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Abstract

The COVID-19 pandemic has put a spotlight on the roles played by temporary foreign workers (TFWs) with lower-skill occupations in the food manufacturing sector. This study focuses on these workers and examines their transition to permanent residency and their industrial retention after immigration. Comparisons are made with TFWs with higher-skill occupations. Five years after starting to work in the food manufacturing industry, TFWs with lower-skill occupations who arrived in Canada from 2000 to 2004 and from 2010 to 2014 displayed lower rates of transition to permanent residency than their counterparts with higher-skill occupations. However, the opposite was true for TFWs with lower-skill occupations who arrived in Canada from 2005 to 2009. The retention rate of TFWs with lower- and higher-skill occupations in the food manufacturing sector declined over the first five years after landing for all landing cohorts. The degree of retention of TFWs with lower-skill occupations in the food manufacturing industry fell with each successive landing cohort, starting in the mid to late 2000s.

Keywords: temporary foreign workers, transition to permanent residency, industrial retention, food manufacturing

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Introduction

The COVID-19 pandemic has put a spotlight on the roles played by temporary foreign workers (TFWs) with lower-skill occupations in the food manufacturing sector—an essential sector according to Canada's National Strategy for Critical Infrastructure.[1] This sector has a high concentration of foreign workers (Lu, 2020; Zhang, Ostrovsky, & Arsenault, 2021), and concerns have been raised about whether these TFWs with lower-skill occupations have sufficient pathways to become permanent residents and whether they stay in the sector after obtaining their permanent residency (Banerjee & Hiebert, 2021; Bousmah & Grenier, 2022; Omidvar & Cepla, 2021).

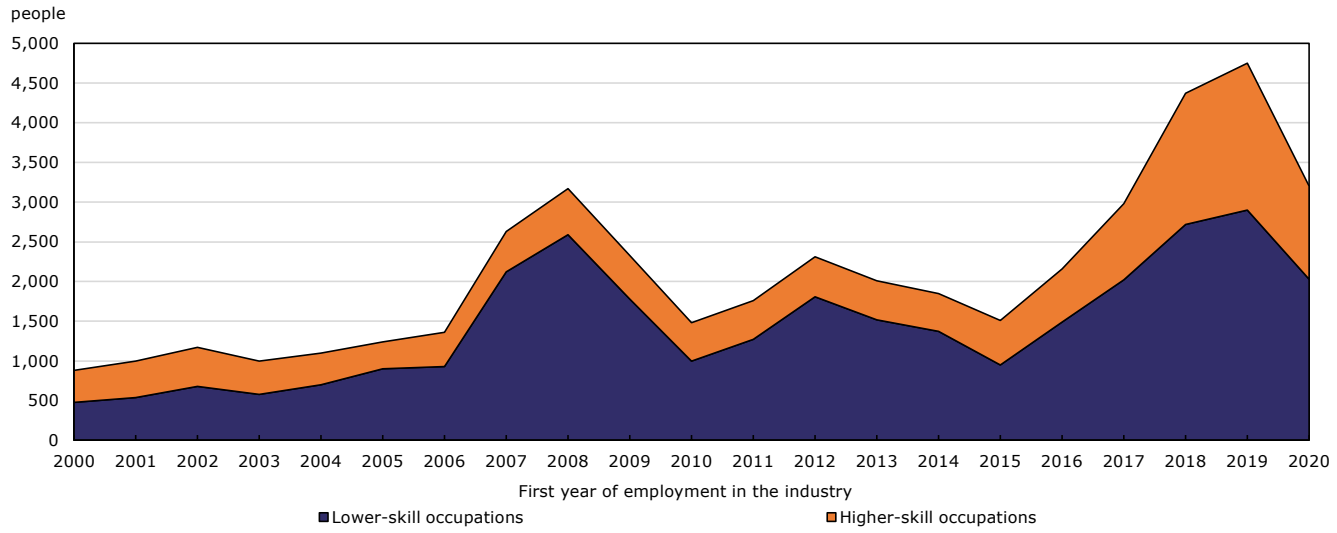
To shed light on these issues, this study focuses on TFWs with lower-skill occupations in the food manufacturing sector and examines their rate of transition to permanent residency and their rate of retention in the industry one to five years after becoming permanent residents. It analyzed work permit holders with lower-skill occupations whose first employment was observed in food manufacturing from 2000 to 2020 and made comparisons with TFWs who held higher-skill occupations in the same industry.[2] TFWs' occupational skill requirement levels were based on the occupation information from their work permits. When the occupation information is unavailable, the annual earnings in the TFW's first employment year were used to impute occupational skill requirement levels (See Data appendix for details).

