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Labour market outcomes of journeypersons designated as visible minorities



by Hyeongsuk Jin and Sophia Su

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Summary

Using data from Statistics Canada's Education and Labour Market Longitudinal Platform (ELMLP), this study examines populations designated as visible minorities in the skilled trades. The labour market outcomes, one year after certification, of journeypersons designated as visible minorities, who responded to the 2016 Census of Population and received certificates in the skilled trades between 2008 and 2017, were compared with the outcomes of journeypersons who are not visible minorities.

- All groups designated as a visible minority were under-represented in the journeypersons population when compared to the Canadian population as a whole. However, the degrees of under-representation varied across population groups. For both men and women, compared to other designated groups, Latin Americans were less under-represented, and Chinese were more under-represented.
- One year after certification, journeypersons in most designated groups had lower median employment incomes than those who were not a visible minority. However, the labour market outcomes varied substantially across population groups.
- Trades in which visible minority journeypersons certified compared to non-visible minorities showed differences. For men, automotive service technician was more common in all designated groups than in non-visible minorities. Similarly, cook was also more common in most designated groups, with the exception of Black men.
- Most visible minority journeypersons received their certificates in Ontario, Alberta, and British Columbia. Compared to non-visible minority journeypersons, a larger proportion was certified in Ontario, whereas Quebec was under-represented.
- For men, about the half of the differences in median employment incomes between visible minority and non-visible minority journeypersons could be explained by different characteristics, such as trade, geography, and the mode of certification. However, this was not the case for women.

Labour market outcomes of journeypersons designated as visible minorities

by Hyeongsuk Jin and Sophia Su

Introduction

Despite policies aimed at supporting diversity and inclusion in Canada, populations designated as visible minority¹ (visible minorities) tend to have lower socioeconomic status than those who are not designated as such (non-visible minority).² Reported experiences of discrimination during the COVID-19 pandemic, as well as the ‘Black Lives Matter’ movements in Canada and other countries have highlighted the importance of understanding the challenges Black people, and visible minorities in general, are facing in Canada.³

In addition, there are growing concerns about a shortage of skilled tradespeople in the near future due to an ageing population.⁴ Since most of Canada’s population growth comes from immigration, and as most visible minorities are immigrants, examining the representation of visible minorities in the skilled trades and how well they are faring in the labour market, can provide important insights for researchers and policymakers alike.⁵

There is an extensive literature examining education and labour market outcomes of immigrants and visible minorities. Studies find that visible minorities have diverse experience and challenges in Canada depending on their ethnic background.⁶ Despite differences among them, in general, visible minorities had poorer labour market outcomes compared to non-visible minorities, although many of them had higher educational attainments.⁷

However, the majority of the literature on visible minorities and immigrants focuses on whether students attended or graduated college or university for post-secondary education and their labour market outcomes after graduation. Little is known for those who pursue careers in the skilled trades, partly due to a lack of appropriate data sources.⁸

This study expands the literature by analyzing labour market outcomes of recently certified visible minority journeypersons based on data from the Statistics Canada’s Education and Labour Market Longitudinal Platform (ELMLP).⁹ The ELMLP allows the combination of anonymized information from the Registered Apprenticeship Information System (RAIS) and the Postsecondary Student Information System (PSIS), with anonymized information from other administrative datasets, including the 2016 Census of Population (2016 Census).

The large size of the dataset enables the examination of outcomes across different population groups as well as visible minorities as a whole.

1. The Employment Equity Act defines visible minorities (visible minority persons) as ‘persons, other than Indigenous peoples, who are non-Caucasian in race or non-white in colour.’ See **Data sources, Methods and Definitions for more information**.
2. According to the 2016 Census, visible minorities had a lower median employment income than non-visible minorities, and more visible minorities were in low-income status.
3. In the crowdsourcing initiative “Impacts of COVID-19 on Canadians: Experiences of discrimination”, Chinese, Korean, Black and South-east Asian participants were more than twice as likely as White participants to report that they had experienced discrimination (Statistics Canada, 2020).
4. See, for example, Cocolakis-Wormstall (2018), May (2019), Prism Economics and Analysis (2019), and BuildForce Canada (2020). However, McQuillan (2013) argued that there are no expected labour shortage in Canada.
5. In 2019, the vast majority of population growth (82%) in Canada were driven by the arrival of new immigrants and non-permanent residents (Statistics Canada, 2019). In 2016 Census, more than two thirds of persons designated as a visible minority were born outside of Canada (**Chart 2**).
6. In their study of second generation immigrants, Chen and Hou (2019) found that most of the second generation immigrants had higher educational attainment than their first generation immigrant parents. However, their labour market outcomes varied across different visible minority groups. Turcotte (2020) examined labour market outcomes of Black youth in particular and documented the challenges they had.
7. Frenette, Lu, and Chen (2019) found that international students earned less than Canadian students six years after graduation if they have similar demographic characteristics and educational qualifications.
8. Due to the smaller population size of visible minority tradespeople, a large scale survey or dataset is required to study their experience reliably, especially to study the varying experience of visible minorities in different groups. The National Apprenticeship Survey 2015 included questions on respondents’ racial groups, but detailed analysis based on the questions were limited due to the small number of observations. Instead, analysis based on immigration status comparing their experience regarding apprenticeship training and employment were released (Frank and Jovic, 2017). Through a case study, Canadian Apprenticeship Forum (2010) interviewed visible minority apprentices about their challenges.
9. Visible minority status is based on self-reported responses to the population group questions in the 2016 Census. Due to a variety of reasons, the response might be different at the time of interest in this paper. See **Data sources, Methods and Definitions for more information** on the ELMLP and datasets used in this study.

Based on previous findings that noted substantially different experiences and choices between men and women in the skilled trades, the analysis is conducted for men and women separately.¹⁰

The first part of this study compares the population of journeypersons to the general Canadian population regarding persons designated as visible minorities. Their representation in the population of journeypersons who responded to the 2016 Census and certified between 2008 and 2017 is compared with the representation in the population of 2016 Census as a whole. In the second part, labour market outcomes and characteristics of visible minority journeypersons were compared against those of non-visible minorities. Across many measures, visible minority journeypersons generally had worse labour market outcomes one year after certification than non-visible minority journeypersons.

However, visible minority journeypersons had different characteristics than non-visible minorities. In the last part of this study, the differences in the employment income of journeypersons were studied using regression models to control for factors associated with incomes such as trades, region and mode of certification.

Fewer visible minorities among recently certified journeypersons than among the Canadian population

In this section, journeypersons who responded to the 2016 Census and received their certificate between 2008 and 2017 were compared with Canadians aged 18 to 54 years (Canadian population), using the data from the 2016 Census.¹¹

Using the responses to the population group question in 2016 Census, twelve population groups were designated as visible minority groups. In this study, in order to have reliable estimates, the largest five groups – South Asian, Chinese, Black, Filipino, and Latin American – are studied separately and the remaining groups are aggregated as ‘All other designated groups’ due to smaller number of journeypersons of these groups.¹²

