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Inter-provincial Employees in Alberta

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| .. | not available for a specific reference period |
| ... | not applicable |
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| 0 ^s | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| ^p | preliminary |
| ^r | revised |
| X | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i> |
| E | use with caution |
| F | too unreliable to be published |
| * | significantly different from reference category ($p < 0.05$) |

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Abstract

In spite of much anecdotal evidence and some case studies regarding the size and characteristics of the inter-provincial workforce in Alberta, comprehensive statistics remain scarce. This is due in part to the many challenges faced in trying to enumerate a mobile population. Drawing on administrative data from several sources between 2003 and 2010, including T4 (*Statement of Remuneration Paid*) and T1 (*General Tax Form*) files, this report provides comprehensive information on inter-provincial employees in Alberta. The results show that the number of inter-provincial employees in Alberta nearly doubled over this period, reaching about 122,500 to 133,000 individuals, or about 5.7% to 6.2% of provincial employment, in 2008. In almost every year during the reference period, the number of inter-provincial employees in Alberta was considerably higher than the number of new residents moving to the province. Detailed estimates on socio-demographic characteristics of workers, cross-sectional and longitudinal employment patterns, earnings, and firm-specific workforces are presented.

Executive summary

In 2004, there were approximately 62,000 to 67,500 inter-provincial employees working in Alberta, accounting for about 3.6% to 3.8% of provincial employment. By 2008, the inter-provincial workforce in the province had increased to about 122,500 to 133,000 individuals, accounting for about 5.7% to 6.2% of provincial employment and about 3.5% of provincial T4 earnings. These figures fell somewhat in 2009 with the economic downturn. In most years, the number of inter-provincial employees in Alberta was considerably higher than the number of new residents moving to the province.

This study uses administrative data to provide estimates and descriptive information on inter-provincial employees working in Alberta between 2004 and 2009. Data from several administrative sources between 2003 and 2010, including T4 (*Statement of Remuneration Paid*) and T1 (*General Tax Form*) files, were used to provide comprehensive and new information on inter-provincial employees in Alberta. Individuals in this group were identified as those who received T4 earnings in Alberta during a given year but who reported that they resided in another province or territory on their T1 returns.

Men accounted for 71% to 74% of inter-provincial employees in Alberta between 2005 and 2009. As well, through the 2000s, a growing share of the inter-provincial workforce consisted of older employees. The share of Alberta's inter-provincial workforce consisting of individuals aged 45 to 64 increased by almost 9 percentage points over the reference period while the share of employees aged 18 to 24 declined by 14 percentage points. However, there is a marked difference in the age profiles of male and female inter-provincial employees, with females more likely to be younger.

The increasing age profile of inter-provincial employees was reflected in a changing marital profile. The share of inter-provincial employees who were married or living common-law increased from 38% in 2004 to 48% in 2009.

Residents of two neighbouring provinces, British Columbia and Saskatchewan, comprised large shares of the inter-provincial workforce in Alberta, accounting for almost 59% of this workforce in 2004. However, following large in-flows of workers from other provinces and territories, this proportion declined to 43% by 2008. In fact, in spite of the distance, the number of inter-provincial employees from the Atlantic Provinces increased almost three-fold between 2004 and 2008. By 2008, Atlantic Canadians comprised over 26% of inter-provincial employees in Alberta.

Within industries, inter-provincial employment accounted for about 9% to 14% of employment in each of the following: construction; oil and gas extraction; agriculture, fishing and forestry; mining; and accommodation and food services. When measured in terms of T4 earnings, inter-provincial employees accounted for 10% of T4 earnings paid in Alberta's construction industry in 2008 but for less than 6% of T4 earnings paid in the province's other industries that year.

Across industries, there were large differences in the distributions of male and female inter-provincial employees. About one-half of male inter-provincial employees in Alberta were employed in construction and oil and gas extraction, while about one-third of female inter-provincial employees were employed in accommodation and food services and retail trade.

Employment patterns of inter-provincial employees vary along a number of dimensions. A significant portion of inter-provincial employees in Alberta are employed in the province on a part-year basis. Indeed, over much of the reference period, almost two-thirds of inter-provincial employees received T4 earnings from Alberta **and** from another province or territory. There is a strong correlation with age as inter-provincial employees in older age groups were more likely than others to work exclusively in Alberta. The share of inter-provincial employees receiving T4

earnings only from Alberta was highest among those from Saskatchewan and Newfoundland and Labrador.

The distinction between inter-provincial employees who are employed exclusively in Alberta and those also working in other provinces or territories is important when considering the distribution of T4 earnings received in Alberta. The median earnings received in Alberta in 2009 by all inter-provincial employees were \$16,347. This is less than half of the median earnings received by Alberta resident employees (\$40,610). However, median Alberta earnings among inter-provincial employees who worked only in Alberta (at \$33,035) are more comparable. Median earnings of those who worked in Alberta and elsewhere were \$9,260.

Among male inter-provincial employees with T4 earnings only from Alberta, median earnings of those employed in oil, gas extraction and support activities were almost \$60,000, while one-in-four of these workers earned \$96,000 or more.

