



Skills in the Manufacturing Sector in Hamilton

March 27, 2015

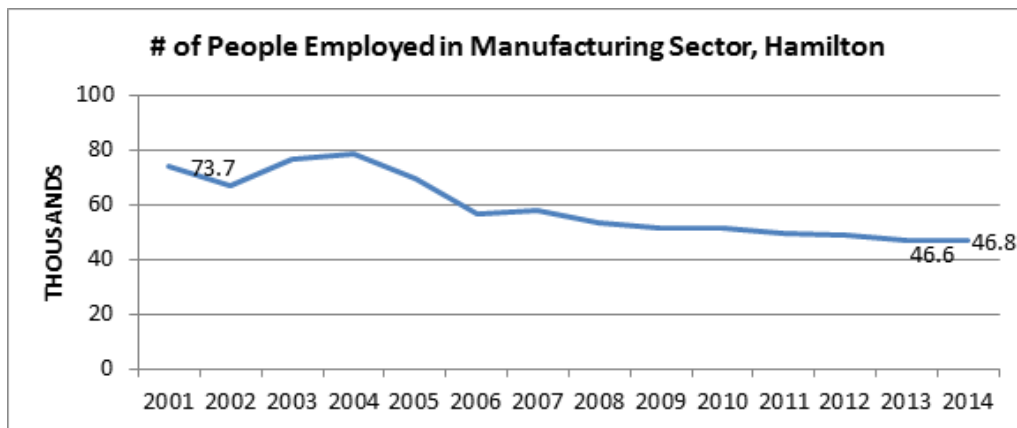
Introduction

Manufacturing has been the backbone of Hamilton's economy for more than a century. At one time it was our largest employment sector but over the past couple of decades we have seen a significant job loss across this sector. Shifts in the economic climate have had a role to play but we also see an evolution in the way work is done. Technological advances have changed the skills profile of the sector and we see a strong demand for high skilled labour. Our research and consultation with the manufacturing sector employers suggest that recruitment of skilled workers is their number one issue.

This report provides a brief overview of the manufacturing sector in Hamilton. The report brings to light many of the skills challenges the industry is facing, and where efforts need to focus to help alleviate the issues. The report includes a special focus on the skilled trades and how a possible skills mismatch may be occurring in the local labour market.

We would like to thank the many employers that have shared their perspective with us and helped bring to light many of their challenges. Without their insight many of the industry's struggles our picture would not be complete.

The Manufacturing Sector in Hamilton



Source: Labour Force Survey

Since the beginning of the 21st Century the Hamilton manufacturing sector has declined in the number of people employed, from a high of 73,700 in 2001 to where it is now at 46,800. More recently, this decline appears to be leveling off and we have actually seen a slight increase from 2013 to 2014.

It is important to note that while manufacturing has declined, it is still a significant contributor to employment in Hamilton. It is the third most employed sector only slightly behind Trade and Healthcare and represents 12% of the total workforce.

Hamilton, Top 5 # of People Employed by Industry

Industry	Total Employed	Share
All Industries	383.7	100%
Trade	62.4	16%
Health care and social assistance	47.5	12%
Manufacturing	46.8	12%
Educational services	29.5	8%
Professional, scientific and technical services	29.3	8%