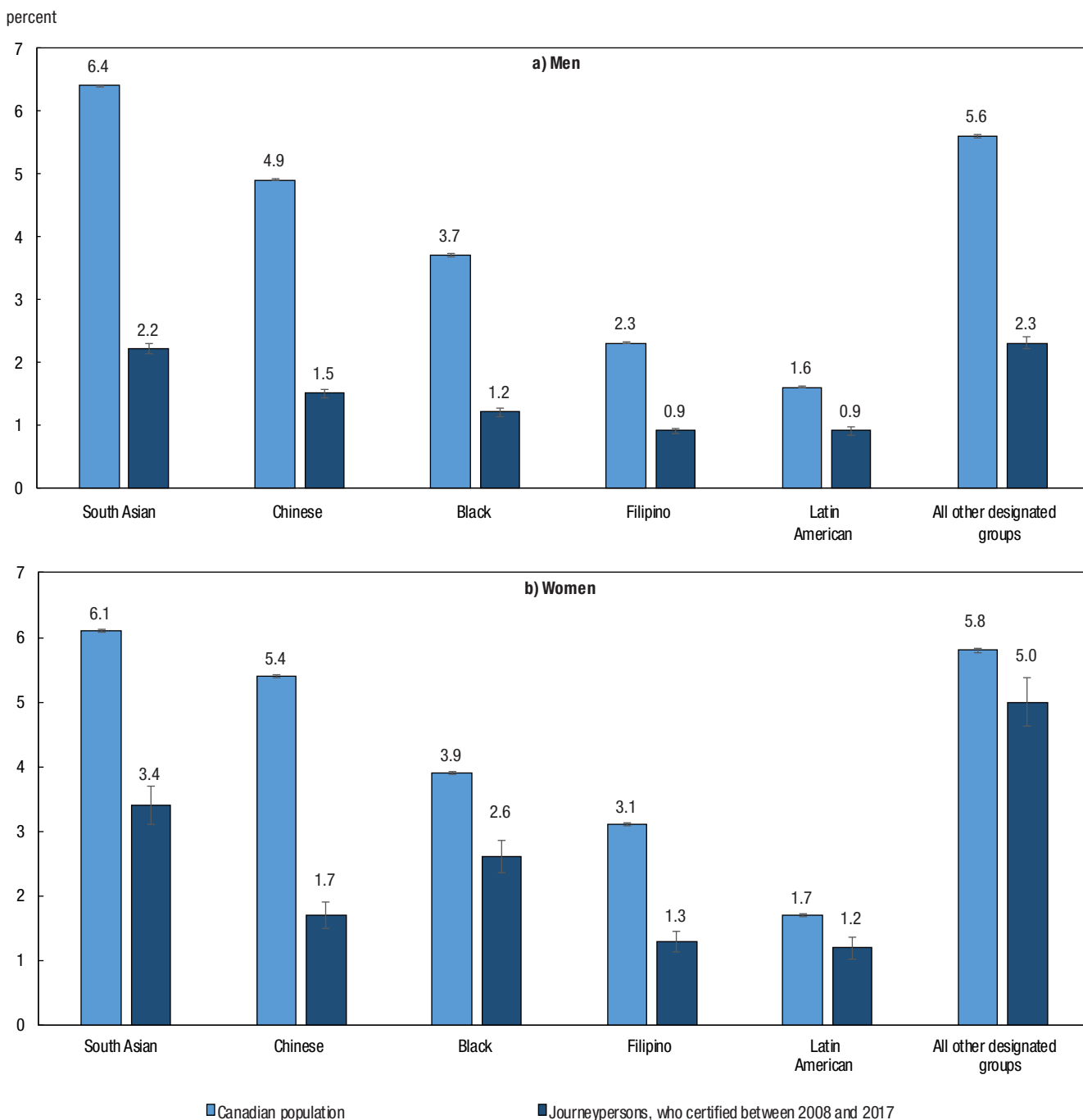
Compared to their representations in the Canadian population, the proportions of all designated groups were lower in the population of journeypersons (**Chart 1**). The difference varied between men and women and across groups, but the proportions of most designated groups among journeypersons were less than half of that in the Canadian population. For example, more than 6% of 18- to 54-year-old men in Canada in 2016 were South Asian. In contrast, about 2% of journeypersons were South Asian.

10. Female journeypersons are concentrated in a few service-related trades, such as hairstylist and early childhood educator, and these trades tend to have different labour market outcomes, including lower employment incomes, compared to male-dominated construction-related trades (Statistics Canada, 2021a). These findings call for a separate analysis of male and female journeypersons.

11. Since the self-reported information on population groups in 2016, a single point in time, was used, the information may not capture the reality of journeypersons in the time of interest - in a year after certification.

12. ‘All other designated groups’ includes Arab, Southeast Asian, West Asian, Korean, Japanese, Visible minority n.i.e. (not included elsewhere), and Multiple visible minorities.

Chart 1
Percentage of population groups designated as visible minorities among Canadian population in 2016 Census and among journeypersons who finished their apprenticeship training between 2008 and 2017, 18- to 54-year-olds, by sex and population group



Note: Error bars represent the 95% confidence interval of estimates.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 – 2017 and 2016 Census).

All designated groups were under-represented in the journeyperson population, but the data illustrate varying degrees of under-representation. Compared to their proportions in the Canadian population, South Asian, Chinese, and Black men were particularly less common among journeypersons. In contrast, Latin American men were relatively less under-represented compared to other designated groups.

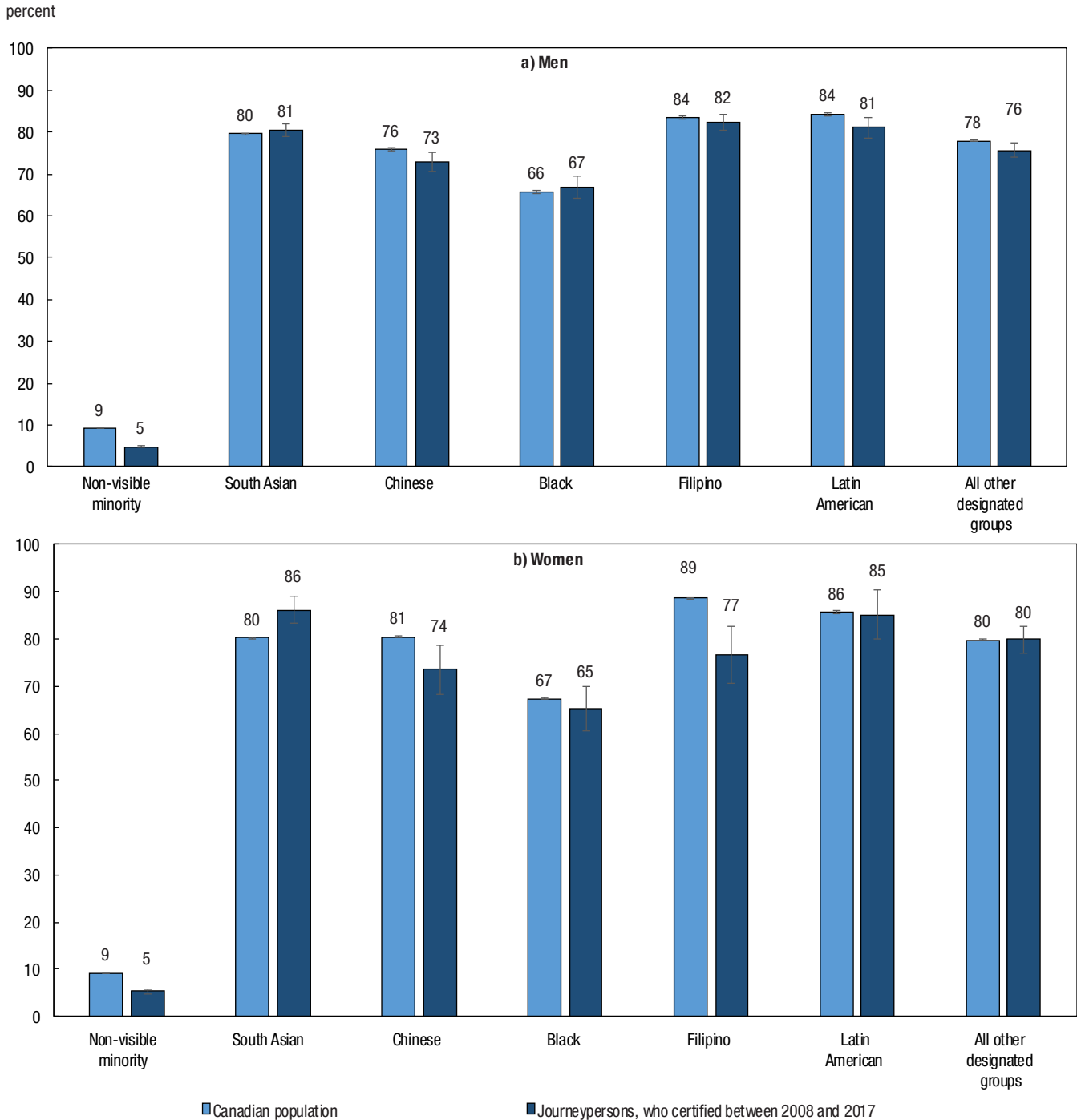
Visible minority women were also under-represented, but less so than men. Latin American women and women in the “All other designated” groups were well represented among journeypersons, and their proportions in the journeyperson population were close to their proportions within the Canadian population. Similar to men, there were fewer Chinese women certified as journeypersons compared to the proportion in the Canadian population.