The prospects for earning higher wages and salaries are no doubt an important consideration in decisions to work inter-provincially. Among men aged 35 to 49, median earnings since becoming inter-provincial employees were approximately 38%, or \$13,200, higher than their annual earnings in the years prior to their becoming inter-provincial employees. Men from the Atlantic Provinces saw the largest earnings gains by becoming inter-provincial employees (79%). As for women aged 35 to 49, their earnings increased by over 30% as they became inter-provincial employees in 2007 or 2008.

Earnings from Alberta have a considerable impact on family total earnings of inter-provincial employees. On average, married and common-law inter-provincial employees contributed 52% of total family earnings with their T4 earnings from Alberta in 2009. For nearly 31% of inter-provincial employees, T4 earnings from Alberta accounted for more than 75% of total family earnings.

Of the individuals first observed in inter-provincial employment in 2005, about one in four became Alberta residents during the next five years. Inter-provincial employees who were younger, single, and from Atlantic Canada were among those most likely to subsequently move to Alberta. Of the inter-provincial employees who did not subsequently move to Alberta, about one-half worked in Alberta during only one year, 21% did so during two years, and nearly 27% did so for three or more years.

1 Introduction

The expansion of Alberta's oil and gas sector and the resulting broader economic activity make the province an attractive destination for job seekers. For some, employment in Alberta is accompanied by a permanent move to the province. Indeed, through the 2000s, net inter-provincial migration to Alberta far surpassed that to other provinces or territories,¹ and the share of new immigrants settling in Alberta increased as well.² For other job seekers, employment in Alberta is not accompanied by a move to the province. This is the case for Canadians who commute to work in Alberta but maintain their primary residence elsewhere.

Even within Alberta, employment opportunities are likely reflected in changing residential and work arrangements. Some individuals have likely moved from southern to more northern communities to capitalize on employment opportunities,³ while others may maintain their primary residence in the south but commute to work in the north on a '9-days-in/5-days-out' type of schedule.

The in-flows of workers through these various arrangements have increased the populations of Alberta communities, but by exactly how much remains the topic of ongoing inquiry and discussion. While counting individuals who maintain their primary residence in the province is fairly straightforward, identifying and enumerating those who commute to work there but live elsewhere is a more challenging task. Such individuals are highly mobile, and often reside in remote areas and temporary accommodations, such as hotels, recreational vehicles, campgrounds, work camps, and private residences. As a result, comprehensive information on this shadow population, broadly defined as individuals temporarily residing or working in a region but maintaining a permanent residence elsewhere, remains scarce.

Household surveys are of limited use in this regard. For example, the Labour Force Survey and most other household surveys collect information on respondents' place of residence but not on their place of work.⁴ One exception is the 2006 Census 2B Long Form, which asked respondents where they had worked during the previous week or, if they were not employed that week, where their longest job was located during the previous year. However, Census 2B respondents who had worked outside of their province or territory of residence the previous year would not be identified as inter-provincial workers if they were employed within their province or territory of residence the week prior to the Census or if their out-of-province employment the previous year was of a shorter duration than any within-province job they had held.

A number of initiatives have been undertaken by municipal and provincial agencies in Alberta to enumerate shadow populations.⁵ While such initiatives have yielded interesting and valuable results at the local level, the limited geographical coverage and varying definitions and

1. Statistics Canada, CANSIM table 051-0018.

2. For example, of immigrants aged 18 to 54 who landed in 2000 and who filed a T1 tax return the following year, 7% were residing in Alberta. This was the case for almost 12% of those who landed in 2009. (Custom tabulation from Longitudinal Immigration Data Base.)

3. The prevalence of intra-provincial mobility within Alberta during the latter half of the 2000s will be available once results from the 2011 National Household Survey are available for analysis.

4. The option of including a question on place of work is being considered by Statistics Canada as part of the redesign of the Labour Force Survey scheduled for 2016.

5. An overview of earlier studies carried out on behalf of various municipalities and provincial agencies was presented in Haan and Odynak (2009) as well as at the 2013 Annual Warren Kalbach Population Conference, University of Alberta, March 8, 2013.

methodologies used in these studies limit their capacity to support broader conclusions and provincial-level estimates.⁶

An alternative approach to obtaining information on shadow populations is to use administrative data sources. The objective of this paper is to use such data to provide estimates and descriptive information on inter-provincial employees working in Alberta. Specifically, individuals are identified as inter-provincial employees if they receive T4 (*Statement of Remuneration Paid*) earnings in Alberta during a given year but report that they reside in another province or territory on their T1 (*General Tax Form*) returns. While inter-provincial employees are employed in virtually every province and territory in Canada, this paper focuses only on those employed in Alberta.

The paper is organized into several sections. In Section 2, detailed information on data sources, sample selection, and concepts is provided. In Section 3, estimates of the size of the inter-provincial workforce in Alberta are provided, both in terms of absolute numbers and as a proportion of provincial employment and T4 earnings. In Section 4, the socio-demographic characteristics of inter-provincial employees are highlighted, and the shares of inter-provincial employment within industries and distributions across industries are assessed. In Section 5, the employment patterns and earnings of inter-provincial employees are examined, along with the extent to which inter-provincial employees subsequently move to Alberta or work inter-provincially over several years. In Section 6, inter-provincial employment is examined using firms as the unit of analysis, with descriptive information presented on the proportion of firms with operations in Alberta that hire inter-provincial employees and the proportions of firm-specific workforces consisting of these workers. Conclusions and suggestions for future research are provided in Section 7.

