways of resolving them.

## Key Findings

This report provides information on major needs and issues facing the sector, including economic factors that shape skills and labour supply and demand; the effects of skills and labour shortages; the occupations and skills that businesses need to meet their workforce needs; and strategies that businesses, industry associations, labour groups, educational institutions, and governments can use to develop and sustain a strong and successful workforce. In particular, this report shows that:

### *Sector Profile and Key Characteristics*

- Canada's advanced wood manufacturing sector is made up of mostly small operations across the country. These operations are concentrated in Ontario, Quebec and British Columbia.
- The furniture subsector accounts for 39 per cent of the sector's employment, followed by kitchen cabinets at 25 per cent, and other millwork (e.g., flooring, baseboards and stairs) at 15 per cent. Prefabricated buildings account for 14 per cent of the sector's employment, and windows and doors account for 7 per cent.
- Businesses in the sector face several economic and market challenges. These include increased imports from low-cost countries; the collapse and subsequent recovery of the U.S. housing market; and advances in technology that increase productivity and decrease the demand for labour.

### ***Workforce Profile and Employment Demand Outlook***

- The sector's workforce is dominated by men, and is older than the Canadian average. Approximately 77 per cent of the sector's workers are male. In addition, the 45-54 age cohort makes up more than 30 per cent of the sector's workforce, compared to 26 per cent for all industries in 2011. Average salaries in the sector are lower than in many other manufacturing sectors.
- Employment in the sector is expected to increase by an annual average of 1.7 per cent from 2015 to 2020, resulting in an increase of approximately 7,900 jobs. However, by 2020 we expect that sector employment will still be 14 per cent below where it stood in 2008, prior to the financial crisis.

### ***Top Human Resources Trends***

- The top human resources trends and issues for businesses in the sector include: a shortage of skilled workers; difficulty attracting new workers; a need for new and improved management skills; and a need for new workforce skills.
- Businesses in the sector face several barriers to recruitment. The most common barriers include: a lack of qualified workers; an inability to improve wages; difficulty with work ethic; applicants' lack of essential skills; and negative perceptions of the sector. Negative perceptions include low wages, manual labour, limited career advancement, and a declining industry.
- The top sources used by businesses to recruit skilled workers include: word of mouth; the industry's apprenticeship training system; Canada's secondary school system; and other businesses in the sector.

### ***Strategies to Address Skills and Labour Shortages***

- Most businesses in the sector increased their in-house training to address worker shortages, retention, succession planning, skills gaps, and other issues. In-house training was particularly common among businesses with 50 employees or more.
- Our survey results also suggest that businesses are working to eliminate the sector's wage gap with other sectors. Nearly three-quarters of the advanced wood manufacturing businesses we surveyed increased their wages to respond to the skills and labour challenges they faced.
- Other strategies to address skills and labour shortages within the sector included: using flexible work weeks; and increasing other benefits and compensation packages. A number of businesses in the sector address their skills and labour shortages by moving workers into projects that require different (often more complex) skill sets; or by streamlining/simplifying their design, production, and finishing processes.

## Contributing to Sustained Success

Canada's advanced wood manufacturing sector is at a critical point in how it goes about developing and maintaining a strong and stable workforce. Businesses and sector stakeholders—including industry associations, labour groups, educational institutions, and governments—recognize that they can do more to respond to the skills and labour challenges they face. Businesses and sector stakeholders can improve their training, retention, marketing, and support strategies to help position the sector for growth and long-term success. (See “A Promising Future—Recommendations for Businesses and Sector Stakeholders.”).

### **A Promising Future—Recommendations for Businesses and Sector Stakeholders**

#### **Sector-Level Support Strategies**

- 1. Ensure that knowledge of sector trends and issues flows smoothly between businesses and sector stakeholders.*
- 2. Develop and promote a human resources and training toolkit for use by companies in the advanced wood manufacturing sector.*
- 3. Establish clear occupational standards, essential skills standards, and language standards for the sector.*

#### **Sector-Level Training Strategies**

- 4. Develop and promote accessible and flexible training programs*
- 5. Promote the value of professional certification within the sector.*
- 6. Ensure that training programs include skills to operate automated machinery as well as traditional craftsmanship skills.*
- 7. Continue to promote management training.*

#### **Marketing and Engagement Strategies**

- 8. Improve youth engagement strategies in primary and secondary schools.*
- 9. Emphasize the opportunities for creativity and impact that exist when promoting the sector.*

#### **Training and Retention Strategies for Businesses**

- 10. Dedicate time to training.*
- 11. Improve the integration of new employees.*
- 12. Recruit more workers from underrepresented groups.*
- 13. Eliminate barriers for women workers.*
- 14. Investigate ways of improving benefits and compensation packages.*

## Chapter 1: Introduction

### Chapter Summary

- The advanced wood manufacturing sector plays an important role in the Canadian economy as an employer and as a producer of value-added products.
- The sector faces challenges that include skills shortages, a shrinking labour pool and increased competitive pressures.
- Anticipating future labour market trends and challenges will help the sector ensure that its human resources are a source of strength and that the sector remains competitive.

For much of the past decade the advanced wood manufacturing sector has been in economic decline. While many Canadians believe, as a result, that it is a sunset industry, TD Bank predicts that advanced wood manufacturing will be the fastest growing manufacturing sector in Canada.<sup>1</sup> The sector directly employed almost 88,000 people in 2015 and, since manufacturing and value-added exports are strong drivers of Canada's economic activity, the advanced wood manufacturing sector is an important contributor to Canada's economic performance.<sup>2</sup> Although Canadians may be more aware of the thousands of people employed in the logging and forest products industries, thousands more are “employed in the secondary manufacturing of wood.”<sup>3</sup>

The sector faces several skills challenges and issues that limit its capacity for growth. New technologies and processes mean that workers in the sector need to develop additional skills to keep pace with these new developments. The sector also faces stiff competition for skilled labour from other sectors, and must draw from a shrinking labour pool, even for unskilled positions. Similar to many businesses in other industries, Canada's advanced wood manufacturers face higher than average retirement rates, which may lead to a future shortage of experienced personnel. Most businesses in the sector understand their skills and workforce challenges, but the sector will be hard-pressed to realize its potential unless they are properly addressed.

### General Background

Businesses in the industry operate across the country and pursue a diverse range of activities and opportunities. Canada's two largest provinces account for a large portion of the sector's employment in Canada. Quebec and Ontario each account for a respective 32 per cent of the sector's employment. British Columbia (14 per cent), and Alberta (9 per cent). Manitoba (7 per cent) also represents sizable shares of the sector's employment. Provinces tend to specialize in different subsectors of advanced wood manufacturing, giving the sector a diverse regional composition. In Quebec and Ontario, for example, advanced wood manufacturers tend to specialize in furniture. Atlantic Canada and the Prairies tend to focus on kitchen cabinets and

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<sup>1</sup> TD Economics, *The Curious Case of Canada's Ailing Manufacturing Sector*.

<sup>2</sup> See Chapter 2 for details.

<sup>3</sup> The Conference Board of Canada, *WoodLINKS: Developing Workers for Canada's Advanced Wood Manufacturing Industry*, 1.

other types of millwork. In Alberta, many advanced wood manufacturers focus on prefabricated buildings.

Advanced wood manufacturing businesses produce a wide range of products, including furniture, kitchen cabinets, countertops, windows, doors, flooring, mouldings and prefabricated buildings. While the sector experienced a large net decrease in employment for the period 2008-2013, we expect the sector to add 7,900 workers by the year 2020. Such a dramatic reversal in the demand for human resources will exacerbate any skills shortages, unless properly addressed.

Canada's advanced wood manufacturing businesses employ and interact with a variety of individuals, groups and organizations. These include: businesses; unionized and non-unionized employees; self-employed workers and consultants; labour unions; Aboriginal organizations and communities; sector associations and councils; federal, provincial, and municipal governments; and others. These groups have a significant impact on the labour, skills, and other human resource issues faced by the industry. As such, their views are critical to a clear understanding of human resource issues and trends in the industry.

## **Purpose of the Report**

This report investigates skills needs in the advanced wood manufacturing sector and addresses key questions pertaining to the sector's workforce. The sector's labour market faces several major challenges including: the globalization of competition; technological advances; changes in the demographic structure of the workforce; and human resources issues such as recruitment and retention challenges, and skills gaps. This report assesses these factors and projects labour demand for the sector, and its various sub-sectors, for the next 5 years.

Ultimately, this report seeks to help the sector become more effective in addressing its human resource challenges. It outlines the skills that are in demand by employers today and anticipates whether these skills will continue to be in demand over the long term. This can help improve educational and training programs and their alignment with the skills demanded by industry as essential components of addressing future labour employment trends. Finally, the report outlines the strategies that can maximize the productivity and efficiency of advanced wood manufacturing in Canada.

Specifically, the report provides:

- a labour demand forecast for the advanced wood manufacturing sector as a whole, by sub-sector and by province;
- an understanding of *current* and *future* human resource issues and trends facing the advanced wood manufacturing sector; and
- an *empirical basis* for strategic decision-making on human resource issues, trends and initiatives within the sector.

"The Wood Manufacturing Council is grateful for the Government's support for [this] labour market information study. Remaining competitive in the context of rapidly growing demand for skilled workers is near the top of woodworking employers' concerns and this information will help them meet the challenge. This study will also help prospective employees make informed decisions about entering this growing and career-rich area of the economy."

*Iain MacDonald, Chair, Board of Directors, Wood Manufacturing Council; Director of the Centre for Advanced Wood Processing, University of British Columbia.*

The report also examines and analyzes market factors that impact the future of the sector, historical and forecast labour demands, and the findings of primary research, such as a business and stakeholder survey and interviews. Based on these findings, it provides recommendations for future action.

## Scope

The report focuses on five key subsectors of the advanced wood manufacturing sector:

- Wood windows and doors
- Other millwork
- Prefabricated wood buildings (factory built)
- Kitchen cabinets, cabinet doors, and countertops
- Wood and upholstered furniture

Where available, insights about other subsectors (including architectural millwork, store fixtures, and engineered wood products) are incorporated into the report.

## Methodology

The report delivers a detailed analysis of the advanced wood manufacturing sector, paying particular attention to workforce and labour market issues. This analysis includes a labour market statistics review. The report draws on statistics related to the Canadian labour market from three surveys conducted by Statistics Canada: the Labour Force Survey (LFS), the Survey of Employment Payroll and Hours (SEPH), and the National Household Survey (NHS). These statistics are used to build a historical employment database by sub-sector and province.

Other analysis includes a sector profile and an economic profile which are carried out through a combination of literature review and data analysis. Data are drawn mainly from Canada Mortgage and Housing Corporation (CMHC), the Annual Survey of Manufacturers and Logging (ASML), Canadian Business Patterns (CBP), Input-Output Accounts, and Industry Canada's trade database. The United States Department of Commerce's National Trade Database, and databases from international organizations such as the United Nations are also used. We identify various indicators that influence employment projection. We then construct an economic model

to generate a 5-year labour demand forecast. The projected results include employment level and growth rates by sub-sectors at the national and provincial levels, from 2011 to 2020.

These forecast results are accompanied by results from:

- an online survey of 185 employers, industry experts, industry associations, educational institutions, labour groups, government, and other stakeholders. Employers surveyed represent a minimum of 6,350 employees (7 per cent of the advanced wood manufacturing sector's labour force);
- Saine Marketing's 2015 study on workforce and training needs in Quebec's windows and doors, furniture, and kitchen cabinets sectors; and
- interviews with 39 employers, industry associations, educational institutions, academic experts, and other stakeholders.

### **About the Advanced Wood Manufacturing Sector: Human Resource Trends and Issues Survey**

From December 2014 to April 2015, with the assistance of the Wood Manufacturing Council, the Conference Board conducted an online survey of employers and other stakeholders in Canada's advanced wood manufacturing sector. Several industry associations and educational institutions assisted with survey distribution. In total, 185 individuals provided their input on the human resource trends and issues their organizations face, including:

- occupational and skills needs;
- the impacts of skills shortages;
- perceptions of causes of challenges;
- recruitment and training; and
- policies and actions that could help to address human resource challenges.

Responses come from several subsectors:

- Wood Windows and Doors
- Other Millwork (e.g. flooring, mouldings, components)
- Prefabricated Wood Buildings (factory-built)
- Kitchen Cabinet, Cabinet Doors, and Countertop Manufacturing
- Upholstered Furniture (e.g. chairs, chesterfields, sofas)
- Wood Residential Furniture
- Wood Commercial/Institutional Furniture
- Architectural Millwork and Store Fixtures; and
- Engineered Wood Products.

Responses are also characterized by the number of employees, region of operation, and total manufacturing revenues.

## Research Limitations

***Limitations of Survey Results:*** Our aim was to obtain approximately 250-300 responses to the online survey. However, the survey had a lower level of completion (185 responses). Survey findings at the regional, sub-sector, and firm-size levels should therefore be interpreted with caution.

Saine Marketing's 2015 survey of Quebec manufacturers generated 366 responses. Due to differences in methodology, we were unable to combine results from the two surveys. We have, however, integrated relevant material from Saine Marketing's survey throughout this report, where appropriate.

We also separated survey respondents into businesses and "other sector stakeholders," which include industry associations, labour groups, educational institutions, and governments. There were far fewer other sector stakeholder respondents (25) than businesses (160) and although this is to be expected, the sample of "other sector stakeholders" is too small to be reliable in all cases. For this reason, analysis of other sector stakeholder responses should be viewed with caution.

***Limitations of Statistical Data:*** Sector employment data largely rely on Statistics Canada's ASML database. However, the database no longer provides employment data at the national industry (i.e. 5-digit) level, since 2011. Additionally, in many cases, data are suppressed at the provincial level. These limitations restrict our ability to provide detailed analyses of the industry and of its sub-sectors' size and scope.

This report provides a concise description of the sector and its key skills development needs. In Chapter 2, we define the sector and outline its key characteristics. In Chapter 3, we provide a workforce profile, and analyze and forecast sub-sector performance and employment. In Chapter 4, we examine the key human resources trends and issues that affect the sector, and in Chapter 5, we describe labour and skills strategies used by the sector. In Chapter 6, we provide recommendations and key takeaways for the sector and its stakeholders.

## Chapter 2: Canada’s Advanced Wood Manufacturing Sector Profile and Key Characteristics

### Chapter Summary

- Canada’s advanced wood manufacturing sector is mostly made up of small operations found across the country with a concentration of activity and enterprises in three provinces: Ontario, Quebec and British Columbia.
- The United States remains the top export destination for Canadian advanced wood products; however, the United Kingdom and Italy are promising export markets.
- Over the past decade, domestic demand for advanced wood products has been increasingly met by cheaper imports from the U.S., China, and Mexico.

### Defining the Sector

For the purpose of this report, the advanced wood manufacturing sector is defined as the sum of the activity in five different subsectors: wood windows and doors; other millwork; prefabricated buildings and other advanced wood products; wood kitchen cabinets and countertops; wood and upholstered furniture. Products are typically “manufactured in a factory setting then shipped to market for sale or to a building site for installation.”<sup>4</sup> We define these subsectors using Statistics Canada’s NAICS system.<sup>5</sup> Table 1 provides the definitions for each subsector and where appropriate, includes sample products for each subsector.

**Table 1**  
**Canada’s Advanced Wood Manufacturing Sector and Subsectors**  
 (Subsector, NAICS Code)

| Subsector   | NAICS Code | Sample Products   |
|---|------------|---|
| <b>Wood windows and doors</b>                                   | 321911     | - Wood windows<br>- Wood doors  |
| <b>Other millwork</b>   | 321919     | - Softwood/hardwood flooring<br>- Wood baseboards<br>- Wood stair work                            |
| <b>Prefabricated buildings and other advanced wood products</b> | 32199      | - Manufactured (mobile) home<br>- Prefabricated buildings<br>- Wood kitchenware<br>- Wood handles |

<sup>4</sup> R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 1.

<sup>5</sup> The North American Industry Classification System (NAICS) is part of a collaborative effort between the main statistical agencies in Canada, Mexico, and the United States and is the standard used for classifying business establishments by industry in the three North American economies. For more information, see Statistics Canada, *North American Industry Classification System (NAICS) 2012*.

| Subsector                              | NAICS Code                                   | Sample Products   |
|--|--|---|
| Wood kitchen cabinets and counter tops | 33711  | - Wood cabinets<br>- Wood counter tops  |
| Wood and upholstered furniture         | 337121, 337123,<br>337127, 337213,<br>337215 | - Wood office bookcase<br>- Wood shelving<br>- Wood bedroom furniture<br>- Factory/lab/hotel furniture<br>- Sofas |

Source: The Conference Board of Canada.

Findings from the research project’s human resources trends and issues survey are shared throughout this report and represent a sample population of the sector’s employers and stakeholders (n=185). The survey findings provide a snapshot of the challenges, issues and opportunities the sector faces. It should be noted, however, that the distribution of employer responses by subsector does not match the sector’s actual distribution in all cases.

Our survey responses were overrepresented in four of five subsectors: wood and upholstered furniture, kitchen cabinets, other millwork, and windows and doors. This is largely because the corresponding survey question allowed respondents to select multiple subsectors, where appropriate. Therefore, survey findings should be interpreted with some caution. Details of survey respondents are found in Appendix A.

## Size of Canada’s Advanced Wood Manufacturing Sector

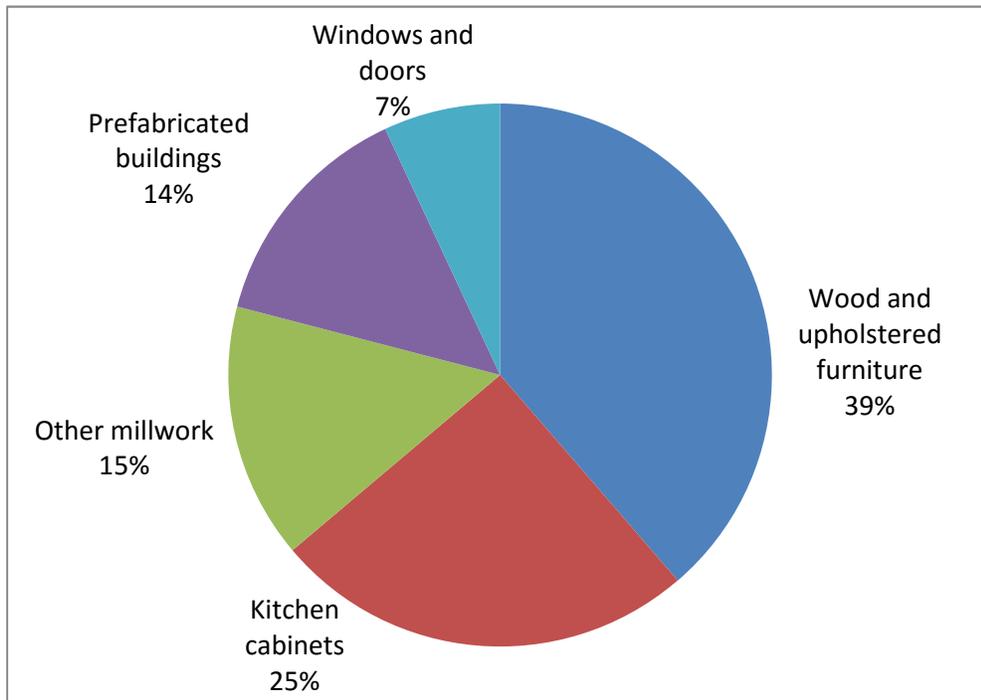
### Employment and Gross Domestic Product (GDP)

The advanced wood products manufacturing sector employed an estimated 88,000 workers in 2015. The furniture subsector was the largest employer, accounting for 39 per cent of employment, followed by kitchen cabinets at 25 per cent, and other millwork (e.g., flooring, baseboards and stairs) at 15 per cent of employment. (See Chart 1.)

The consistency of the sector has changed over time—addressing and adapting to the changing economy; global competition; currency rates; consumer demands; technology, machinery, and equipment. In the past ten years the furniture and window and doors subsectors have contracted in size and shrunk in importance while the kitchen cabinets and prefabricated buildings subsectors have grown. A key part of the changing consistency is that some subsectors have experienced declines in employment, while the level of employment in others has been more stable. (See Chart 2.)

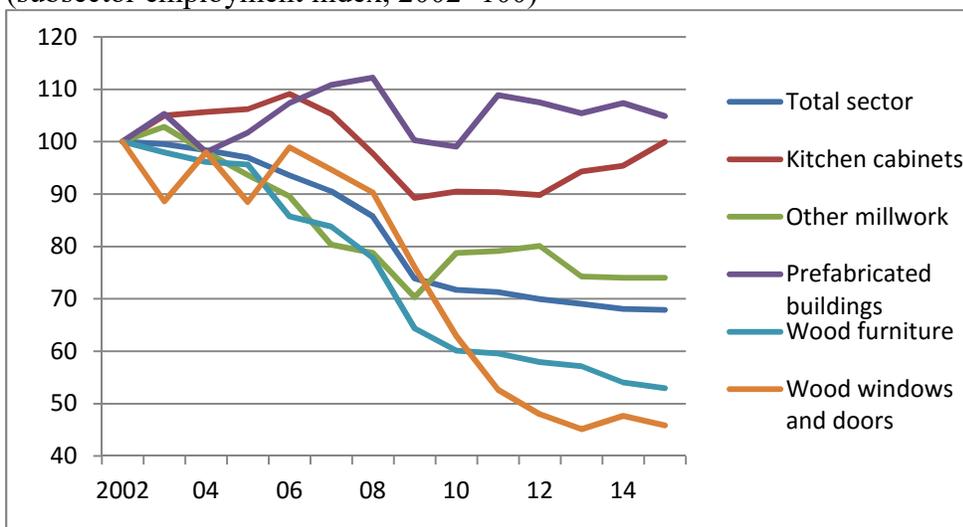
Broadly, the sector's GDP and employment have shrunk since peaking in 2002. As a result, the sector has seen its share of the Canadian economy shrink over time. For example, in 2015 the sector accounted for 0.4 per cent of Canadian GDP, down from 0.8 per cent in 2002. In addition, the sector’s share of Canadian employment has also been shrinking—losing just under a third of its workforce since 2002, accounting for 0.6 per cent of total Canadian employment in 2015, down from 0.8 per cent in 2002.

**Chart 1**  
**Wood Furniture Subsector is Largest Employer in Sector**  
 (share of total sector employment, per cent, 2015)



Sources: Statistics Canada; Conference Board of Canada.

**Chart 2**  
**Employment Performance Has Varied by Subsector**  
 (subsector employment index, 2002=100)



Sources: Statistics Canada; Conference Board of Canada.

In Chart 2, data from Statistics Canada shows an overall decline in the sector’s employment; however, it also shows modest employment growth in prefabricated buildings, kitchen cabinets, and

other millwork, from 2009 to 2015. When we surveyed employers about changes to their workforce in the past 5 years, 48 per cent of those that responded reported that they had experienced some growth. (See Chart 3.)

These increases contrast with 29 per cent of businesses that saw their workforces become smaller, and 22 per cent which saw no change in their workforce size. The increases shown by Statistics Canada data and by our survey correspond with our economic forecast, which predicts a gradual increase in the sector's employment until 2020.

In addition, Saine Marketing's 2015 study of Quebec employers notes that 42 per cent of respondents expected their workforce to grow in 2015, while 49 per cent expected relative stability. Only 9 per cent of respondents expected their workforces to decrease in size.<sup>6</sup> This contrasts with results from 2014, which show that 46 per cent of employer respondents reduced their workforces—through layoffs or dismissals—in the 12 months preceding the survey. Many layoffs came in production-related positions, and a significant majority of layoffs were temporary (55 per cent) or seasonal (18 per cent). Quebec employers cite a loss of production, organizational restructuring, and the sector's seasonal nature as common reasons for layoffs.<sup>7</sup>

Our survey results show that smaller-sized advanced wood manufacturing businesses are less likely to see their workforce numbers increase. For example, only 27 per cent of businesses with 2-9 employees saw their workforce increase in size. This figure is higher in Quebec, where 41 per cent of businesses with fewer than 10 employees saw their workforces grow in 2014.<sup>8</sup>

In contrast, 55 per cent of businesses with 10-49 employees, and 54 per cent of businesses with 100-499 employees saw their workforce numbers increase. In Quebec, 47 per cent of businesses with 10-49 employees, and 46 per cent of businesses with 50 or more employees, saw their workforces grow in 2014.<sup>9</sup> It is possible that some employment losses, captured by Statistics Canada data in Chart 2, occurred in less successful businesses. Due to the attention required to ensure they continue operating, these businesses may have less time to participate in a survey such as ours. It is also possible that some of these businesses were forced to cease operations, making them unable to complete our survey.

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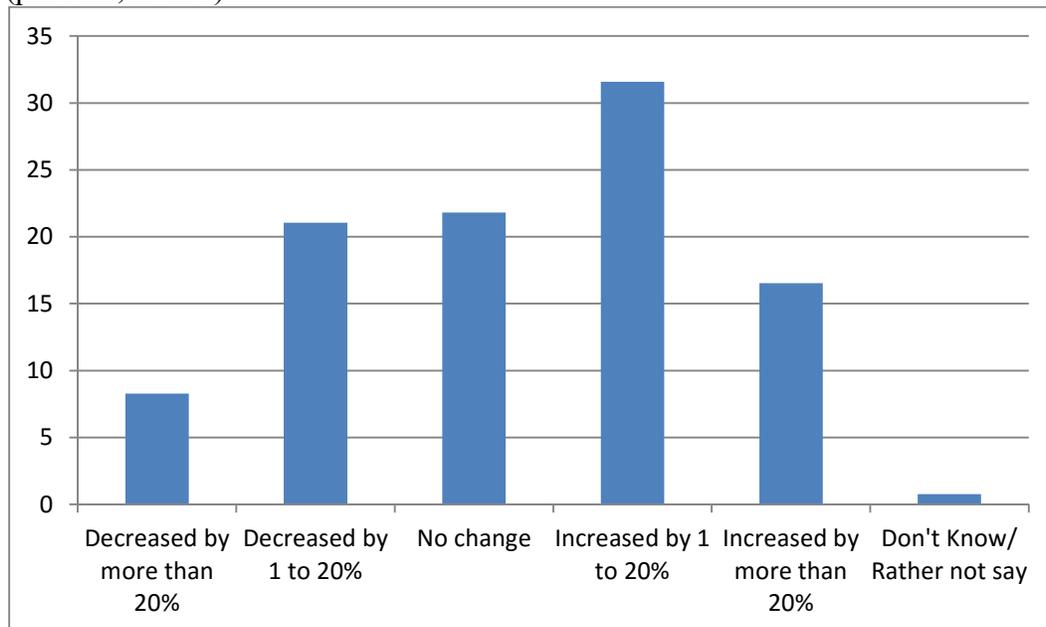
<sup>6</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 15-16.

<sup>7</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 28.

<sup>8</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 25.

<sup>9</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 25.

**Chart 3**  
**Changing Size of Operations in Canada's Advanced Wood Manufacturing Sector**  
(per cent, n=133)



Source: The Conference Board of Canada.

### **Trends and Issues That Affect Canada's Advanced Wood Manufacturing Sector**

Several major issues contribute to the overall decline of the advanced wood manufacturing sector in the past decade. These issues include:

- increases in imports from low cost countries into Canada and the U.S., primarily from China;
- North American consumers' choice to purchase cheaper imported products over higher quality and more expensive domestic products;
- the rising value of the Canadian dollar—reducing the competitiveness of Canadian manufacturers;
- the U.S. housing market collapse and its subsequent slow recovery (the majority of Canadian exports are destined for the U.S. market); and
- technological advances that have increased worker productivity and reduced the demand for labour.

Employer respondents to our survey point to current economic and market conditions, the price of inputs, the fluctuating Canadian dollar, changes in technology, and the demand for new products and services as the top five trends and issues affecting their operations. Less than fifty per cent of respondents feel that foreign competitors entering the Canadian market or the need for new and improved business models are affecting their operations to any great extent. (See Table 2.)