The proportion of immigrants among visible minority journeypersons is similar to that of the Canadian population.

Among non-visible minorities, the proportion of immigrants was lower in the population of journeypersons than that of the Canadian population, suggesting that non-visible minority immigrants were less likely to pursue a career in the skilled trades than their Canada-born counterparts. To illustrate, immigrants made up about 9% of people who were not visible minorities in the Canadian population, while they made up about 5% of journeypersons of both sexes (**Chart 2**).¹³

13. Since the majority of journeypersons was non-visible minority (**Chart 1**), the overall proportion of immigrant was lower in journeypersons than in the Canadian population.

Chart 2
Percentage of immigrants among Canadian population in 2016 Census and among journeypersons who certified between 2008 and 2017, 18- to 54-year-olds in 2016, by sex and population group



Note: Error bars represent the 95% confidence interval of estimates.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 – 2017 and 2016 Census).

For visible minority men, the proportions are similar in the Canadian population and in the population of journeypersons.¹⁴ Black people had the lowest proportion of immigrants among visible minority population groups (66% in the population and 67% among journeypersons), and Latin Americans had the highest proportion (84% in the population and 81% among journeypersons).

For visible minority women, the proportions showed small differences between the journeyperson population and the Canadian population. The proportions of immigrants were lower among female Filipino and Chinese journeypersons (77% and 74%, respectively) than their general population counterparts (89% and 81%, respectively). In contrast, immigrants were more common among South Asian journeypersons (86%) than South Asian women in general (80%).

Median employment income of visible minority journeypersons was lower than that of non-visible minority journeypersons one year after certification.

The labour market outcomes of visible minority journeypersons one year after certification were compared to those of non-visible minority journeypersons using tax data from the T1 Family File (T1FF). It is important to note that the estimates are based on all journeypersons who filed taxes and that some journeypersons might not have worked full-time full-year.¹⁵ There were large variations across population groups, but visible minority journeypersons had lower employment incomes than non-visible minority journeypersons in general. Some of these differences are related to differences in trades they are certified in and other characteristics across population groups, which will be examined in the following sections.

For men, with the exception of Filipino journeypersons,¹⁶ visible minority journeypersons had significantly lower median employment incomes compared to their non-visible minority counterparts (**Table 1**).¹⁷ One year after certification, South Asian journeypersons had the lowest median incomes of all groups at \$51,900, which was about 20% lower than that of non-visible minority journeypersons (\$65,600). Of population groups designated as visible minority, Filipino journeypersons had the highest median income at \$67,000, followed by Black journeypersons, whose median income was \$61,500.

Although the gaps were not as large as those of male journeypersons, similar relationships were found for women.¹⁸ Latin American journeypersons had the lowest median income of all groups at \$21,400, and their median income was about 15% lower than non-visible minority journeypersons (\$28,300). Similar to men, Filipino female journeypersons had the highest median income (\$33,300) of all population groups, including non-visible minority journeypersons.

14. This suggests that there were no large differences in choosing skilled trades as their careers between visible minority immigrants and non-immigrants. According to a recent survey, immigrants' parents preferred their children to attend universities (Canadian Apprenticeship Forum, 2021), and such perceptions of immigrant parents may affect career choices of their (Canada-born) children.

15. Since the tax data do not have information on hours or weeks of work, it is not possible to adjust the estimates. In addition, some journeypersons might have earned a part or the entire employment income from a workplace unrelated to the trade in which they certified.

16. There was no statistically significant differences in the median income of Filipino male journeypersons and that of non-visible minority male journeypersons.

17. Median employment incomes are reported in **Table 1**. See **Table A2** for alternative measures of employment income.

18. Some of the large difference of median income between men and women can be explained by differences in trades they certified. Many trades popular among female journeypersons, such as hairstylist, cook, and early child educator, have lower earnings than men-dominated trades, such as construction electrician, carpenter, or millwright.

Table 1
Labour market outcome of journeypersons certified between 2008 and 2017, one year after certification, by sex and population group

		Non-visible minority journeypersons	South Asian	Chinese	Black	Filipino	Latin American	All other designated groups	
	Unit								
					Men				
Journeypersons	persons	350,030	8,610	5,850	4,690	3,570	3,450	8,910	
Filed tax	percent	95.2	96.7**	96.6**	93.1**	96.7**	93.3*	95.2	
Median employment income	2018 dollar	65,600	51,900**	52,400**	61,500**	67,000	57,100**	52,500**	
Reported self-employment income	percent ¹	8.2	12.6**	13.7**	12.3**	7.7	11.4**	13.0**	
Had self-employment income only	percent ¹	1.9	4.2**	5.1**	3.1**	1.0**	2.8	5.8**	
Paid union dues	percent ¹	51.6	35.9**	37.1**	51.7	40.3**	52.2	34.6**	
Had a registered pension plan	percent ¹	32.7	14.4**	12.9**	22.3**	18.9**	25.6**	15.4**	
Low income status, after tax	percent ¹	1.6	6.6**	7.4**	3.6**	1.5	2.4	8.6**	
Mobile	percent ¹	8.5	9.4	12.5**	8.9	7.2	5.4**	4.4**	
					Women				
Journeypersons	persons	45,300	1,850	920	1,430	690	640	2,700	
Filed tax	percent	95.3	96.7	97.0	92.2*	97.8*	98.5**	96.7**	
Median employment income	2018 dollar	28,300	22,300**	26,100	26,000	33,300	21,400**	22,800**	
Reported self-employment income	percent ¹	13.7	11.7	11.2	11.3	10.6	14.9	13.5	
Had self-employment income only	percent ¹	5.0	5.5	5.8	5.2	4.8	5.8	7.3	
Paid union dues	percent ¹	24.6	25.6	24.9	30.2*	26.2	17.2**	15.7**	
Had a registered pension plan	percent ¹	13.9	8.8**	12.2	17.6*	19.8*	6.4**	6.1**	
Low income status, after tax	percent ¹	5.8	12.2**	10.8*	19.8**	4.7	16.3**	16.7**	
Mobile	percent ¹	5.1	3.2*	4.3	3.8	3.5	2.8*	2.8*	

* significantly different from the estimates of journeypersons who are not visible minorities ($p < 0.05$)

** significantly different from the estimates of journeypersons who are not visible minorities ($p < 0.01$)

1. The share of journeypersons out of those who have records in the tax files.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2017, T1 Family File 2009 - 2018, and 2016 Census).

Visible minority and non-visible minority journeypersons made different trade choices

Visible minority and non-visible minority journeypersons made different choices regarding their trades. Median employment income varies substantially across trades. Also, as journeypersons of different trades work in different industries, other labour market outcomes – such as union membership – are dependent upon trades. These factors may explain some of the differences in the labour market outcomes noted above.