The use of administrative data offers several advantages. First, a consistent methodology can be applied across all provinces and territories yielding comprehensive national estimates of inter-provincial employment. Although this report is restricted to inter-provincial employment in Alberta, estimates for other provinces and territories could be calculated using the same approach. Second, administrative data from the Canada Revenue Agency provide high-quality earnings and income data, and thus facilitate estimations of the financial dimensions of inter-provincial employment. Third, administrative data are available on an annual basis, allowing year-to-year changes in the level and incidence of inter-provincial employment to be calculated. That being said, there is a time lag associated with the development and validation of administrative data files and, in turn, a lag in the availability of estimates of inter-provincial employment. Data were available up to 2010 while this analysis was performed. Administrative data are also longitudinal, allowing the transitions and trajectories of inter-provincial employees to be identified.

In addition, it is important to note the parameters and limitations of this study. The concept of shadow populations includes many different subgroups, such as inter-provincial workers (employees and self-employed), temporary foreign workers, out-of-province students, and other groups (e.g., refugee claimants). This heterogeneous composition makes it difficult, if not impossible, to enumerate and examine shadow populations in a comprehensive way using a single data source. Given the methodological approach supported by the administrative data employed, this paper is restricted to inter-provincial employees. Temporary foreign workers, out-of-province students, and other groups are included only if they received T4 earnings in Alberta but resided in another province or territory.

6. In 2011, the Alberta Office of Statistics and Information (AOSI) contracted with the Special Surveys Division of Statistics Canada to conduct a field test using both Drop-off/Mail-back questionnaires and on-site personal interviews to reach transient work populations in the Wood Buffalo/Fort McMurray region. The test demonstrated that the Drop-off/Mail-back option would not produce useable data. Although responses to the personal interviews were acceptable, conducting interviews in the region presented unique logistical challenges, and cost was a deterrent.

This has particular implications for the self-employed. Specifically, unincorporated self-employed individuals cannot be identified or included in the estimates of inter-provincial employment because they do not issue themselves a T4 slip—the data source from which the province or territory of employment is determined. Incorporated self-employed individuals may be included, but only if they issue themselves a T4 slip in Alberta. Given the information available, it is not possible to distinguish incorporated self-employed individuals from the general population of wage-and-salary employees or to determine the share of incorporated self-employed workers doing business in Alberta who are included (or excluded) from the analysis. Overall, the estimates of inter-provincial employment in Alberta are considered to be conservative to the extent that unincorporated self-employed workers and an unknown subset of incorporated self-employed individuals who work in Alberta but reside elsewhere cannot be included. It is for this reason that the term inter-provincial employees is used, emphasizing the T4 basis of the definition.

A second limitation is the absence of information on the distribution of inter-provincial employees within Alberta. There is a great deal of interest in the size of the inter-provincial workforce at sub-provincial levels of geography—that is, in specific municipalities. At issue is the need to enumerate non-permanent populations that draw on local services and infrastructure. However, while sub-provincial information on place of residence is available from the T1 tax return, sub-provincial information on place of work is not available from the T4 slip. In short, it is possible to determine whether inter-provincial employees from Newfoundland and Labrador reside in Cornerbrook, Gander, or St. John's, but it is not possible to determine whether their employment in Alberta is located in Fort McMurray, Calgary, or Canmore. This remains a data gap.

Finally, the T4 slip and the T1 tax return provide information on earnings and income on an annual basis only. Information is not collected on the number of hours worked each week or the number of weeks worked during the year. Hence, hourly wages or weekly earnings cannot be calculated. Furthermore, because start or stop date of jobs are not collected, the duration of employment in Alberta cannot be calculated below an annual level. Given the apparent prevalence of part-year employment among inter-provincial employees, such information would be useful to this analysis. Information on socio-economic characteristics, such as educational attainment, occupation of employment, and immigration status, is not collected on either the T4 slip or the T1 form, so that inter-provincial employees cannot be examined along these lines.

2 Data sources, sample selection, and concepts

Component data sources

An integrated (or linked) data base consisting of information from four different sources is used for this study. The four component data sources are the following:

T4 File

The T4 File contains tax information filed by employers who have paid an employee any of the following types of income: employment income (e.g., wages or salaries); commissions; taxable allowances and benefits; fishing income; or any other payments for services rendered during the year. Information on the province or territory of employment is drawn from Field 10 on each T4 (*Statement of Remuneration Paid*) slip. The Canada Revenue Agency's *Employers' Guide: Filing the T4 Slip and Summary* provides the following instructions to employers completing the T4 slip regarding the province or territory of employment:

"Enter one of the following abbreviations to indicate where the employee reported to work...The province or territory of employment you enter depends on where your employee has to report for work...For any employee who worked in or whose employment was located in more than one province or territory in the year, complete separate T4 slips. For each location, indicate the total remuneration paid to the employee and the related deductions...." (p. 9)

T1 Family File (T1FF)

The T1 Family File (T1FF) is an administrative data file constructed from information submitted on annual personal income tax returns (i.e., T1, *General Tax Form*). In addition, the T1FF contains information from the Canada Child Tax Benefit and the T4, *Statement of Remuneration Paid*, allowing data to be tabulated for individuals as well as for census families. The province/territory-of-residence variable on the T1FF indicates each tax filer's reported province or territory of residence as at December 31 of the tax year. At the time this analysis was done, the T1FF was available up to 2010.