**Table 2**  
**Top Trends and Issues Affecting Canada’s Advance Wood Manufacturing Employers**  
 (per cent of respondents, n=160)

| Trend or Issue  | Extent of Impact on Operations |               |             |              |                    |
|---|--------------------------------|---------------|-------------|--------------|--------------------|
|   | No Extent                      | Little Extent | Some Extent | Great Extent | Some/ Great Extent |
| Current economic or market conditions                                   | 0                              | 4             | 29          | 67           | 96                 |
| Price of inputs   | 4                              | 13            | 50          | 32           | 82                 |
| Fluctuating Canadian dollar   | 6                              | 13            | 52          | 29           | 81                 |
| Changes in technology   | 5                              | 31            | 51          | 13           | 64                 |
| Demand for new products and services                                    | 5                              | 38            | 44          | 14           | 57                 |
| Changes in government policy  | 10                             | 34            | 42          | 14           | 55                 |
| Regulatory burdens  | 8                              | 37            | 36          | 19           | 55                 |
| Environmental issues  | 7                              | 39            | 41          | 14           | 54                 |
| Foreign competitors entering domestic market                            | 19                             | 33            | 34          | 15           | 48                 |
| Need for new and improved business models                               | 8                              | 44            | 41          | 7            | 48                 |
| Changes in government spending  | 16                             | 37            | 35          | 13           | 47                 |
| Lack of collaboration among organizations, associations and governments | 18                             | 39            | 29          | 14           | 42                 |
| Layoffs and closures  | 21                             | 40            | 30          | 9            | 39                 |
| Sector consolidation and restructuring                                  | 26                             | 47            | 27          | 19           | 27                 |

Source: The Conference Board of Canada.

### Responding to Changing Market Conditions

Several business owners we interviewed noted that changes in market conditions sometimes force businesses to adjust their product offerings.<sup>10</sup> When forced to make these changes, many business owners would rather manufacture and sell new products than change other elements of their operations, such as their brand or location.

Unless businesses adopt rigid production processes, few barriers prevent them from changing these processes to match changes in market conditions. If a local housing market experiences a downturn, for example, a kitchen cabinet maker may decide to temporarily produce custom millwork for large organizations or institutions. Several business owners we interviewed believe that barriers to adjustments in product offerings are particularly low for small and medium-sized businesses. These low barriers contribute to the sector’s capacity to respond to changes in market conditions.

Changes in product offerings also suggest that interpersonal networks are important for businesses in the sector, particularly for sales and marketing. Since some businesses change their product offerings without revising their promotional materials, these materials are not always useful for their customers. As such, businesses in the sector may rely on interpersonal

<sup>10</sup> See also Saine Marketing, *Sondage sur les besoins de main-d’oeuvre et de formation*, 49.

relationships to communicate changes in their product offerings instead of relying on formal marketing techniques.

### **Industry Concentration**

In 2015, the Canadian advanced wood manufacturing sector had approximately 5,300 enterprises. There are two main factors that potentially drive where these enterprises are located. First, is the availability of cut wood as an input into the production process; sources available nearby reduce input costs. The second is closeness to market and, since many of the industry's products are used in residential construction, this means proximity to major population centres. As a result, manufacturers are located most heavily in Ontario and Quebec, which have both sizeable sawmill industries and large populations. British Columbia and Alberta are also home to a sizeable number of firms. (See Chart 4.)

The advanced wood manufacturing sector is highly fragmented. Ninety-seven per cent of firms employ fewer than 100 workers.<sup>11</sup> This is true for almost all provinces except Manitoba (88 per cent) and New Brunswick (94 per cent). (See Chart 5.) These two provinces differ in that they have a higher share of medium sized firms (100 to 499 workers) and large sized firms (with 500+ workers). For example, two of the four largest advanced wood products manufacturing firms in Canada are located in Manitoba. Palliser Furniture, the largest furniture manufacturer in Canada, has approximately 600 employees at its Winnipeg plant.<sup>12</sup>

There are, of course, some exceptions as some segments have an above-average degree of concentration, including “manufactured (mobile) home manufacturing”, “prefabricated wood building manufacturing”, and “upholstered household furniture manufacturing”.

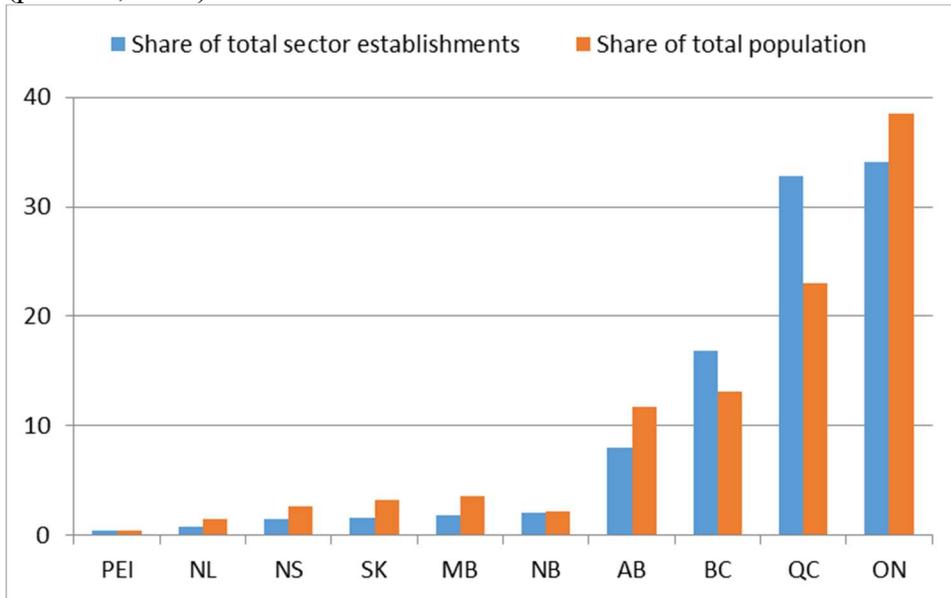
Industry concentration is the highest in the “manufactured home manufacturing” segment, where 28 per cent of enterprises employ more than 100 workers. Workers in this segment generally put together various pre-assembled components to “build” a mobile home in a large factory space. This manufacturing process often uses advanced computer technology to design customized products. As such, it requires significant capital investments which can increase the barriers to entry. Half of the manufacturers in this segment are located in Alberta and British Columbia, as heavy investment in oil and natural gas has supported demand for manufactured homes provided by companies for their employees.

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<sup>11</sup> Industry Canada defines the size of a firm based on the number of employees. Goods-producing firms are considered “small” if they have fewer than 100 employees, whereas for service-producing firms that cut-off point is 50 employees. The average for all goods-producing firms that hire fewer than 100 employees is 94 per cent. Therefore, any number, which is below 94 per cent, indicates an above average degree of concentration.

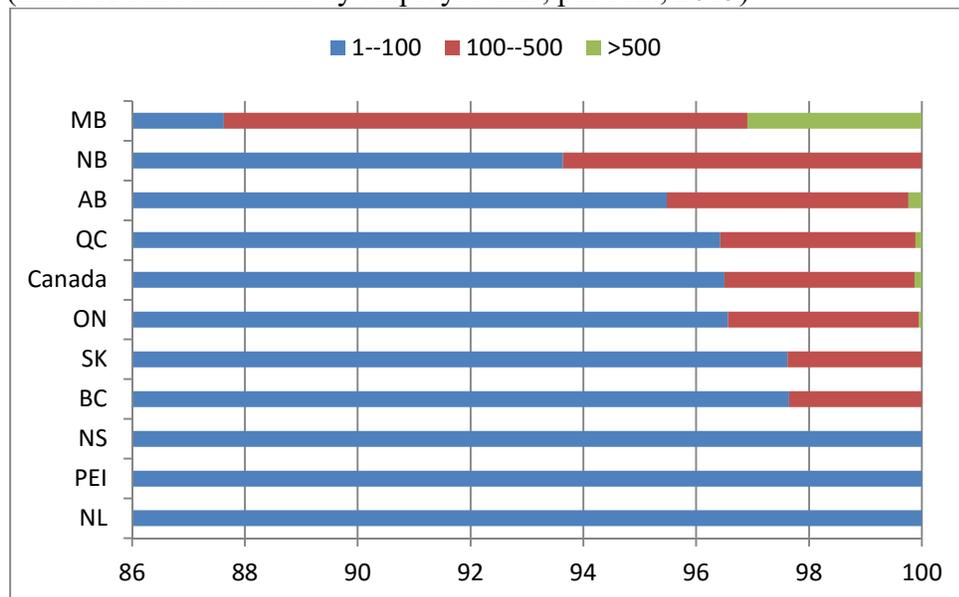
<sup>12</sup> Cash, *Palliser Goes Platinum*.

**Chart 4**  
**Enterprises in the Sector Are Concentrated in Four Provinces**  
 (per cent, 2015)



Sources: Statistics Canada; The Conference Board of Canada.

**Chart 5**  
**The Advanced Wood Manufacturing Sector Is Highly Fragmented**  
 (share of establishments by employee size, per cent, 2015)



Sources: Statistics Canada; The Conference Board of Canada.

## Economic Profile

This section examines critical factors that affect Canada's advanced wood manufacturing sector's economic performance. In particular we look at export and import trends; the rise of global competition for market share; product prices; and the costs of labour and commodities.

### Exports

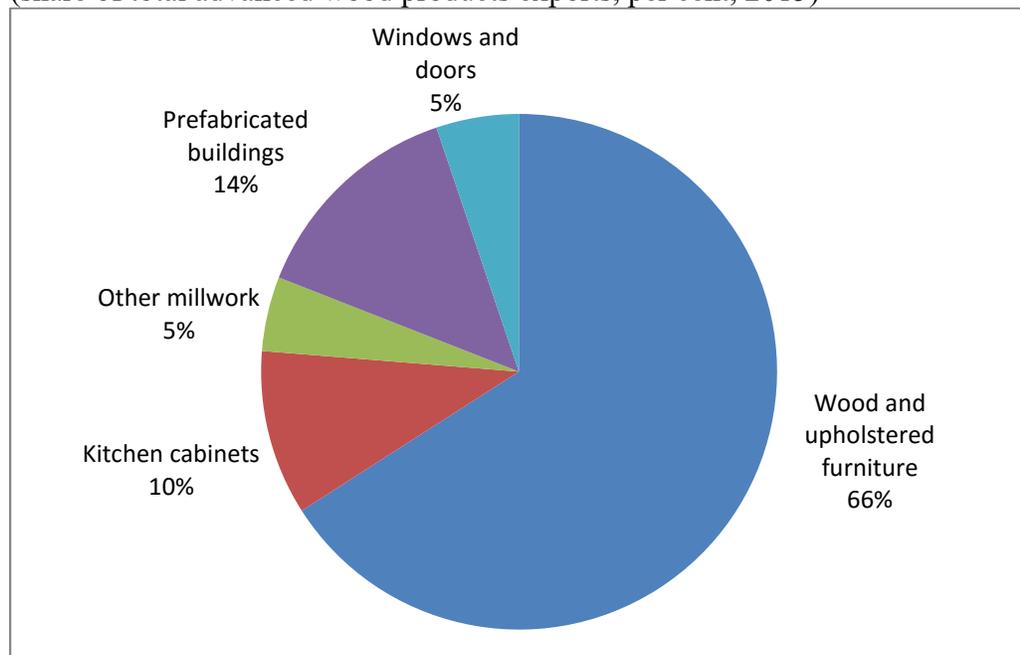
Exports of advanced wood products peaked in 2002 at \$8.3 billion. By 2009, the value of exports had dropped to \$3.5 billion. However, since then, exports have staged a solid rally, recovering to \$5.9 billion by 2015 - their highest levels since 2007. The main driver of the sector's export performance is the wood furniture subsector. It accounts for two thirds of the sector's exports. (See Chart 6.)

Foreign markets made up more than a third of sector sales in 2015. The wood furniture subsector has the highest degree of export dependency, with exports representing 54 per cent of sales. This is followed by prefabricated buildings at 36 per cent, windows and doors (24 per cent) and kitchen cabinets (21 per cent). Lower export dependency from the latter two subsectors reflects the build to order nature of many of their products. When combined with the fact that long distance shipping of these products can be cost prohibitive due to their weight and bulk, particularly when assembled, as well as the need to accommodate differences in regional building codes, the result is that these industries are more likely to be regional rather than international.

### Chart 6

#### Advanced Wood Products Exports by Subsector

(share of total advanced wood products exports, per cent, 2015)



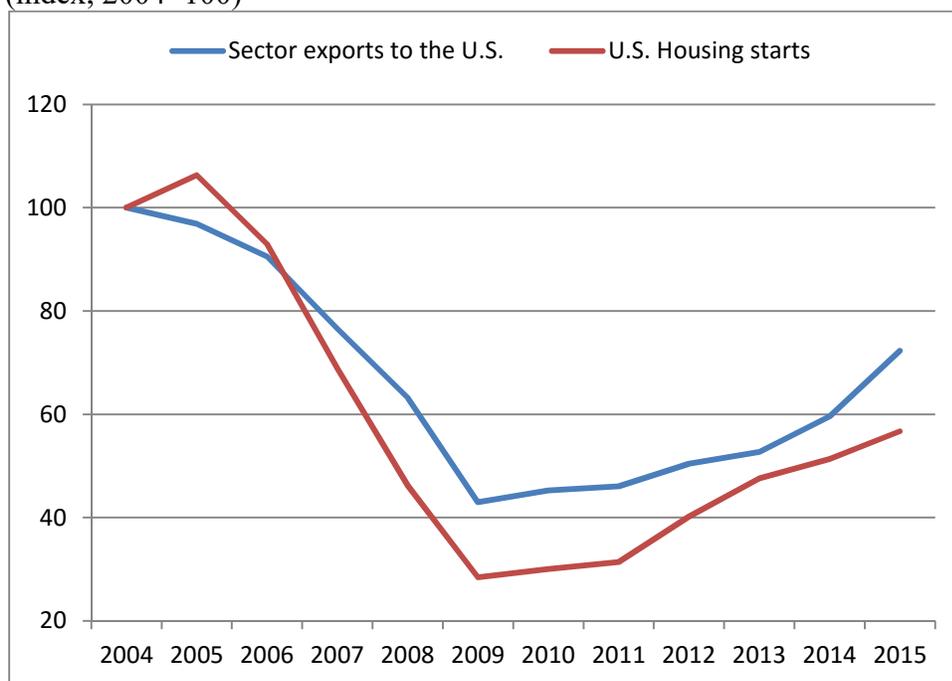
Source: Industry Canada.

The “other millwork” subsector has the lowest degree of export dependency at 9 per cent. This is because many of its finished products are used for interior decoration; thus, they are often assembled by local individual carpenters/craftsmen directly on building sites.<sup>13</sup>

The U.S. remains the dominant export market for Canadian advanced wood products. More than 90 per cent of the sector's foreign sales were to the U.S. in 2015. The value of advanced wood product exports to the U.S. is estimated at \$5.4 billion. Canadian exports of advanced wood products to the U.S. are closely linked to the health of the U.S. housing market. (See Chart 7.)

Although the U.S. remains the main destination for the sector's exports, the sector has been gradually diversifying its export markets. As recently as 2004, the U.S. share of its exports was 95 per cent. For example, the U.K. and Italy are promising export markets for advanced wood products from Canada. Together the value of exports to these two countries reached \$276 million in 2015, an increase of 280 per cent from the beginning of the decade. In particular, wood products such as shoe trees, ladders, and kitchenware, which all belong to the all other miscellaneous wood products manufacturing subsector, have experienced dramatic increases in exports to these countries.

**Chart 7**  
**Sector Exports Are Closely Linked to U.S. Housing Demand**  
 (index, 2004=100)



Sources: Industry Canada; U.S. Census Bureau; The Conference Board of Canada.

<sup>13</sup> Agarwal and Shang, *Analysis of Canadian Wood Export to India and China*, 35.

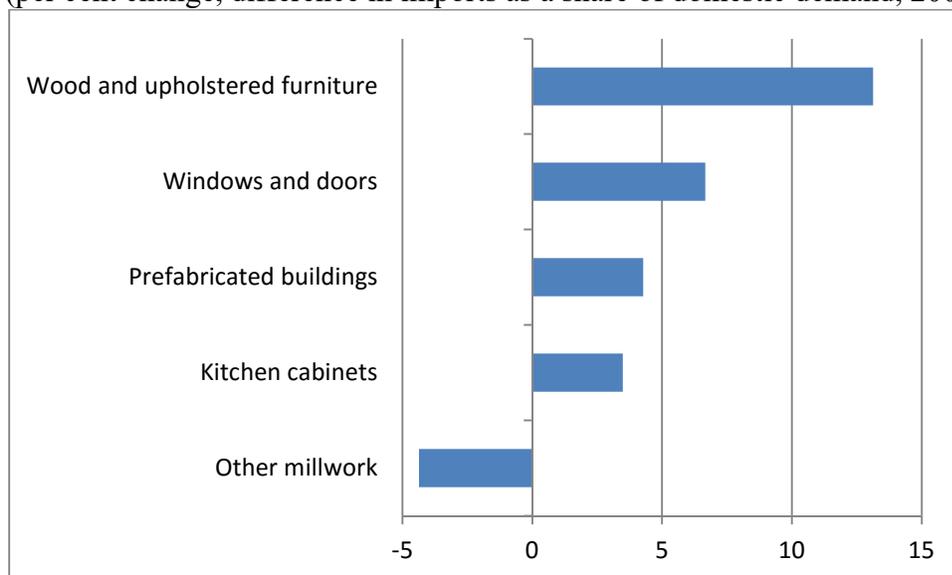
## Imports

Over the last decade, domestic demand for the sector's products has been increasingly met by imports. (See Chart 8.) Even the recent depreciation of the Canadian dollar, which supports the price competitiveness of domestically made advanced wood products, has done little to stem the tide of rising imports. The wood furniture subsector has witnessed some of the fastest growth in imports, with imports rising by roughly 11 per cent in 2015. This is not surprising given that this subsector is also the one most highly exposed to trade. As well, household furniture generally offers little or no customization for consumers and thus can be more easily replaced by similar import models.<sup>14</sup>

### Chart 8

#### Import Penetration Rises the Fastest in the Wood Furniture Subsector

(per cent change, difference in imports as a share of domestic demand, 2006-2015)



Sources: Industry Canada; Statistics Canada; The Conference Board of Canada.

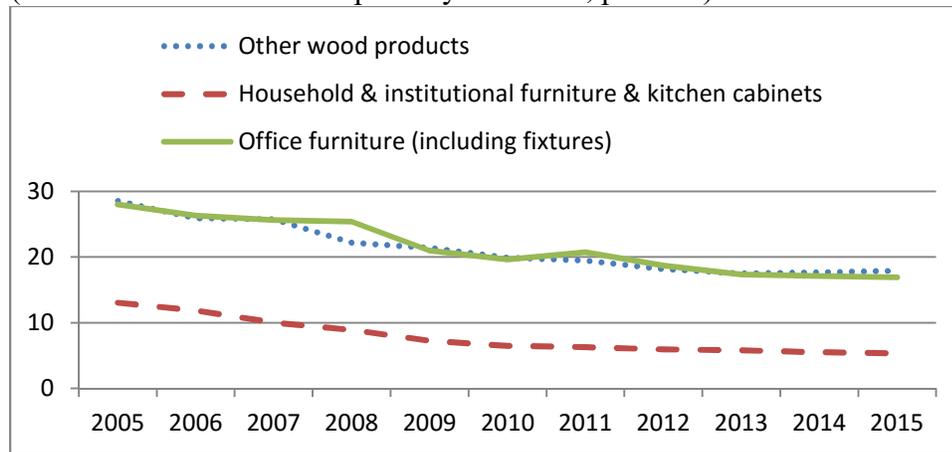
Canadian imports of advanced wood products come mainly from three countries: the U.S., China, and Mexico. While the U.S. remains the largest source of Canadian imports (accounting for 36 per cent), China is a growing source of imports. From 2004 to 2015, the share of advanced wood products imports coming from China has risen from 21 per cent to 30 per cent. Mexico's share changed little over the same time period.

Chinese producers have also been capturing market share in the U.S. at the expense of Canadian producers, as seen by the steady decline in Canada's share of the U.S. import market. (See Chart 9.) Vietnam is also emerging as an important supplier for advanced wood products. Falling tariffs rates are one of the factors that has made the U.S. import market more competitive. The end result is that many advanced wood products from emerging markets can now enter the U.S.

<sup>14</sup> Torsten, Buehlmann, and Beauregard, *Mass Customization as a New Competitive Strategy for North American Wood Furniture Enterprises*, 2.

duty-free.<sup>15</sup> The loss of Canadian market share in the U.S. import market varies by subsector. (See Chart 10.) Together, China and Vietnam have more than made up for Canada’s decline in the other wood product manufacturing and household and institutional furniture, and kitchen cabinet and countertop subsectors. As well, Vietnam has single-handedly made up for the majority of Canada's decline in the office furniture subsector.

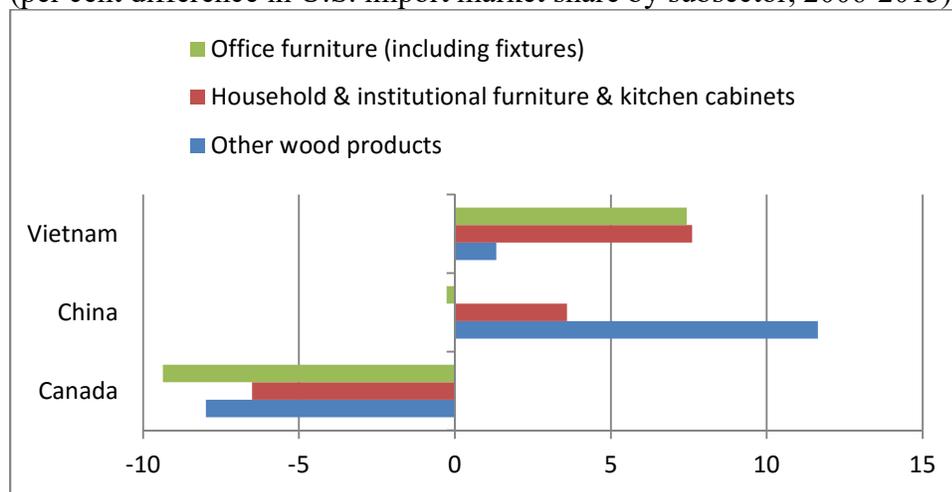
**Chart 9**  
**Canada’s Market Share in the U.S. Is Shrinking**  
 (Canada’s share of U.S. imports by subsector, per cent)



Source: U.S. Department of Commerce.

\*Note other wood products include the wood window and doors, other millwork, and prefabricated buildings subsectors.

**Chart 10**  
**China and Vietnam Are Major Sources of Competition in the U.S. Market**  
 (per cent difference in U.S. import market share by subsector, 2006-2015)



Source: U.S. Department of Commerce.

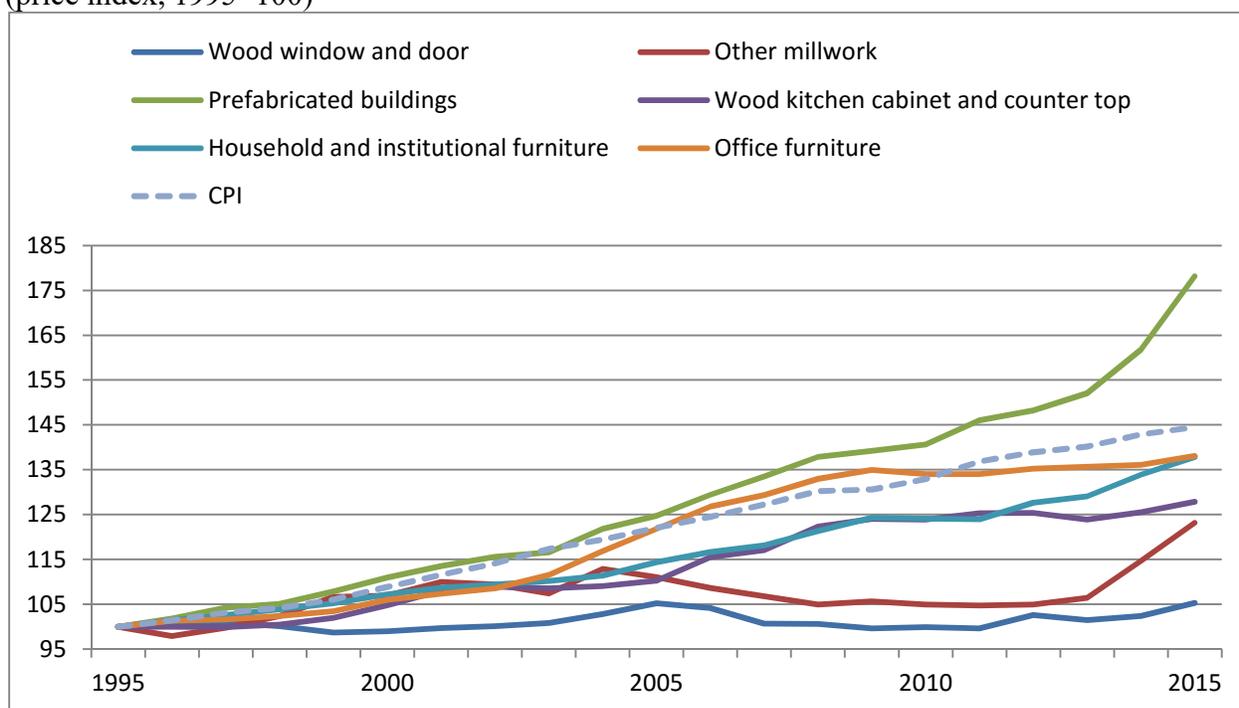
\*Note other wood products include the wood window and doors, other millwork, and prefabricated buildings subsectors.

<sup>15</sup> Harris, *U.S. Department of Commerce Industry Report*, 1.

### Poor Product Price Appreciation in the Sector

Generally, sector manufacturers only have a limited ability to pass higher costs on to customers. In the past 20 years, product prices in the advanced wood products manufacturing industry have increased at a slower rate than the Consumer Price Index (CPI) for every major subsector except one, prefabricated buildings. (See Chart 11.) In the case of the wood window and doors sector, prices today are little different than they were in 1995. Over the same period, the CPI has increased by 45 per cent.

**Chart 11**  
**Product Prices for Majority of Subsectors Rise at a Slower Pace than Inflation**  
 (price index, 1995=100)



Sources: Statistics Canada; The Conference Board of Canada.

Two key factors contribute to the sector's generally weak price appreciation:

- First, both domestic and foreign demand for advanced wood products has dropped significantly in the past decade. Typically, when demand is weak, manufacturers are under pressure to maintain sales volumes and compete vigorously on price, therefore contributing to weak price appreciation.
- Second, many of the sector's products are not highly differentiated, which further increases competitive pressures. For example, wood window frames can be substituted with windows framed in vinyl or aluminum, often for a considerably lower price than comparable wood-frame versions.<sup>16</sup> Other products, such as wood household furniture, can be easily copied and produced by multiple manufacturers. Consequently, if companies in the sector set their product prices too high, consumers will just substitute for cheaper alternatives.

<sup>16</sup> Donegan, "Clear Choices for Windows."

## Sector Input Costs

There are two major inputs into the sector’s production process. The first major input is wages and salaries paid to labour which can account for more than 30 per cent of total input costs in some subsectors. In comparison, labour costs, on average, represent one-fifth of total input costs in all industries. (See Chart 12.) This share is particularly high in some of the more labour intensive subsectors, such as household furniture manufacturing. This is because low volumes limit the ability to standardize and mechanize the assembly process.

**Chart 12**  
**Labour Share of the Sector's Costs Is High**  
 (per cent, share of total input costs, 2011)



Source: Statistics Canada.

\*Note other wood products include the wood window and doors, other millwork, and prefabricated buildings subsectors.

Wood products are the second major input used in the sector. In particular, wood products are used most often in the other wood product manufacturing segment (which includes the wood window and doors, other millwork, and prefabricated buildings subsectors), accounting for 24 per cent of total input costs. As such, price fluctuations for wood products, such as lumber and panelling, can have a big impact on the subsector’s costs. Strong competition from alternative products which use different material inputs, such as plastics and metals, means that manufacturers of advanced wood products cannot always pass along any material price increases to customers. As a result, they may instead face tighter margins.