Apprenticeship training and qualification of journeypersons are governed by provincial and territorial authorities in Canada. To help set common standards across trades and facilitate the mobility of skilled workers across Canada, the Canadian Council of Directors of Apprenticeship administers the Interprovincial Standards Red Seal Program. Journeypersons of designated trades (Red Seal trades) who have successfully passed the Red Seal examination receive a Red Seal endorsement on their provincial/territorial trade certificate. The Red Seal, when affixed to a provincial or territorial trade certificate, indicates that a tradesperson has demonstrated the knowledge required for the national standard in that trade.¹⁹ In general, Red Seal trades had higher median incomes than non-Red Seal trades, and journeypersons of Red Seal trades were more mobile than journeypersons of non-Red Seal trades.²⁰

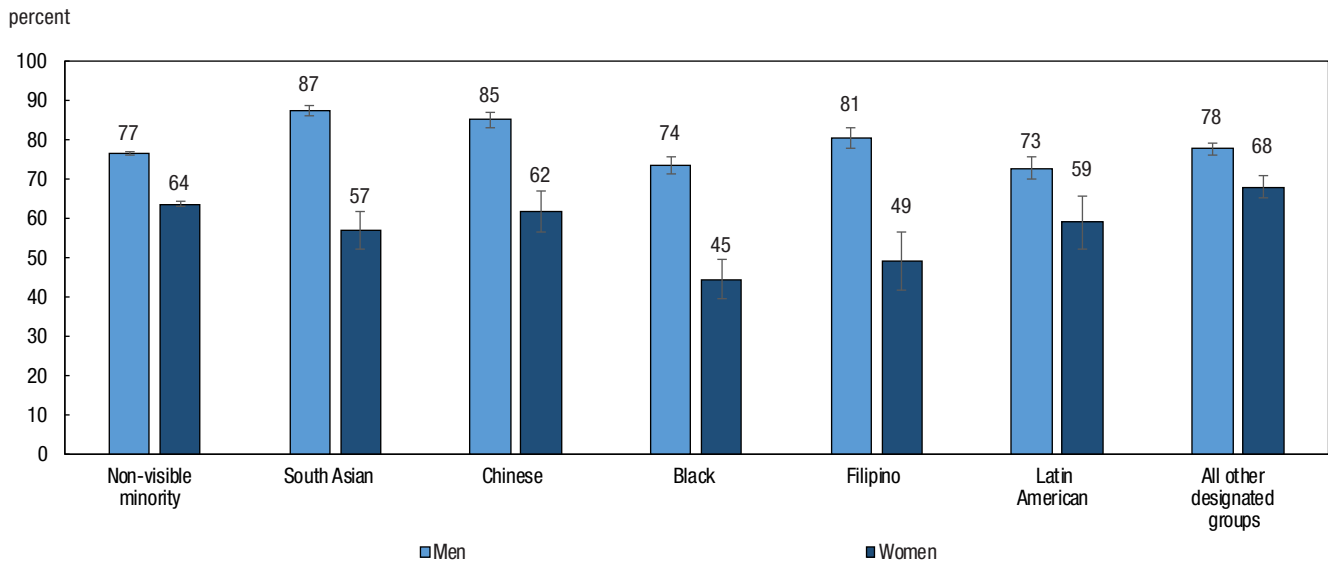
For men, visible minority journeypersons were more likely to be certified in a Red Seal trade than non-visible minorities (**Chart 3**). South Asian (87%) and Chinese (85%) had the highest percentage of journeypersons certified in a Red Seal trade. Considering the Red Seal endorsement make their skills recognizable beyond the jurisdiction of certification, this may play a role in the higher rates of mobility of Chinese male journeypersons, which will be explained more in detail in the proceeding section.

Some trades that were popular for women, such as early childhood educator and IT support associate, are non-Red Seal trades. Consequently, the overall proportions of journeypersons certifying in Red Seal trades were lower for women than men. Black (45%) and Filipino (49%) female journeypersons were significantly less likely to be certified in a Red Seal trade (therefore, more likely to be certified in a non-Red Seal trade) than non-visible minority women (64%).

19. Canadian Council of Directors of Apprenticeship (2020).

20. See Median employment income of journeypersons who certify in selected trades, two and five years after certification, cross-sectional analysis (Table 37-10-0194-01) and Net mobility indicators of newly certified journeypersons, one and three years after certification (Table 37-10-0205-01).

Chart 3
Percentage of journeypersons who certified in a Red Seal trade among journeypersons certified between 2008 and 2017, by sex and population group



Note: Error bars represent the 95% confidence interval of estimates.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 – 2017 and 2016 Census).

In addition, there were some notable differences between visible minorities and non-visible minorities regarding choice of trades (**Table 2**).

For non-visible minority male journeypersons, carpenter was one of the most popular trades in terms of the number of journeypersons certified in the trade (11%). However, carpentry is a relatively less popular trade among visible minority journeypersons. Few South Asian, Chinese, and Filipino journeypersons were certified as carpenters. The rate varied across groups, from 1% to 5%, but it was far from being the most popular trade for any visible minority group.

In contrast, automotive service technician and cook showed the opposite relationship. These two trades were more popular among most visible minority men than non-visible minorities. About 5% of non-visible minority male journeypersons were automotive service technicians, whereas this figure was 15% for Filipino men, and the trade was most popular trade for them in terms of the number of journeypersons.

Similarly, the percentage of cooks is higher among many population groups than non-visible minority men. Few non-visible minority men were certified cooks (2%), but more than 7% of South Asian journeypersons were.²¹ As the median income of cook is lower than other construction-related trades popular among non-visible minority men, a part of the large difference of employment income between visible minority and non-visible minority journeypersons (**Table 1**) could be explained by the different choices in trade.²²

Female journeypersons were concentrated in a smaller number of trades than men. Hairstylist was the most popular trade among women in all population groups, including non-visible minority female journeypersons (40% of them were certified hairstylists). Early childhood educator, a non-Red Seal trade available only in Ontario, was more popular among all visible minority groups (9% to 19% across population groups) than among non-visible minorities (4%). The proportion of journeypersons certified as an early childhood educator was particularly high for South Asian (19%) and Black (18%) women. In contrast to visible minority men, there were fewer certified cooks among visible minority women, with the exception of Filipino women (11%).

21. Cook is a voluntary trade in all provinces and territories, and a certification is not required to work as a cook.

22. As the data this study used were collected before the COVID-19 pandemic (the most recent data were collected in 2018), this study could not examine the impacts of the pandemic on journeypersons. However, the fact that cooks were more common among visible minority male journeypersons and that the accommodation and food services industry had the largest impact of the pandemic (Gellatly and McCormack, 2020) suggest that the pandemic had greater impacts on visible minority journeypersons than non-visible minority journeypersons.

Table 2
Distribution of trades among journeypersons certified between 2008 and 2017, by sex and visible minority group

		Non-visible minority journeypersons	South Asian	Chinese	Black	Filipino	Latin American	All other designated groups
	Unit							
Men								
Journeypersons	persons	350,030	8,610	5,850	4,690	3,570	3,450	8,910
Construction electrician	percent	13.9	16.5**	25.3**	14.3	12.5	12.7	15.5*
Carpenter	percent	10.9	0.5**	1.3**	3.9**	1.4**	5.1**	2.3**
Automotive Service Technician	percent	4.6	14.1**	14.0**	8.6**	15.1**	7.5**	15.0**
Welder	percent	4.3	3.8	3.5	4.1	7.3**	4.2	6.8**
Plumber	percent	4.3	4.5	3.9	4.6	1.3**	3.3	2.7**
Industrial mechanic (millwright)	percent	3.7	7.4**	3.2	3.0	6.9**	1.6**	2.5**
Steamfitter / Pipefitter	percent	3.5	3.8	1.5**	2.8	5.0*	2.7	2.2**
Heavy duty equipment technician	percent	3.0	1.7**	1.2**	2.4	2.5	1.8**	1.0**
Truck and transport mechanic	percent	2.1	8.5**	1.8	4.9**	2.2	1.6	2.5
Cook	percent	1.5	7.4**	5.2**	2.0	3.9**	4.1**	3.5**
Women								
Journeypersons	percent	45,300	1,850	920	1,430	690	640	2,700
Hairstylist	percent	40.4	50.9**	37.2	35.0*	31.2*	52.6**	58.8**
IT support associate	percent	5.5	11.0**	7.7	11.7**	6.4	8.9	3.1**
Cook	percent	5.5	3.0**	5.5	3.6	10.8	3.1*	4.6
Early childhood educator	percent	4.2	19.4**	10.9**	17.9**	11.4	8.8**	11.5**

* significantly different from the estimates of journeypersons who are not visible minority ($p < 0.05$)

** significantly different from the estimates of journeypersons who are not visible minority ($p < 0.01$)

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2017, T1 Family File 2009 - 2018, and 2016 Census).