T1 Historical (T1H) file

The T1 Historical file is an administrative data file constructed from information submitted on annual personal income tax returns (i.e., T1, *General Tax Form*). The T1H file includes information from T1 late filers and from re-assessed tax files. Because the inter-provincial workforce is highly mobile, individuals in this group may be more likely than individuals in the general population to file their tax returns late. For this reason, the T1H file is used in addition to the T1FF in order to increase the match rate between the T4 and T1 files and to ensure that late tax filers are taken into account in estimates of inter-provincial employment. At the time this analysis was done, the T1H file was available up to 2008.

Longitudinal Employment Analysis Program (LEAP)

The LEAP file contains information on annual employment, annual payroll, and industry for all incorporated and unincorporated business enterprises in Canada that have paid at least one employee. The file provides information on the industries in which T4 recipients are employed; the industries in which T4 recipients are employed are an important consideration in this analysis.

Data selection and data file

Data from these four sources were first linked together to create a set of integrated, cross-sectional files for the years 2003 to 2010. This process consists of several steps. First, a standard set of protocols was run to identify and rectify cases where individuals changed Social Insurance Numbers (SINs) over the period. T4 records that contained missing or incomplete SINs were also identified, with 0.2% to 0.4% of them excluded from the file for this reason.

Next, individuals who received one or more T4 slips from employment in Alberta were identified and retained. Each of these T4 records was then linked to the T1FF using the SINs available on both files. An initial match rate of about 88% to 90% was made for the years 2003 to 2010. Additional information was then drawn from the T1H—including late tax filers—increasing the match rate to about 93% to 95% for the years up to 2008.⁷

An analysis of the unmatched T4 records showed that youth and individuals with low earnings were overrepresented within this group. To address this issue and increase T4–T1FF match rates, individuals under 18 years of age and individuals who had total T4 earnings⁸ of less than

7. See Table 36 in Section 8, "Appendix Tables," for detailed numbers.

8. In 2002 dollars.

\$1,000 were excluded from the sample. Such exclusions are often used in analyses of labour supply. Applying these selection criteria increased the match rate between the T4 File and the T1FF or the T1H file to about 97% to 98% between 2004 and 2008. Counts and match rates are shown in Table 1.

The first column in Table 1 shows that the total number of individuals with T4 records⁹ from Alberta ranged from 1.7 million in 2003 to just over 2.1 million in 2008. These observations are identified as ‘the Alberta workforce’ in the analysis and are used as the denominator for calculating the incidence of inter-provincial employment in the province.¹⁰

Table 1
Individuals with T4s from Alberta — Match rates with T1FF and T1H data, 2003 to 2010

	Total number of individuals	T1FF matched		T1FF or T1H matched		Not matched with either T1FF or T1H	
	counts	counts	percent	counts	percent	counts	percent
2003	1,699,726	1,561,317	91.9	1,661,344	97.7	38,382	2.3
2004	1,751,171	1,621,039	92.6	1,715,092	97.9	36,079	2.1
2005	1,842,175	1,691,250	91.8	1,791,292	97.2	50,883	2.8
2006	1,979,160	1,796,713	90.8	1,912,021	96.6	67,139	3.4
2007	2,069,730	1,878,744	90.8	2,002,906	96.8	66,824	3.2
2008	2,134,746	1,942,447	91.0	2,059,347	96.5	75,399	3.5
2009	2,082,685	1,885,838	90.5	1,885,838	90.5	196,847	9.5
2010	2,081,109	1,882,978	90.5	1,882,978	90.5	198,131	9.5

Note: T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*.

Source: Statistics Canada, Inter-provincial Workforce Database.

The vast majority of individuals who received T4 earnings in Alberta reported on their T1 tax returns that Alberta was their province of residence.¹¹ Of the nearly 2.1 million Alberta T4 recipients in 2008, slightly fewer than 1.9 million resided in the province that year, while about 166,000 resided in another province or territory (Table 2, bottom panel). The number of observations with missing province or territory of residence information on T1 tax returns is inconsequential, at 0.03% to 0.11% of the sample. These observations were included as part of the Alberta workforce throughout the analysis.

9. Individuals may have more than one T4 record; i.e., individuals may receive more than one T4 slip.

10. All individuals with one or more Alberta T4 are included in this group regardless of whether their T4s were matched with a T1FF record or a T1H record.

11. When province of residence information is missing on the T1FF, the filer's postal code is used to derive province of residence. If the filer's postal code is missing, the postal code of co-resident family members is used to derive province of residence.