The number of temporary foreign workers entering the food manufacturing industry fluctuated over time

The number of TFWs entering food manufacturing varied between 880 and 4,750 annually from 2000 to 2020, with remarkable variations after the mid-2000s (Chart 1). The variations were mainly driven by fluctuations in the number of TFWs with lower-skill occupations, who represented 55% to 82% of the TFW entrants in the food manufacturing industry each year. Before the mid-2000s, around 500 to 900 TFW entrants in the industry worked in lower-skill occupations each year. In 2007, the number rose sharply to 2,120, more than twice what was observed in 2006, then peaked at 2,590 in 2008. From 2007 to 2010, the Expedited Labour Market Opinion Pilot Project was implemented in Alberta and British Columbia. This program gave employers faster access to foreign workers and allowed firms to fill many lower-skill positions (Employment and Social Development Canada, 2007). While this program lasted until 2010, the number of TFWs with lower-skill occupations decreased substantially, from 2,590 in 2008 to 1,000 in 2010, and the representation of these workers among the overall TFWs in food manufacturing also decreased considerably, from 82% in 2008 to 68% in 2010. This may be associated with shrinking labour demand in the food manufacturing sector around the 2008/2009 economic recession. After 2010, the number of TFWs with lower-skill occupations fluctuated between around 1,000 and 1,800 until 2016. The number surpassed 2,000 in 2017 and reached 2,900 in 2019, the highest number in the past 20 years.

1. Information on Canada's National Strategy for Critical Infrastructure is available in Public Safety Canada (2021).
2. Study permit holders were excluded from this study because of their small number in this industry.

Chart 1
Number of temporary foreign workers in their first year of employment and whose first employment was in the food manufacturing industry by occupational skill level, 2000 to 2020



Note: Counts are rounded to nearest 10 and may not add up because of rounding.
Source: Statistics Canada, Canadian Employer–Employee Dynamics Database.

The annual number of TFW entrants with higher-skill occupations was relatively small and stable, at about 340 to 600 from 2000 to 2015. From 2015 to 2019, the number grew quickly by almost three times (from 670 to 1,850). However, in 2020, because of travel restriction during the COVID-19 pandemic, the number of TFWs in both occupational skill groups dropped more than 30% each.

Temporary foreign workers with lower- and higher-skill occupations in the food manufacturing industry had different socioeconomic characteristics

Table 1 presents the characteristics of TFWs with lower- and higher-skill occupations in five entry cohorts defined by the year of arrival in Canada (2000 to 2004, 2005 to 2009, 2010 to 2014, 2015 to 2019, and 2020). In general, TFWs in the food manufacturing industry were concentrated in the 25 to 34 age group. Men were more likely than women to work in the sector, but the gender difference became smaller in more recent cohorts.

Table 1

Characteristics of temporary foreign workers in their first year of employment and whose first employment was in the food manufacturing industry, by occupational skill level and entry cohort