Unincorporated self-employment was more common among visible minority male journeypersons

Some journeypersons earned a part of employment income from self-employment,²³ and the proportion of those with self-employment (unincorporated) income varied across population groups.²⁴

For men, with the exception of Filipino journeypersons, visible minority journeypersons were more likely to report self-employment income than non-visible minorities. About 8% of non-visible minority journeypersons were self-employed compared to around 12% for most population groups designated as visible minority. Chinese journeypersons had the largest proportion of self-employment (14%), and Filipino journeypersons had the lowest rate (8%).

The overall proportion of self-employed was slightly higher among female journeypersons (11% to 15%, across population groups) than men (8% to 14%). However, there was no significant difference between visible minority female journeypersons (11% to 15%) and non-visible minorities (14%).

Visible minority journeypersons were less likely to work in unionized workplaces

Half of non-visible minority male journeypersons worked in unionized occupations and paid union dues one year after certification (52%). This figure varied across groups, but visible minority journeypersons were less likely to pay union dues, which is consistent with the higher rates of self-employment. In addition, as unionization rates vary across industries, the different trade choices across population groups may be another reason for the difference. Fewer than two out of five (40%) South Asian and Chinese male journeypersons paid union dues. In contrast, Black and Latin American male journeypersons (52%) had similar proportions of those who paid union dues to that of non-visible minorities (52%).

23. There were journeypersons who only earned employment income from self-employment ('Had self-employment income only' in **Table 1**), but the majority of those with self-employment income also earned wages or salaries.

24. Business owners, those who incorporated their business, are not identified in T1FF. All 'self-employment' in this study refers only those who have unincorporated business.

The overall rates of unionization were much lower for female journeypersons. About one in four non-visible minority female journeypersons (25%) paid union dues one year after certification, and the rates were similar for South Asian, Chinese, and Filipino journeypersons. Black journeypersons had the largest proportion of those who paid union dues among female journeypersons (30%), while the figure was the smallest for Latin American female journeypersons (17%).

Similarly, for men, smaller proportions of visible minority journeypersons worked for employers providing registered pension plans. A third of non-visible minority male journeypersons had registered pension plans through employers (33%), higher than the rates for all visible minority population groups (ranging from 13% to 26%).

For women, about 14% of non-visible minority journeypersons had registered pension plans. Black and Filipino female journeypersons were more likely to have such plans (18% and 20%, respectively), whereas South Asian and Latin American journeypersons were less likely (9% and 6%, respectively).

Chinese male journeypersons had the highest rate of interprovincial mobility

Interprovincial mobility is a factor related to income. In general, those who migrate to other provinces tend to have higher incomes compared to those who do not migrate.²⁵ In addition, facilitating interprovincial mobility of journeypersons has been an important policy goal as concerns about the regional imbalances of skilled tradespeople grow.²⁶ The mobility of journeypersons is measured by comparing their jurisdiction of certification and their jurisdiction of residence or employment, one year after certification. Journeypersons are considered ‘mobile’ if they were living or working outside the province or territory where they received their certificates, one year later.

Based upon this definition, 13% of Chinese male journeypersons were mobile, the highest rate of interprovincial mobility among all population groups considered in this study, including non-visible minority men, whose rate was 9%. For both men and women, Latin American journeypersons had lower mobility rates than their non-visible minority counterparts.

Most visible minority journeypersons certified in Ontario

In addition to the choice of trades, the geographic distribution of the certification jurisdiction also showed differences between visible minority journeypersons and non-visible minorities (**Chart 4**).²⁷ As median employment income varies across provinces and territories – even for the same trade, the geographic distribution can be another factor associated with differences in labour market outcomes.

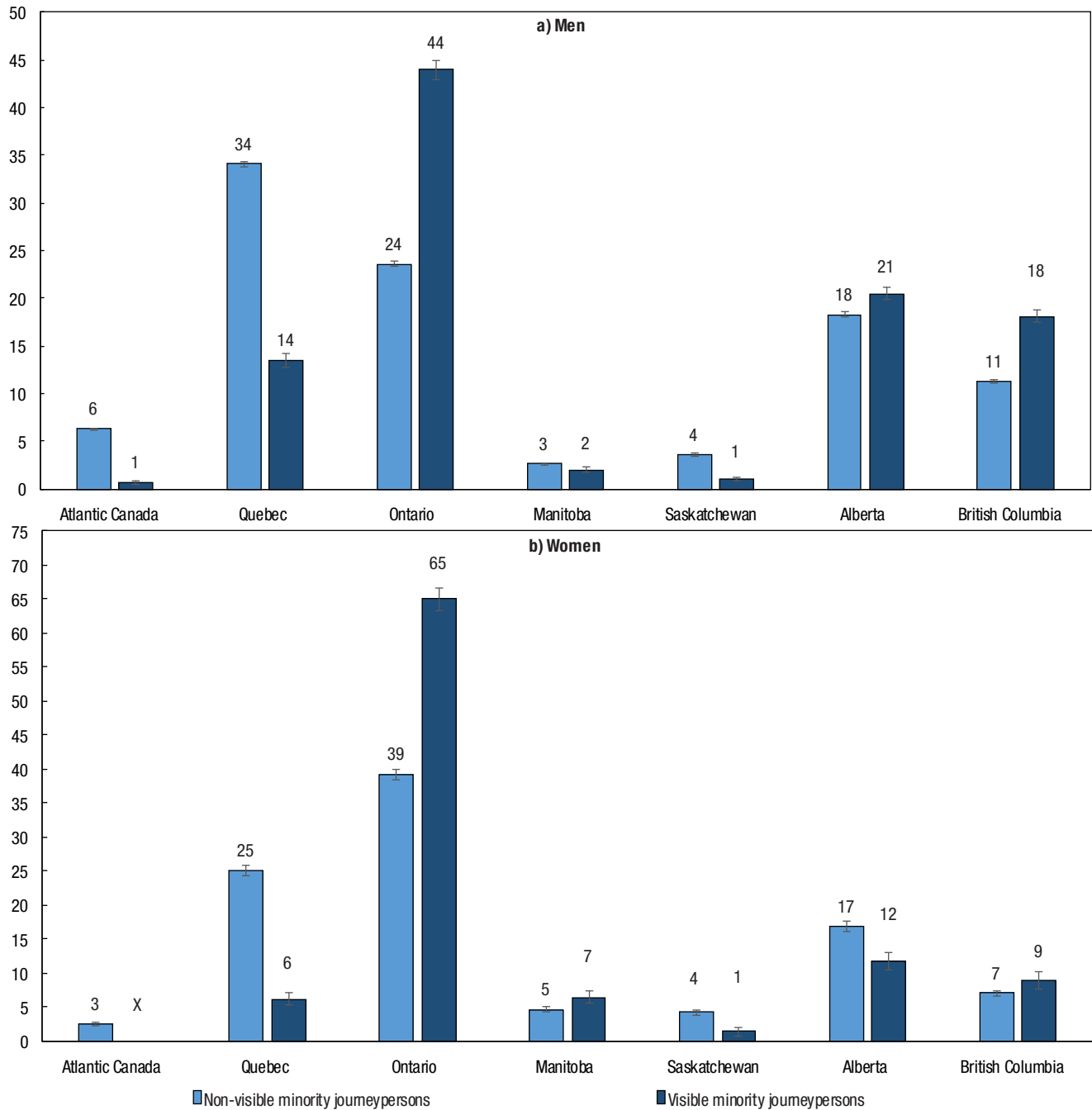
25. There is a declining trend of interprovincial mobility in Canada as well as many other developed countries. However, Haan and Cardoso (2020) found that the observed return of interprovincial mobility has been increasing over time.