Table 2
Matched Alberta data by residency status, 2003 to 2010

	Alberta residents	Not Alberta residents	Unknown place of residence	Total
	counts			
T4–T1FF matched				
2003	1,482,408	78,505	404	1,561,317
2004	1,538,785	81,832	422	1,621,039
2005	1,598,040	92,615	595	1,691,250
2006	1,674,796	121,128	789	1,796,713
2007	1,732,092	145,459	1,193	1,878,744
2008	1,787,692	152,883	1,872	1,942,447
2009	1,759,578	124,559	1,701	1,885,838
2010	1,765,127	115,934	1,917	1,882,978
T4–T1FF–TIH matched				
2003	1,575,173	85,674	497	1,661,344
2004	1,625,881	88,675	536	1,715,092
2005	1,689,883	100,521	888	1,791,292
2006	1,779,077	131,909	1,035	1,912,021
2007	1,842,546	158,831	1,529	2,002,906
2008	1,891,564	165,612	2,171	2,059,347

Note: T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*.

Source: Statistics Canada, Inter-provincial Workforce Database.

Identifying inter-provincial employees

Although one might identify inter-provincial employees as all individuals who received T4 earnings from Alberta but reported a different province or territory of residence on their T1 tax returns, such an approach would include individuals who moved out of the province during the year (i.e., out-migrants). As shown in Figure 1, out-migrants can be identified as individuals who: (i) had T4 earnings in Alberta in year t but resided in another province or territory at the end of year t , **and** (ii) who resided in Alberta in the previous year ($t-1$); **and** (iii) who were still residing outside of Alberta the following year ($t+1$). Defined in this way, the estimated number of annual out-migrants from Alberta ranged from about 19,000 to about 23,000 between 2004 and 2006, and from about 27,000 to about 35,000 between 2007 and 2009.¹² Inter-provincial employees can then be defined as all individuals who, in year t , worked in Alberta but resided in another province or territory **minus** all out-migrants from Alberta. This is the "**Base definition**" of inter-provincial employees used in the analysis.

Figure 1

Identifying out-migrants — Approach 1 (Base definition)

	t-1	t	t+1
Province of work	Alberta or other	Alberta	Not Alberta
Province of residence	Alberta	Not Alberta	Not Alberta

12. Estimates of the total number of persons 18 years of age or older out-migrating from Alberta over a similar period ranged from 37,800 to 43,100 between 2004/2005 and 2010/2011 (from July 1 of one year to June 30 of the next) (CANSIM table 051-0012). These estimates include all persons 18 years of age or older regardless of earnings or employment status, while the estimates of out-migration presented in the text above are limited to individuals who had T4 earnings of more than \$1,000.

The definition of out-migrants can be enlarged—and in turn the definition of inter-provincial employees made more restrictive—by considering place of work and residence in year $t-1$ and year t , but disregarding individuals' characteristics in year $t+1$ (see Figure 2). Specifically, out-migrants can be identified as individuals who: (i) resided in Alberta in year $t-1$ **but** (ii) moved to another province or territory the following year (i.e., year t). Whether or not they remained in that province or territory the following year is not considered. Again, inter-provincial employees can be defined as all individuals who, in year t , worked in Alberta but resided in another province or territory **minus** out-migrants identified in this more encompassing way. This group is labeled "**Base definition excluding Alberta residents at $t-1$** " in the analysis.

Figure 2
Identifying out-migrants — Approach 2

	t-1	t	t+1
Province of work	Alberta or other	Alberta	
Province of residence	Alberta	Not Alberta	

Finally, the most encompassing definition of out-migrants (and, in turn, the most restrictive definition of inter-provincial employees) takes into account individuals whose province or territory of residence at $t-1$ is missing on the T4–T1FF–T1H data. Out-migrants are identified as those whose province or territory of residence indicates they moved out of Alberta (i.e., those identified in Figure 2) as well as those for whom complete information is not available in order to make such a determination (see Figure 3). Again, inter-provincial employees can be defined as all individuals who, in year t , worked in Alberta but resided in other province or territory **minus** individuals identified as out-migrants in this way. This group is labelled "**Base definition excluding Alberta and unknown residents at $t-1$** " in the analysis.

Figure 3
Identifying out-migrants — Approach 3

	t-1	t	t+1
Province of work	Alberta or other	Alberta	
Province of residence	Missing or Alberta	Not Alberta	

Overall, approaches 1 through 3 define out-migrants in an increasingly inclusive way and, in turn, provide increasingly restrictive definitions and estimations of inter-provincial employees. The sensitivity of inter-provincial employment estimates to alternative definitions can thus be assessed.

3 Estimates of inter-provincial employment in Alberta

Estimates of the absolute number and percentage of inter-provincial employees in Alberta are shown in Table 3. The top panel is based on matched T4–T1FF data and shows that the number of inter-provincial employees increased from about 62,000 to about 122,000 between

2004 and 2008, and then declined to about 97,000 in 2009 (Base definition). The more restrictive definitions yield estimates that are about 4,000 to 10,000 lower in most years.¹³ However, the T4–T1FF data do not include late tax filers and, hence, underestimate the number of inter-provincial employees in the province.