## **Conclusion**

Canada's advanced wood manufacturing sector is made up of mostly small operations concentrated in Ontario, Quebec, and British Columbia. A large majority of the sector's estimated 88,000 employees are concentrated in the furniture, kitchen cabinets, and other millwork subsectors. Overall, the sector has seen a gradual decrease in employment and GDP since 2002. This decline is attributed to several major trends and issues, which include increased imports of low cost products from the United States, China, and Mexico, the fluctuating Canadian dollar, advances in technology, and the collapse of the U.S. housing market. Decreases in domestic and foreign demand, and a lack of product differentiation, contribute to a generally weak price appreciation in the sector. Labour costs account for a high percentage of the sector's input costs, particularly in labour-intensive subsectors such as household furniture manufacturing.

## Chapter 3: Workforce Profile and Demand Outlook of Canada’s Advanced Wood Manufacturing Sector

### Chapter Summary

- Salaries and wages in the advanced wood manufacturing sector are below the national average for manufacturing industries.
- The sector’s workforce is aging and predominately male.
- Ontario and B.C. are expected to benefit the most from healthy growth in local demand and rising exports.
- Canada’s advanced wood products sector can expect to see average annual gains in employment of 1.7 per cent between 2015 and 2020 (approximately 7,900 new jobs). However, sector employment will still be 14 per cent below where it stood in 2008, prior to the financial crisis.

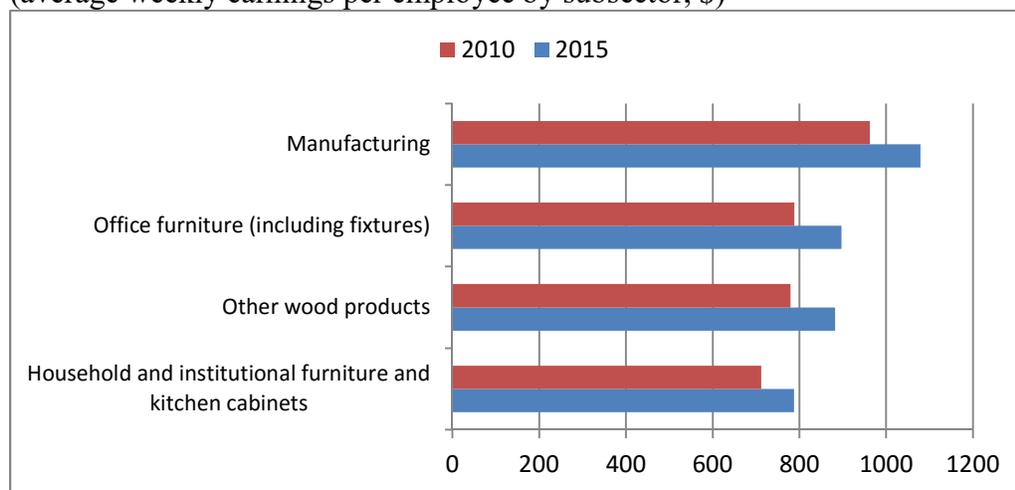
### Workforce Profile

#### Sector Earnings

The average weekly earnings<sup>17</sup> in the advanced wood products manufacturing sector is consistently lower than for the manufacturing sector as a whole. (See Chart 13.) Even the average earnings of the highest paying subsector, office furniture manufacturing, is below average. This affects the sector’s ability to attract new workers and to retain existing ones, as firms in the sector may lose workers to other manufacturing industries that offer a better pay.

**Chart 13**

**Earnings in the Advanced Wood Products Manufacturing Sector Are Below Average**  
(average weekly earnings per employee by subsector, \$)



Source: Statistics Canada.

<sup>17</sup> Statistics Canada defines earnings data based on gross taxable payroll before source deductions. Average weekly earnings are calculated by dividing total weekly earnings by the total number of employees.

### An Aging Workforce

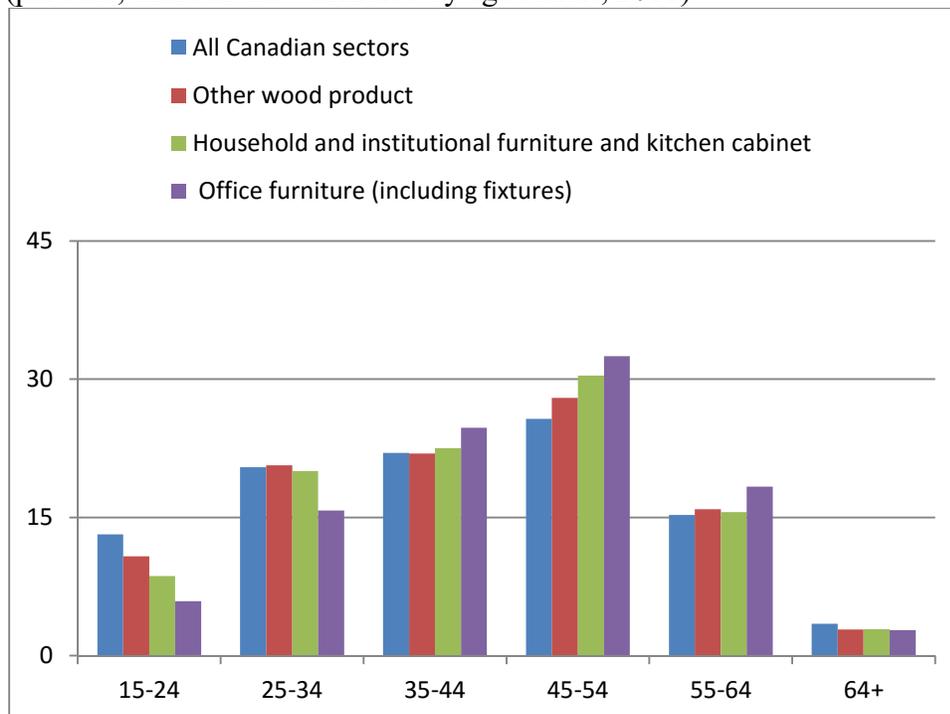
The workforce in the advanced wood products manufacturing sector is older than the Canadian average for all sectors. For example, the 45-54 age cohort makes up more than 30 per cent of the sector’s workforce, compared to 26 per cent for all other industries in 2011. (See Chart 14.)

In the next decade, the sector will experience significantly higher than average retirement rates. This is apparent when we look at the share of the workforce currently in the 55-64 age cohort. Approximately 17 per cent of the sector’s workforce belongs to this cohort, compared to 15 per cent for all industries. As older workers retire, much of their tacit knowledge, skills, and expertise leave with them. Thus, the sector will need to replace those retirees (along with their knowledge, skills, and expertise) and may face a shortage of experienced personnel.

**Chart 14**

#### The Sector’s Workforce Is Older than Average

(per cent, share of the workforce by age cohort, 2011)



Source: Statistics Canada.

\*Note other wood products include the wood window and doors, other millwork, and prefabricated buildings subsectors.

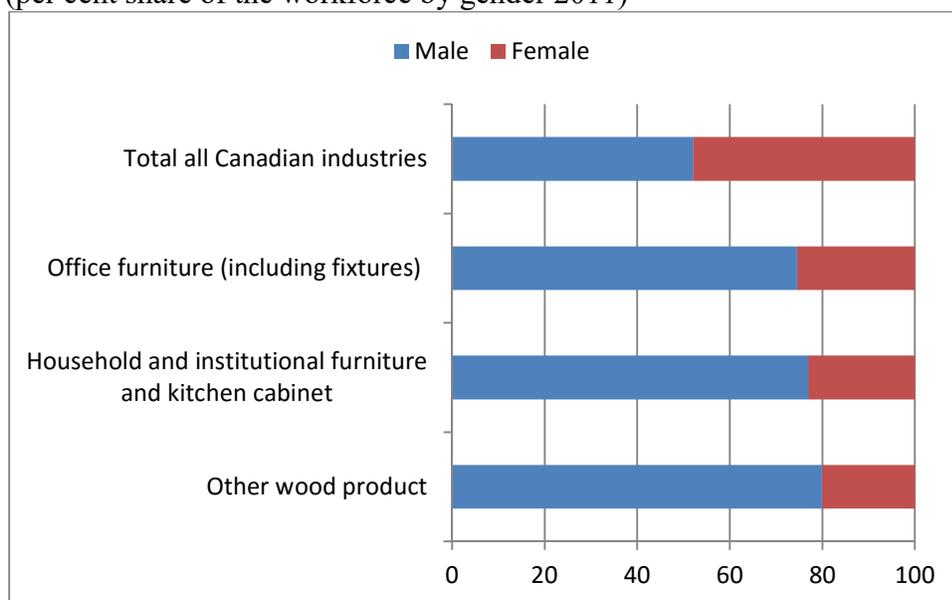
### A Male Dominated Sector

The advanced wood manufacturing sector has a gender imbalance issue as workers in the sector are predominately male. This is not good for the sector. Whereas female workers account for a significant proportion of labour force growth in the overall economy they remain a consistently underrepresented cohort within the advanced wood manufacturing sector. One advanced wood manufacturer noted that “we value female workers highly, but like in most shops, they are in the minority by far.” Across the entire sector and its subsectors male workers overwhelmingly make

up the bulk of the workforce (77 per cent compared to 52 per cent for the Canadian workforce as a whole).<sup>18</sup> (See Chart 15.) Male workers account for:

- 80 per cent of the wood windows and doors, other millwork, and prefabricated buildings and other advanced wood products workforce;
- 77 per cent of the workforce in the household and institutional furniture, and kitchen cabinet and countertop subsector;
- 75 per cent of the office furniture and fixtures workforce.<sup>19</sup>

**Chart 15**  
**Male Workers Make Up The Majority of the Sector’s Workforce**  
 (per cent share of the workforce by gender 2011)



Source: Statistics Canada.

\*Other wood products include wood window and doors, other millwork, and prefabricated buildings subsectors.

Many of the employers and industry stakeholders we interviewed suggested that low female participation rates could be on account of the perception that the sector’s workplace cultures are male dominated and unwelcoming to women. A recent sector study found that while a majority of female workers feel their current employers offer good places to work (91 per cent) and provide equal opportunities for training (77 per cent) and advancement (71 per cent) three-quarters of women workers also indicated that they face challenges in their careers, including:<sup>20</sup>

- lack of female role models (69 per cent);
- harassment and discrimination (64 per cent);
- unwelcoming atmosphere (49 per cent);

<sup>18</sup> Statistics Canada.

<sup>19</sup> Statistics Canada.

<sup>20</sup> Sable Ridge Consulting, *Advancing Women in the Advanced Wood Processing Sector*, 13-15, 17.

- few advancement opportunities (44 per cent);
- pay inequality (44 per cent).

While many of the employers we interviewed indicated that reducing barriers to female participation in the advanced wood manufacturing sector is a priority, very little is likely to change without the concerted efforts of employers, industry representatives, educators, and government working together. (See textbox: Mentoring Women in the Advanced Wood Manufacturing Sector.)

### **Mentoring Women in the Advanced Wood Manufacturing Sector**

Entry barriers exist for many women wanting to pursue non-administrative careers in the advanced wood manufacturing sector. Sable Ridge Consulting's 2015 report, *Advancing Women in the Advanced Wood Processing Sector*, also notes that women workers in core occupations such as assembling, finishing and machine operating often feel subject to undue scrutiny by their male colleagues (especially when they make "rookie mistakes").

However, opportunities exist to better integrate women workers in the sector, improve upon workplace dynamics, and help women workers achieve their career aspirations.<sup>21</sup>

#### **Mentoring Matters**

Mentoring is an effective way to support women workers at various stages of their careers, including:<sup>22</sup>

- While in school—by helping female students learn about the sector and the skills, attitudes, and behaviours needed to succeed; providing insights on the range of occupations and job opportunities available and the different workplace cultures they may encounter.
- When transitioning into the workplace—by providing women workers on-going support when entering new careers, helping overcome feelings of isolation, and providing guidance when dealing with day-to-day pressures and workplace issues.
- When transitioning into supervisory/management positions—by providing women workers with female role models; sharing their experiences and insights on the leadership skills needed to succeed; and providing women workers with the tools, techniques and know-how to manage difficult situations and challenging environments.

For more information on the value mentoring provides women in the advanced wood manufacturing sector, and recommendations on a proposed mentoring program, see: *Advancing Women in the Advanced Wood Processing Sector (Final Report)*.

<sup>21</sup> Sable Ridge Consulting, *Advancing Women in the Advanced Wood Processing Sector*, 20-31.

<sup>22</sup> Sable Ridge Consulting, *Advancing Women in the Advanced Wood Processing Sector*, 24.

## **Employment Demand Outlook for Canada's Advanced Wood Manufacturing Sector and Subsectors (2015-2020)**

This section examines the employment demand outlook for the Canadian advanced wood manufacturing sector by subsector and province. The forecasts are generated by linking key economic indicators with the sector's historical employment performance. The forecasts for the economic variables then drive the sector's employment outlook. The key indicators that drive labour demand vary somewhat by subsector, but some common factors include:

- U.S. housing starts;
- exchange rates;
- Canadian housing starts;
- residential renovation spending;
- residential investment;
- non-residential investment; and
- household expenditures on key manufactured wood products such as wood furniture, doors, floors, kitchen cabinets, countertops.

### **Macroeconomic Environment**

The economic forecast used to generate the outlook for the advanced wood products sector was created in April of 2016 using all available information at that time. In general, the Canadian economy appears to be gaining traction to start the year, as solid export growth is helping to offset the slump in investment in oil-producing regions. In contrast, the U.S. economy started the year on a weak note, as economic output growth slowed in the opening months of the year. However, the outlook for the economic indicators that are most pertinent to the advanced wood products sector remains healthy.

In the U.S., the housing market continues to recover and still has considerable room for improvement. Based on the strength of strong employment gains, U.S. housing starts reached 1.1 million units at an annualized pace in March, compared with 954,000 a year earlier. While healthy, this is still well below what could be considered normal. Furthermore, permits for future home construction reached a one-year low in March, indicating a possible cooling in the housing market in the near term. Nonetheless, U.S. housing starts are still expected to steadily rise in the coming years, reaching 1.3 million units in 2016 and 1.8 million units by 2018. This pace of building is in line with the demographic needs of the U.S., where the population rises by about 2.4 million people every year. This is generally very positive news for Canadian exporters of advanced wood products.

Exports of advanced wood products will be further boosted by the weaker Canadian dollar. The drop in oil prices has dealt a big blow to the Canadian dollar. As well, the divergence in monetary policy between the U.S. and Canada has not helped the loonie. By making Canadian advanced wood products less expensive and thus more competitive abroad, a weak dollar will benefit the sector. The Canadian dollar is expected to gradually strengthen over the next few

years, but it will remain below 0.85 C\$/US\$. As such, the competitive position of advanced wood products exporters will remain much better than it has been over much of the previous decade.

In Canada, the outlook for growth in home related spending is much more modest. Housing demand is actually expected to ease over the next few years, the result of rising mortgage interest rates, inflated house prices, and highly indebted consumers. Canadian housing starts will fall from 196,000 units in 2015 to 184,000 units in 2016, and will only begin to recover in 2018. Still, the market will retain sufficient strength to avoid a serious correction, and we expect a soft landing.

However, the weakness at the national level is not prevalent in all regions of the country. In fact, the current economic weakness is largely confined to the major oil producing economies (Alberta, Saskatchewan, and Newfoundland and Labrador). Economic growth in British Columbia and Central Canada has fared much better, and they will continue to outperform in the next two or three years. Longer term, Western Canada is expected to return to its position as Canada's growth leader thanks to its favourable demographic trends, including a younger than average workforce and a strong pace of immigration.

### **The Outlook for Advanced Wood Manufacturing Employment**

The forecasting results include employment levels and growth rates by subsector at both the national and provincial level from 2015 to 2020. The advanced wood products sector is expected to average annual gains in employment of 1.7 per cent over this period, resulting in an increase in sector employment of roughly 7,900 jobs. (See Appendix B for details.) While significant, it is important to put this increase into context: by 2020 we expect sector employment will still be 14 per cent below where it stood in 2008, prior to the financial crisis.

On a regional basis, the strongest job gains will occur in Ontario (3,300 jobs between 2015 and 2020), British Columbia (2,000 jobs), and Quebec (1,900 jobs). Both Ontario and British Columbia are expected to benefit from healthy growth in local demand and rising exports. The sector has the largest footprint in Quebec, thus labour demand will rise there as well, but growth in Quebec will be limited by the weaker demographic conditions in that province. Most of the other provinces will experience smaller job gains, but small declines in employment are expected in Newfoundland and Labrador and Alberta.

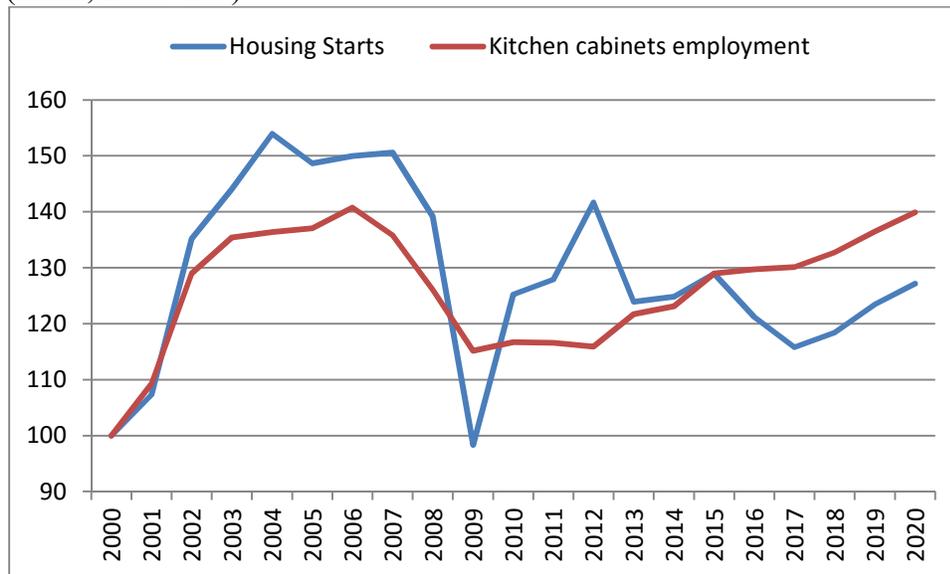
The remainder of this chapter looks at employment demand outlooks for each of the advanced wood manufacturing subsectors.

#### ***Kitchen Cabinets: Labour Demand Outlook***

The employment demand outlook for the kitchen cabinets subsector is tied to domestic residential renovation spending and new residential construction activity due to the domestic orientation of this subsector. Canadian kitchen cabinets manufacturers were able to take advantage of fast growing residential renovation spending and construction activity from 2000 to 2007 with strong sales growth. However, the subsector was negatively impacted by the global financial crisis in 2008 and 2009 which resulted in a drop in new residential construction activity. (See Chart 16.)

**Chart 16**

**Weaker Housing Starts To Dampen Near-Term Employment Growth in Kitchen Cabinet Sub-Sector**  
(index, 2000=100)



Sources: Statistics Canada; Canada Mortgage and Housing Corporation (CMHC).

Housing starts in Canada have partially recovered from the effects of the recession but they remain well below where they stood in the mid-2000s. What is more, construction activity has shifted towards multi-family units post-recession. This negatively impacts demand for kitchen cabinets and countertops as the kitchens in these units are smaller on average than in single family units.

Canadian housing starts are expected to weaken modestly in the near term, as consumer debt burdens are high and housing affordability is deteriorating. We do not expect an improvement in home building activity until the outlying years of the forecast. As well, the pattern of smaller homes being built in Canada is expected to continue. As a result, employment in this subsector will be little changed through 2017 (averaging 22,300 jobs), with modest gains expected at the end of the forecast period.

Discussion of the national employment outlook in the kitchen cabinets subsector masks the significant local variations which underpin it. In particular, regional housing starts are largely influenced by local job markets and their resulting migration flows. Quebec (27 per cent), Ontario (27 per cent), Manitoba (15 per cent), British Columbia (14 per cent), and Alberta (11 per cent) combined account for more than 93 per cent of the subsector’s employment, so we will focus on the performance in these markets.

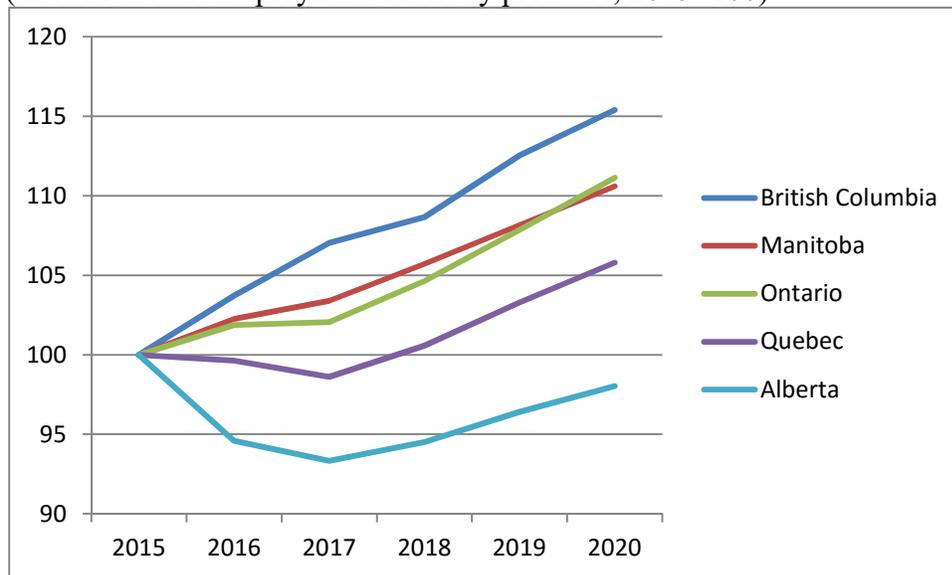
We expect that Ontario, Manitoba, and British Columbia will experience the strongest employment gains in the kitchen cabinets subsector thanks to their high levels of immigration and the impact this has on demand for housing. (See Chart 17.) In contrast, employment growth in Quebec is expected to be more modest over the forecast period as the province will continue to struggle with weak population and economic growth. Alberta is expected to experience

modest employment declines, particularly in the near term, as the province’s economic and housing market outlook has been dampened by the fall in oil prices.

**Chart 17**

**Kitchen Cabinet Employment Growth Will be Strongest in British Columbia**

(kitchen cabinet employment index by province, 2015=100)



Source: The Conference Board of Canada.

**Other Millwork: Labour Demand Outlook**

Labour demand for the “other millwork” subsector is closely tied to domestic residential renovation spending. So the question becomes what factors affect home renovation spending? Existing home sales is one of the key determinants of expenditures on residential renovations, as home buyers usually undertake renovations to their recently purchased homes in order to make them better suit their tastes. In fact, one study estimates that after the purchase of a resale home, renovation expenditures accounted for more than 20 per cent of the total expenses related to buying a house, second only to MLS service fees.<sup>23</sup>

Another key factor driving renovation expenditures in the coming years will be the aging stock of Canadian homes. (See Chart 18.) For example, in 2011, about 64 per cent of Canada’s housing stock was at least 30 years old. This stock of housing will require significant ongoing repairs and remodelling and will thus be an important source of demand for millwork products such as dressed lumber and wood mouldings.

Improving renovation spending is expected to continue supporting employment growth within the other millwork subsector over the next few years. In recent years, growth in renovation spending was supported by modest household income growth and low interest rates, which improved affordability in the resale market. Going forward, slowing home price growth and a stable resale market are expected to continue supporting affordability, allowing for growth in

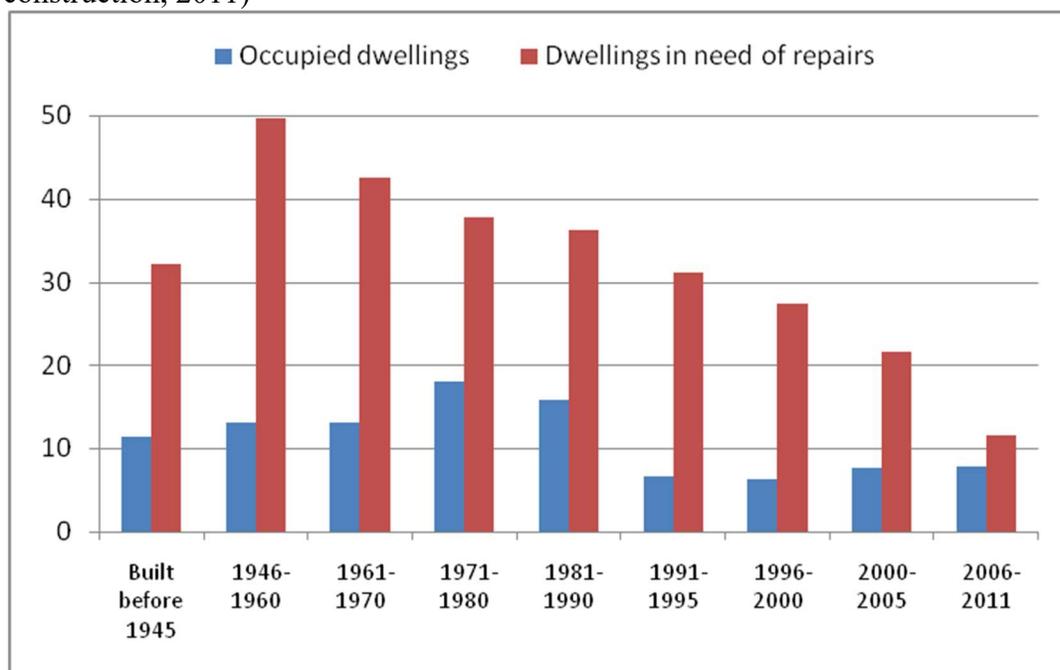
<sup>23</sup> Altus Group Economic Consulting, "Economic Impacts of MIS Home Sales and Purchases in Canada and the Provinces."

renovation spending. Thus, even with a gradual rise in mortgage rates, beginning towards the end of 2016, price adjusted renovation spending is expected to grow by an average 1.7 per cent annually from 2015-2020. All told, employment demand in the other millwork subsector will experience steady gains over the forecast period, averaging growth of 2.1 per cent per year between 2015 and 2020. As a result, sub-sector employment will rise from 13,400 in 2015 to 14,900 by 2020.

**Chart 18**

**Canada’s Aging Housing Stock Will Support Renovation Expenditures**

(per cent, share of total occupied dwellings and share of dwellings in need of repairs by period of construction, 2011)



Source: CMHC.

Three provinces, including Ontario, Prince Edward Island, and Nova Scotia, will experience above average growth in residential renovation spending which means that employment demand for the other millwork subsector should be stronger in those provinces. A growing stock of resale housing coupled with the slower pace of resale price inflation in Ontario over the forecast horizon should translate into market gains for existing homes over the new home sector.<sup>24</sup> Thus, a busy resale market will support demand for other millwork.

Prince Edward Island and Nova Scotia have different driving forces contributing to their residential renovation spending. These two provinces have large cohorts of adults aged 65 years and over. An older than average population means that there will be reduced housing turnover. Rather, they choose to stay in their existing homes and are unlikely or unable to trade up; consequently, they will be devoting more of their spending to home renovation.<sup>25</sup>

<sup>24</sup> Canada Mortgage and Housing Corporation, "Housing Market Outlook Canada Edition."

<sup>25</sup> Perkins, "Spending on Renovations Outpaces New Home Construction."