Source: Labour Force Survey

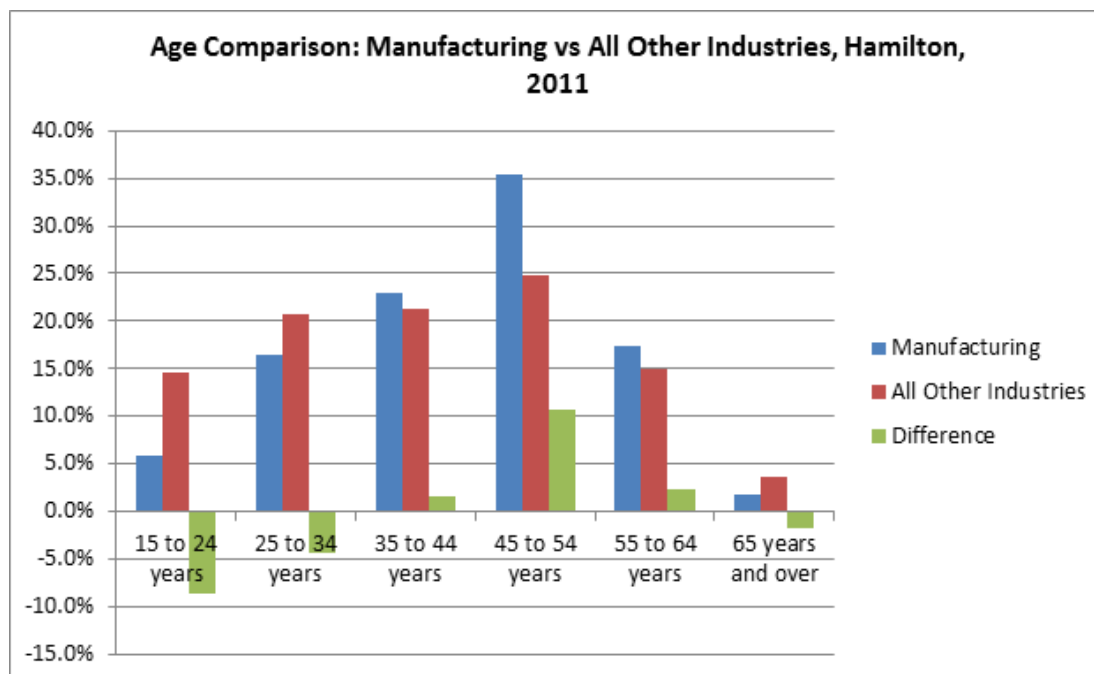
Experts suggest that a lower Canadian dollar and with declining transportation costs due to low price for oil we may see an uptick in manufacturing sector in the next year or so. Will there be skilled workers to meet this demand?

Top five manufacturing sectors in Hamilton based on number of businesses, June 2014

332 - Fabricated metal product manufacturing	233	22%
333 - Machinery manufacturing	125	12%
311 - Food manufacturing	89	8%
327 - Non-metallic mineral product manufacturing	57	5%
336 - Transportation equipment manufacturing	42	4%
331 - Primary metal manufacturing	40	4%