Table 3
Estimated number and percentage of inter-provincial employees in Alberta, 2004 to 2010

	Base definition		Base definition excluding Alberta residents at <i>t-1</i>		Base definition excluding Alberta and unknown residents at <i>t-1</i>	
	counts	percent	counts	percent	counts	percent
T4–T1FF matched						
2004	62,232	3.6	58,433	3.3	55,574	3.2
2005	73,726	4.0	70,375	3.8	67,387	3.7
2006	98,160	5.0	94,817	4.8	90,627	4.6
2007	110,377	5.3	105,638	5.1	101,167	4.9
2008	122,454	5.7	116,544	5.5	112,109	5.3
2009	97,436	4.7	91,610	4.4	82,451	4.0
2010	...	...	88,954	4.3	79,833	3.8
T4–T1FF–T1H matched						
2004	67,333	3.8	63,199	3.6	59,234	3.4
2005	79,895	4.3	76,195	4.1	71,769	3.9
2006	106,726	5.4	103,051	5.2	97,037	4.9
2007	120,704	5.8	115,530	5.6	107,777	5.2
2008	133,061 ¹	6.2 ¹	125,970	5.9	119,279	5.6
2009	105,876 ¹	5.1 ¹	99,408 ¹	4.8 ¹	87,908 ¹	4.2 ¹

1. Preliminary estimate.

Note: T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*. The late-filer adjustment factor is derived from the average of the ratios of the T4–T1FF–T1H matched data to the T4–T1FF matched data for all available years. Specific adjustment factors are used for each definition of inter-provincial employees.

Source: Statistics Canada, Inter-provincial Workforce Database.

The bottom panel of Table 3, which is based on T4–T1FF–T1H data, includes late filers and yields annual estimates of inter-provincial employment which are 8.2% to 9.4% higher than those based on T4–T1FF data alone. In short, the inclusion of late tax filers and re-assessed tax files increases the number of inter-provincial employees in Alberta by about 4,000 to 10,000 each year. Taking this into account, the number of inter-provincial employees in the province increased from about 67,000 to about 121,000 between 2004 and 2007 (Base definition). Although the T1H file is not yet available to allow for extending the series to 2008 and 2009, the application of a ‘late-filer adjustment’ to T4–T1FF data yields estimates of 133,000 and 106,000 inter-provincial employees in Alberta in 2008 and 2009, respectively.¹⁴ Chart 1 places these estimates in context, showing that for most years the number of inter-provincial employees in Alberta was considerably higher than the number of new residents moving to the province.¹⁵

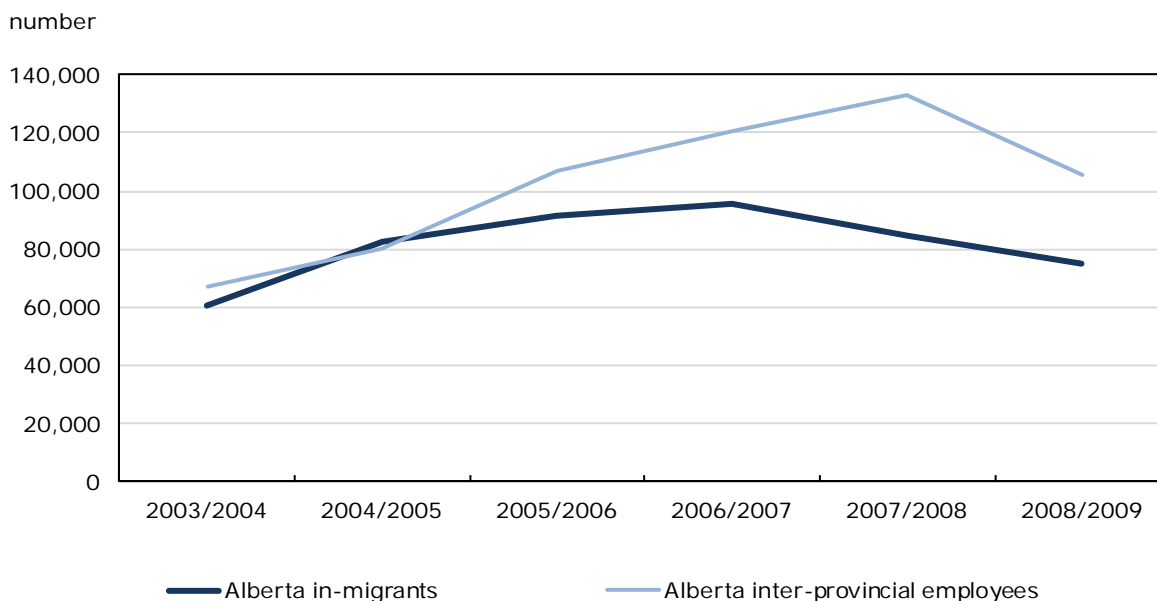
13. The only exception is 2009, with a difference of almost 15,000 between the base definition (Approach 1) and the most restrictive definition (Approach 3).

14. Between 2004 and 2007, the inclusion of late tax filers from the T1H file increased the number of inter-provincial employees in Alberta estimated from the T1FF by an average of 8.66% (Base definition). The T1FF estimates of inter-provincial employment for 2008 and 2009 were thus multiplied by 1.0866 to estimate the total inter-provincial employment in Alberta in those years. The ‘late tax filer adjustment’ factors for the more restrictive definitions of inter-provincial employment were 1.0862 and 1.0667.