	Lower-skill occupations					Higher-skill occupations				
	2000-to-2004 entry cohort	2005-to-2009 entry cohort	2010-to-2014 entry cohort	2015-to-2019 entry cohort	2020 entry cohort	2000-to-2004 entry cohort	2005-to-2009 entry cohort	2010-to-2014 entry cohort	2015-to-2019 entry cohort	2020 entry cohort
	people									
Person counts	2,970	8,320	6,970	10,070	2,030	2,160	2,410	2,440	5,680	1,170
	percent									
Age at first employment										
24 or younger	22.7	13.3	17.7	17.4	14.8	16.3	15.9	16.9	13.9	7.6
25 to 34	41.3	52.6	51.3	46.3	45.0	43.0	42.3	45.3	46.3	44.0
35 to 44	24.4	28.9	25.5	28.2	31.2	27.7	29.1	26.0	27.0	32.2
45 or older	11.6	5.2	5.4	8.2	8.9	12.9	12.8	11.9	12.7	16.2
Gender										
Male	60.7	72.3	56.7	56.8	63.3	75.7	74.6	67.0	65.1	69.9
Female	39.3	27.7	43.3	43.2	36.7	24.3	25.4	33.0	34.9	30.1
Province of first employment										
Atlantic region	x	6.8	29.7	22.3	19.0	3.0	4.8	2.6	x	x
Quebec	23.0	12.3	17.3	30.8	37.1	18.8	24.8	24.8	35.2	38.1
Ontario	52.4	14.4	15.8	18.1	16.2	57.9	34.6	34.5	30.3	35.8
Manitoba	5.7	18.4	2.8	8.8	9.7	x	7.1	7.0	6.3	4.6
Saskatchewan	x	2.5	0.6	x	x	x	2.0	2.4	x	x
Alberta	7.1	37.8	23.0	x	x	10.1	17.1	17.0	8.7	6.0
British Columbia	10.8	7.8	10.8	11.8	10.0	7.6	9.7	11.7	15.2	11.1
Source region										
Central America	17.7	22.2	21.3	22.6	32.2	6.0	9.0	6.8	4.4	8.6
Caribbean	8.8	4.0	6.2	8.8	4.2	4.2	8.5	3.9	10.1	8.2
South America	8.8	8.2	2.1	4.2	4.2	10.1	7.3	3.6	6.6	8.0
Western Europe	4.7	4.1	7.0	7.4	4.1	10.8	19.8	21.7	17.1	11.2
Northern Europe	1.8	1.1	2.2	3.0	x	4.0	4.4	5.6	4.1	x
Southern Europe	1.4	0.5	1.9	1.3	x	2.5	2.2	6.7	3.7	x
Eastern Europe	11.4	9.3	7.4	2.0	1.3	12.5	6.3	7.2	5.1	3.8
Africa	13.3	5.2	4.2	11.0	9.2	13.1	7.4	7.3	13.4	14.8
South Asia	10.8	1.9	2.5	5.7	10.4	11.8	5.4	6.3	12.1	19.2
Southeast Asia	2.0	26.9	26.9	17.0	23.8	3.2	12.1	11.3	9.1	11.5
East Asia	10.4	13.6	15.1	13.3	5.3	7.3	4.9	6.9	7.4	4.2
West Asia	6.5	1.6	1.2	2.1	3.6	6.1	3.1	1.8	2.1	3.2
Oceania and other	1.9	0.9	1.6	1.3	x	2.1	2.3	2.5	1.7	x
North America	0.6	0.4	0.5	0.2	x	6.3	7.3	8.4	3.4	x

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

Notes: The entry cohort is based on the year when a temporary work permit holder started their first employment in this industry in Canada. Counts are rounded to nearest 10 and may not add up because of rounding.

Source: Statistics Canada, Canadian Employer–Employee Dynamics Database.

TFWs who arrived after 2004 were less concentrated in Ontario than they had been previously. The share of TFWs with lower-skill occupations in Ontario was slightly above 50% for the 2000-to-2004 entry cohort then decreased to around 14% to 18% for the subsequent cohorts. Conversely, a large increase was seen in the share working in the Atlantic provinces. This trend resulted in a more balanced geographical distribution among TFWs with lower-skill occupations in the cohorts during the 2010s. Different from TFWs with lower-skill occupations, more recent TFW entrants with higher-skill occupations did not increase their share in the Atlantic provinces; their first employment was clustered in Ontario, Quebec, Alberta and British Columbia.

The primary source regions of the cohorts that arrived before 2005 differed from those of subsequent cohorts. For TFWs with lower-skill occupations, Central America, Africa and Eastern Europe were the primary source regions in the 2000-to-2004 entry cohort. For the subsequent cohorts, Central America remained one of the top three regions, and Southeast Asia and East Asia replaced the other two. Compared with TFWs with lower-skill occupations, TFWs with higher-skill occupations were more likely to be from more developed countries, such as those in Western Europe, the leading source region for the entry cohorts after the mid-2000s.

Temporary foreign workers with lower-skill occupations had relatively lower rates of transition to permanent residency, except for the 2005-to-2009 entry cohort

The cumulative rates of transition from temporary residency to permanent residency by the year after entering the food manufacturing industry are shown in Table 2. Among those who entered the food manufacturing industry before 2010, transition rates increased rapidly during the first 5 years and became stable from the 5th to the 10th year after entry.[3] For example, among the TFWs with lower-skill occupations in the 2005-to-2009 entry cohort, 5% transitioned to permanent residency one year after entry, noted as the one-year transition rate. The cumulative transition rate increased to 58% five years after entry, noted as the five-year transition rate. When the examination period was expanded from 5 to 10 years after entry, the cumulative transition rate increased by only about 7 percentage points to 65%. The corresponding rates for the TFWs with higher-skill occupations in the same cohort were 11%, 51% and 59%, respectively.