Source: 2014 June Canadian Business Patterns Data

Age Dynamics in Manufacturing

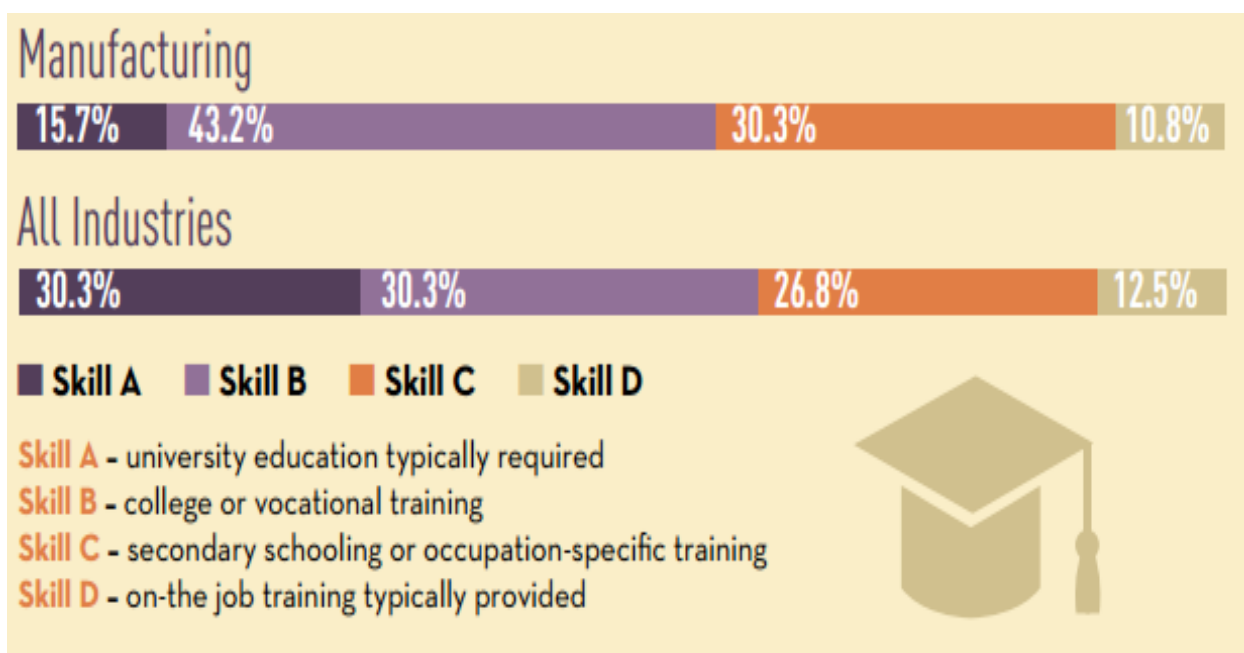


Source: 2011 National Household Survey

Workers in the manufacturing sector in Hamilton are on average older than the workforce in other sectors. The majority of people working in the industry are over the age of 45. There are also fewer people employed in manufacturing below the age of 34 than all other industries. In fact, the difference between the age group 45 to 54 is 10% higher in manufacturing than in the other industries.

According to our latest Hire Learning Survey¹, the main source of separations (job departures) in the manufacturing sector is retirements (55% of all separations). This was higher than quits and layoffs. The age profile of the manufacturing sector suggests that this trend will continue.

Skills in the Manufacturing Sector



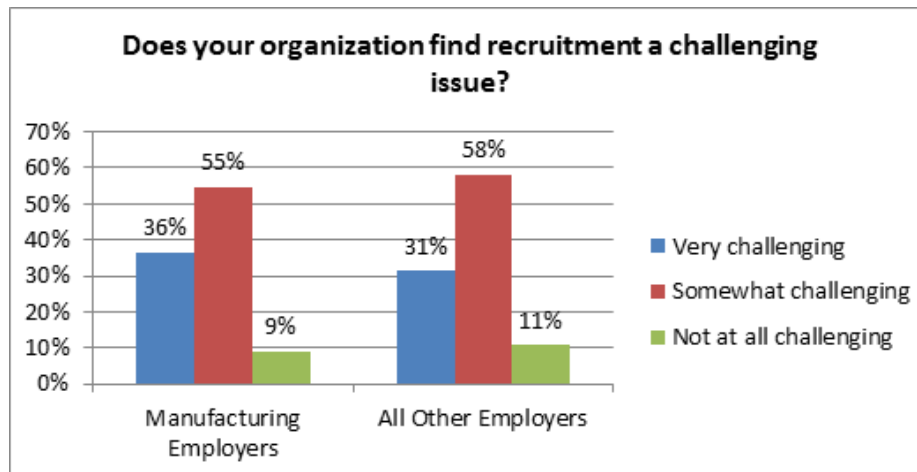
Source: 2011 National Household Survey

¹ The Hire Learning Survey is an annual employer survey conducted by Workforce Planning Hamilton looking at labour force demand. It is distributed in January each year to all sectors and sized of employers in Hamilton.

The skills profile for manufacturing sector shows that it is comprised of a highly skilled workforce. Furthermore, the skills requirements are expected to increase. According to the Hire Learning Survey, the majority of employers expect skills to increase over the next five years to a moderate extent, and with over a quarter of manufacturing employers expecting it to increase by a significant extent.

Currently, there may already be a possible skills mismatch in Hamilton as 43.2% of people employed in manufacturing require a College education. However, only 30.3% of employed person in Hamilton have a College level education. This would suggest that it is difficult for manufacturers to find people with this type of educational background.