15. The number of in-migrants to Alberta is from CANSIM table 051-0018.

Chart 1

Alberta in-migrants and inter-provincial employees, 2003 to 2009



Note: Alberta in-migrants are restricted to those aged 18 or more regardless of earnings.

Sources: Statistics Canada, Inter-provincial Workforce Database and CANSIM table 51-0018.

In the measurement of inter-provincial employment, the municipality of Lloydminster is a special case as it spans the Alberta–Saskatchewan border. In this study, Lloydminster residents on the Alberta side are counted in the Alberta workforce provided they have at least one Alberta T4, while Lloydminster residents on the Saskatchewan side are counted as inter-provincial employees if they have at least one Alberta T4. This latter group includes about 2,800 to 3,600 individuals each year, accounting for about 2% to 4% of inter-provincial employees. Individuals residing on the Alberta side of Lloydminster who have T4 earnings from Saskatchewan are inter-provincial employees in that province, but are beyond the scope of the analysis.

In proportional terms, the share of the Alberta workforce who are inter-provincial employees increased from 3.8% to 6.2% between 2004 and 2008, and then declined to 5.1% by 2009 (Base definition, T4–T1FF–T1H data; Table 3, bottom panel). The two more restrictive definitions of 'inter-provincial employment' yield estimates that are 0.2 percentage points lower (Approach 2) and 0.4 percentage points lower (Approach 3).¹⁶

The value of T4 earnings received by inter-provincial employees in Alberta increased from about \$1.3 billion to about \$4.1 billion between 2004 and 2008, and then declined to about \$3.3 billion in 2009 (Base definition, T4–T1FF–T1H data; Table 4, bottom panel). In relative terms, this accounted for 3.6% of total T4 earnings paid in Alberta in 2008 and for 3.0% of total T4 earnings paid in Alberta in 2009. Again, the use of the two more restrictive definitions yields estimates

16. The denominator for these percentages includes all Alberta employees with T4 records, including those whose T4s could not be matched to either the T1FF or the T1H file. While included in the denominator, unmatched records cannot be included in the numerator because the province of residence cannot be determined; hence, these percentages are conservative. An alternative strategy is to exclude all unmatched Alberta T4s from the percentage calculation. This leaves the numerator unchanged, but reduces the denominator (i.e., the number of workers in Alberta with T4s) by 2.1% to 3.5%. This approach yields estimates that are 0.1 percentage points to 0.6 percentage points higher than those shown in Table 3. These supplementary estimates are shown in Appendix Table 37.

that are 0.1 percentage points to 0.2 percentage points lower (Approach 2) and 0.1 percentage points to 0.3 percentage points lower (Approach 3).

Table 4

Estimated T4 earnings and T4 earnings as a percentage of total Alberta T4 earnings of inter-provincial employees in Alberta, 2004 to 2010

	Base definition		Base definition excluding Alberta residents at <i>t-1</i>		Base definition excluding Alberta and unknown residents at <i>t-1</i>	
	\$ millions (2009)	percent	\$ millions (2009)	percent	\$ millions (2009)	percent
T4–T1FF matched						
2004	1,204.1	1.5	1,134.5	1.4	1,105.4	1.4
2005	1,629.0	1.9	1,557.5	1.8	1,522.8	1.7
2006	2,302.3	2.3	2,224.9	2.2	2,169.9	2.2
2007	2,916.5	2.7	2,800.5	2.6	2,746.7	2.5
2008	3,859.3	3.4	3,696.9	3.2	3,638.4	3.2
2009	3,113.5	2.9	2,967.0	2.7	2,780.0	2.6
2010	...	...	3,226.6	2.9	3,021.5	2.8
T4–T1FF–T1H matched						
2004	1,278.6	1.6	1,202.2	1.5	1,158.5	1.5
2005	1,736.8	2.0	1,658.3	1.9	1,602.1	1.8
2006	2,452.1	2.5	2,366.4	2.4	2,282.7	2.3
2007	3,123.9	2.9	2,996.7	2.8	2,887.2	2.7
2008	4,114.3 ¹	3.6 ¹	3,912.1	3.4	3,807.3	3.3
2009	3,319.2 ¹	3.0 ¹	3,154.6 ¹	2.9 ¹	2,918.8 ¹	2.7 ¹

1. Preliminary estimate.

Note: T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*. The late-filer adjustment factor is derived from the average of the ratios of the T4–T1FF–T1H matched data to the T4–T1FF matched data for all available years. Specific adjustment factors are used for each definition of inter-provincial employees.

Source: Statistics Canada, Inter-provincial Workforce Database.

The fact that inter-provincial employees in Alberta accounted for 6.2% of the provincial workforce but for only 3.6% of provincial T4 earnings in 2008 reflects a variety of factors, including the socio-demographic characteristics of inter-provincial employees, the industries in which they worked, and the extent to which they worked in both Alberta and their province or territory of residence during the year. It is to these characteristics that the study now turns.

Information on family characteristics is not available on the T1H file. Consequently, the analysis below is based on the T4–T1FF matched data. Also, because the characteristics of inter-provincial employees do not differ appreciably across the three definitions described in Section 2, information is presented using only the base definition for ease of presentation.