Table 2

Cumulative rates of transition of temporary foreign workers to permanent residency after their first year of employment and whose first employment was in the food manufacturing industry, by occupational skill level and entry cohort

	Lower-skill occupations					Higher-skill occupations				
Years after the first year working in the industry	2000-to-2004 entry cohort	2005-to-2009 entry cohort	2010-to-2014 entry cohort	2015-to-2019 entry cohort	2020 entry cohort	2000-to-2004 entry cohort	2005-to-2009 entry cohort	2010-to-2014 entry cohort	2015-to-2019 entry cohort	2020 entry cohort
	percent									
1	12.7	5.4	3.8	4.0	6.3	15.4	11.4	6.5	7.6	11.7
2	26.3	26.2	12.3	13.6	…	29.3	26.9	20.4	22.2	…
3	37.4	44.4	24.1	…	…	38.9	39.6	34.2	…	…
4	42.3	54.0	33.0	…	…	45.7	46.6	43.2	…	…
5	45.7	58.2	39.0	…	…	50.0	50.6	48.4	…	…
6	47.2	60.4	43.2	…	…	53.1	53.5	50.9	…	…
7	49.1	61.9	45.2	…	…	55.4	56.0	52.6	…	…
8	50.3	63.4	…	…	…	57.0	57.5	…	…	…
9	51.1	64.4	…	…	…	57.8	58.7	…	…	…
10	51.8	65.0	…	…	…	58.5	59.1	…	…	…

... not applicable

Note: The entry cohort is based on the year when a temporary work permit holder started their first employment in this industry in Canada.

Source: Statistics Canada, Canadian Employer–Employee Dynamics Database.

3. The end of the observation period for the transition to permanent residency was 2021. Therefore, the transition was only observable up to the seventh year after entry for the 2010-to-2014 entry cohort, up to the second year after entry for the 2015-to-2019 cohort and up to the first year after entry for the 2020 cohort.

For both occupational skill levels, the one-year transition rate decreased significantly from the earliest cohorts to the 2010-to-2014 cohort then increased for the most recent cohorts. The one-year transition rate of TFWs with lower-skill occupations increased from 4% for the 2015-to-2019 cohort to 6% for the 2020 cohort, and for TFWs with higher-skill occupations from 8% to 12%.

The 2005-to-2009 cohort of TFWs with lower-skill occupations had higher medium- and long-run transition rates than the 2000-to-2004 and 2010-to-2014 cohorts with lower-skill occupations. The five-year transition rate of the TFWs with lower-skill occupations in the 2005-to-2009 entry cohort was 58%, about 12 and 19 percentage points higher than that of the 2000-to-2004 (46%) and 2010-to-2014 (39%) cohorts, respectively. The 10-year transition rate of the 2005-to-2009 cohort (65%) was about 13 percentage points higher than that of the 2000-to-2004 cohort (52%). In comparison, among the TFWs with higher-skill occupations, the medium- and long-run transition rates were relatively similar across cohorts. The 5-year transition rates were virtually the same in the three entry cohorts from 2000 to 2014, at around 48% to 51%, and the 10-year transition rates in the two entry cohorts before 2010 were also very close, at around 59%.[4]

Except for the 2005-to-2009 cohort, TFWs with higher-skill occupations had a higher transition rate than their lower-skill counterparts in any given year after first employment in the food manufacturing industry. Among the 2000-to-2004 cohort, the five-year transition rate for TFWs with higher-skill occupations (50%) was about 4 percentage points higher than that for those with lower-skill occupations (46%). The difference was even larger among the 2010-to-2014 cohort, where the five-year transition rate for TFWs with higher-skill occupations (48%) was about 9 percentage points higher than that for TFWs with lower-skill occupations (39%).[5]

Temporary foreign workers with lower-skill occupations had higher rates of retention in the food manufacturing industry for the landing cohorts from 2006 to 2015

Among all the TFWs who started their first employment in the food manufacturing industry from 2000 to 2018, about 40% obtained permanent residency by 2019. These TFWs were divided into four landing cohorts (2001 to 2005, 2006 to 2010, 2011 to 2015 and 2016 to 2019). Table 3 shows their industrial retention status by year since landing (i.e., becoming a permanent resident). Depending on the landing cohort, about 46% to 78% of the TFWs with lower-skill occupations remained in the food manufacturing industry during their landing year, compared with about 66% to 73% among the TFWs with higher-skill occupations.