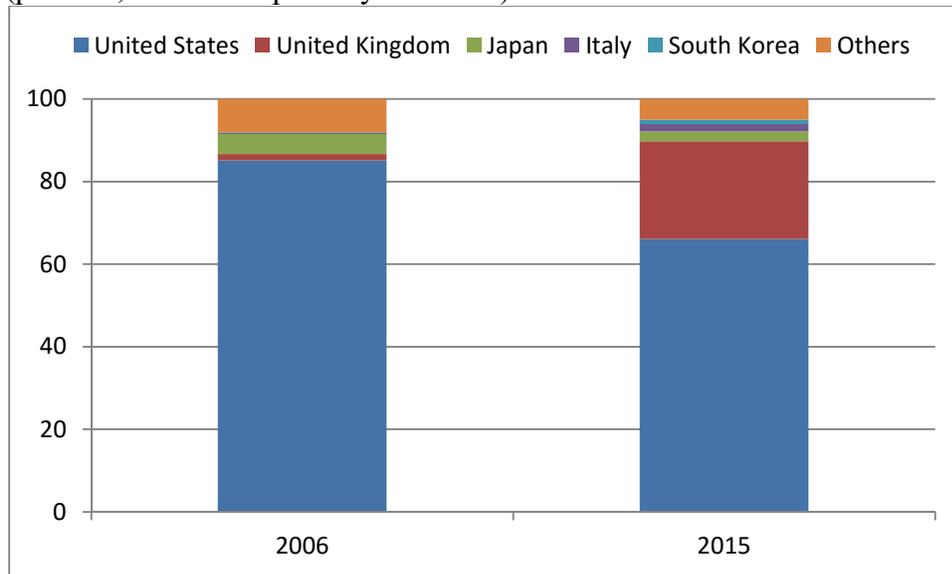
While Manitoba is not expected to experience above average growth in residential renovation spending, the province has benefited from several years of net in-migration and a segment of these newcomers will purchase a home, supporting the resale market and all of the accompanying downstream parties such as other millwork. This will support employment demand for the other millwork subsector within the province.

***Prefabricated Buildings: Labour Demand Outlook***

Labour demand for the prefabricated buildings subsector is set to experience modest growth throughout the forecast period, averaging gains of 1.1 per cent per year between 2015 and 2020. The drop in Canadian mining, oil and gas investment in 2015-16 will be a key factor detracting from the outlook, as this sector has been a key source of demand for prefabricated buildings.

On a positive note, manufacturers have successfully tapped into markets outside North America. For example, Canadian manufacturers have increasingly turned towards European countries such as the United Kingdom and Italy over the last decade. (See Chart 19.) Therefore, higher foreign sales should help to lift production and employment.

**Chart 19**  
**Reduced Export Dependency to the U.S.**  
 (per cent, share of exports by countries)



Source: Industry Canada.

Sales to these foreign markets will likely continue to grow given the fact that the general economic outlook remains positive in many of these countries. For example, according to the International Monetary Fund’s World Economic Outlook (April 2016), real GDP in South Korea is expected to increase 2.7 per cent in 2016.<sup>26</sup> As well, the U.K. economy is expected to expand 1.9 per cent in 2016.

<sup>26</sup> International Monetary Fund, *World Economic Outlook*, April 2016.

In addition to solid economic growth, a recently signed free trade agreement between Canada and these countries will also help to reduce trade barriers and lower import duties for prefabricated wood products. For example, the Canada – European Union Comprehensive Economic and Trade Agreement (CETA) will immediately eliminate existing tariffs on prefabricated wood buildings, which is assessed at 2.7 per cent from Canada into the EU.

Improved foreign market access will mostly benefit manufacturers in British Columbia, Quebec and Ontario since the 3 provinces together supply about 86 per cent of the subsector's exports in 2015. However, even though Nova Scotia accounts for approximately 2 per cent of exports, its exports have shown dramatic gains over the past decade. In particular, N.S. exports of "all other miscellaneous wood products," such as wood kitchenware, to the U.K. have increased from roughly \$7,000 in 2006 to more than \$10.5 million in 2015. CETA should make Nova Scotia's exports more competitive in European countries and create the conditions for increased sales, which in turn will likely result in more jobs at home.

### ***Wood and Upholstered Furniture: Labour Demand Outlook***

Labour demand in the wood and upholstered furniture subsector is expected to average gains of 1.6 per cent per year between 2015 and 2020, representing a gain of 2,900 jobs. The forecast is primarily based on two indicators: domestic new housing construction and U.S. new housing construction. In general, the volume of housing starts reflects not only demand for homes, but also demand for various consumer products associated with home purchases such as furniture. More than half of the subsector's production was exported in 2015 and the U.S. remains the largest recipient of Canadian wood and upholstered furniture. As a result, the health of the U.S. housing market is a significant factor in the subsector's employment demand.

The U.S. housing market is expected to make strong gains over the short and medium terms. Factors propelling this growth include rising U.S. household formation rates, which are still far below levels expected at this stage of an economic recovery. We expect an acceleration of the household formation rates, as more people will be able to afford their own homes thanks to the strengthening labour market. Moreover, easier access to mortgage credit while mortgage rates remain low will also help to boost demand for homes in the near term. Overall, we forecast U.S. housing starts to rise from less than 1.1 million units per year in 2015 to 1.9 million units by 2020.

A strong U.S. housing market outlook points towards an uptick in imports of Canadian wood and upholstered furniture products. This improvement will be further bolstered by the lower value of the Canadian dollar, which has increased the competitiveness of Canadian producers in the U.S. market. The weaker loonie has also increased the effective price received by the manufacturers since the prices for furniture products are set in U.S. dollars. (See Chart 20.)

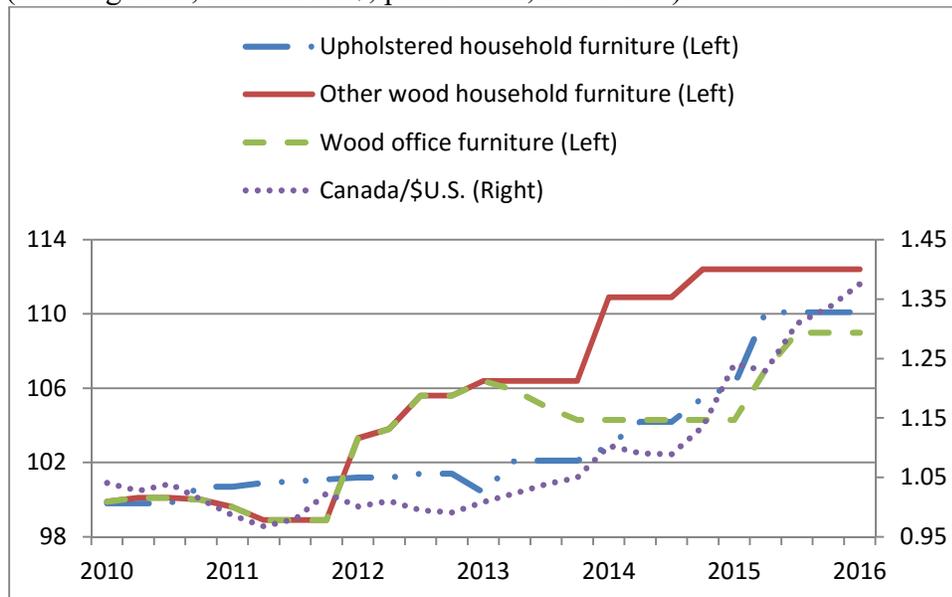
The other factor that will support growth in subsector employment is a change in import trends. As noted in the previous chapter, the wood and upholstered furniture subsector was heavily impacted by a loss of market share in the U.S. to China since the turn of the century. However, China is becoming a less attractive sourcing location and distributors are looking closer to home when choosing their suppliers.<sup>27</sup> Factors driving this shift include rising relative labour costs in

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<sup>27</sup> Sirkin, Zinser, Hohner, and Rose, "Made in America, Again."

China, lower energy costs in North America, concerns over intellectual property infringements, and much faster turnaround times between orders and deliveries among North American suppliers. As a result, Canadian producers are not expected to lose additional market share to Chinese producers.

**Chart 20**  
**Weaker Canadian Dollars Mean Stronger Industry Prices**  
 (exchange rate, Canada/US\$; price index, 2010=100)



Sources: Statistics Canada; The Conference Board of Canada.

**Wood Windows and Doors: Labour Demand Outlook**

Apart from a slight uptick in 2014, employment in the wood windows and doors subsector has been declining since 2007. New housing construction in both Canada and the U.S. dropped precipitously during the financial crisis, causing wood window and door sales to experience a similar decline. At the same time, non-wood materials such as plastic windows and doors have captured market share from wood based products due to their lower costs, versatility, durability and energy saving qualities.<sup>28</sup> (See Chart 21.) This has resulted in prolonged periods of shrinking labour demand in the subsector.

The subsector is expected to experience growth starting in 2016, spurred on primarily by a rebound in U.S. new home construction. Demand for wood windows and doors is expected to rise with the increase in housing starts, due to the high percentage of wooden doors used in the interior of new housing.

As well, demand for wood products should benefit from consumer perceptions that wood is an aesthetically pleasing material that adds value to a home, especially in the mid-range and high-end housing markets.<sup>29</sup> As a result, labour demand in the subsector is expected to have an average annual growth of 2.8 per cent between 2015 and 2020.

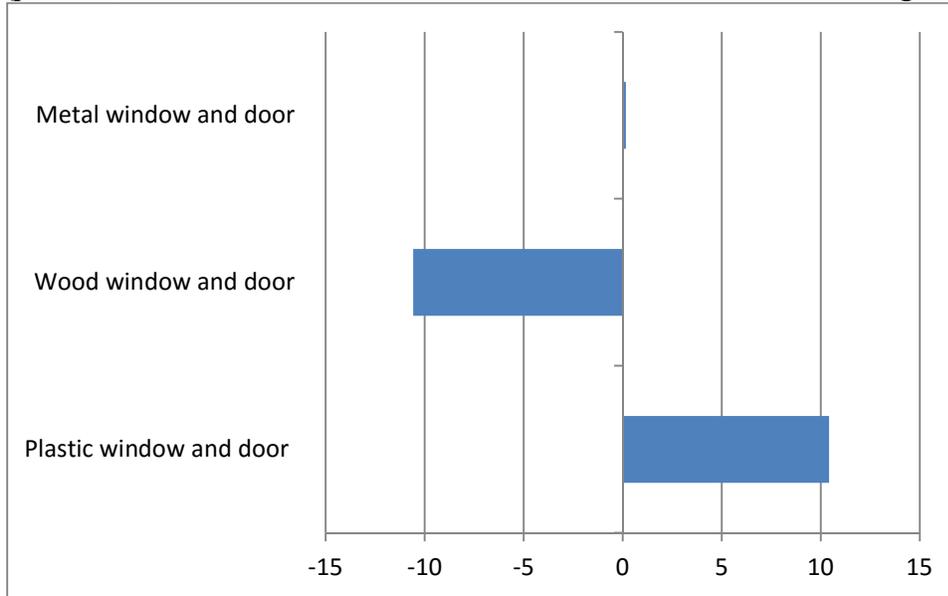
<sup>28</sup> McMahon and Nagle Windows and Doors, "What Makes a Window Energy Efficient."

<sup>29</sup> Freedonia Group Inc., "Windows & Doors to 2018."

### Chart 21

#### Plastic Windows and Doors Have Gained Popularity Over Time

(per cent, difference in share of total windows and doors manufacturing sales from 2007-2015)



Source: Statistics Canada.

### Conclusion

Salaries in the sector are below those of many other manufacturing sectors, limiting the sector's ability to attract and retain workers. The sector's workforce is older than most other sectors, and is predominantly a male workforce. Despite these challenges, the sector is experiencing a modest recovery, due mainly to rising exports, as well as modest growth in local demand. From 2015 to 2020, the sector is expected to add workers by an average annual rate of 1.7 per cent, with the strongest gains coming in Ontario, British Columbia, and Quebec. However, sector employment in 2020 will still be 14 per cent lower than 2008 levels.

## Chapter 4: Human Resource Trends and Issues

### Chapter Summary

- Market pressures are changing the composition of the advanced wood manufacturing sector, creating new human resource challenges for the sector.
- Growing human resource demands could potentially lead to a shortage of experienced labour and negatively impact businesses' productivity.
- Improving recruitment, training, development, and retention strategies could help the sector respond to these challenges.

### Top Human Resources Trends and Issues

Systemic changes are underway in the advanced wood manufacturing sector that have important implications for its workforce. Rising materials costs and foreign competition in both domestic and international markets are forcing the sector to adapt. Faced with the adoption of new processes, technologies and products, the sector is experiencing an inadequate supply of skills in key occupations. The sector will need to develop innovative recruitment, training, development and retention programs to address these human resource challenges.

Canada's advanced wood manufacturing sector faces several human resources trends and issues that include: skilled worker shortages, recruitment challenges, retirements, and retention. We asked advanced wood manufacturing businesses to identify the human resources trends and issues that affect their operations. Approximately 84 per cent of respondents reported that they are affected by a shortage of skilled workers to some extent or a great extent. (See Chart 22.) In addition, only 19 per cent of survey respondents said that there is an adequate supply of skilled workers in their region. However, 50 per cent of businesses in Quebec agree or strongly agree that there are enough skilled workers in their region.<sup>30</sup> This is significantly higher than in most other provinces, where no more than 26 per cent of businesses agree or strongly agree.

Data from Statistics Canada shows that in several provinces, the number of unemployed workers far exceeds the number of job vacancies. For example, in 2014, the ratio of unemployed workers to job vacancies in Canada's manufacturing sector was 5.2. This ratio was especially high in Quebec (9.0), Ontario (5.0), and British Columbia (3.7). In Alberta, the ratio was 1.9.<sup>31</sup>

However, many business owners in the sector feel that available workers do not have the skills to be successful. These skills include the skills needed to operate new machinery, traditional craftsmanship skills, essential skills, and general business skills.

Businesses in the sector face other human resource challenges. For example, 76 per cent of businesses have some difficulty or great difficulty attracting new workers, and 62 per cent of

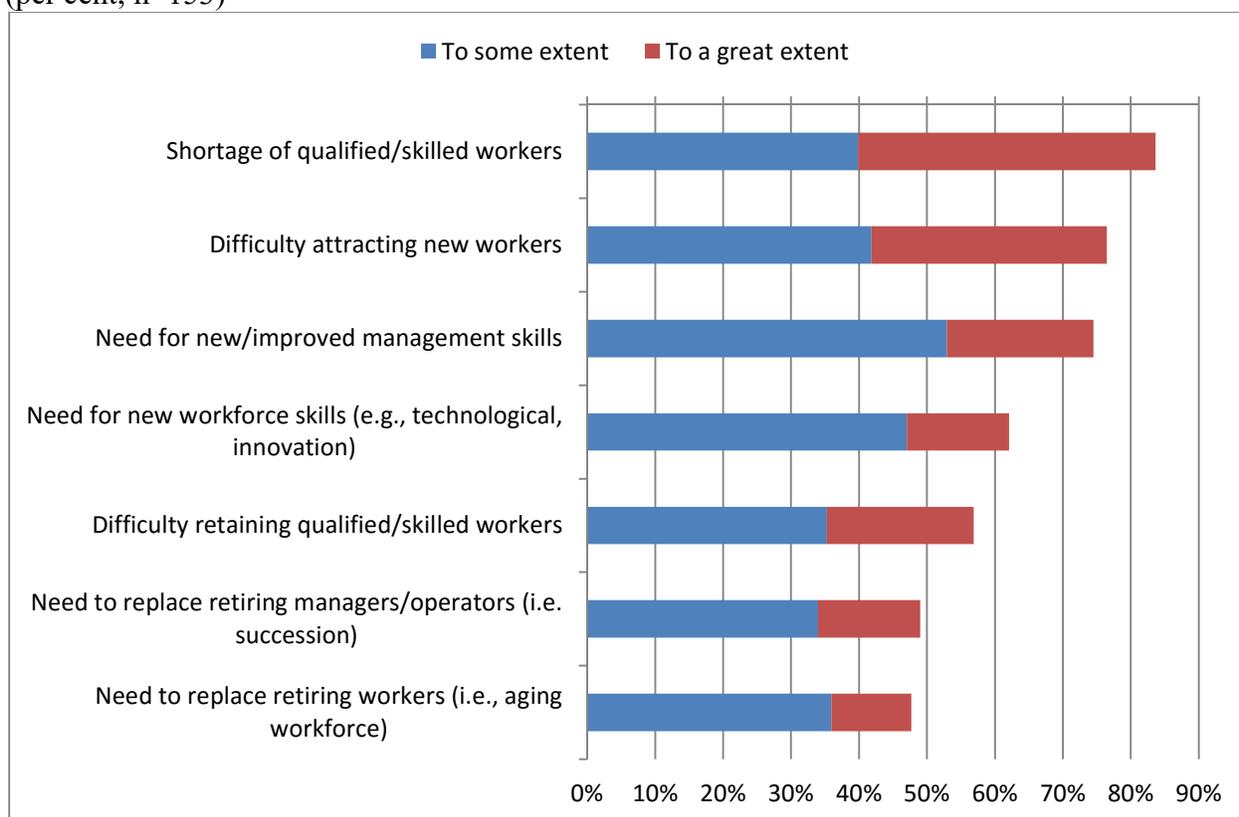
<sup>30</sup> A small sample (12 Quebec manufacturers) means that this result should be viewed with caution.

<sup>31</sup> This ratio was not available for all provinces, because data was either unreliable or was restricted by confidentiality requirements. See Statistics Canada, CANSIM Table 284-0004.

business reported they are affected by a need for new and improved management skills to some extent or a great extent. However, more businesses have greater difficulty attracting new workers (35 per cent) than those that need new management skills (22 per cent). (See Chart 22.)

Integrating new workers is a challenge for many employers in the sector.<sup>32</sup> In some cases, new workers may not be familiar with the expected pace and nature of the work. When they learn that workplace requirements do not meet their expectations, it can cause them to lose interest in the sector. In other cases, the repetitive nature of some positions causes workers to lose interest, especially young workers and highly-skilled immigrants.<sup>33</sup> Many of the businesses we interviewed also noted that a poor work ethic is a problem among many new workers.

**Chart 22**  
**Top Human Resource Trends and Issues Facing the Sector Include Worker Shortages, Attraction, and the Need for Management Skills**  
 (per cent; n=153)



Source: The Conference Board of Canada.

<sup>32</sup> Interview findings; Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 39.

<sup>33</sup> The Conference Board of Canada, *Conversation with Sector Stakeholders*.

### **Materials Costs and the Effect on Human Resources**

Some subsectors, such as wood windows and doors, other millwork, and prefabricated buildings, are particularly sensitive to fluctuations in prices for material inputs such as lumber and wood panelling. Businesses are often reluctant to pass these costs on to their customers, and many business owners we interviewed prefer to improve their efficiency by minimizing labour costs, and by using more automated machinery. Other businesses prefer to focus on the high-end market by hiring highly-skilled employees and producing upmarket products that command strong prices.

Some interviewees believe that competition for artisanal skills and high-end craftsmanship will increase if more businesses begin producing upmarket products. Several interviewees noted that the supply of workers with these skills is limited, and that many businesses have chosen to attract and recruit employees from competitor firms, rather than finding them through traditional job-postings.

Many business owners indicated that they try to reduce labour costs by replacing manual and repetitive labour with automated machinery wherever possible. Other businesses try to reduce their labour costs by simplifying tasks and processes to minimize the training and skills requirements of new hires. These strategies reduce demand for unskilled and semi-skilled labourers but also increase the demand for technically-skilled machine operators and process managers.<sup>34</sup>

### **Labour and Occupational Needs and Challenges**

Much of the sector's labour demand is closely related to trends in the housing market. For example, labour demand for kitchen cabinets is affected by new housing starts. In British Columbia and Ontario, strong performance in housing starts is expected to contribute to strong economic and employment growth. Performance in the "other millwork" subsector is closely tied to home renovation spending, for which labour demand is expected to grow at 8 per cent per year before slowing to 3 per cent in 2016. Most of this growth in the labour force is expected in Ontario, Manitoba, Nova Scotia and Prince Edward Island. Labour demand for prefabricated buildings is expected to grow as well, with most of the demand occurring in British Columbia, Quebec and Ontario. Demand for furniture will also continue to grow while the demand for windows and doors will see moderate declines.

A recurring theme during interviews was that changes in consumer spending habits and bank lending practices have an important impact on sector trends. This is because expenditures on home renovations, including cabinetry and custom millwork increase a property's equity value, and may therefore be financed with a mortgage. As such, interviewees often noted that persistent low mortgage rates contribute to the strength of these subsectors. On the other hand, interviewees noted that consumers are reluctant to purchase products such as furniture which do not directly increase the resale value of real estate and are thus ineligible for mortgage financing. Statistics Canada notes that spending on furniture and home furnishings in Canada increased by 8.3 per

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<sup>34</sup> Although many interviewees believe the skills gap is increasing for CAD and CNC operators, they also predict a much larger skills gap for machinists who can repair this equipment.

cent between January 2010 and May 2015.<sup>35</sup> This increase in spending is less than the retail trade sector (19.1 per cent) and the rate of inflation (9.5 per cent) over the same period.<sup>36</sup>

Some advanced wood manufacturers create products for international markets, where consumers often have different tastes than in domestic markets. For instance, 56 per cent of wood furniture sales in Canada come from exports. Manufacturers of these products often require highly skilled workers who can produce ornate detailing demanded by international consumers.

During interviews with business owners involved in international trade—either by exporting products or importing materials—several interviewees suggested that changes in the exchange rate would affect their business activities. While a lower Canadian dollar will improve the overall export climate, it also raises input costs for Canadian companies that use materials imported from abroad especially hardwoods used to make export-grade furniture.

### **Occupational Shortages**

Occupational shortages continue to present a challenge for many businesses in the sector. The most common occupations for which businesses have some difficulty or a great difficulty hiring include cabinet makers (46 per cent), wood machine operators (44 per cent), and supervisors (plant management) (40 per cent). This partly contrasts with research from 2010, which shows that operations managers (44 per cent) and supervisory managers (41 per cent) were the most difficult to hire.<sup>37</sup>

The Canadian Occupational Projection System (COPS), projects a balance between demand and supply in the machining, metalworking, woodworking and related machine operators group.<sup>38</sup> However, many employers we interviewed are dissatisfied with the quality of post-secondary training, and are not necessarily comfortable hiring available workers.

Businesses had little difficulty or no difficulty hiring industrial electricians (14 per cent) and maintenance and industrial mechanics (23 per cent). These occupations require skills that can be used in a variety of sectors, and relevant training programs exist in several different fields. Despite this transferability, the Canadian Occupational Projection System (COPS) predicts a labour shortage for industrial electricians, due to a low number of high school graduates.<sup>39</sup>

When businesses were asked to anticipate occupational shortages that will occur in the next five to ten years, they often identified the same three occupations that present the greatest challenges today: wood machine operators (49 per cent), supervisors (plant management) (40 per cent), and cabinet makers (47 per cent). (See Table 3.) Businesses believe the occupational gap will increase the most for other entry level workers (10 per cent), operations managers (manufacturing) (8 per cent), supervisors (plant management) (7 per cent), and other experienced workers, such as installers (7 per cent). (See Table 3.)

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<sup>35</sup> Statistics Canada, CANSIM Table 080-0020.

<sup>36</sup> Statistics Canada, CANSIM Table 080-0020.

<sup>37</sup> R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 40-43

<sup>38</sup> Employment and Social Development Canada, *Machining, Metalworking, Woodworking And Related Machine Operators (951)*.

<sup>39</sup> Employment and Social Development Canada, *Electrical Trades and Telecommunications Occupations (724)*.

In Quebec, 24 per cent of the 336 respondents to Saine Marketing’s 2015 study reported difficulty recruiting cabinetmakers. A further 10 per cent of respondents reported difficulty recruiting installers, while 10 per cent expressed difficulty finding general factory workers and labourers. Employers in Quebec also experienced difficulty recruiting painters, finishing painters, and painter assistants (9 per cent); designers (8 per cent); and technicians (7 per cent), among others.<sup>40</sup>

**Table 3**  
**Businesses Have Difficulty Hiring Workers Now, and Will Continue into the Future**  
 (per cent; to some extent, and great extent; businesses and other industry stakeholders combined; n=180).

| Occupation  | Difficulty Hiring (Today) (%) | Anticipated Difficulty Hiring (5 to 10 years) (%) | Change |
|---|-------------------------------|---|--------|
| Cabinet makers  | 46                            | 47  | +1     |
| Wood machine operators  | 44                            | 49  | +5     |
| Supervisors (plant management)                                      | 40                            | 47  | +7     |
| Other experienced workers (e.g., installers)                        | 39                            | 46  | +7     |
| Computer numerically controlled (CNC) operators                     | 39                            | 43  | +4     |
| Finishers (lacquering), manual and automated application            | 39                            | 42  | +3     |
| Operations managers (manufacturing)                                 | 38                            | 46  | +8     |
| Finishers, advanced wood products and related                       | 38                            | 42  | +4     |
| Industrial designers, drafting technologists, technicians (CAD/CAM) | 34                            | 39  | +5     |
| Industrial engineering, manufacturing technologists, technicians    | 29                            | 33  | +4     |
| Other entry level workers   | 26                            | 36  | +10    |
| Maintenance/Industrial mechanics                                    | 23                            | 23  | -      |
| Industrial electricians   | 14                            | 16  | +2     |

Source: The Conference Board of Canada.

<sup>40</sup> Saine Marketing, *Sondage sur les besoins de main d’oeuvre et de formation*, 24.

## **Installations**

Businesses that produce high-end products often expressed concern about using third parties to install their products.<sup>41</sup> Businesses also noted that sub-standard installations not only reduce the quality of final products but they also detract from their brand and reputation. Furthermore, poor installations can reduce the useful life of advanced wood manufactured products, which then require frequent and costly replacement of products that are often under warranty. However, businesses owners also indicated that it is very difficult to hire enough installation staff, making third-party installations a necessity. This partly explains the perception of a growing skills gap for installers. To manage the risks of third party installations, businesses expressed a growing desire to use their own staff whenever possible.

## **Recruitment Barriers**

Businesses identified several barriers to recruitment. The most common barrier, identified by approximately 65 per cent of businesses surveyed, is a lack of qualified workers. Other top barriers to recruitment identified by advanced wood manufacturing businesses include:

- the inability to improve wages (60 per cent);
- difficulty with work ethic (53 per cent);
- applicants' lack of essential skills (42 per cent); and
- negative perceptions of the sector (41 per cent).

See Chart 23 for the complete list of recruitment barriers.

Other sector stakeholders (e.g., industry associations, post-secondary institutions) most often identified an aging workforce (86 per cent) as an important recruitment barrier facing the sector, although only 34 per cent of businesses felt the same. One sector stakeholder explained that workers approaching retirement tend to be highly skilled craftspeople with well-developed artistic senses, but they rarely hire apprentices, and thus do not transmit their knowledge and skills to younger generations of workers. While the loss of artistic sense is a clear concern for the sector as a whole, not every advanced wood manufacturing business requires artisanal skills. This partly explains the discrepancy between the survey responses of businesses and other industry stakeholders.

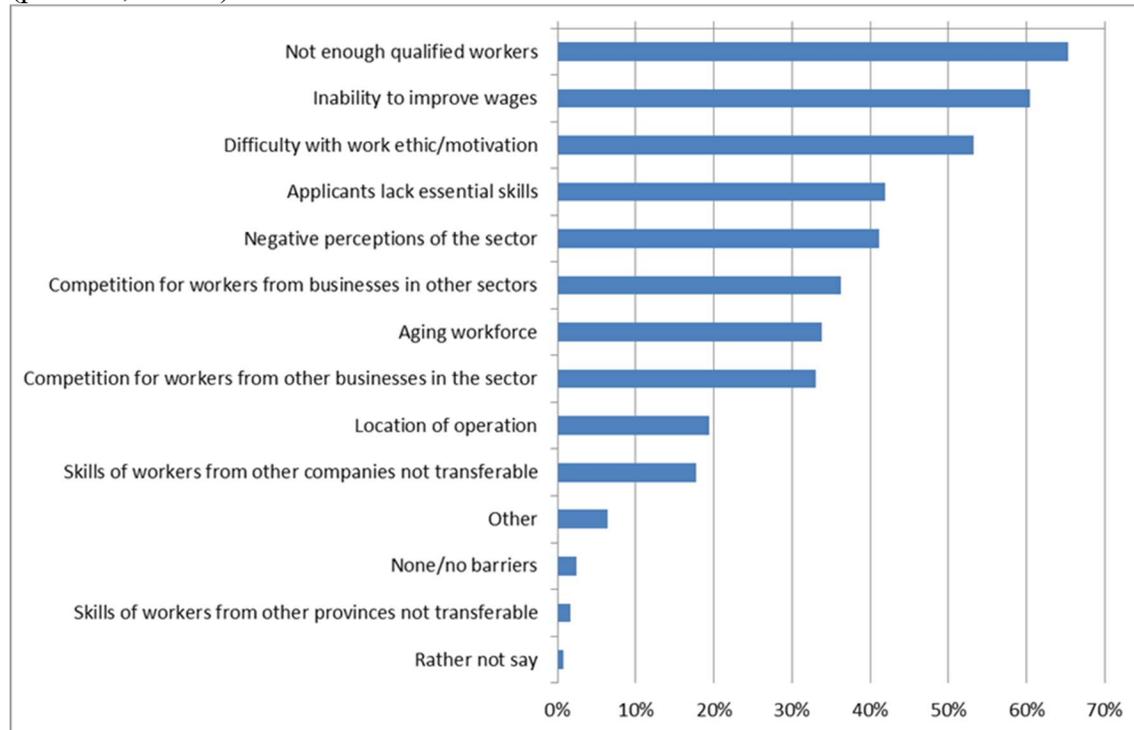
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<sup>41</sup> Interview findings.