26. May (2019) and Canadian Council of Directors of Apprenticeship (2020).

27. Due to smaller number of observations, all designated groups were aggregated as ‘visible minority journeypersons’ in **Chart 3**, and **Table A2** in Appendix has the geographic distribution of each population groups.

Chart 4
Certification region of journeypersons certified between 2008 and 2017, by sex and visible minority group

percent



X suppressed to meet the confidentiality requirements of the *Statistics Act*

Note: Although journeypersons certified in Territories and female visible minority journeypersons in Atlantic Canada were included for analysis in this study, they are not shown in the chart due to the small numbers. Error bars represent the 95% confidence interval of estimates.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 – 2017 and 2016 Census).

For both men and women, the percentages of journeypersons certified in Quebec were lower for visible minority journeypersons than for non-visible minorities. For non-visible minority men, Quebec had the largest number of certifications (34% of male journeypersons) during the ten years studied in this paper, and the second largest for non-visible minority women (25%). In contrast, for visible minority journeypersons, Ontario had the largest number of certification for both men and women (44% and 65%, respectively).²⁸

Due to the importance of the trades in the oil and gas industry, Alberta has been well represented among the population of journeypersons compared to the size of its general population, and many journeypersons who were mobile either lived or worked in the province.²⁹ For both male and female visible minority journeypersons, Alberta was the second largest province in terms of the number of certificates (21% of men and 12% of women) after Ontario. For men, the percentage of journeypersons certified in Alberta was higher among visible minority journeypersons (21%) than non-visible minorities (18%).

Most population groups showed similar distributions across regions, but there were a number of differences (**Table A2**). Among Filipino men, there were more journeypersons certified in Alberta (1,340) than in Ontario (990), whereas Ontario had the largest number of certifications among other visible minority groups for both sexes.

In addition, the number of journeypersons certified in Quebec was smaller than those certified in other provinces such as Ontario, Alberta, and British Columbia for many visible minority groups. However, Quebec had the second largest number of Black and Latin American journeypersons of both sexes after Ontario.

Many visible minority journeypersons were trade qualifiers

There are two major pathways to become a certified journeyperson in Canada. The first pathway is through the completion of an apprenticeship training program, where apprentices must complete in-class and on-the-job training portions.³⁰ The apprentice is then eligible to write a qualifying examination and, if successful, becomes a certified journeyperson. The second pathway is for those who already have extensive experience in the trade. This latter group – termed trade qualifiers – can challenge the exam without completing an apprenticeship training program.

In general, trade qualifiers were more common among visible minority journeypersons (**Chart 5**). About one in four non-visible minority male journeypersons were trade qualifiers (27%), and all population groups designated as visible minorities had higher proportions of trade qualifiers, ranging from 31% to 59%. About three in five South Asian male journeypersons (59%) became certified without completing an apprenticeship training program, the highest percentage of all groups.

Trade qualifiers were less common among women than men. Fewer than one in five non-visible minority female journeypersons received their certificates as trade qualifiers (18%). In contrast, among visible minority women, more than one in four (27%) South Asian female journeypersons were trade qualifiers. The proportions of trade qualifiers among Black (16%) and Filipino (17%) journeypersons were similar to that of non-visible minority women.

Given the fact that most visible minority journeypersons were immigrants (**Chart 2**), the higher percentage of trade qualifiers among visible minorities suggest that many of them may have received training (and certification) in their home country prior to immigrating to Canada as skilled tradespeople.³¹

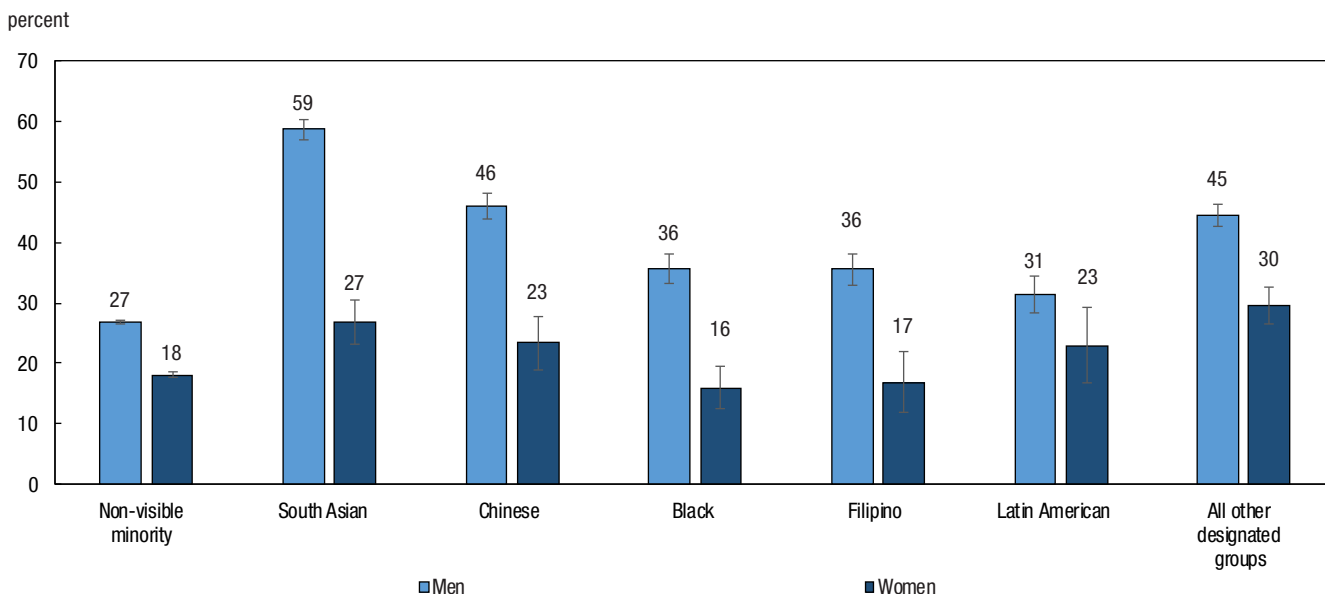
28. In the general population, according to the 2016 Census, one in two (51%) people designated as visible minorities were living in Ontario (Statistics Canada, 2017).

29. See Statistics Canada (2021a).

30. The detail varies across trades and jurisdictions, but apprentices are typically expected to spend 80 - 90% of their time on on-the-job training and remaining 10 - 20% on in-class technical training. The nominal duration of whole training varies from 1 to 5 years, but many apprentices took more time to receive certificates (Jin, Langevin, Lebel, and Haan, 2020).

31. The share of immigrants were higher among trade qualifiers than those completed apprenticeship training.

Chart 5
Percentage of trade qualifiers among all journeypersons certified between 2008 and 2017, by sex and population group



Note: Error bars represent the 95% confidence interval of estimates.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 – 2017 and 2016 Census).

The different choices in pathways between visible minority and non-visible minority journeypersons might explain some of the differences in incomes after certification (**Table 1**) as trade qualifiers tend to have lower employment income than apprenticed journeypersons after certification.³² Since the majority of apprenticeship training in Canada is work-based and conducted through employment opportunities, journeypersons who finished apprenticeship training likely had better connections to formal and informal professional networks and found better-paying jobs more easily compared to trade qualifiers.

For men, some of the difference in median incomes of visible minorities and non-visible minorities could be explained by other factors

The findings in the previous sections showed that visible minority journeypersons had different characteristics from non-visible minorities, which could affect median income. To control for these characteristics, difference in median incomes were studied using regression models.