4. The cumulative transition rates for TFWs in the food manufacturing industry were much higher than those of their counterparts in the accommodation and food services industry for all cohorts regardless of occupation skill level (Zhong et al. 2024). The underlying reasons need further study as the TFWs in these two industries had different demographic characteristics (e.g., age, gender and source country), which could all be potential factors for immigration decisions.
5. The rate of transition to permanent residency for the 2010-to-2014 cohort of TFWs with lower-skill occupations in the food manufacturing industry was the lowest among all cohorts. It might reflect a change in the temporary residency program. In this industry, since 2011, many TFWs have held a work permit under the Working Holiday program and had very low transition rates, especially in the first few years after the permit was issued.

Table 3
Industrial retention of temporary foreign workers whose first employment was in the food manufacturing industry, by occupational skill level and landing cohort

	2001-to-2005 landing cohort			2006-to-2010 landing cohort			2011-to-2015 landing cohort			2016-to-2019 landing cohort		
	Stay	Move	No T4 earnings	Stay	Move	No T4 earnings	Stay	Move	No T4 earnings	Stay	Move	No T4 earnings
	percent											
Lower-skill occupations												
Landing year	46.4	36.7	16.9	78.1	14.5	7.5	72.7	20.9	6.4	66.6	25.5	7.9
Year 1	31.5	47.2	21.3	68.5	22.0	9.5	59.6	32.2	8.2	55.6	35.0	9.4
Year 2	24.4	49.5	26.2	58.6	29.8	11.7	47.4	43.3	9.3	...	...	...
Year 3	20.8	51.8	27.4	51.7	35.9	12.4	41.6	47.9	10.4	...	...	...
Year 4	17.2	52.8	30.0	45.6	40.3	14.1	38.1	50.4	11.5	...	...	...
Year 5	15.7	52.6	31.7	40.4	43.4	16.3	36.0	51.7	12.3	...	...	...
Higher-skill occupations												
Landing year	73.2	19.9	6.9	68.0	24.2	7.8	66.2	26.6	7.2	71.1	22.4	6.5
Year 1	59.8	30.1	10.2	56.9	32.9	10.2	54.5	36.7	8.8	57.1	33.1	9.7
Year 2	50.0	35.7	14.3	48.0	38.8	13.3	46.4	40.9	12.6	...	...	...
Year 3	42.0	37.8	20.2	41.1	43.9	15.0	42.3	43.1	14.6	...	...	...
Year 4	35.2	41.8	23.1	38.4	44.6	17.0	38.4	46.0	15.5	...	...	...
Year 5	30.1	44.0	25.9	34.3	47.8	17.9	34.8	48.0	17.2	...	...	...

... not applicable

Notes: The number of temporary foreign workers (TFWs) with lower-skill occupations who became immigrants was 930 for the 2001-to-2005 landing cohort, 3,270 for the 2006-to-2010 cohort, 4,000 for the 2011-to-2015 cohort and 3,210 for the 2016-to-2019 cohort. The corresponding numbers of TFWs with higher-skill occupations were 790, 1,210, 1,390 and 1,560, respectively.

Source: Statistics Canada, Canadian Employer–Employee Dynamics Database.

The percentage of TFWs who stayed in the food manufacturing industry fell gradually in the years following their landing for both skill groups. For example, among the TFWs with lower-skill occupations in the 2006-to-2010 landing cohort, the industrial retention rate during the first year after landing, or the one-year retention rate, was 69%; the three-year retention rate fell to 52%; and the five-year retention rate was 40%. The corresponding rates for the TFWs with higher-skill occupations in the 2006-to-2010 landing cohort were 57%, 41% and 34%, respectively.

Except for the 2001-to-2005 and 2016-to-2019 cohorts, the former TFWs with lower-skill occupations were more likely than the former TFWs with higher-skill occupations to remain in food manufacturing in almost any given year after landing. The five-year retention rates for the TFWs with lower-skill occupations were 40% for the 2006-to-2010 landing cohort and 36% for the 2011-to-2015 cohort. The corresponding rates for the TFWs with higher-skill occupations in the two cohorts were 34% and 35%, respectively.

The industrial mobility status among those who did not remain in the food manufacturing sector was divided into two categories: those who moved to other industries or those without T4 earnings. Transitions to other industries increased with the number of years after landing. For example, moving rates among the former TFWs with lower-skill occupations in the 2006-to-2010 landing cohort were 15% in the landing year, 22% in the first year, 36% in the third year and 43% in the fifth year; the corresponding rates among the higher-skilled TFWs in the same cohort were higher, at 24%, 33%, 44% and 48%, respectively. This pattern is consistent with the notion that obtaining permanent residency might improve employment opportunities and job mobility.