Recruitment Challenges



Source: 2015 Hire Learning Survey

Top factors that make recruitment challenging:

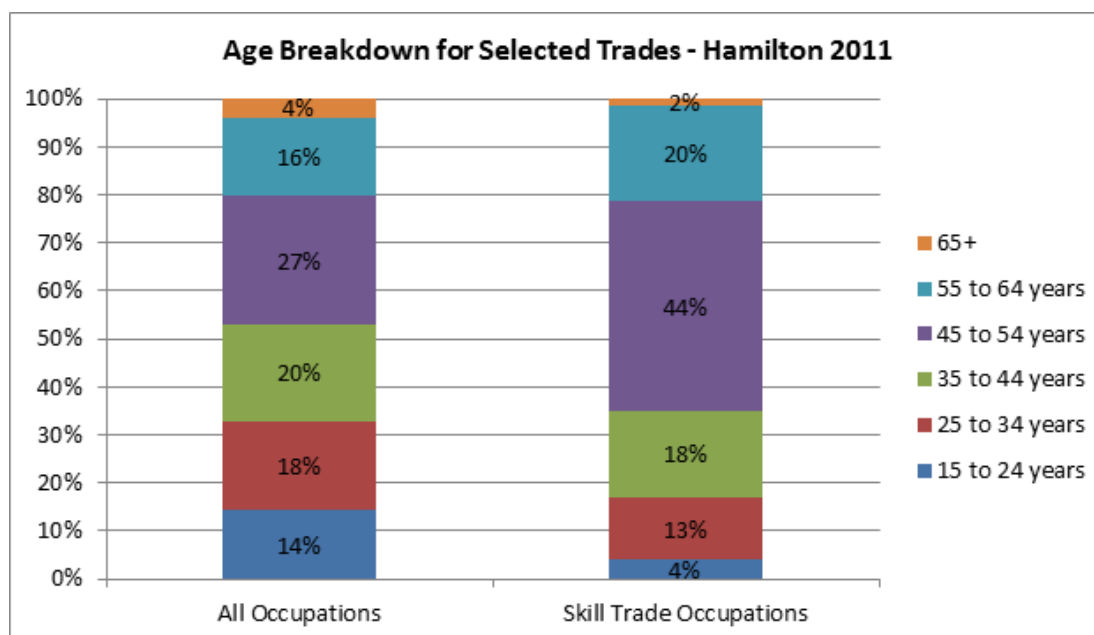
- Applicants not meeting skills
- Applicants not meeting qualifications
- Applicants not meeting work experience
- Applicants not meeting motivation, attitude, or interpersonal abilities

The Hire Learning Survey provides further evidence of a possible skills mismatch in the manufacturing sector. When asked if employers find recruitment a challenging issue, the majority of employers from the manufacturing sector said that it was 'somewhat challenging' and over a third of manufacturers said it was 'Very challenging'. This was higher than all other industries. The main reasons given as to why it is so challenging, were that applicants did not have the right skills, education and experience.

Skilled Trades

One job category that was mentioned frequently by employers in this sector as a particularly difficult to fill are the industrial trades. To prepare the following analysis, WPH examined the prevalent industrial trades occupations (those requiring a Certificate of Qualification) occurring across the top five sub sectors of manufacturing in Hamilton. Based on these criteria we identified twelve skilled trades occupations.

For these twelve skilled trades occupations, we see that the age dynamics are tilted towards older workers.



*Source: 2011 National Household Survey; Place-of-work; Employed Labour Force
15 Years of Age and Over with a usual place of work or working at home*