### Chart 23

#### Businesses Often Have Trouble Finding Qualified Workers

(per cent; n=124)



Source: The Conference Board of Canada.

#### Negative Perceptions of the Sector Continue to Hinder Recruitment Efforts

Advanced wood manufacturing businesses were asked to identify which negative perceptions of their sector pose barriers to recruitment. These perceptions include:

- low wages (69 per cent);
- manual labour (67 per cent);
- limited career advancement opportunities (47 per cent);
- industry is in decline (32 per cent).

See Chart 24 for the complete list of negative perceptions that pose barriers to recruitment within the sector.

Negative perceptions of the industry result, in part, from a growing lack of awareness about the industry. For instance, only 37 per cent of businesses surveyed believe that potential new workers are aware of employment opportunities at their company. In addition, most business owners we interviewed believe that a reduction in the number of high-school woodworking programs—shop class in particular—has reduced young people’s exposure to the industry.

Many business owners also believe that negative perceptions of the sector are related to a decline of interest in the skilled trades in general, as many new workers prefer to avoid manual labour.

Some interviewees noted that many recent graduates of woodworking programs expect most materials to be managed by automated machinery, and that manual labour requirements will be limited. This expectation may be partly related to the fact that traditional craftsmanship skills are not necessarily taught at educational institutions, due to the increased use of automated machinery for some tasks. As described by one millwork and cabinet maker, "The younger generation is not very interested in using their hands, and they want to do everything by computer."

### **Low Wages**

Low wages are a significant barrier to recruitment for many advanced wood product manufacturing businesses. According to Statistics Canada, employees in Canada's manufacturing sector that are paid by the hour receive an average wage of \$23.46. This is higher than the hourly wage in many subsectors related to advanced wood manufacturing, including other wood products, wood windows and doors, other millwork, and prefabricated buildings (\$21.92), office furniture (\$20.60), and household and institutional furniture and kitchen cabinets (\$19.62).<sup>42</sup>

"There are certainly some challenges hiring young people today. Their expectations are high. While we see that they do not necessarily fit the 'common mold', we are beginning to look at how we might inspire young people. Collectively, we are asking young people, who have a different mindset than our generation, to fit in to our way of thinking... While we do not have it all figured out yet—our company is looking at ways to adapt to their skills and talents."

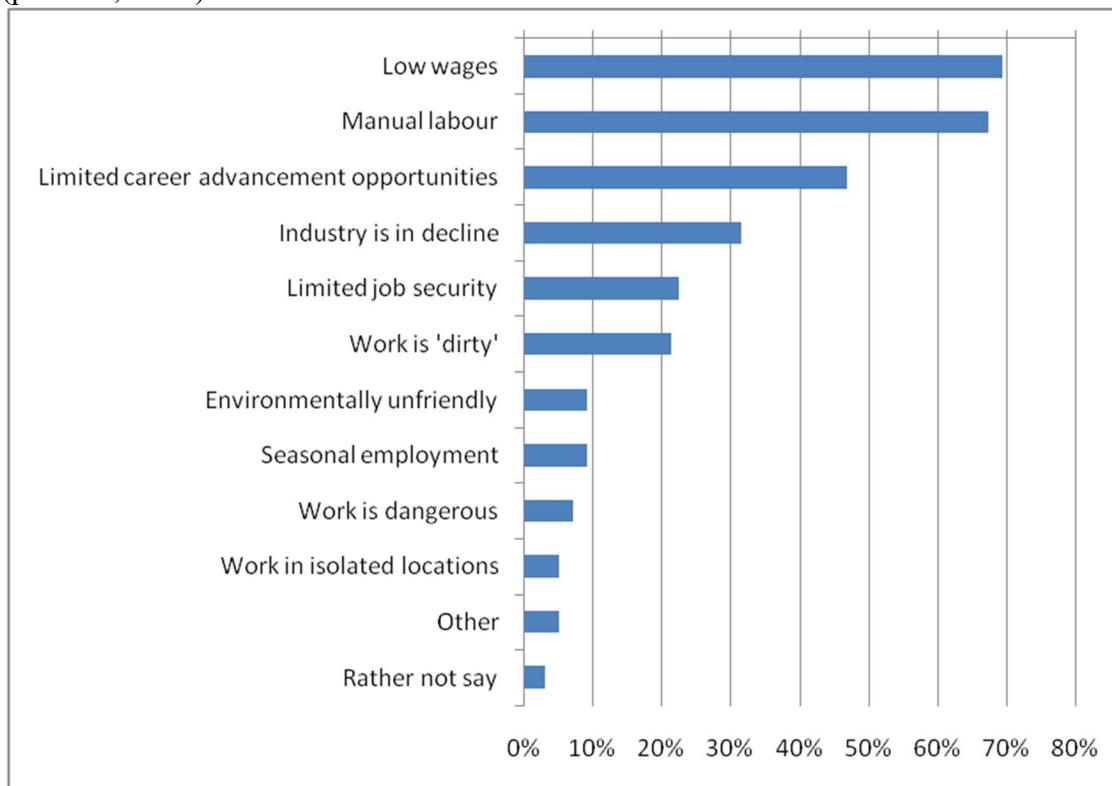
*Advanced Wood Manufacturing Employer*

This corresponds with our interview findings, where businesses note that employees are frequently drawn to other sectors in search of higher wages and better benefits. Many of the skills needed to operate new technology in the advanced wood manufacturing sector can be easily transferred to higher-paying sectors. Our survey and interview results suggest that businesses in the sector have some capacity to increase their wages. For instance, 70 per cent of the businesses we surveyed increased their wages to respond to skills needs and challenges. Despite these increases, low wages remain a challenge for the sector.

<sup>42</sup> Statistics Canada, CANSIM Table 281-0030.

**Chart 24**  
**Negative Perceptions Include Low Wages, Manual Labour, and Limited Career Advancement Opportunities**

(per cent; n=98)



Source: The Conference Board of Canada.

**Recruitment Challenges for Upscale Producers and Low-Cost Manufacturers**

Recruitment challenges in the sector partly depend on whether businesses are upscale, custom producers or low-cost, high-volume manufacturers. Businesses that produce upscale and custom wood products have little difficulty hiring skilled workers today, but acknowledge that the sector’s aging workforce will reduce the number of available skilled workers in the future. One possible reason these producers have little difficulty hiring skilled workers is that the skills required to produce high-end, custom work are specific to the advanced wood manufacturing sector, and are not easily transferred to other manufacturing sectors such as automotive or petroleum manufacturing. For this reason, workers may have difficulty moving to these sectors, even when attracted by these sectors’ higher wages.

High-volume manufacturers, however, have more difficulty hiring skilled workers. Many of the high-volume employers we interviewed noted that the expanded use of automated technologies such as CAD and CNC has resulted in a more standardized set of skills across the sector.

This standardization has intensified the competition for skilled workers with other manufacturing sectors. For example, CAD operators have skills that apply to many manufacturing sectors, but entry-level wages in these sectors are often higher than in the advanced wood manufacturing

sector. Since their skills are transferrable, CAD operators will likely gravitate to manufacturing sectors that offer higher wages and more extensive benefit packages.

### **Recruitment and Technical Trades**

The sector's recruitment difficulties are partly related to negative perceptions of skilled trades. Many interviewees feel that social barriers and the stigmatization of manual labour make recruitment, particularly youth recruitment, more difficult. For many new entrants to the job market, the lower social status associated with the trades strongly outweighs more tangible considerations, such as compensation and working conditions.

Considering the perception that skilled trades are more appropriate for those who lack the intelligence required for higher education, many interviewees felt that new workers avoid the trades for reasons related to image more than substance.

Twenty-six per cent of businesses view secondary schools as an important source of recruitment. However, some business owners feel that high school-aged students are a less important source of recruitment than in the past. Fewer high school students today learn about advanced wood manufacturing through coursework or shop classes, giving them less exposure to the career possibilities offered by the sector. The decline in awareness of advanced wood manufacturing is discussed in greater detail later in this chapter.

### **Skills Needs and Challenges**

Wood manufacturing employers were asked to identify the skills most critical for their workplace. The most critical skills are: quality control (85 per cent), operating new equipment and machinery (82 per cent), and technical skills needed within different subsectors (82 per cent). While other sector stakeholders such as educators, industry associations and labour groups found these skills to be of importance, they also noted that managerial skills (100 per cent) and innovation skills (95 per cent) are critically important to businesses in the sector. (See Table 4.)

**Table 4**  
**The Most Critical Skills for the Advanced Wood Manufacturing Sector**  
 (per cent; to some extent and to a great extent)

| <b>Top 5 Critical Skills</b>  | <b>Employers<br/>(n=140)<br/>(%)</b> | <b>Other Sector<br/>Stakeholders<br/>(n=19)<br/>(%)</b> |
|---|--------------------------------------|---|
| Quality control   | 85                                   | 89  |
| Operating new equipment and machinery   | 82                                   | 100   |
| Technical skills needed within different subsectors                                     | 82                                   | 79  |
| Maintaining existing equipment and machinery  | 79                                   | 95  |
| Essential skills (e.g., literacy, numeracy, communication, critical thinking, teamwork) | 79                                   | 89  |
| <b>Other Critical Skills</b>  |                                      |   |
| Innovation skills (e.g., creativity, risk assessment, communication)                    | 74                                   | 95  |
| Workplace health and safety   | 71                                   | 84  |
| Managerial skills (e.g., managing workers, projects, public relations)                  | 71                                   | 100   |
| Computer skills (e.g., new software)  | 68                                   | 89  |
| Business skills (e.g., marketing, finance, negotiation, entrepreneurship)               | 59                                   | 79  |
| Supply chain management   | 52                                   | 84  |
| Environmental management/sustainability   | 49                                   | 84  |
| Technical skills that require certification   | 40                                   | 95  |

Source: The Conference Board of Canada.

### Skills Gaps

The sector continues to experience skills gaps, which makes it difficult for businesses to hire employees with the skills they need. See Table 5 for a complete list of skills that businesses find lacking in new workers. Businesses reported some difficulty or great difficulty finding, recruiting, and retaining workers with:

- Technical skills (75 per cent);
- Skills to operate new equipment and machinery (68 per cent);
- Quality control skills (66 per cent);

- Skills to maintain equipment and machinery (65 per cent); and
- Innovation skills (57 per cent).

**Table 5**  
**New Workers Often Lack Several Important Skills**  
 (per cent, to some extent and to a great extent; n=136)

| <b>Top 5 Lacking Skills</b>   | <b>Per Cent of Responses</b> |
|---|------------------------------|
| Technical skills needed within different subsectors                       | 75                           |
| Operating new equipment and machinery                                     | 68                           |
| Quality control   | 66                           |
| Maintaining existing equipment and machinery                              | 65                           |
| Innovation skills (e.g., creativity, risk assessment, communication)      | 57                           |
| <b>Other Missing Skills</b>   |                              |
| Essential skills (e.g., literacy, numeracy, communication, teamwork)      | 54                           |
| Managerial skills (e.g., managing workers, projects, public relations)    | 54                           |
| Computer skills (e.g., new software)                                      | 51                           |
| Business skills (e.g., marketing, finance, negotiation, entrepreneurship) | 47                           |
| Technical skills requiring certification                                  | 43                           |
| Workplace health and safety   | 42                           |
| Supply chain management   | 37                           |
| Environmental management/sustainability                                   | 29                           |

Source: The Conference Board of Canada.

Many business owners believe that their needs for particular skills can only be met with courses tailored to their product or sub-sector. Some owners of cabinetry businesses, for instance, noted that graduates of college woodworking programs required significant amounts of in-house training. One interviewee estimated that graduates of two year college wood-working programs had received as little as ten hours of training in cabinetry. Interviewees from other sub-sectors expressed similar frustrations with the post-secondary education sector's inability to address their skills needs. This creates an opportunity for businesses and industry associations in the sector to be more involved in training, either by providing feedback on program content to training institutions, or by increasing their own investments in training.

### **Essential Skills**

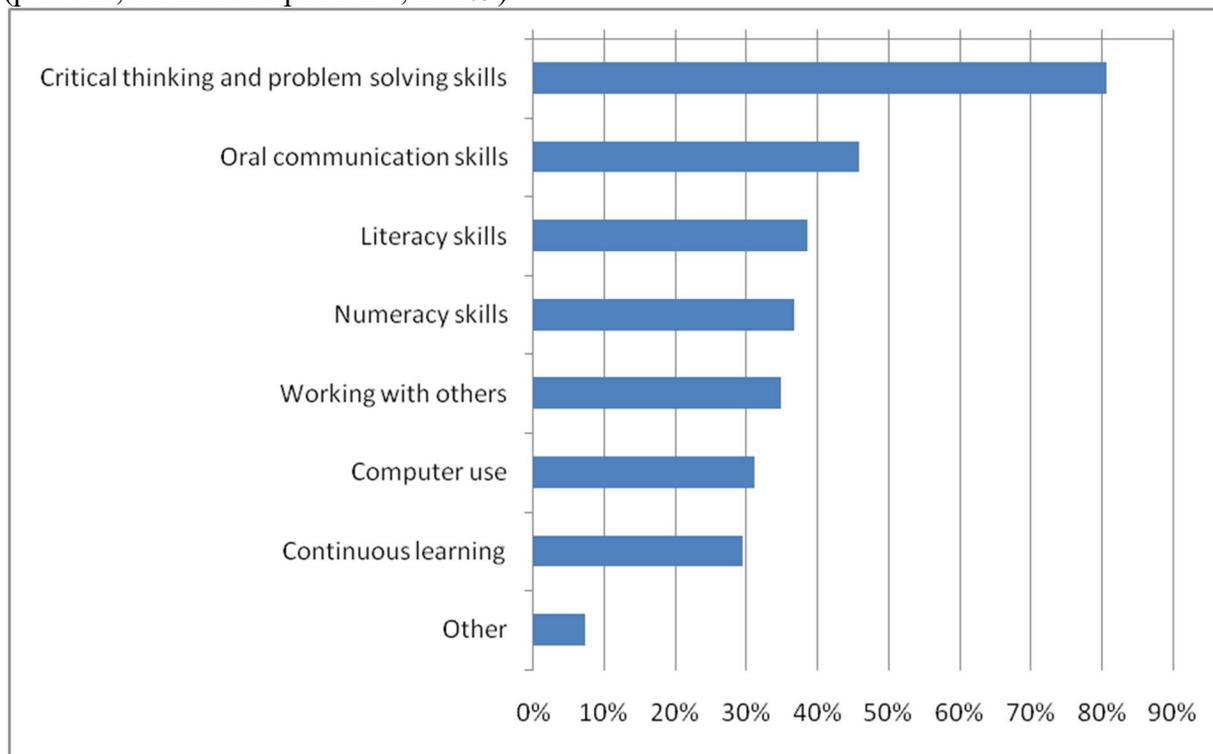
Businesses in advanced wood manufacturing also have difficulty hiring workers with sufficient essential skills. Survey respondents identified critical thinking and problem solving skills (81 per

cent), oral communication skills (46 per cent), literacy skills (39 per cent), numeracy skills (37 per cent) and the ability to work with others (35 per cent) as most difficult to find among recent hires. (See Chart 25.)

Several employers expressed difficulty finding new hires that have common sense, and that can understand their employer's expectations. When asked to elaborate, employers expressed concern about several issues, including poor time management; excessive waste of materials; lack of business sense; lack of concern for profitability; and insufficient numeracy skills, specifically those related to arithmetic and measurement.

Workers' lack of 'common sense' is partly related to their lack of experience in business environments. As described by one business owner, "New hires, even the skilled ones coming out of college, might spend ten hours making a really nice chair—and it's a beautiful piece of work—but for my shop to make money on that chair, it needs to be finished in less than two hours. They just don't understand that time and materials cost money, and we can only put so much effort into a piece before we are stuck taking a loss. Too often I find myself losing money on the products made by new employees; they don't understand how to work in a business."

**Chart 25**  
**New Hires Often Lack Critical Thinking and Good Communication Skills**  
 (per cent; business respondents; n=109)



Source: The Conference Board of Canada.

### Managerial Skills

During interviews, other sector stakeholders identified the lack of business and managerial skills and training as major deficiencies of the sector. One interviewee suggested that the problem was

related to the sector's high number of small and medium-sized businesses, and the fact that owners of these businesses may have never participated in formal management training. This may result in a lack of awareness, on the part of some business owners, of the skills required to manage other craftspeople effectively. This contrasts with large businesses, which often offer or facilitate formal training programs, including training in managerial skills. Several interviewees claimed that the sector's deficit in managerial skills is a significant weakness and a significant opportunity.

### **Automation and Craftsmanship**

Many of the business owners and sector stakeholders we interviewed believe that automated machinery can help make businesses in the sector more efficient.<sup>43</sup> The most commonly mentioned technologies were Computer Aided Design (CAD) and Computer Numerical Control (CNC). These technologies, CAD and CNC, reduce some of the need for labour, but they do not eliminate the need for traditional craftsmanship. Instead, these technologies ensure that traditional craftspeople can focus more exclusively on fine details that cannot be automated.

Many business owners believe that employees with both types of skills are valuable to their workforce. Some of these business owners suggested that there are synergies between these two types of skills, and that workers with CAD and CNC skills are more adept and intuitive as traditional craftspeople than those without these skills. One furniture and cabinet manufacturer noted that "using CAD and CNC helps to improve your mental imagery, which in turn makes you a better craftsperson and vice versa. We really get excited when we find people that can use their hands as well as the newest machines."

Our survey results show that the largest occupational shortages are in occupations that use these skills directly. These occupations include cabinet makers, wood machine operators, CNC operators and finishers.

### **Impacts of Skills and Labour Shortages**

Skills and labour shortages affect advanced wood manufacturing businesses in several ways. The most common effects are reduced productivity (88 per cent of respondents) and reduced profitability (77 per cent of respondents). The need to increase productivity was also cited by 50 per cent of Quebec employers as a reason to invest in employee training.<sup>44</sup> In addition, 72 per cent of business noted that skills and labour shortages result in reduced sales and an inability to respond to new opportunities. (See Chart 26.) Employers in Quebec also cited improvements in product quality (36 per cent), proper use of equipment (29 per cent), reductions in delivery delays (27 per cent), and preventative maintenance as reasons for providing employee training.<sup>45</sup>

When businesses are unable to find workers with the right skills, it is difficult for them to complete projects on time and as a result, they sometimes need to decline new opportunities. Several business owners interviewed noted that this is detrimental to their operations.

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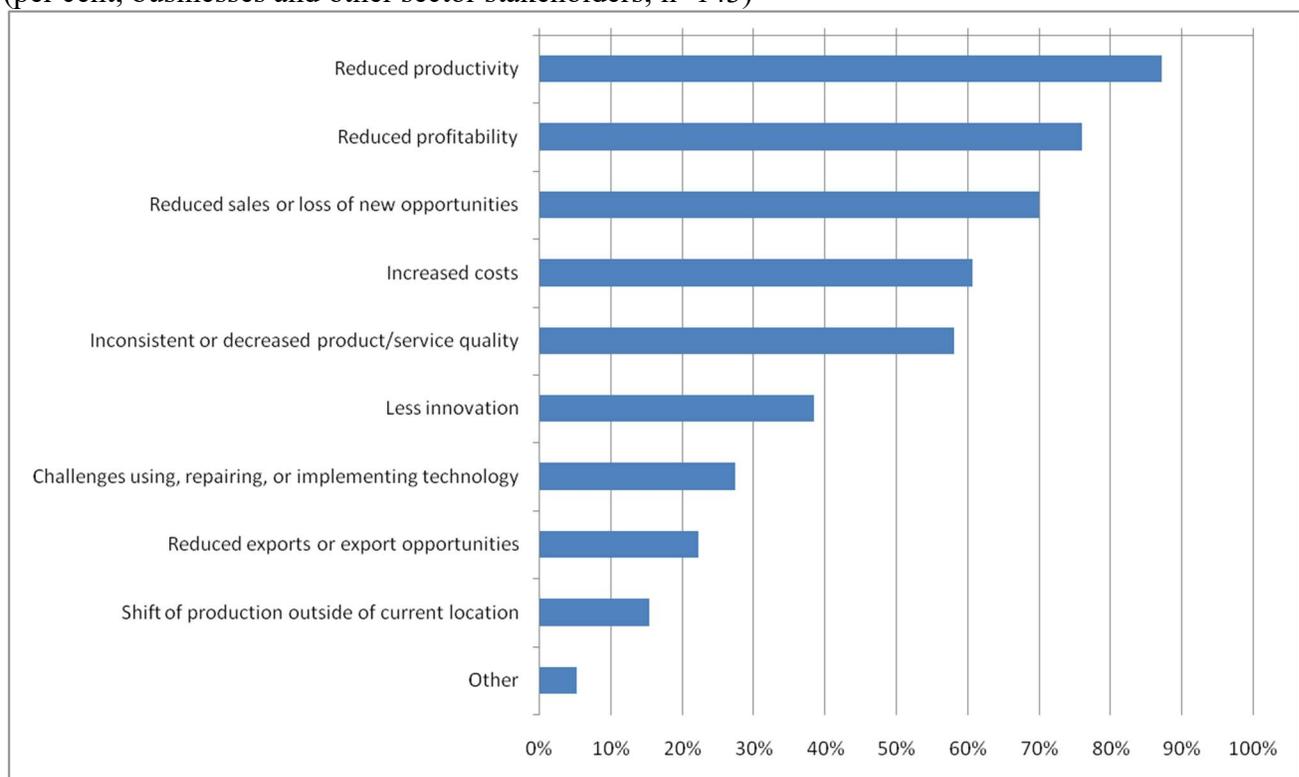
<sup>43</sup> See also : Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 49.

<sup>44</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 39.

<sup>45</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 39.

Our survey results also reveal that a lack of qualified workers can increase manufacturers' costs, particularly variable costs associated with overtime pay. (See Chart 26.) Employers in Quebec also cited improving their financial position as a priority issue.<sup>46</sup> Many businesses rely on overtime as a solution to labour shortages, although most business owners admitted during interviews that this is a stop-gap measure. In addition, workplace safety is a major concern for the sector. This means that overtime is not an ideal solution to labour shortages, since tired workers are more likely to make mistakes. The use of overtime suggests that businesses can afford to pay higher wages; however, increasing the base wage rate is a more permanent and long-term strategy that presents additional financial challenges, particularly during periods of low demand.

**Chart 26**  
**Skilled Worker Shortages Reduce Productivity and Profitability**  
 (per cent; businesses and other sector stakeholders; n=143)



Source: The Conference Board of Canada.

Furthermore, when businesses lack qualified employees, the time and effort required to maintain existing lines of business reduces opportunities for innovation, and delays investments in technology and machinery.<sup>47</sup> Low levels of innovation and investment in technology can have negative impacts on businesses' productivity.<sup>48</sup>

<sup>46</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 49.

<sup>47</sup> Interview findings.

<sup>48</sup> The Conference Board of Canada, *Business Innovation in Canada*.

## **Conclusion**

The advanced wood manufacturing sector is undergoing substantial changes that will significantly impact its human resource outlook. Market pressures are changing how the sector operates, and the sector is adopting new processes and technologies to remain competitive. These pressures mean that the sector needs to help workers develop new skills. With recruitment and retention already a challenge, the impact of skills and labour shortages will intensify unless the sector is able to respond.

## Chapter 5: Recruitment, Retention and Skills Development Strategies

### Chapter Summary

- The advanced wood manufacturing sector uses a variety of formal training and recruitment strategies. However, businesses in the sector prefer informal, in-house methods of training and recruitment.
- New and experienced workers often develop skills that relate to technical requirements and new machinery, but traditional craftsmanship skills remain valuable.
- Businesses and educational institutions have an opportunity to improve managerial and general business skills in the advanced wood manufacturing sector.

### Recruitment, Retention and Training Strategies of Skilled Workers

The advanced wood manufacturing sector uses a variety of recruitment, retention and training strategies to address its ever-changing skills needs. These strategies involve businesses themselves, as well as educational institutions and industry associations. Many businesses prefer informal on-the-job training, such as job shadowing, instead of formal training in post-secondary institutions. However, businesses use post-secondary training and certification in advanced wood manufacturing as a proxy to find workers who are committed to careers in the sector.

“Our firm uses personality profiles in recruiting—to match people’s interests with the first job they get within the company. It is hard enough to recruit people into our industry, so once we get them we do not want to lose them by putting them in a job that they are not ready for or are not interested in.”

*Advanced Wood Manufacturing Employer*

During training, workers often develop skills that relate to technical requirements, new equipment, and computers. These skills are especially important as more businesses move to automated production processes in a search for efficiency. However, traditional craftsmanship skills remain important as many businesses focus on upscale, value-added products. Meeting these skills needs is critical to developing a strong advanced wood manufacturing workforce.

### Sources of Recruitment of Skilled Workers

Businesses in the advanced wood manufacturing sector often begin by recruiting and promoting workers from within. A majority of the businesses we surveyed (80 per cent) agree or strongly agree that their business promotes from within where possible. Many businesses prefer to recruit and promote internally because it is more cost-effective than other forms of recruitment.

When internal recruitment and promotion strategies fail to address all of their skills needs, businesses use several external sources of recruitment. These include:

- word of mouth;
- apprenticeships;
- secondary schools;
- other companies in the sector;
- colleges, polytechnics, and institutes;
- family or friends;
- companies in other industries;
- foreign workers; and
- universities.

We asked businesses in the sector to rate the importance of several sources of new skilled workers. Most respondents (82 per cent) believe that word of mouth is a somewhat important or very important source of new skilled workers. (See Table 6.) Word of mouth is especially popular among high-end and custom manufacturers within the sector.

Businesses in the sector place more emphasis on recruitment today than they did in 2010. For instance, 74 per cent of respondents believe the sector's apprenticeship training system is an important source of new skilled workers, an increase of 24 percentage points from 2010. In addition, 68 per cent of respondents rated secondary schools as a somewhat important or very important source of new skilled workers, a 17 percentage point increase from 2010.<sup>49</sup> (See Table 6.) This dependency reflects the sector's need to address major human resources challenges, include a shortage of skilled workers, an aging workforce, and the need for new workforce skills.

Some employers only offer apprenticeships to existing employees. In these cases, apprentices are not necessarily "new" workers. However, pre-apprenticeship employment allows business owners to assess an employee's suitability for apprenticeship, and may be used in conjunction with other common evaluation practices such as résumé reviews, interviews, and reference checks.

Sixty-four per cent of businesses believe other companies in the sector are somewhat important or very important sources of new skilled workers. This contrasts with a 2010 study, which shows that 40 per cent of respondents rated other companies as an important source of skilled workers.<sup>50</sup> Other companies in the sector can be useful sources of skilled workers, because previous employment in the sector suggests that workers have relevant skills and are committed

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<sup>49</sup> The Conference Board's 2014-2015 survey used a four-point scale for this question, while R.A. Malatest & Associates used a five-point scale. See R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 44.

<sup>50</sup> R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 43.

to careers in the sector. This strategy can benefit individual businesses when their recruitment efforts are successful; however, it can also lead to a loss of organizational memory when their employees are recruited by their competitors.