Three regression models were estimated, for men and women separately (**Table 3**). First, no control variables other than visible minority groups were included (Model 1) to measure the total difference in the median incomes.³³ Second, differences in trades were controlled for using a series of dummy variables for selected trades (Model 2). Third, a number of other characteristics (immigration status, union membership, trade qualifier, certification region, mobility, self-employment, and age at certification) were controlled in addition to trades (Model 3).

For men, with the exception of Filipino journeypersons, visible minority journeypersons in selected trades had a significantly lower median employment income than non-visible minority journeypersons (Model 1). Substantial parts of the difference could be explained by differences in the trades in which they certified. If visible minority journeypersons certified in the same trades as non-visible minorities, the model found that the income gap would reduce by 20% to 70%, depending on the group (Model 2).

32. In a longitudinal analysis for employment income of all journeypersons certified in 2014, trade qualifiers had higher incomes than those finished apprenticeship training *before* certification, but the gap disappeared by the time they certified. In the year of certification, 2014, the median employment income of journeypersons who finished training was 6.3% higher than that of trade qualifiers (Statistics Canada, 2021a).

33. Due to the smaller number of visible minority journeypersons, there are many trades where no or very few visible minority journeypersons certified. These trades cannot be studied in the model analysis when the difference in trade choices is accounted for. For the comparison using regression models in this section, such trades where no or very few visible minority journeypersons certified are removed from the sample. This restriction reduced the sample sizes. As a result, the results of the Model 1 are not equivalent to the estimates in **Table 1**, where journeypersons of all trades are used. See **Table A2** for the list of selected trades used in the regression analysis.

The gap was further reduced when additional characteristics were controlled. In Model 3, where differences in other characteristics and trade are controlled for, there were no statistically significant differences between non-visible minority journeypersons and Black, Latin American, and Filipino men. In contrast, although the estimated income gaps are smaller compared to that in Model 1, the median income for South Asian and Chinese journeypersons were more than \$9,000 lower than non-visible minority journeypersons with the same set of characteristics considered in the model.

In contrast, the factors considered in this study could not explain the majority of the income gap for female journeypersons. With no control, in Model 1, the difference in median income is measured from -\$5,300 (South Asian) to +\$3,100 (Filipino). No statistically significant differences were found for the median incomes of Chinese, Black, and Filipino journeypersons to that of non-visible minority journeypersons. Trades played little role or were masking parts of underlying income gaps for female journeypersons depending on the population groups. When the trades were controlled (Model 2), the gap remained virtually the same for Chinese, or even grew larger for some groups, implying that many visible minority journeypersons were certified in trades with higher earnings compared to non-visible minority journeypersons. This is because of the higher concentration of non-visible minority female journeypersons in hairstylist, which had a lower median employment income than other trades, than visible minorities.³⁴

Other characteristics, such as immigration status and union membership, could account for a small part of the gap in Model 2. When other controls are introduced (Model 3), the income gaps slightly decreased from the estimates in Model 2, leaving the majority of the estimated income gap remained unaccounted for.

Table 3
Median employment income (2018 constant dollar) of visible minority journeypersons certified between 2008 and 2017 in selected trades, relative to non-visible minority journeypersons, one year after certification, by sex

	Model 1	Model 2	Model 3
	Men		
South Asian	-16,712**	-13,450**	-9,426**
Chinese	-17,518**	-11,431**	-9,252**
Black	-5,648**	-2,359	-442
Filipino	-632	2,492**	-1,101
Latin American	-6,339*	-1,822	571
All other designated groups	-13,010**	-6,821**	-3,377**
Number of observations	225,610		
	Women		
South Asian	-5,312**	-6,759**	-5,754**
Chinese	-1,333	-1,422	-2,130*
Black	-953	-2,729	-487
Filipino	3,104	-912	331
Latin American	-5,015**	-4,292**	-3,354**
All other designated groups	-3,542**	-3,562**	-3,206**
Number of observations	29,790		
Control	Trade	Trade, immigrant, trade qualifier, mobility, union membership, region, self-employment, age	

* significantly different from the estimates of non-visible minority journeypersons ($p < 0.05$)

** significantly different from the estimates of non-visible minority journeypersons ($p < 0.01$)

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2017, T1 Family File 2009 - 2018, and 2016 Census).

34. About 70% of non-visible minority female journeypersons and 63% of visible minorities certified as hairstylists (due to the restriction of trades considered in the regression analysis, these percentages are different from the estimates reported in Table 2). The median employment income of female hairstylist one year after certification was \$21,800, which is about \$10,000 lower than other trades considered (early childhood educator, cook, and IT support agent).

Conclusions

Little was known about visible minorities in the skilled trades due to the lack of large-scale data sources appropriate for the analysis prior to the introduction of the ELMLP. Using data from the ELMLP, this study examined visible minority journeypersons.

Visible minority journeypersons had poorer labour market outcomes than non-visible minority journeypersons, in general. However, there is a lot of heterogeneity among journeypersons of different population groups designated as visible minorities. For both men and women, Filipino journeypersons had the highest median employment income among visible minority journeypersons, and had no significant differences to that of non-visible minority counterparts. In contrast, South Asian journeypersons had the lowest median employment income.

This study found that visible minority journeypersons made different choices regarding their careers in trades and a part of the gap in median employment income of male journeypersons could be explained by these differences. As journeypersons of different trades work in different industries and environments, these findings suggest that visible minorities and non-visible minorities may face distinct sets of challenges.

Although this study was able to determine that choice of trade and characteristics contributed to the income gap between visible minority journeypersons and non-visible minorities, this study could not answer why they made different choices due to the descriptive nature of RAIS. The reasons behind different choices can be important for enhancing our understanding of visible minority journeypersons, and this is left for future studies.

Data sources, Methods and Definitions

Data Sources

This study used data from the Education and Labour Market Longitudinal Platform (ELMLP).³⁵ The ELMLP at Statistics Canada was developed to allow for the combination of anonymized information from the Registered Apprenticeship Information System (RAIS) and the Postsecondary Student Information System (PSIS), with anonymized information from other administrative datasets. The RAIS provides information on individuals who registered for training and those who obtain certification within a trade where apprenticeship training is being offered.

As the RAIS does not contain information on individual's visible minority status, the response in 2016 Census of Population (2016 Census) is used to identify journeypersons designated as visible minorities. For a variety of reasons, it is possible that the response in 2016 did not capture the accurate population group the person belongs to at the time of interest in this paper. For more information, see the Census definition of Visible Minority of Person. Approximately 25% of journeypersons in the RAIS responded to the long-form census that includes population group questions, and those records were weighted using the person weight in 2016 Census in analysis.³⁶

The population of interest for this study is those who responded to 2016 Census and who received a certificate of qualification between 2008 and 2017 and who were 54-year-old or younger in the year of certification were used. Although the majority of journeypersons had only one certification record, it is not uncommon for a person receiving multiple certificates across trades or jurisdictions. In this study, only the most recent certification record of an individual is considered. If the journeyperson received multiple certificates on the same day, one was randomly chosen.

The T1 Family File (T1FF) is used as a source of income and labour market related information. As tax files do not have information on period or duration of employment, it is possible that some journeypersons included in this study did not work full-time full-year. In addition, the income used in this study is the total amount of employment income during the calendar year, of which a part or the entire amount might be earned in a workplace unrelated to the trade the journeyperson certified.

35. Visible Minority of Person (Statistics Canada, 2015).

36. Except the parts where the journeyperson population was compared against the Canadian population as a whole, specifically **Charts 1 and 2**, only the sample of journeypersons (those who had records in the RAIS) was used in analysis.