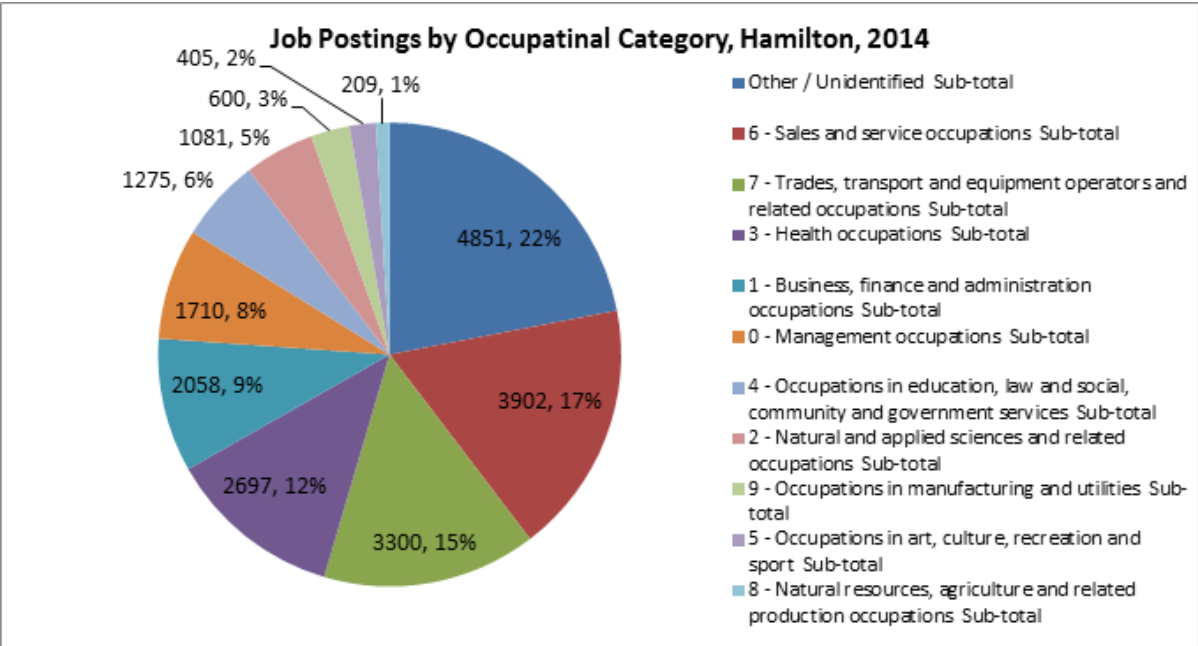
Almost half of people employed in the twelve selected trades are in the age group 45 to 54. This is significantly higher than all occupations as only 27% are in that age group. Also, among the skilled trade occupations only 17% of workers are below the age of 34, while for all occupations this age group account for about third of workers.

Selected Trade Occupations	Unemployment rate%
All occupations	6.1
7232 Tool and die makers	0
7316 Machine fitters	0
7231 Machinists and machining and tooling inspectors	2.1
7252 Steamfitters, pipefitters and sprinkler system installers	3.5
7237 Welders and related machine operators	4.0
7311 Construction millwrights and industrial mechanics	4.1
7371 Crane operators	4.7
7235 Structural metal and platework fabricators and fitters	5.4
7272 Cabinetmakers	5.8
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations	6.3
7242 Industrial electricians	7.4
7521 Heavy equipment operators (except crane)	14.8

Source: 2011 National Household Survey; Place-of-residence, for population 15 years of age and over

The unemployment rate for most these selected trade occupations was significantly lower than the unemployment rate for all occupations in 2011. The lower the unemployment rate the tighter the labour market it is for this occupation and the more difficulty the employer will have in recruiting for that position. However, that is not the case for all the trade occupations as some were higher. This shows that there is variation among skill trades occupations and that broad generalizations among them may not be completely accurate.

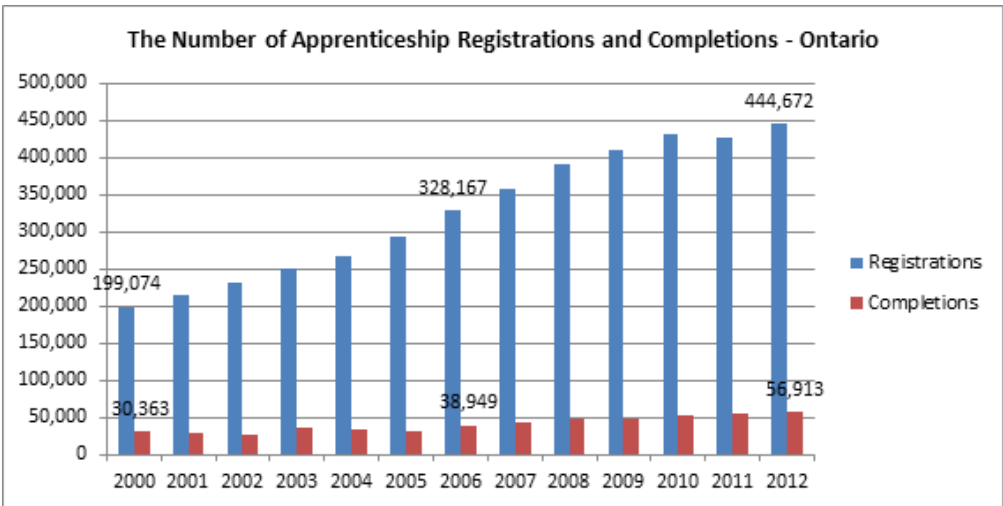
These selected trade occupations also had higher wages than the average wage in Hamilton. In fact, eight out of twelve had higher wages than the average wage in Hamilton and 5 of them² were in the fourth quartile in terms on average wages.