**Table 6**  
**Word of Mouth, Apprenticeships, and Secondary Schools are the Most Important Sources of New Skilled Workers**  
 (per cent)

| Sources of Recruitment                    | Importance in 2010<br>(n=204, %) | Importance in 2015<br>(n=146, %) |
|---|----------------------------------|----------------------------------|
| Word of mouth                             | n/a                              | 82                               |
| Industry training (apprenticeship) system | 50                               | 74                               |
| Secondary school system                   | 51                               | 68                               |
| Other companies in the sector             | 40                               | 64                               |
| Colleges, Polytechnics, Institutes        | 33                               | 60                               |
| Family or friends                         | n/a                              | 45                               |
| Other industries                          | 47                               | 34                               |
| Immigration/foreign Workers               | 17                               | 32                               |
| Universities                              | 9                                | 23                               |

Source: The Conference Board of Canada; R.A. Malatest & Associates.

Businesses in the sector can investigate ways of recruiting more workers from outside their region. Only 17 per cent of businesses reported that they recruited internationally. In addition, only 16 per cent of businesses said they have recruited workers from outside their province. Moreover, just 18 per cent of businesses believe qualified workers are willing to relocate to the region in which they operate—adding to the sector’s recruitment challenges.

Many businesses look to educational institutions (including colleges, polytechnics, and institutes, as well as the secondary school system) to gain an advantage in the recruitment process. Sixty per cent of the businesses we surveyed, for example, use colleges, polytechnics, and institutes, which provide training in advanced wood manufacturing, as sources of recruitment; and 73 per cent of businesses believe secondary schools are important sources of new workers.<sup>51</sup> (See Table 6.) In some cases, businesses take an active role in educational institutions’ activities in order to gain access to students before their competitors. In other cases, businesses leverage informal relationships with faculty to arrange and secure employment opportunities with top students before they graduate.<sup>52</sup>

<sup>51</sup> This is an increase from 2010, when just 51 per cent of employers cited secondary schools as important sources of workers. R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 44.

<sup>52</sup> Interview findings.

Some employers believe that students taking advanced wood manufacturing programs in post-secondary education institutions are more committed to a career in the sector. Because of this belief, employers are also more likely to invest in their future training.<sup>53</sup>

However, many of the business owners we interviewed are dissatisfied with the quality of instruction at secondary schools. For example, several business owners describe high school shop class as a “dumping ground for poor students,” and note that negative teacher attitudes towards woodworking discourage gifted students from careers in advanced wood manufacturing. Most business owners we interviewed also believe that the decline in secondary school woodworking classes has contributed to the sector’s shortage of skilled workers.<sup>54</sup> To address this dissatisfaction, several business owners said they take an active role in the development of curriculum within the secondary school system wherever possible.

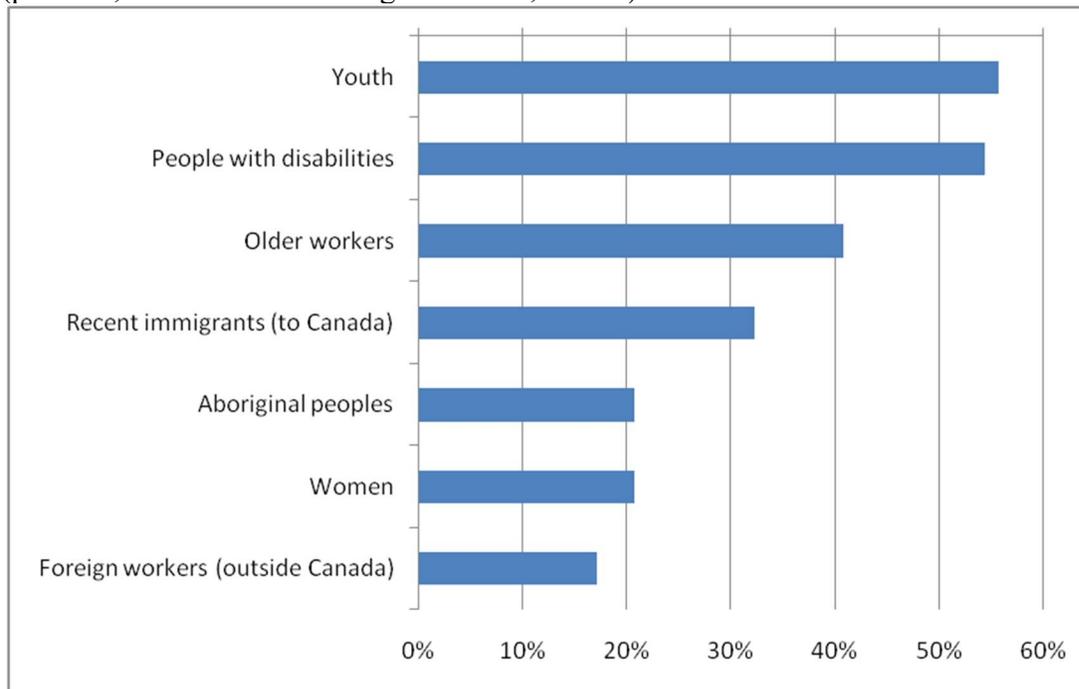
### Recruiting Workers from Underrepresented Groups

Businesses in the sector recruit workers from several underrepresented groups, including youth (56 per cent), people with disabilities (54 per cent), and older workers. However, businesses in the sector have an opportunity to recruit more from additional groups, including recent immigrants to Canada (32 per cent), and Aboriginal peoples (21 per cent). (See Chart 27.)

**Chart 27**

### Businesses Could Recruit More Workers from Underrepresented Groups

(per cent; to some extent or a great extent; n=128)



Source: The Conference Board of Canada.

<sup>53</sup> Interview findings.

<sup>54</sup> Interview findings.

As previous Conference Board research shows, Canada's Aboriginal population is growing rapidly, and is younger than the non-Aboriginal population.<sup>55</sup> As such, Aboriginal workers could be a valuable source of new skilled workers for the sector.

Businesses in the sector could also recruit more women (21 per cent), and foreign workers (17 per cent). (See Chart 27.) Many women face several barriers that make it challenging for them to succeed. These barriers include pay inequality, harassment and discrimination, and a lack of female role models, among others. (See Textbox "Advancing Women in the Advanced Wood Manufacturing Sector.")

### **Recruitment, Retention and Skills Development Strategies**

Businesses were asked to rate the extent to which they have taken certain actions to address skills issues and challenges. The results show that businesses in the sector have a clear preference for in-house training and strategies. For example, 83 per cent of businesses surveyed reported increasing in-house training and development when faced with worker shortages, retention, succession planning, skills gaps, and other issues. (See Chart 28.) In Quebec, employers cited succession planning for key positions as the most common reason to invest in training and development.<sup>56</sup> In addition, many businesses are small employers and cannot afford to pay for external training for their employees. In-house training is particularly common among businesses with 50 employees or more.

There are other signs that businesses are taking steps to address skills challenges. Many business owners, for example, believe that the sector's inability to pay competitive wages, especially when compared with other manufacturing sectors, is a significant barrier to recruitment. Of the businesses we surveyed, 70 per cent reported that they increased wages to respond to skills challenges. (See Chart 28.) Investigating the size of these increases is beyond the scope of this research, and additional analysis is required to determine the full extent of these wage increases relative to wages in other sectors. Wage increases are an especially common strategy used by businesses with 50 to 99 employees (91 per cent) and businesses with 2 to 9 employees (73 per cent).

A majority of businesses surveyed (57 per cent) use flexible work arrangements as one approach to addressing their skills challenges. (See Chart 28.) Flexible work arrangements are especially popular among some of the smaller businesses surveyed: 73 per cent of businesses with 2 to 9 employees reported that they use this strategy to some extent or a great extent.<sup>57</sup> When asked to describe the flexible work arrangements they use, several business owners reported using 10 hour work days, four days per week. This type of arrangement creates a "swing day" that can be used as a fifth workday when overtime is required. One cabinet and furniture maker stated that his employees appreciate flexible work arrangements because these arrangements reduce commute times, and provide three day weekends more often than most other jobs. While many business owners we interviewed believe they can reduce the need for overtime with proper

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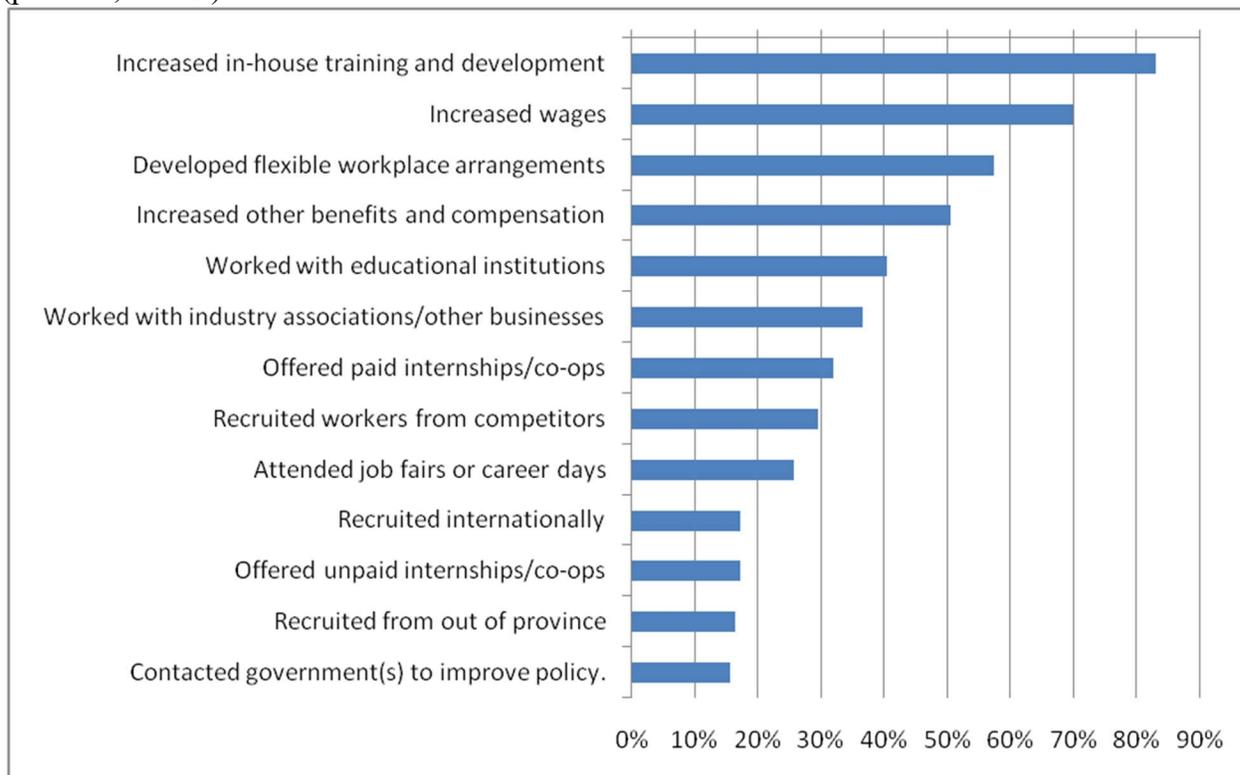
<sup>55</sup> Edge, *Aboriginal Workers*.

<sup>56</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 39.

<sup>57</sup> Survey findings.

management and planning, some business owners admitted they do not have the managerial skills to do so.<sup>58</sup>

**Chart 28**  
**Businesses Rely on In-House Training to Address Their Skills Challenges**  
 (per cent; n=129)



Source: The Conference Board of Canada.

Fifty per cent of the businesses we surveyed increased a number of other benefits and compensation packages to address their skills challenges—including health and dental coverage, and retirement benefits. Improving benefits and compensation packages is an approach used by small and medium-sized businesses in the sector. For example, 73 per cent of small businesses (those with 50 to 99 employees) and 65 per cent of medium-sized businesses (those with 100-499 employees) said they improved their benefits and compensation packages to some extent or a great extent as a way to help address their skills issues and challenges.

Interviews revealed that some businesses address skills shortages by putting current workers on projects that require more advanced skills. This sometimes reduces the quality of final products. Several business owners also suggested that using simpler and less costly design, assembly, and finishing processes is sometimes necessary to address labour shortages. Many businesses prefer to simplify their operations than to decline new contracts, projects, and revenue streams.

<sup>58</sup> Interview findings.

## Skills and Training

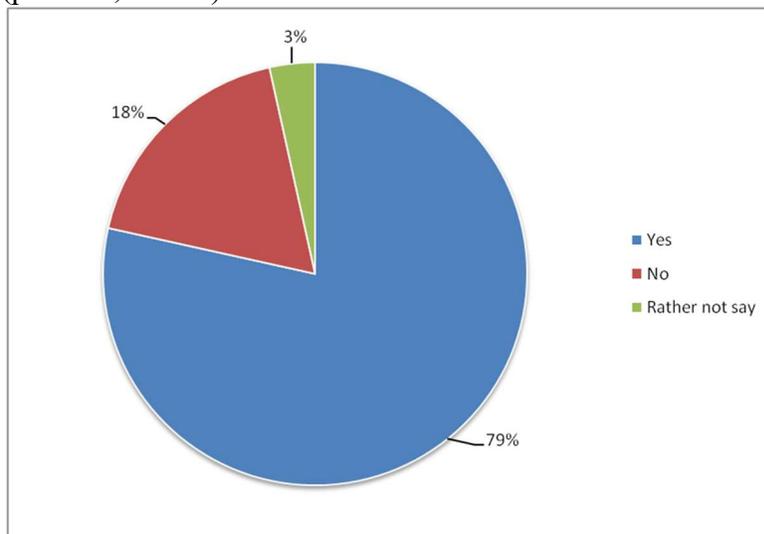
To remain competitive, the advanced wood manufacturing sector needs to ensure that education and training programs offered by educational institutions, sector associations, labour groups, and governments provide workers with the right knowledge and skills.<sup>59</sup> The increased use of automated machinery has increased the demand for workers with Computer Numerically Controlled, Computer Aided Design, and other technological and computer-related skills. However, workers also need traditional craftsmanship skills to produce ornate details that characterize many products in the sector. The following section discusses how education and training programs can help businesses in the sector respond to their skills needs.

### Types of Training Taken by Workers

Of the businesses we surveyed, 79 per cent reported that their employees had taken some form of training in the past 12 months. The most common type of training offered by businesses in the sector is informal, on-the-job training. (See Charts 29 and 30).

#### Chart 29

**Most Advanced Wood Manufacturing Workers Participate in Training**  
(per cent; n=127)



Source: The Conference Board of Canada.

Nearly 80 per cent of businesses indicated that their employees had taken part in some form of informal, on-the-job training not leading to certification in the past 12 months. In Quebec, 90 per cent of employer respondents to Saine Marketing's 2015 survey reported using on-the-job training by experienced employees.<sup>60</sup> Other types of training that workers participated in include:

<sup>59</sup> R.A. Malatest & Associates, *Labour Market Update of the National Human Resources Study of the Advanced Wood Processing Industry*, 48.

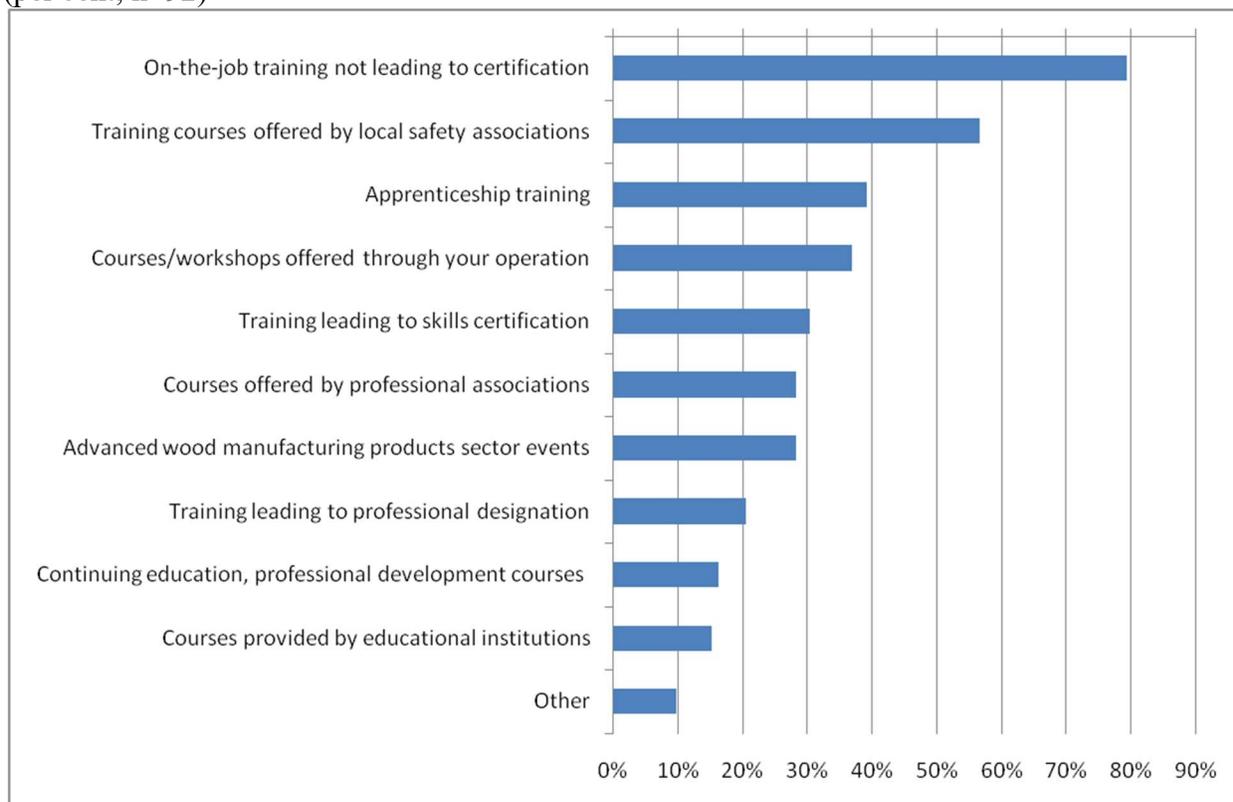
<sup>60</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 31.

- training courses offered by local safety associations (57 per cent);
- apprenticeship training (39 per cent);
- courses and workshops offered within their own organizations (37 per cent); and
- training leading to skills certification—whether offered inside their organizations or through a third-party vendor (30 per cent).

See Chart 30 for a complete list of training activities.

### Chart 30

**Advanced Wood Manufacturing Workers Participate in Several Types of Training Activities**  
(per cent; n=92)



Source: The Conference Board of Canada.

Quebec employers also reported using:<sup>61</sup>

- courses offered by external consultants (39 per cent);
- internal, out-of-job training (39 per cent);

<sup>61</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 37.

- training offered by equipment providers (37 per cent);
- training offered by educational networks (22 per cent).

Results from Saine Marketing's 2015 study show that 70 per cent of employers in Quebec believe training is especially important for employees in production-related positions (such as cabinetmakers, upholsterers, assemblers, machine operators).<sup>62</sup> In addition, 49 per cent of Quebec employers believe that training is important for managers and supervisors. Quebec businesses with 50 or more employees were more likely to cite a need for managerial and supervisory training than businesses with 49 employees or less. According to Saine Marketing, this is likely due to the higher number of available managerial and supervisory positions at larger companies.<sup>63</sup>

### **Internal Training and Management Strategies to Address Skills Challenges**

Businesses in the sector reported that they use a variety of internal education and training strategies to address skills challenges. A majority of businesses (67 per cent) indicated that they use cross-training. Cross-training can be an effective training strategy because it helps employees broaden their knowledge of different positions within the company.<sup>64</sup> The need to develop this flexibility is a key reason why 45 per cent of Quebec employers to offer training to their employees.<sup>65</sup> As one advanced wood manufacturing employer notes, "We like to train our employees in-house, the way we want them trained, so being a good person is key. We do lots of cross-training, as it is good for the company and good for the worker. If there are ever layoffs, someone who can work at more stations is more likely to be retained. We are happy to get people with good basic skills."

Businesses also use mentoring as a way to transfer knowledge and skills (62 per cent), and train existing workers to replace retiring workers (57 per cent). (See Chart 31.) One employer notes that "our company matches new-hires with experienced workers to share knowledge and train—our training is done in-house." Other internal strategies used to address skills challenges include:

- identifying positions in critical areas of operation (43 per cent);
- job shadowing (39 per cent);
- job rotation (38 per cent); and
- identifying hard-to-recruit positions (34 per cent).

See Chart 31 for a complete list of internal training and management strategies used by businesses in the advanced wood manufacturing sector.

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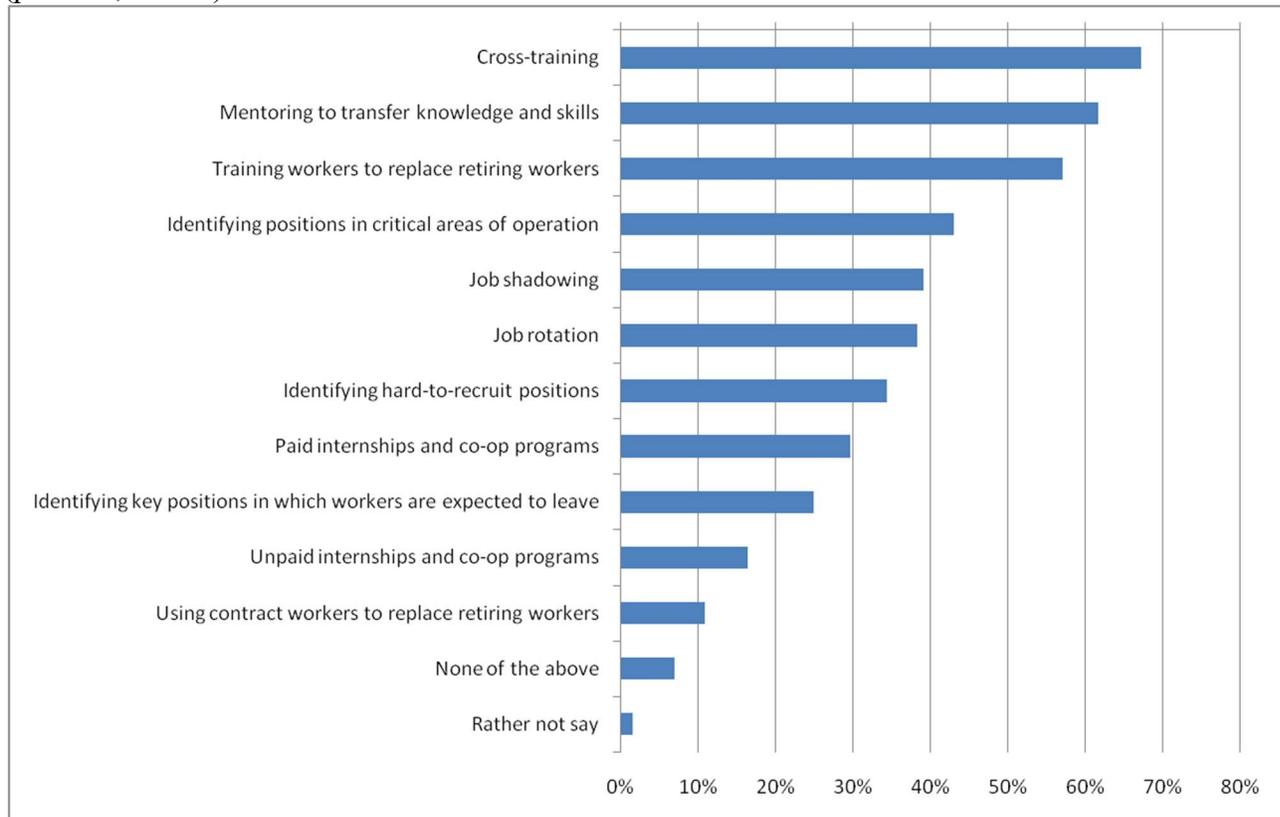
<sup>62</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 32.

<sup>63</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 38.

<sup>64</sup> Gwen Morgan, *4 Steps to Creating a Successful Job-Swapping Program*.

<sup>65</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 33, 39, 49.

**Chart 31**  
**Businesses Leverage Internal Resources for Training**  
 (per cent; n=128)



Source: The Conference Board of Canada.

Internal training has several benefits. For example, training existing workers to fill job vacancies leverages internal resources. In addition, mentoring helps transfer technical knowledge and skills, and helps employees develop and leverage their communication skills. Several businesses we interviewed believe that new employees often have weak communication skills. Mentoring also helps build inter-personal relationships, which facilitate the creation of new products, services, and processes.

In many small businesses, training often consists of job shadowing and observation. In these cases employees are expected to learn new skills almost by osmosis. Many businesses we interviewed noted that job shadowing is cost-effective because it does not require businesses to pay fees to a third party. This is true, but job shadowing also involves opportunity costs requiring experienced employees to slow their work pace, often leading to decreased productivity.

Despite these challenges, most businesses in the sector recognize the value and importance of ongoing training (whether for new hires, seasoned workers, or management and leadership) and support a variety of training activities. One employer survey respondent noted that: “We have always offered to pay the cost of courses, but seldom do people take advantage of this offer. These days we teach brief seminars on various subjects related to the field [of work] right on the shop floor during regular paid work hours.”

## Skills Developed

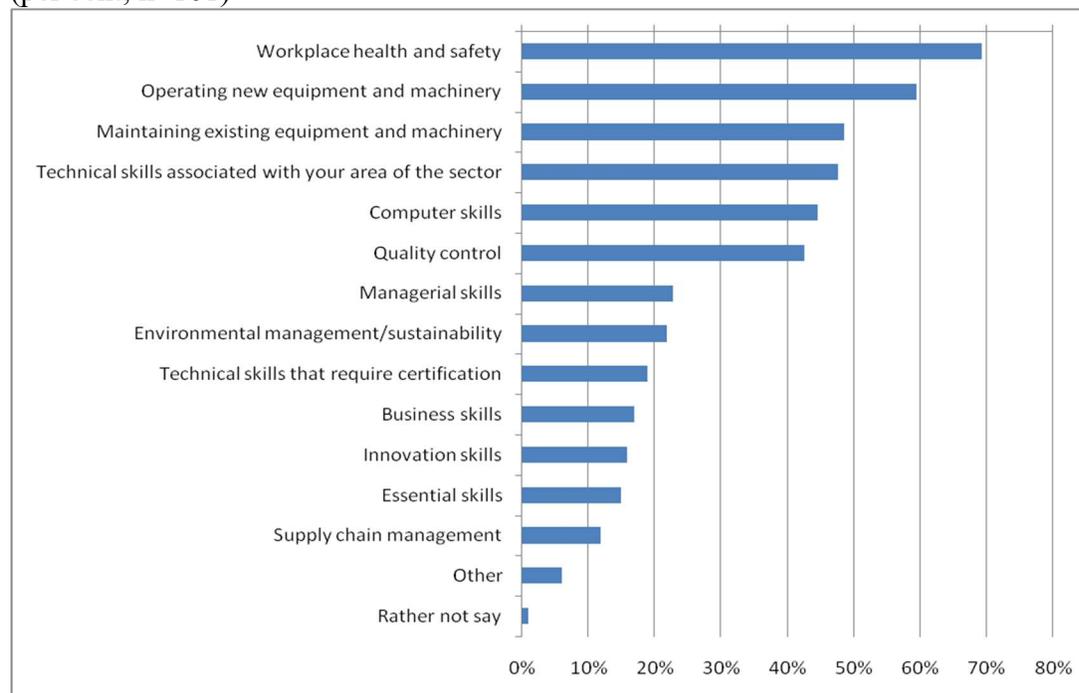
Education and training programs help workers in the sector develop the skills they need to succeed in the workplace. For example, in 69 per cent of businesses, workers develop workplace health and safety skills offered in-house or by local safety associations—a critical skill set to have given the nature of work in the advanced wood manufacturing sector (e.g., cutting and shaping wood; using saws, lathes, planers, pressing machines, routers, and edgers). (See Chart 32 for a list of the top skills developed by workers through their training activities.) According to businesses other top skills that workers develop include:

- skills to operate new equipment and machinery;
- skills to maintain existing equipment and machinery;
- technical skills
- computer skills (particularly important for those businesses with automated production processes using CAD, CNC, and other computerized machinery); and
- quality control.

### Chart 32

#### Workers Most Often Develop Safety Skills, Technical Skills, and New Equipment Skills During Training

(per cent; n=101)



Source: The Conference Board of Canada.