Conclusion

Focusing on TFWs with lower-skill occupations in the food manufacturing sector, this study examined the rate of transition from temporary residency to permanent residency and the rate of retention in the food manufacturing sector after they become permanent residents. As a major source of foreign workers in food manufacturing, TFWs with lower-skill occupations represented 55% to 82% of TFWs who entered the sector from 2000 to 2020. They were often men aged 25 to 34 and came primarily from Southeast Asia, East Asia and Central America. Except for those who entered the sector from 2005 to 2009, TFWs with lower-skill occupations had lower rates of transition to permanent residency than their higher-skilled counterparts. Industrial mobility status was also examined for the former TFWs who entered the food manufacturing industry from 2000 to 2019 and obtained permanent residency from 2001 to 2019. The retention rate of former TFWs in both occupational skill groups declined with the number of years elapsed since landing. The rates of retention of TFWs with lower-skill occupations in the food manufacturing industry fell with each successive cohort, from the 2006-to-2010 cohort to the most recent cohort.

Data appendix

Using the integrated datasets from the Non-permanent Resident File, the Immigrant Landing File and the Longitudinal Worker File in the Canadian Employer–Employee Dynamics Database, the study focuses on temporary foreign workers (TFWs) whose first work permit was issued from 2000 to 2020, with their first ever observed employment in food manufacturing (since 1989).[6]

Occupational skill requirement levels for TFWs are identified through a combination of skill level derived from the occupation listed on the employer-specific work permits, typically issued by the TFW Program, and the level of pre-landing earnings if the occupation information is missing, especially for many open work permit holders. The occupation is categorized by the 2016 National Occupational Classification (NOC), which serves as a basis for assigning two broad skill levels to TFWs. Lower-skill occupations correspond to NOC levels C (intermediate and clerical) and D (elemental and labourers), and higher-skill occupations correspond to NOC levels 0 (managerial), A (professional) and B (skilled trades and technical). When the occupation information is missing on work permits, individuals' annual earnings reported on their T4 tax return in their first employment year were used as a proxy for the occupational skill requirement level. The relationship between earnings level and skill level has been established in previous studies (Picot, Hou, Crossman, & Lu, 2021; Liu, Lu, & Zhong, 2021). With this approach, the analysis identified workers with lower-skill occupations as those with full-year equivalent annual earnings less than half of the national median in the same year, and workers with higher-skill occupations as those with full-year equivalent annual earnings at least half of the national median.[7,8]

In total, around 44,220 TFWs whose first work permit was issued from 2000 to 2020 and whose first employment was in food manufacturing were included for the analysis of their transition to permanent residency.

For an analysis of industrial retention after obtaining permanent residency, the sample is further restricted to those who transitioned to permanent residency from 2001 to 2019 (i.e., former TFWs). This study uses tax data up to 2020 to examine their employment and industrial retention after immigration. Around 16,360 individuals were included in this analysis.

6. This analysis includes those who only had valid work permits in their first year of employment. Individuals who worked in multiple industries in their first year of employment are included if their highest earnings are obtained from the food manufacturing sector (compared with other industries based on the two-digit North American Industry Classification System code).
7. Given that some TFWs did not have full-year income statistics for the year they were first employed in Canada, the full-year equivalent annual earnings were recalculated as actual annual earnings divided by the number of days of all permits in the year and multiplied by 365.
8. In this study, it is important to note certain caveats related to the imputation method used for skill levels when the occupation information is unavailable. First, this method does not reflect occupational requirements for education, knowledge or experience because of the lack of information in the data. Second, the selection of an earnings threshold for imputing lower skill levels can be considered somewhat arbitrary. Using the subsample of TFWs with available information on their designated skill levels and yearly earnings, a sensitivity analysis was done to test how the rate of classifying those with higher-skill occupations as lower-skill changed when the earnings threshold was set at the national median rather than at half of the national median. In the food manufacturing industry, the misclassification rate increased from 10% to 50%. Based on this test, it is reasonable to select half of the national median earnings to be the threshold. Those TFWs with both skill levels and annual earnings who were used in the sensitivity test were mostly from the TFW Program, whereas those whose skill levels needed to be imputed were mostly open work permit holders. The observations in the sensitivity study may not necessarily be fully consistent with open work permits.

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