Source: Vicinity Data

Looking at job posting data³, the trades occupations are one of the most advertised job categories. After sales and service jobs, trades, transport and equipment operators had the second most postings (excluding other/unidentified). However, our research demonstrates that of people entering the trades is not keeping up with the demand, based on the analysis of the unemployment rate and wage information.

Furthermore number of people completing the skilled trades is not keeping up with the number of people registering.



Source: Statistics Canada, CANSIM Table 477-0055 and CANSIM Table 477-0053

² Skilled Trade occupations in the 4th quartile in wages: Steamfitters, pipefitters and sprinkler system installers (NOC 7252), Machine fitters (NOC 7316), Industrial electricians (NOC 7242), Construction millwrights and industrial mechanics (NOC 7311), Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations (NOC 7201)

³ Workforce Planning Hamilton releases quarterly job vacancy reports with data purchased from Vicinity Jobs. The technology platform collects any data from online job postings including location, industry, occupation, type of employment, duration of employment and job posting source.

Conclusion

Hamilton manufacturer's have faced turbulent times this century, but in terms of employment seems to be leveling off. As well it is still a significant industry as about 47,000 people are employed in the industry.

The age dynamics of the industry show a much older workforce as the majority of people employed are over the age of 45. According to the Hire Learning Survey, retirements are already a major source of separations, and will most likely only continue unless younger workers are attracted to the industry.

The skills and education of Hamilton's workforce create a recruitment challenge for manufacturer's as there are not enough people with College or Apprenticeship level of education. This challenge will only continue as the skill requirements are expected to increase in the industry. Also, while technical skills are important many manufacturers mention applicants not having the right soft skills such as communication, work-ethic, self-motivation.

One specific job category that is difficult to fill for employers are skilled trade occupations especially among industrial manufacturers. Many of the top industrial trade occupations have low unemployment rates and high wages, a sign of a shortage. Also, the trades are one of the most advertised job categories in the city.

Many of these finding were also brought up among employer interviews we conducted. We asked numerous small manufacturers and many felt that it was difficult to find qualified staff to fill their opening especially skilled trades jobs. This issue only is complicated by the fact that many employers have specific skills needed for their company. There were also concerns about the actual number of people applying to an opening not just the fact that the people applying did not have the right skills.

The soft skills were reiterated among the interviewees, especially among young people as many felt they do not have the right work ethic, and wages were a constant issue. Also, the students coming from many of the post secondary institution did not have the right skills needed for their company. Training is difficult because of the financial cost and also the opportunity cost of people needing to stop working to help train others. This was a particular concern among small employers.

It appears there are many challenges in the manufacturing sector, but through cooperation and a stronger focus from labour market stakeholders many of these issues can be alleviated. These efforts are strongly needed as manufacturing still has a strong base in the city, and is a major contributor to employment and earnings in the community.

What are other communities doing?

The city of Toronto and soon in Kitchener/Waterloo, clusters of manufacturers are banding together to train and give experience – for highly skilled, specialized positions – to young people, particularly youth who are unemployed, underemployed or disadvantaged.

It is meant to help manufacturers with their hard-to-fill jobs, but also gives many youth a chance to get a well paying permanent full time position. The initiative, called the Ontario Manufacturing Learning Consortium, works with a training institute and comprises of four industry associations in the aerospace, tolling and machining, nuclear and manufacturing sectors.