General business skills continue to be crucial; but businesses, industry associations, labour groups, and education institutions can do more to ensure that workers have more opportunities to develop these skills. Just 17 per cent of businesses surveyed reported that their workers develop

business skills during training; and just 16 per cent said their workers develop innovation skills. There is also an opportunity for workers to develop more management skills: only 23 per cent of businesses surveyed noted that their workers develop managerial skills during training. (See Chart 32.)

### **Barriers to Training and Skills Development**

We also asked businesses to comment on the training and skills development barriers they face in the workplace. Approximately 54 per cent of businesses surveyed believe they do not have enough time for training—focusing their time on day-to-day operations instead. In addition, 40 per cent of businesses surveyed believe training is too expensive for the company, and 37 per cent believe workers are not interested in training. (See Chart 33.)

These results correspond with those from Saine Marketing's 2015 study, which show that 67 per cent of Quebec employers cited a lack of time or personnel as a barrier to training. Other common barriers cited by Quebec employers include:<sup>66</sup>

- Slower production (42 per cent);
- Lack of financial aid (29 per cent);
- Cost of training activities is too high (26 per cent);
- Lack of internal expertise to identify training needs (17 per cent);
- Lack of appropriate training tools in the workplace (16 per cent).

The lack of interest on the part of employees to take training, as identified by employers, requires further analysis to understand the root causes of this indifference. These causes may include: training is not valued by employees, training does not lead to higher wages or career advancement, training and learning outcomes are not recognized by businesses or the sector, training only serves the needs/interests of employers, and workers believe that the skills and labour shortages facing the sector puts them in an advantageous position. For example, one business owner we spoke to suggested that some employees are not always motivated to take training to heart because they believe their jobs are not at risk, as many companies continue to face skills and labour shortages, and have trouble finding replacement workers for certain occupations.<sup>67</sup>

Distance is also a barrier to training. Of the businesses we surveyed, 27 per cent believe that meaningful training is too far away from their places of work. (See Chart 33.) Distance is more likely to be a barrier in smaller communities, many of which are further away from post-secondary education institutions that offer formal education and training programs (e.g., degrees, diplomas and certificates) in advanced wood manufacturing. For instance, 40 per cent of businesses in communities with 25,000 to 100,000 people believe distance is an issue; whereas 54 per cent of businesses in communities with 1,000 to 25,000 people believe distance is an

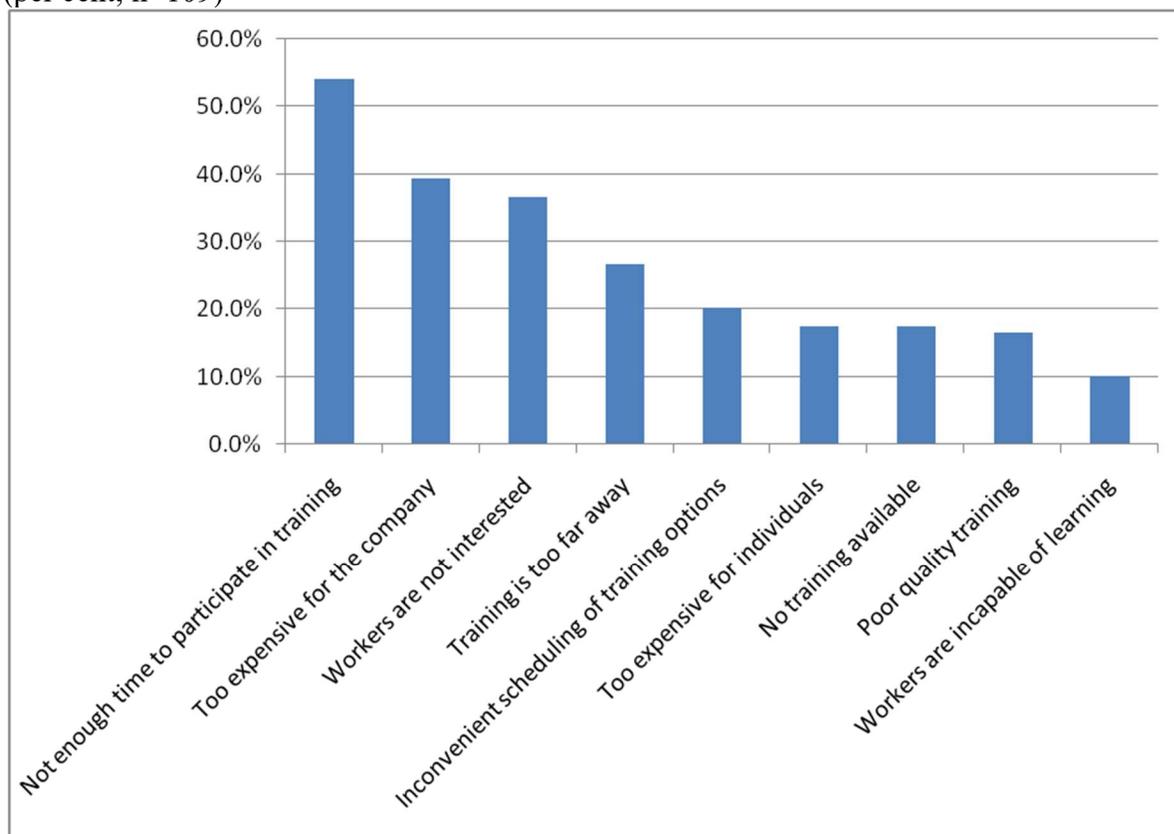
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<sup>66</sup> Saine Marketing, *Sondage sur les besoins de main d'oeuvre et de formation*, 40.

<sup>67</sup> Survey text response.

issue. Distance is less of a barrier in communities with more than 500,000 people—where most colleges, institutes, and polytechnics are located in Canada—with just 5 per cent of respondents noting that distance to training is an impediment.

**Chart 33**  
**A Lack of Time is the Top Impediment to Training**  
 (per cent; n=109)



Source: The Conference Board of Canada.

### Building a More Skilled Workforce

Businesses offered several suggestions on how to build and sustain a strong advanced wood manufacturing workforce. Businesses in the sector have a clear desire to leverage the knowledge and skills of their own employees: 67 per cent believe more in-house or on-the-job training would strengthen the sector’s workforce. In addition, 46 per cent believe coaching and/or mentoring by experienced workers would lead to a stronger workforce. (See Table 7.)

To leverage the knowledge and skills of their workers, businesses need to ensure that their workers receive proper training before they enter the workforce. According to survey results, 54 per cent of businesses believe workers entering the advanced wood manufacturing sector need additional skills training in a wide range of areas including employability skills (e.g., problem-solving, communication, teamwork), technical skills, and general business skills. (See Table 7.) Pre-employment skills training activities are especially popular among residential furniture manufacturers (66 per cent) and commercial furniture manufacturers (64 per cent). This reflects

the fact that residential and commercial furniture is often upscale and ornate and as such, workers in these sub-sectors need specialized training.

**Table 7**  
**In-house and External Training are Valuable Workforce Development Strategies**  
 (per cent; n=115)

| Strategy   | Per cent |
|--|----------|
| More in-house or on-the-job training (workplace learning)            | 66       |
| Skills training required before workers enter the workforce          | 54       |
| Coaching and/or mentoring by experienced workers                     | 46       |
| Higher levels of work readiness                                      | 43       |
| Continuing professional development and education                    | 33       |
| Cross-training in skills needed in multiple jobs                     | 33       |
| More workers participating in training on their own time and expense | 27       |
| More apprentices   | 26       |
| Higher levels of essential skills                                    | 23       |
| More college or university education                                 | 16       |
| Higher levels of computer skills                                     | 13       |
| Mobile training units to bring skills training to remote areas       | 10       |
| Cross-training in skills needed by multiple sectors                  | 3        |
| Other  | 3        |
| None of the above/rather not say                                     | 2        |

Source: The Conference Board of Canada.

Workers also need to update existing skills and acquire new skills after they enter the workforce. This corresponds with our survey results, which show that 38 per cent of businesses believe that continuing professional development and education helps make the sector’s workforce more productive, innovative, and efficient. Seventy-two per cent of the sector stakeholders we surveyed—including educational institutions, industry associations, labour groups, and government—agree.

More can be done. There is an opportunity to better align national occupational standards with workplace requirements. National occupational standards “describe the skills and knowledge needed to perform competently in the workplace” and “serve as a benchmark against which the

actual practice of an occupation can be measured.”<sup>68</sup> Educational institutions, industry associations, labour groups, and government should use these standards as the basis for training programs in the sector.

## **Conclusion**

Businesses in the advanced wood manufacturing sector prefer in-house methods of recruitment and skills development. Workers in the sector often develop safety skills, technical skills and new equipment and computer skills during training as businesses look to become more automated and technologically sophisticated. Traditional craftsmanship skills will also remain important as businesses continue to produce upscale products and maintain the Canadian sector’s competitive advantage. Businesses and sector stakeholders will need to ensure that skills needs in these areas are properly addressed to maintain the sector’s competitiveness and prosperity.

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<sup>68</sup> Hall, “National Occupational Standards.”

## Chapter 6: Strategies for Success

### Chapter Summary

- The success of the advanced wood manufacturing sector depends on its ability to maintain a strong and stable workforce.
- Workers in the sector need to have strong traditional woodworking skills, skills to operate new machinery, computer skills, essential skills, and general business skills.
- Focusing recruitment, training, and retention strategies on addressing labour and skills gaps will help the sector be competitive and successful now, and in the future.

The advanced wood manufacturing sector is one of Canada's fastest-growing manufacturing sectors, and its success depends on a strong and stable workforce. To do this, workers in the sector need to have a combination of traditional woodworking skills, new machinery and computer skills, essential skills, and general business skills. However, the sector faces competitive pressures at home and from abroad, as well as several skills challenges that hinder its ability to reach its full potential. By focusing recruitment, training, and retention strategies on these challenges, businesses and other sector stakeholders will ensure that the sector remains competitive and successful in the future.

Businesses, industry associations, unions and labour groups, educational institutions and governments can make important contributions to the overall productivity and human resource outlook of the sector. The following strategies are designed to help stakeholders address key human resources challenges the sector faces, now and over the next 5 to 10 years.

### Sector-Level Support Strategies

#### 1. Ensure that knowledge of sector trends and issues flows smoothly between businesses and sector stakeholders.

Businesses and sector stakeholders (such as industry associations, labour groups, educational institutions and government departments) sometimes have different views on sector trends and issues. These differences can make it difficult to create and deliver relevant programs to businesses and workers in the sector. The Wood Manufacturing Council can help eliminate these differences by ensuring that information on sector trends and issues is accessible and flows smoothly between businesses and sector stakeholders. Having timely, relevant, and accurate information on sector trends and issues, from a variety of perspectives, will help ensure that businesses have access to employees with the right skills; that educational institutions provide relevant training; and that industry associations, labour groups, and government departments can provide support to maintain a stable and productive workforce.

## **2. Develop and promote a human resources and training toolkit for use by companies in the advanced wood manufacturing sector.**

Many sector stakeholders believe that in-house training is the most efficient and cost-effective way of training workers to specific company needs. These needs include technical skills as well as familiarity with company culture and values. However, many employers, especially small employers, find it difficult to develop and schedule training programs, especially during periods of peak production. The Wood Manufacturing Council should develop a training toolkit to help companies train their employees. A toolkit that includes training and skills needs checklists, training plan templates, impact assessment models, and training models would:

- help employers understand their training and skills needs;
- provide guidance on how to develop appropriate training programs;
- help employers understand the value of their investments in training; and
- show employers how training programs can be incorporated into their existing operations.

## **3. Establish clear occupational standards, essential skills standards, and language standards for the sector.**

New technologies and production processes are changing the requirements of some occupations in the advanced wood manufacturing sector. Educational institutions have responded by emphasizing the development of technological skills; however, many businesses we interviewed feel that current educational training does not fully meet their needs. For example, businesses noted that new workers often lack the traditional craftsmanship skills they need to create finished products. They also noted that new workers often lack some of the basic skills needed to carry out their work tasks (e.g., quality control skills, equipment maintenance skills, business skills, and managerial skills); and to listen and communicate effectively with co-workers, managers, and individuals outside the workplace (e.g., suppliers, industry associations, customers, educators).

Establishing clear standards based on current and future needs can help workers and businesses develop and maintain the skills, attitudes, and behaviours needed to be successful. These standards include:<sup>69</sup>

- **National Occupational Standards.** These standards help workers identify career paths and the skills needed to succeed in their current positions and future careers. They also: help employers and owners recruit, select, train and develop their employees; assist educators design and develop relevant and effective training programs and curricula; and help students understand the advanced wood manufacturing sector and the skills and knowledge required to enter the sector in different occupations.<sup>70</sup>

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<sup>69</sup> Hall, “National Occupational Standards.”

<sup>70</sup> Wood Manufacturing Council, *National Occupational Standard*, 2.

- **Essential Skills Standards.** These standards identify the essential skills employees need to acquire new knowledge and complete their day-to-day tasks. These skills include literacy (reading, writing, and document use), numeracy, oral communication, critical thinking and problem solving, working with others, computer use, and continuous learning.
- **Occupational Language Standards.** These standards describe the level of language competency (in English or French) that employees need to perform their work tasks safely and effectively. Occupational language standards are based on the skills and knowledge outlined in the occupational standards and essential skills standards.

## **Sector-Level Training Strategies**

### **4. Develop and promote accessible and flexible training programs.**

Many businesses in the sector are unable to take advantage of training programs offered by educational institutions, industry associations, and labour groups because they are not readily accessible. Many training programs are offered during working hours, and programs at educational institutions often focus on long-term and full-time studies. However, most businesses can only afford to release their employees for training during less active periods of production. As one business owner noted, “We cannot lose a full-time staff for 6 months of training, end of story. Even four month, part-time courses are a problem because when our business gets busy, we expect our staff to be at work.”

Educational institutions, industry associations, labour groups, and governments should develop and promote training programs that provide accessibility and flexibility for learners and businesses. One option is to develop short-term certification programs (e.g., four to twelve weeks) that teach students the fundamental skills and knowledge required by workplaces in the advanced wood manufacturing sector.

Another option would be to divide training programs into shorter modules that can be taken as stand-alone courses or as part of a more comprehensive program. Modularized training programs would allow more workers to access training opportunities.

### **5. Promote the value of professional certification within the sector.**

Many business owners and sector stakeholders we interviewed believe that prospects for advancement in the sector are limited for all but the most highly trained (and professionally-certified) workers. A lack of professional certification can make career advancement difficult unless employees are willing to stay with a single company. Limits on career advancement and restrictions on worker mobility will likely discourage entry into the industry. Promoting the value of professional certification would encourage more workers to enter the industry. Companies that did so would also demonstrate their willingness to invest in their employees.

## **6. Ensure that training programs include skills to operate automated machinery as well as traditional craftsmanship skills.**

Many employers suggested that there are synergies between the skills needed to operate automated machinery and traditional craftsmanship skills. Educational institutions, industry associations, labour groups, and government should ensure that training programs provide workers with both types of skills. One training administrator we interviewed suggested that two types of training courses be designed to help workers develop these symbiotic skills:

- courses in CAD and CNC machinery delivered to older workers; and
- courses in traditional craftsmanship for younger workers.

## **7. Continue to promote management training.**

Several business owners we interviewed believe that the sector's deficit in managerial skills is a significant opportunity for the sector. Programs such as the Wood Manufacturing Council's On-line Management Skills Training modules can help managers and owners/operators to improve their management skills. These skills include bookkeeping skills, HR management skills, supply chain management skills, marketing skills, and other general business skills. To leverage this opportunity, the Wood Manufacturing Council, industry associations, educational institutions and labour groups should continue to develop and promote the value of training programs that improve these skills. Doing this will help businesses in the sector become more efficient and competitive.

## **Marketing and Engagement Strategies**

### **8. Improve youth engagement strategies in primary and secondary schools.**

There is an opportunity for business and sector stakeholders (including industry associations, labour groups, and educational institutions) to improve their youth engagement strategies. Strategies from other sectors and industries can help the advanced wood manufacturing sector make improvements to its own youth engagement strategies. One example is Quebec's aerospace industry, where industry representatives give presentations and distribute model airplanes to primary school students' classes. This strategy helps ensure that youth are familiar with the career opportunities in the aerospace industry from a young age and will consider their sector as they enter the workforce.

In addition, youth engagement programs need to involve credible and engaging presenters. These include industry professionals and employers, as well as existing apprentices and co-op students. In many cases, primary and secondary school students find that employers and current woodworking students deliver engaging presentations that increase young students' awareness of, and interest in, the advanced wood manufacturing sector.

## **9. Emphasize the creative opportunities and impacts that exist when promoting the sector.**

Many workers enter the advanced wood manufacturing sector because of the intrinsic appeal of creating new designs and products. Businesses, industry associations, and labour groups should emphasize this appeal when they promote the sector. One cabinet and furniture maker noted that "People study the arts because they appreciate beauty, only to find their career path leading to a life at a desk. They come to advanced wood manufacturing because in this sector, your job is to create beautiful things."

In addition, because many businesses in the sector are small, there may be more opportunities to have a visible impact than in large organizations. Emphasizing these opportunities, and creative and artistic elements of the sector, should be used in conjunction with other common ways of addressing skills issues and challenges that include increasing in-house training and development, increasing wages, increasing other benefits and compensation packages, and recruiting workers from competitors.

## **Training and Retention Strategies for Businesses**

### **10. Dedicate time to training.**

Many business owners feel that they do not have enough time to train their workers. However, as many business owners and sector stakeholders noted during interviews, training helps new and existing employees develop new skills and improve existing skills, which helps them be more productive, efficient, and safe.

Businesses in the sector should dedicate more time to training. One option would be to set aside a period of time, during working hours, for specific skills or machinery training. This approach would allow workers to focus on learning new skills, and would prevent experienced workers from becoming less efficient when they need to explain tasks. In addition, setting aside time for training would allow employers to demonstrate their willingness to invest in their employees; this would help create a more positive perception of the sector.<sup>71</sup>

### **11. Improve the integration of new employees.**

There is an opportunity for businesses to improve the integration of new employees. New employees need to familiarize themselves with their employer's company culture, processes, and terminology, and need to develop relationships with existing employees. Poor integration can lead to high rates of employee turnover and makes businesses less productive. For some business owners, turnover is especially high during employees' first week on the job.

To improve employee retention, one business owner we interviewed implemented a phased integration plan in which new employees spend their first weeks on the job exclusively with other new employees. This "gives new employees some breathing space to learn the work culture and a chance to meet other people before being matched with a pre-existing team member. It has

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<sup>71</sup> Work Ready, *Benefits of Training Your Staff*.

dramatically improved the retention of new employees, in particular the retention of female employees.”

## **12. Recruit more workers from underrepresented groups.**

Businesses in the sector could do more to recruit workers from underrepresented groups. For example, Canada’s Aboriginal population is growing quickly, and is younger than Canada’s non-Aboriginal population. As such, Aboriginal workers could be a valuable source of new skilled workers for the sector. However, only 21 per cent of the businesses we surveyed said they make special efforts to recruit Aboriginal workers. In addition, few of the businesses we surveyed make special efforts to recruit recent immigrants to Canada, women, or foreign workers.

One program available to businesses in the sector is the Wood Manufacturing Council’s Wood Employee Readiness Curriculum (WERC). WERC is designed to increase work readiness for underrepresented groups—such as Aboriginal workers, people with disabilities, and immigrants working in Canada—while responding to the workforce needs of advanced wood manufacturers.<sup>72</sup>

## **13. Eliminate barriers for women workers.**

Women constitute 52 per cent of Canada’s workforce, but only 20 per cent of the advanced wood manufacturing workforce. Women in the sector face several barriers to success, which include a male-dominated culture, possible harassment, fewer flexible work arrangements, and lower wages. Eliminating these barriers would make the sector more attractive to women, and would increase the pool of available workers. One option is to introduce mentoring programs that educate businesses on the challenges faced by women in the sector, and on how to help women workers navigate the barriers cited above. In some cases, companies could use “reverse mentoring,” where junior female employees mentor their male superiors on female experiences in advanced wood manufacturing.<sup>73</sup>

## **14. Investigate ways of improving benefits and compensation packages.**

Businesses, industry associations, and labour groups could investigate ways of improving benefit and compensation packages. Extended benefit and compensation packages help to attract and retain workers, because they demonstrate that employers are concerned about their employees’ well-being. In addition, health and dental coverage help maintain employees’ health, and reduce time lost to illness and improve productivity.<sup>74</sup> Improving benefits and compensation packages may be challenging, however, because many businesses in the sector are small employers with limited resources.

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<sup>72</sup> Wood Manufacturing Council, *Wood Employee Readiness Curriculum (WERC)*.

<sup>73</sup> Sable Ridge Consulting, *Advancing Women in the Advanced Wood Processing Sector*, 20-23.

<sup>74</sup> Barbie Carpenter, *Reasons for Employee Benefits*.

## **Developing a Strong and Stable Advanced Wood Manufacturing Workforce**

A strong and stable workforce is a key component of the continued success of the advanced wood manufacturing sector. Businesses in the sector recognize that the use of new technologies and production processes means workers require new skills and that traditional woodworking skills also remain important. Businesses' investments in new recruitment, training, and retention will only yield their full return when workers have the right advanced wood manufacturing skills. Acquiring, developing and leveraging these skills will ensure that the sector is prosperous, innovative, and competitive in the years ahead.

## Appendix A: Details of Survey Respondents

### Geography

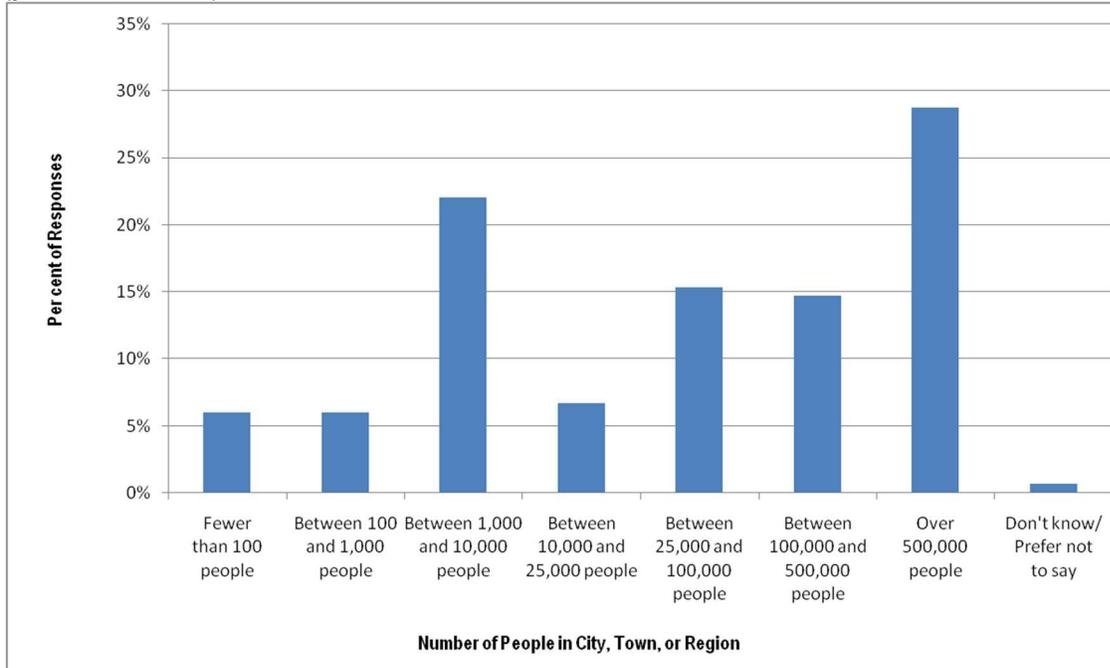
#### Province of Operation

(number and per cent; n=158)

| Province/Territory             | # of Employers (%) |
|--------------------------------|--------------------|
| Ontario (ON)                   | 63 (40%)           |
| British Columbia (BC)          | 28 (18%)           |
| Alberta (AB)                   | 25 (16%)           |
| Quebec (QC)                    | 16 (10%)           |
| Manitoba (MB)                  | 9 (6%)             |
| New Brunswick (NB)             | 9 (6%)             |
| Nova Scotia (NS)               | 5 (3%)             |
| Saskatchewan (SK)              | 5 (3%)             |
| Newfoundland and Labrador (NL) | 2 (1%)             |
| Prince Edward Island (PE)      | -                  |

Source: The Conference Board of Canada.

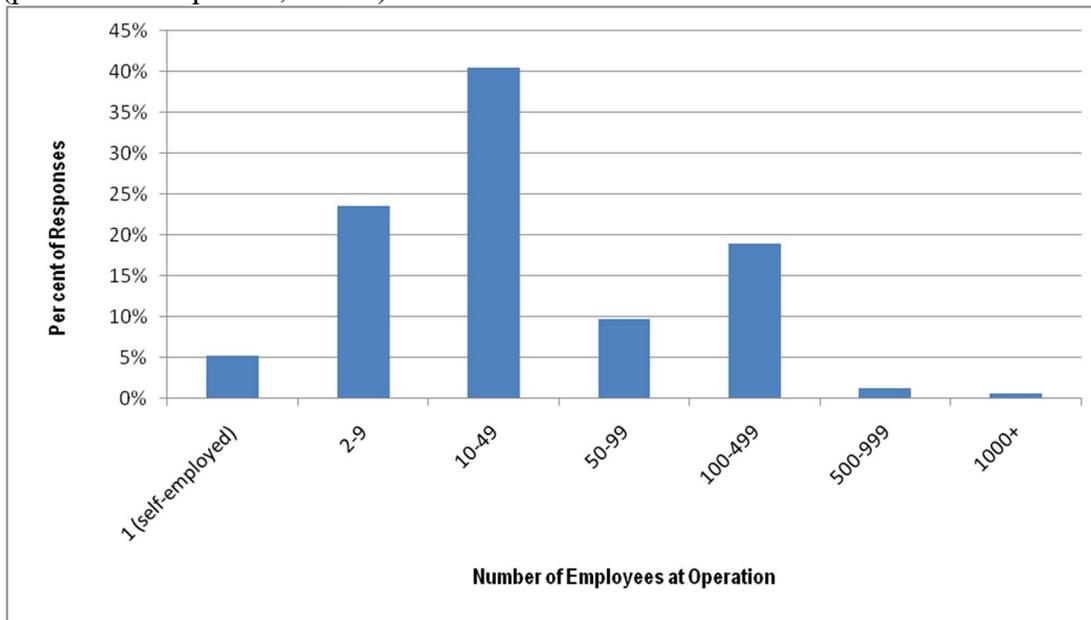
### Size of City, Town, or Region (per cent; n=150)



Source: The Conference Board of Canada.

### Workforce Characteristics

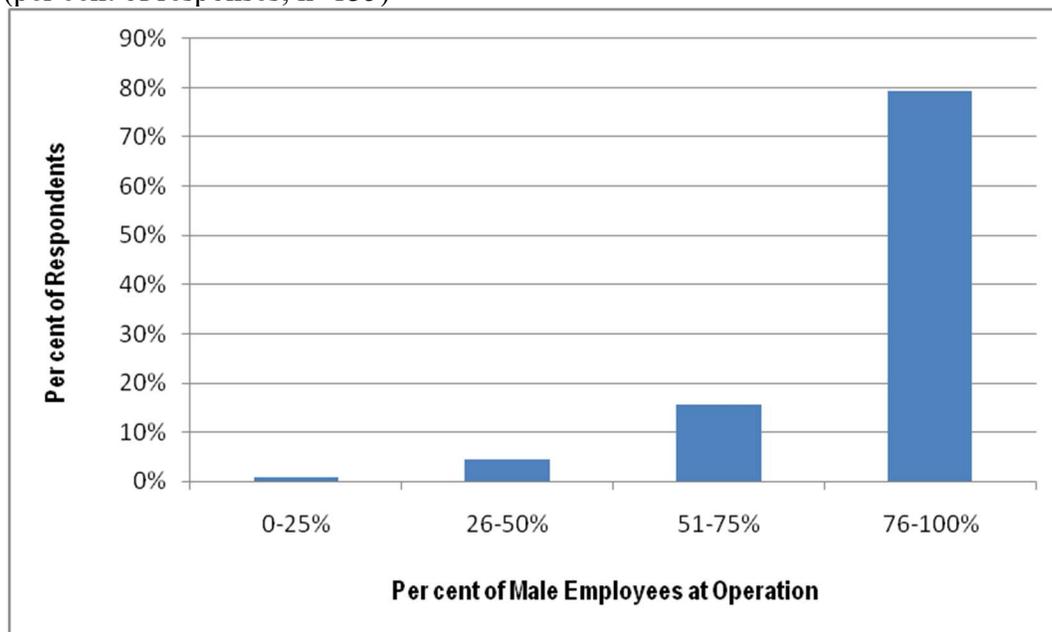
#### Number of Employees at Operation (per cent of responses; n=153)



Source: The Conference Board of Canada.