Methods

To conduct statistical significance tests and to compute the confidence interval of estimates, standard errors are estimated by the Balanced Repeated Replication method using the 2016 Census replication weights. See the Sampling and Weighting Technical Report of the 2016 Census for more information.³⁷

All estimates are rounded to protect the confidentiality. To ensure reliability of estimates, the estimates are suppressed if the rounded counts are below a certain threshold.

Definitions

Journeypersons are those individuals who passed the qualification exam and received their certificate of qualification from the apprenticeship authority. One can become a journeyperson either through apprenticeship training or through challenging the exam without becoming a registered apprentice. When a distinction is necessary, the latter cases are referred to as **trade qualifiers**.

Mobility is defined by comparing the jurisdiction of certification and the jurisdiction of residence or employment in one year after certification. Journeypersons are **mobile** if they filed tax or had employment incomes outside the province or territory of certification. The same definition is used in the Tables 37-10-0205-01 and 37-10-0204-01.³⁸

The Employment Equity Act defines **visible minorities (visible minority persons)** as ‘persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour.’ The 2016 Census contained population group questions to derive counts for visible minority population. Statistics Canada designates some population groups as visible minorities. Although the 2016 Census enumerated twelve visible minority groups, the largest five groups (South Asian, Chinese, Black, Filipino, and Latin American) are used for separate population group analysis, and persons belonging to other groups are aggregated into the ‘All other designated groups.’ Due to the nature of the aggregation, individuals in the same population groups have diverse backgrounds, such as immigration status, place of birth, cultural or ethnic origin.

Employment income is the sum of wages or salaries, other employment income, and net self-employment income. It also includes tax-exempt employment-income earned by registered Indians. Net self-employment income can be positive, negative, or zero. As a result, small number of journeypersons with self-employment income included in analysis had negative income. All income amounts are inflation-adjusted to 2018 constant dollars using the Consumer Price Index.

37. Sampling and Weighting Technical Report of the 2016 Census (Statistics Canada, 2018).

38. See Indicators on the interprovincial and territorial mobility of certified journeypersons, 2008 to 2018 (Statistics Canada, 2021b) for the details.

Appendix

Appendix 1 Alternative measures of employment income

Median employment income of all journeypersons (with records in the tax data) are reported in **Table 1**. Using average, instead of median, inflates the levels by about \$5,000. This suggests that the distribution of employment income is skewed right, or there are a small number of journeypersons with very high employment income.

As noted, some journeypersons had income from self-employment. Excluding those also affects the estimates, and it generally lowers the level. This implies that those with self-employment income have lower income than those without it.

Although the levels vary depending on the measure used, the overall relationship across population groups remain the same.

Table A1
Alternative measures of employment income of journeypersons certified between 2008 and 2017, one year after certification, by sex and population group

		Non-visible minority journeypersons	South Asian	Chinese	Black	Filipino	Latin American	All other designated groups
Unit								
		Men						
Journeypersons	persons	350,030	8,610	5,850	4,690	3,570	3,450	8,910
Filed tax	percent	95.2	96.7**	96.6**	93.1**	96.7**	93.3*	95.2
Median employment income	2018 dollar	65,600	51,900**	52,400**	61,500**	67,000	57,100**	52,500**
Median employment income excluding those with self-employment income	2018 dollar	66,900	54,200**	56,300**	63,000**	68,100	59,200**	55,700**
Average employment income	2018 dollar	69,600	55,900**	57,300**	63,300**	72,700**	59,900**	55,800**
Average employment income excluding those with self-employment income	2018 dollar	71,000	58,100**	60,800**	65,700**	74,200**	61,700**	59,200**
		Women						
Journeypersons	persons	45,300	1,850	920	1,430	690	640	2,700
Filed tax	percent	95.3	96.7	97.0	92.2*	97.8*	98.5**	96.7*
Median employment income	2018 dollar	28,300	22,300**	26,100	26,000	33,300	21,400**	22,800**
Median employment income excluding those with self-employment income	2018 dollar	29,500	23,100**	28,900	26,800*	36,000**	22,900**	24,100**
Average employment income	2018 dollar	33,600	23,500**	30,800*	29,000**	34,600	23,400**	24,300**
Average employment income excluding those with self-employment income	2018 dollar	35,300	24,600**	31,700*	29,500**	36,600	24,900**	24,900**

* significantly different from the estimates of journeypersons who are not visible minority ($p < 0.05$)

** significantly different from the estimates of journeypersons who are not visible minority ($p < 0.01$)

1. The share of journeypersons out of those who have records in the tax files.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2017, T1 Family File 2009 - 2018, and 2016 Census).

Appendix 2 Geographic distribution of visible minority journeypersons

Table A2

Visible minority journeypersons by the jurisdiction of certification, journeypersons certified between 2008 and 2017, by sex

Jurisdiction	Journeypersons	Visible minority journeypersons						All other groups
		All	South Asian	Chinese	Black	Filipino	Latin American	
Men								
Canada	382,430	34,780	8,570	5,770	4,660	3,540	3,430	8,820
Atlantic Canada	22,000	240	x	x	100	x	x	x
Newfoundland and Labrador	5,750	40	x	x	x	x	x	x
Prince Edward Island	1,260	x	x	x	x	x	x	x
Nova Scotia	6,940	130	x	x	50	x	x	x
New Brunswick	8,040	50	x	x	x	x	x	x
Quebec	122,600	4,680	240	220	1,010	80	1,070	2,050
Ontario	97,490	15,280	4,850	2,670	2,050	990	1,300	3,410
Manitoba	9,850	720	80	80	110	230	60	160
Saskatchewan	12,780	380	40	40	110	70	40	80
Alberta	71,070	7,150	1,500	940	960	1,340	620	1,790
British Columbia	45,830	6,310	1,810	1,790	310	810	310	1,290
Territories	810	x	x	x	x	x	x	x
Women								
Canada	53,200	8,150	1,830	920	1,410	670	630	2,690
Atlantic Canada	1,130	x	x	x	x	x	x	x
Newfoundland and Labrador	380	x	x	x	x	x	x	x
Prince Edward Island	150	x	x	x	x	x	x	x
Nova Scotia	320	x	x	x	x	x	x	x
New Brunswick	290	x	x	x	x	x	x	x
Quebec	11,680	500	40	x	140	x	150	120
Ontario	23,040	5,290	1,450	460	1,090	340	380	1,570
Manitoba	2,660	530	50	50	x	80	x	290
Saskatchewan	2,080	120	x	x	x	x	x	60
Alberta	8,610	960	150	170	100	100	50	390
British Columbia	3,930	710	110	210	x	110	x	240
Territories	70	x	x	x	x	x	x	x

Note: To protect confidentiality and ensure reliability of estimates, all counts are rounded, and cells below a certain threshold are suppressed. Suppressed cells are indicated by 'x.' Due to rounding, sum of regions or population groups may be different from the respective total.

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2018 and 2016 Census).

Appendix 3 List of selected trades

In the regression analysis (**Table 3**), to control for differences in trade choices, it was necessary to have enough observations for each trade. Due to the smaller population size of visible minority journeypersons relative to non-visible minorities, there were many trades where no, or very few, visible minority journeypersons certified. To have reliable estimates, trades were included in the regression analysis only if there are a sufficient number of all seven population groups considered in this study.

Table A3

Selected trades used in regression analysis

Men	
Automotive Service Technician	Information Technology Support Associate
Carpenter	Machinist
Construction Electrician	Plumber
Cook	Refrigeration and Air Conditioning Mechanic
Hairstylist	Sheet Metal Worker
Halocarbons/Refrigerant Tester (Vehicles)	Steamfitter/Pipefitter
Heavy Duty Equipment Technician	Truck and Transport Mechanic
Industrial Electrician	Welder
Industrial Mechanic (Millwright)	
Women	
Cook	Hairstylist
Early Childhood Educator	Information Technology Support Associate

Source: Education and Labour Market Longitudinal Platform (Registered Apprenticeship Information System 2008 - 2018 and 2016 Census).

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