### Percentage of Male Employees at Respondents' Operation

(per cent of responses; n=135)



Source: The Conference Board of Canada.

### Employers' Workforce Characteristics (by Type of Employment)

(number and per cent)

| Percentage of workforce | Number of respondents who said their employees are: |                                    |                        |                          |
|-------------------------|---|------------------------------------|------------------------|--------------------------|
|                         | Year-round full-time (%)<br>(n=146)                 | Year-round part-time (%)<br>(n=54) | Seasonal (%)<br>(n=44) | Occasional (%)<br>(n=32) |
| 0-25%                   | 2 (1%)  | 47 (87%)                           | 31 (71%)               | 31 (97%)                 |
| 26-50%                  | 6 (4%)  | 3 (6%)                             | 9 (21%)                | 1 (3%)                   |
| 51-75%                  | 12 (8%)   | 2 (4%)                             | 2 (5%)                 | -                        |
| 76-100%                 | 126 (86%)   | 2 (4%)                             | 2 (5%)                 | -                        |

Source: The Conference Board of Canada.

**Use of Full Time Human Resources Manager or Director**  
(per cent; n=153)

| Response                     | Per cent |
|------------------------------|----------|
| No                           | 69       |
| Yes                          | 30       |
| Don't know/Prefer not to say | 2        |

Source: The Conference Board of Canada.

**Nature of Employment Earnings**  
(per cent; n=141)



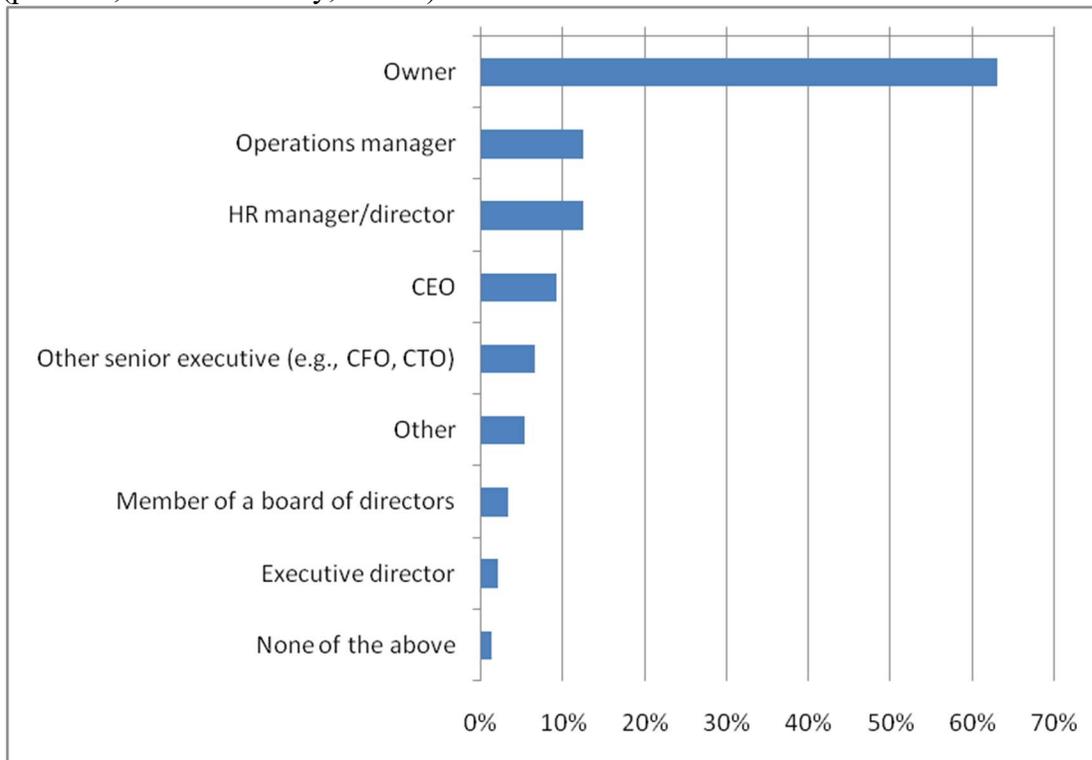
Source: The Conference Board of Canada.

**Type of Organization (all respondents)**  
(number and per cent; n=185)

| Organization Type                                     | # of Organizations (per cent) |
|---|-------------------------------|
| Business/Employer                                     | 160 (86%)                     |
| Industry/Association                                  | 11 (7%)                       |
| College, University, or Other Educational Institution | 7 (4%)                        |
| Other/None of the above                               | 6 (3%)                        |

Source: The Conference Board of Canada.

**Respondent's Role at Operation**  
(per cent; businesses only; n=152)



Source: The Conference Board of Canada.

**Respondents by Advanced Wood Manufacturing Subsector**  
(number and per cent; n=156)

| <b>Subsector</b>   | <b>#<br/>(per cent)</b> |
|--|-------------------------|
| Kitchen Cabinet, Cabinet Doors, and Countertop Manufacturing | 75<br>(48%)             |
| Architectural Millwork and Store Fixtures                    | 47<br>(30%)             |
| Other Millwork (e.g., flooring, mouldings, components)       | 41<br>(26%)             |
| Wood Commercial/Institutional Furniture                      | 37<br>(24%)             |
| Wood Residential Furniture                                   | 34<br>(22%)             |
| Wood Windows and Doors                                       | 33<br>(21%)             |
| Engineered Wood Products                                     | 23<br>(15%)             |
| Prefabricated Wood Buildings (factory-built)                 | 15<br>(10%)             |
| Upholstered Furniture (e.g. chairs, chesterfields, sofas)    | 9<br>(6%)               |

Source: The Conference Board of Canada.

\*Note: Respondents were allowed to select more than one category.

## Appendix B: Advanced Wood Manufacturing Employment Forecast, 2015-2020

| Canada                                  | Actual  |         |         |         |         |         |         |         |         |        |        |        |        |        |        |        | Forecast |        |        |        |        |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
|   | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016     | 2017   | 2018   | 2019   | 2020   |
| <b>Advanced Wood Products</b>           | 113,307 | 120,067 | 129,508 | 128,919 | 127,455 | 125,620 | 121,247 | 117,289 | 111,045 | 95,736 | 92,905 | 92,376 | 90,592 | 89,407 | 88,188 | 87,959 | 89,766   | 91,181 | 92,708 | 94,340 | 95,829 |
| <b>Kitchen cabinets and countertops</b> | 17,178  | 18,762  | 22,158  | 23,262  | 23,422  | 23,539  | 24,183  | 23,331  | 21,655  | 19,780 | 20,048 | 20,027 | 19,907 | 20,905 | 21,147 | 22,153 | 22,282   | 22,351 | 22,806 | 23,444 | 24,037 |
| <b>Other millwork</b>                   | 15,062  | 16,728  | 18,084  | 18,595  | 17,727  | 16,936  | 16,204  | 14,533  | 14,246  | 12,722 | 14,250 | 14,315 | 14,482 | 13,433 | 13,384 | 13,389 | 13,756   | 14,004 | 14,315 | 14,602 | 14,891 |
| <b>Prefabricated buildings</b>          | 10,189  | 10,711  | 11,727  | 12,350  | 11,495  | 11,931  | 12,592  | 12,996  | 13,159  | 11,762 | 11,616 | 12,774 | 12,604 | 12,367 | 12,593 | 12,299 | 12,485   | 12,548 | 12,678 | 12,823 | 12,972 |
| <b>Wood and upholstered furniture</b>   | 59,057  | 61,548  | 64,185  | 62,882  | 61,726  | 61,398  | 55,054  | 53,781  | 49,925  | 41,307 | 38,593 | 38,231 | 37,189 | 36,680 | 34,696 | 33,999 | 34,855   | 35,721 | 36,174 | 36,578 | 36,888 |
| <b>Wood windows and doors</b>           | 11,821  | 12,318  | 13,354  | 11,830  | 13,085  | 11,816  | 13,214  | 12,648  | 12,060  | 10,165 | 8,398  | 7,029  | 6,410  | 6,023  | 6,369  | 6,119  | 6,389    | 6,557  | 6,735  | 6,893  | 7,041  |

Source: The Conference Board of Canada

| British Columbia                        | Actual |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Forecast |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
|   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016     | 2017   | 2018   | 2019   | 2020   |
| <b>Advanced Wood Products</b>           | 10,736 | 11,838 | 13,119 | 12,800 | 13,221 | 13,553 | 14,097 | 14,324 | 13,708 | 11,648 | 11,518 | 11,425 | 11,515 | 11,985 | 11,799 | 12,245 | 12,681   | 13,113 | 13,505 | 13,869 | 14,252 |
| <b>Kitchen cabinets and countertops</b> | 1,920  | 2,241  | 2,647  | 2,468  | 2,996  | 2,943  | 3,174  | 3,392  | 3,294  | 3,008  | 2,890  | 2,922  | 2,904  | 3,141  | 2,966  | 2,990  | 3,101    | 3,200  | 3,249  | 3,365  | 3,451  |
| <b>Other millwork</b>                   | 2,344  | 2,948  | 3,188  | 3,300  | 3,338  | 2,924  | 3,019  | 2,872  | 2,499  | 2,040  | 2,291  | 2,469  | 2,500  | 2,574  | 2,469  | 2,380  | 2,513    | 2,660  | 2,723  | 2,794  | 2,857  |
| <b>Prefabricated buildings</b>          | 2,003  | 1,912  | 2,393  | 2,435  | 2,155  | 2,264  | 2,524  | 2,668  | 2,847  | 2,001  | 1,967  | 2,240  | 2,332  | 2,581  | 2,547  | 3,118  | 3,324    | 3,424  | 3,471  | 3,530  | 3,587  |
| <b>Wood and upholstered furniture</b>   | 3,418  | 3,652  | 3,653  | 3,591  | 3,615  | 4,240  | 4,116  | 4,108  | 3,762  | 3,432  | 3,227  | 2,968  | 3,040  | 2,962  | 2,858  | 2,806  | 2,881    | 3,142  | 3,116  | 3,134  | 3,104  |
| <b>Wood windows and doors</b>           | 1,051  | 1,085  | 1,238  | 1,006  | 1,117  | 1,182  | 1,264  | 1,284  | 1,306  | 1,167  | 1,143  | 825    | 738    | 727    | 959    | 952    | 980      | 1,028  | 1,036  | 1,047  | 1,052  |

Source: The Conference Board of Canada

| Alberta                                 | Actual |        |        |        |       |        |        |        |        |       |       |       |       |       |       |       | Forecast |       |       |       |       |
|---|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
|   | 2000   | 2001   | 2002   | 2003   | 2004  | 2005   | 2006   | 2007   | 2008   | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016     | 2017  | 2018  | 2019  | 2020  |
| <b>Advanced Wood Products</b>           | 10,369 | 12,113 | 11,783 | 10,879 | 9,948 | 10,145 | 10,818 | 10,992 | 10,587 | 9,060 | 7,806 | 7,984 | 8,169 | 7,911 | 8,219 | 8,303 | 7,943    | 7,906 | 7,979 | 8,065 | 8,138 |
| <b>Kitchen cabinets and countertops</b> | 818    | 1,140  | 1,414  | 1,290  | 1,294 | 1,495  | 1,883  | 1,747  | 1,852  | 1,752 | 1,861 | 1,722 | 1,854 | 1,797 | 2,210 | 2,447 | 2,314    | 2,284 | 2,313 | 2,359 | 2,399 |
| <b>Other millwork</b>                   | 736    | 973    | 1,186  | 1,028  | 1,215 | 1,269  | 1,107  | 1,046  | 1,057  | 993   | 1,111 | 1,020 | 1,092 | 1,150 | 1,164 | 1,255 | 1,213    | 1,214 | 1,232 | 1,247 | 1,261 |
| <b>Prefabricated buildings</b>          | 1,922  | 1,855  | 2,144  | 2,207  | 1,834 | 2,180  | 2,764  | 3,410  | 2,890  | 2,692 | 2,602 | 3,428 | 3,489 | 3,376 | 3,569 | 2,888 | 2,757    | 2,725 | 2,733 | 2,743 | 2,752 |
| <b>Wood and upholstered furniture</b>   | 6,133  | 7,576  | 6,312  | 5,550  | 4,732 | 4,810  | 4,065  | 3,799  | 3,678  | 2,644 | 1,965 | 1,686 | 1,541 | 1,364 | 1,171 | 1,587 | 1,530    | 1,542 | 1,550 | 1,555 | 1,556 |
| <b>Wood windows and doors</b>           | 760    | 569    | 727    | 804    | 873   | 391    | 999    | 990    | 1,110  | 979   | 267   | 127   | 193   | 223   | 105   | 126   | 129      | 141   | 150   | 160   | 170   |

Source: The Conference Board of Canada

Advancing Wood Manufacturing in Canada (LMI Update 2015-16)

**Saskatchewan**

|                                  | Actual |       |       |       |      |       |       |       |       |       |       |       |       |       |       |       | Forecast |       |       |       |       |
|----------------------------------|--------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
|                                  | 2000   | 2001  | 2002  | 2003  | 2004 | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016     | 2017  | 2018  | 2019  | 2020  |
| Advanced Wood Products           | 835    | 1,438 | 1,449 | 1,129 | 917  | 1,082 | 1,132 | 1,077 | 1,223 | 1,381 | 1,435 | 1,379 | 1,431 | 1,306 | 1,217 | 1,216 | 1,165    | 1,206 | 1,239 | 1,275 | 1,314 |
| Kitchen cabinets and countertops | 407    | 228   | 528   | 263   | 282  | 303   | 315   | 288   | 383   | 398   | 526   | 465   | 445   | 510   | 452   | 447   | 410      | 420   | 434   | 451   | 469   |
| Other millwork                   | 23     | 34    | 38    | 27    | 30   | 49    | 44    | 41    | 79    | 70    | 72    | 99    | 94    | 66    | 68    | 63    | 62       | 65    | 67    | 69    | 71    |
| Prefabricated buildings          | 147    | 141   | 166   | 143   | 121  | 160   | 193   | 190   | 253   | 450   | 358   | 327   | 327   | 206   | 188   | 183   | 178      | 183   | 187   | 191   | 196   |
| Wood and upholstered furniture   | 175    | 903   | 621   | 610   | 423  | 495   | 511   | 518   | 484   | 437   | 459   | 476   | 559   | 520   | 510   | 523   | 515      | 539   | 552   | 564   | 577   |
| Wood windows and doors           | 83     | 132   | 96    | 85    | 62   | 75    | 69    | 40    | 24    | 26    | 21    | 12    | 7     | 4     | 0     | 0     | 0        | 0     | 0     | 0     | 0     |

Source: The Conference Board of Canada

**Manitoba**

|                                  | Actual |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Forecast |       |       |       |       |
|----------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
|                                  | 2000   | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016     | 2017  | 2018  | 2019  | 2020  |
| Advanced Wood Products           | 7,058  | 6,685 | 7,937 | 8,083 | 8,135 | 8,798 | 8,240 | 8,026 | 7,286 | 5,893 | 5,549 | 5,440 | 5,381 | 5,198 | 6,053 | 5,993 | 6,197    | 6,331 | 6,472 | 6,592 | 6,714 |
| Kitchen cabinets and countertops | 1,740  | 1,980 | 2,408 | 2,685 | 2,788 | 2,875 | 2,935 | 2,608 | 2,344 | 2,425 | 2,644 | 2,366 | 2,264 | 2,325 | 3,265 | 3,285 | 3,359    | 3,397 | 3,473 | 3,553 | 3,633 |
| Other millwork                   | 290    | 361   | 361   | 233   | 207   | 312   | 364   | 348   | 469   | 360   | 270   | 306   | 297   | 293   | 313   | 339   | 354      | 363   | 372   | 378   | 384   |
| Prefabricated buildings          | 158    | 146   | 228   | 227   | 226   | 300   | 362   | 357   | 474   | 499   | 452   | 602   | 603   | 412   | 420   | 295   | 304      | 308   | 312   | 314   | 317   |
| Wood and upholstered furniture   | 3,478  | 2,599 | 2,988 | 3,101 | 3,114 | 3,160 | 2,413 | 2,443 | 2,258 | 1,426 | 1,511 | 1,598 | 1,669 | 1,648 | 1,589 | 1,616 | 1,684    | 1,740 | 1,766 | 1,777 | 1,787 |
| Wood windows and doors           | 1,392  | 1,599 | 1,952 | 1,837 | 1,800 | 2,151 | 2,166 | 2,270 | 1,741 | 1,183 | 672   | 568   | 549   | 520   | 465   | 459   | 496      | 523   | 549   | 570   | 592   |

Source: The Conference Board of Canada

**Ontario**

|                                  | Actual |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Forecast |        |        |        |        |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
|                                  | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016     | 2017   | 2018   | 2019   | 2020   |
| Advanced Wood Products           | 41,616 | 41,112 | 44,512 | 45,790 | 45,969 | 42,744 | 40,738 | 38,790 | 35,671 | 29,745 | 28,641 | 29,244 | 28,784 | 29,097 | 29,031 | 28,450 | 29,438   | 29,929 | 30,556 | 31,146 | 31,750 |
| Kitchen cabinets and countertops | 6,045  | 6,339  | 7,356  | 8,036  | 8,111  | 7,318  | 7,061  | 6,853  | 5,811  | 5,107  | 5,024  | 5,267  | 5,280  | 5,739  | 5,611  | 5,952  | 6,063    | 6,074  | 6,227  | 6,420  | 6,615  |
| Other millwork                   | 4,931  | 5,372  | 5,673  | 5,504  | 5,284  | 4,937  | 4,961  | 4,454  | 4,205  | 3,849  | 3,775  | 3,783  | 3,928  | 3,388  | 3,606  | 3,406  | 3,544    | 3,603  | 3,701  | 3,785  | 3,880  |
| Prefabricated buildings          | 2,112  | 2,093  | 2,414  | 2,527  | 2,095  | 2,260  | 2,146  | 1,898  | 1,854  | 1,739  | 1,922  | 1,982  | 2,067  | 2,163  | 2,344  | 2,411  | 2,479    | 2,488  | 2,526  | 2,562  | 2,605  |
| Wood and upholstered furniture   | 25,115 | 23,854 | 25,123 | 26,035 | 26,209 | 24,572 | 22,706 | 22,095 | 20,763 | 16,730 | 15,825 | 16,373 | 15,800 | 16,090 | 15,728 | 14,994 | 15,569   | 15,935 | 16,214 | 16,441 | 16,663 |
| Wood windows and doors           | 3,413  | 3,454  | 3,946  | 3,688  | 4,270  | 3,657  | 3,864  | 3,490  | 3,038  | 2,320  | 2,095  | 1,838  | 1,709  | 1,718  | 1,743  | 1,687  | 1,784    | 1,829  | 1,887  | 1,937  | 1,988  |

Source: The Conference Board of Canada

**Quebec**

|                                  | Actual |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Forecast |        |        |        |        |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
|                                  | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016     | 2017   | 2018   | 2019   | 2020   |
| Advanced Wood Products           | 38,863 | 43,322 | 46,322 | 45,690 | 44,723 | 44,915 | 41,956 | 39,875 | 38,200 | 34,084 | 33,716 | 33,058 | 31,504 | 30,189 | 28,646 | 28,494 | 28,854   | 28,970 | 29,450 | 29,938 | 30,371 |
| Kitchen cabinets and countertops | 5,560  | 6,143  | 6,989  | 7,663  | 7,062  | 7,764  | 7,939  | 7,532  | 7,013  | 6,140  | 6,129  | 6,245  | 5,985  | 6,188  | 5,587  | 5,968  | 5,945    | 5,885  | 6,001  | 6,164  | 6,313  |
| Other millwork                   | 6,079  | 6,330  | 6,808  | 7,645  | 6,932  | 6,893  | 6,143  | 5,203  | 5,342  | 4,776  | 5,560  | 5,690  | 5,641  | 5,056  | 5,143  | 5,283  | 5,376    | 5,401  | 5,518  | 5,623  | 5,728  |
| Prefabricated buildings          | 2,840  | 3,596  | 3,334  | 3,595  | 3,668  | 3,625  | 3,433  | 3,310  | 3,602  | 3,119  | 3,303  | 3,192  | 2,921  | 2,881  | 2,763  | 2,603  | 2,617    | 2,596  | 2,621  | 2,649  | 2,677  |
| Wood and upholstered furniture   | 19,502 | 22,124 | 24,137 | 22,731 | 22,422 | 22,564 | 19,925 | 19,547 | 17,763 | 15,821 | 14,836 | 14,648 | 14,090 | 13,568 | 12,380 | 12,067 | 12,254   | 12,393 | 12,543 | 12,672 | 12,766 |
| Wood windows and doors           | 4,882  | 5,129  | 5,054  | 4,056  | 4,639  | 4,069  | 4,516  | 4,283  | 4,480  | 4,228  | 3,888  | 3,283  | 2,867  | 2,497  | 2,772  | 2,573  | 2,662    | 2,696  | 2,767  | 2,830  | 2,887  |

Source: The Conference Board of Canada

Advancing Wood Manufacturing in Canada (LMI Update 2015-16)

**New Brunswick**

|                                  | Actual |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Forecast |       |       |       |       |
|----------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
|                                  | 2000   | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016     | 2017  | 2018  | 2019  | 2020  |
| Advanced Wood Products           | 2,191  | 2,570 | 2,846 | 2,804 | 2,961 | 2,809 | 2,661 | 2,589 | 2,679 | 2,071 | 2,491 | 2,600 | 2,507 | 2,330 | 1,835 | 2,065 | 2,127    | 2,133 | 2,161 | 2,195 | 2,221 |
| Kitchen cabinets and countertops | 405    | 454   | 485   | 516   | 562   | 565   | 568   | 547   | 526   | 539   | 596   | 633   | 715   | 713   | 537   | 553   | 563      | 561   | 570   | 585   | 597   |
| Other millwork                   | 194    | 224   | 387   | 353   | 287   | 80    | 86    | 82    | 92    | 121   | 596   | 591   | 562   | 522   | 206   | 335   | 348      | 352   | 359   | 366   | 371   |
| Prefabricated buildings          | 799    | 816   | 891   | 997   | 1,207 | 946   | 963   | 968   | 1,007 | 943   | 835   | 843   | 722   | 560   | 582   | 684   | 702      | 700   | 706   | 712   | 718   |
| Wood and upholstered furniture   | 607    | 781   | 798   | 657   | 642   | 969   | 755   | 743   | 739   | 259   | 201   | 221   | 219   | 247   | 204   | 191   | 198      | 202   | 204   | 206   | 207   |
| Wood windows and doors           | 186    | 295   | 285   | 281   | 263   | 249   | 289   | 249   | 315   | 209   | 263   | 312   | 289   | 287   | 305   | 301   | 315      | 318   | 323   | 326   | 329   |

Source: The Conference Board of Canada

**Nova Scotia**

|                                  | Actual |       |       |       |       |       |       |       |       |       |       |      |      |      |       |      | Forecast |      |      |      |      |
|----------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|------|----------|------|------|------|------|
|                                  | 2000   | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011 | 2012 | 2013 | 2014  | 2015 | 2016     | 2017 | 2018 | 2019 | 2020 |
| Advanced Wood Products           | 988    | 1,105 | 1,152 | 1,199 | 1,042 | 1,155 | 1,121 | 1,100 | 1,135 | 1,313 | 1,335 | 890  | 871  | 944  | 1,007 | 822  | 856      | 866  | 877  | 885  | 896  |
| Kitchen cabinets and countertops | 78     | 81    | 168   | 176   | 183   | 181   | 178   | 201   | 223   | 214   | 219   | 234  | 265  | 272  | 337   | 315  | 325      | 325  | 330  | 336  | 342  |
| Other millwork                   | 211    | 326   | 300   | 369   | 257   | 279   | 296   | 307   | 304   | 339   | 449   | 233  | 226  | 249  | 296   | 204  | 215      | 218  | 222  | 224  | 227  |
| Prefabricated buildings          | 130    | 137   | 147   | 155   | 144   | 150   | 158   | 144   | 152   | 212   | 130   | 142  | 103  | 150  | 148   | 90   | 93       | 94   | 94   | 94   | 95   |
| Wood and upholstered furniture   | 544    | 527   | 492   | 457   | 422   | 524   | 464   | 426   | 429   | 506   | 501   | 220  | 220  | 229  | 210   | 203  | 213      | 218  | 220  | 220  | 220  |
| Wood windows and doors           | 25     | 34    | 45    | 42    | 36    | 22    | 25    | 22    | 27    | 42    | 36    | 60   | 57   | 44   | 16    | 10   | 11       | 11   | 11   | 11   | 11   |

Source: The Conference Board of Canada

**Prince Edward Island**

|                                  | Actual |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Forecast |      |      |      |      |
|----------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|
|                                  | 2000   | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016     | 2017 | 2018 | 2019 | 2020 |
| Advanced Wood Products           | 262    | 169  | 153  | 165  | 238  | 212  | 260  | 255  | 241  | 195  | 142  | 98   | 112  | 144  | 100  | 88   | 104      | 105  | 107  | 107  | 107  |
| Kitchen cabinets and countertops | 18     | 18   | 21   | 22   | 23   | 20   | 25   | 35   | 35   | 38   | 31   | 30   | 31   | 68   | 33   | 34   | 40       | 41   | 41   | 42   | 42   |
| Other millwork                   | 125    | 90   | 51   | 42   | 110  | 89   | 95   | 88   | 82   | 53   | 11   | 21   | 27   | 23   | 19   | 35   | 41       | 42   | 43   | 43   | 43   |
| Prefabricated buildings          | 17     | 18   | 20   | 21   | 19   | 20   | 21   | 22   | 22   | 23   | 18   | 18   | 16   | 15   | 17   | 14   | 16       | 16   | 16   | 16   | 15   |
| Wood and upholstered furniture   | 72     | 22   | 49   | 49   | 60   | 62   | 97   | 89   | 83   | 70   | 69   | 26   | 37   | 36   | 30   | 0    | 0        | 0    | 0    | 0    | 0    |
| Wood windows and doors           | 29     | 21   | 12   | 31   | 25   | 21   | 22   | 21   | 19   | 11   | 13   | 3    | 2    | 2    | 2    | 6    | 7        | 7    | 7    | 7    | 7    |

Source: The Conference Board of Canada

**Newfoundland and Labrador**

|                                  | Actual |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Forecast |      |      |      |      |
|----------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|
|                                  | 2000   | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016     | 2017 | 2018 | 2019 | 2020 |
| Advanced Wood Products           | 344    | 237  | 263  | 263  | 240  | 278  | 244  | 269  | 347  | 341  | 293  | 285  | 315  | 303  | 280  | 283  | 282      | 279  | 273  | 267  | 267  |
| Kitchen cabinets and countertops | 187    | 138  | 142  | 142  | 121  | 122  | 105  | 129  | 174  | 159  | 128  | 143  | 164  | 151  | 149  | 163  | 161      | 165  | 167  | 170  | 176  |
| Other millwork                   | 129    | 70   | 91   | 94   | 67   | 104  | 89   | 91   | 117  | 121  | 115  | 103  | 115  | 113  | 100  | 90   | 90       | 85   | 79   | 73   | 68   |
| Prefabricated buildings          | 15     | 16   | 17   | 7    | 26   | 27   | 28   | 29   | 31   | 31   | 25   | 25   | 21   | 23   | 14   | 14   | 14       | 13   | 12   | 11   | 10   |
| Wood and upholstered furniture   | 13     | 13   | 13   | 20   | 26   | 25   | 22   | 21   | 26   | 30   | 25   | 14   | 14   | 16   | 16   | 11   | 11       | 10   | 10   | 9    | 8    |
| Wood windows and doors           | 0      | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 6    | 6        | 6    | 5    | 5    | 4    |

Source: The Conference Board of Canada

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