4 Socio-demographic characteristics of inter-provincial employees

Sex, age, and family characteristics

Given the industrial composition of Alberta's economy and the greater likelihood of geographic mobility among younger employees, one might expect inter-provincial employees in the

province to be predominantly young and male.¹⁷ This is largely the case. Each year from 2005 to 2009, 71% to 74% of inter-provincial employees in Alberta were men, while this was the case for just over one-half of Alberta resident employees (Table 5).

Table 5

Gender composition of inter-provincial employees and Alberta resident employees, 2004 to 2009

	Men		Women	
	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees
	percent			
2004	67.3	52.5	32.7	47.5
2005	71.3	52.8	28.7	47.2
2006	71.9	53.0	28.1	47.0
2007	71.9	53.0	28.1	47.0
2008	73.5	53.2	26.5	46.8
2009	72.6	52.9	27.4	47.1

Source: Statistics Canada, Inter-provincial Workforce Database.

Similarly, during the 2004-to-2009 period, over one-half of inter-provincial employees in Alberta were under 35 years of age, with the largest share aged 18 to 24 (Table 6). However, over the period, there was a significant shift in the age composition of inter-provincial employees, with the share aged 18 to 24 declining by 14.3 percentage points and the share aged 45 or older increasing by 9.5 percentage points. In short, as the size of the inter-provincial workforce increased through the 2000s, it was older individuals who joined the ranks. This may be attributable to changes in labour demand (i.e., the types of workers that employers sought), to changes in labour supply (i.e., the types of individuals willing to travel to Alberta for work), or to some combination of both. The general aging of the workforce is a further consideration, as can be seen by looking at the corresponding numbers for Alberta resident employees (Table 6, bottom panel).

17. Unless specified otherwise, the base definition of inter-provincial employees, Alberta resident employees, and T4–T1FF matched data are used throughout the rest of the report.

Table 6**Age composition of inter-provincial employees and Alberta resident employees, 2004 to 2009**

	18 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years or over
	percent					
Inter-provincial employees						
2004	41.8	22.9	14.8	12.7	6.5	1.3
2005	38.1	23.2	15.5	14.3	7.7	1.3
2006	37.5	22.8	16.0	14.8	7.5	1.4
2007	35.3	22.9	15.9	16.0	8.3	1.5
2008	31.9	23.7	16.5	16.9	9.3	1.7
2009	27.5	25.5	17.1	17.7	10.4	1.9
Percentage point difference between 2004 and 2009	-14.3	2.5	2.3	5.0	3.9	0.6
Alberta resident employees						
2004	17.0	23.0	24.3	22.8	10.9	2.0
2005	17.2	23.0	23.4	23.0	11.3	2.1
2006	17.1	23.1	22.7	23.0	11.7	2.3
2007	16.9	23.4	22.1	23.0	12.1	2.5
2008	16.4	23.8	21.6	22.9	12.5	2.8
2009	15.3	24.1	21.4	22.9	13.2	3.0
Percentage point difference between 2004 and 2009	-1.8	1.1	-2.8	0.1	2.3	1.0

Source: Statistics Canada, Inter-provincial Workforce Database.

There is a noticeable difference in the age profiles of male and female inter-provincial employees, with females more likely to be younger (Table 7). In 2008, for example, 68% of female inter-provincial employees were aged 35 or less while this was the case for 51% of males. In comparison, 40% of men and women in Alberta were under the age of 35. A difference of a similar magnitude was evident in other years as well (e.g., 74% and 60%, respectively, in 2004).

Table 7**Percentage of employees aged 35 or under by gender, 2004, 2008, and 2009**

	Inter-provincial employees		Alberta resident employees	
	Women	Men	Women	Men
	percent			
2004	74.1	60.3	40.0	40.1
2008	67.8	51.2	40.1	40.3
2009	65.3	48.3	39.5	39.3

Source: Statistics Canada, Inter-provincial Workforce Database.

The increasing age profile of inter-provincial employees was reflected in a changing marital profile of this group over the period (Table 8). Between 2004 and 2009, the share of inter-provincial employees who were married or living common-law increased by 10 percentage points, from 38% to 48%, with a larger shift evident among men (11 percentage points) than women (6.5 percentage points). The share of Alberta resident employees who were married remained unchanged over this period, at about 63%.

Table 8**Composition of inter-provincial employees and Alberta resident employees by marital status, 2004 to 2009**

	Married / Living common-law		Single	
	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees
	percent			
Total				
2004	37.7	63.2	62.3	36.8
2005	40.1	62.9	59.9	37.1
2006	40.4	62.8	59.6	37.2
2007	42.5	63.0	57.5	37.0
2008	44.6	63.1	55.4	36.9
2009	48.1	64.0	51.9	36.0
Men				
2004	40.7	63.5	59.3	36.5
2005	43.3	63.0	56.7	37.0
2006	43.6	62.8	56.4	37.2
2007	46.1	63.1	53.9	36.9
2008	48.3	63.2	51.7	36.8
2009	51.9	64.6	48.1	35.4
Women				
2004	31.5	62.8	68.5	37.2
2005	32.3	62.8	67.7	37.2
2006	32.1	62.8	67.9	37.2
2007	33.2	62.9	66.8	37.1
2008	34.7	62.9	65.3	37.1
2009	37.9	63.4	62.1	36.6

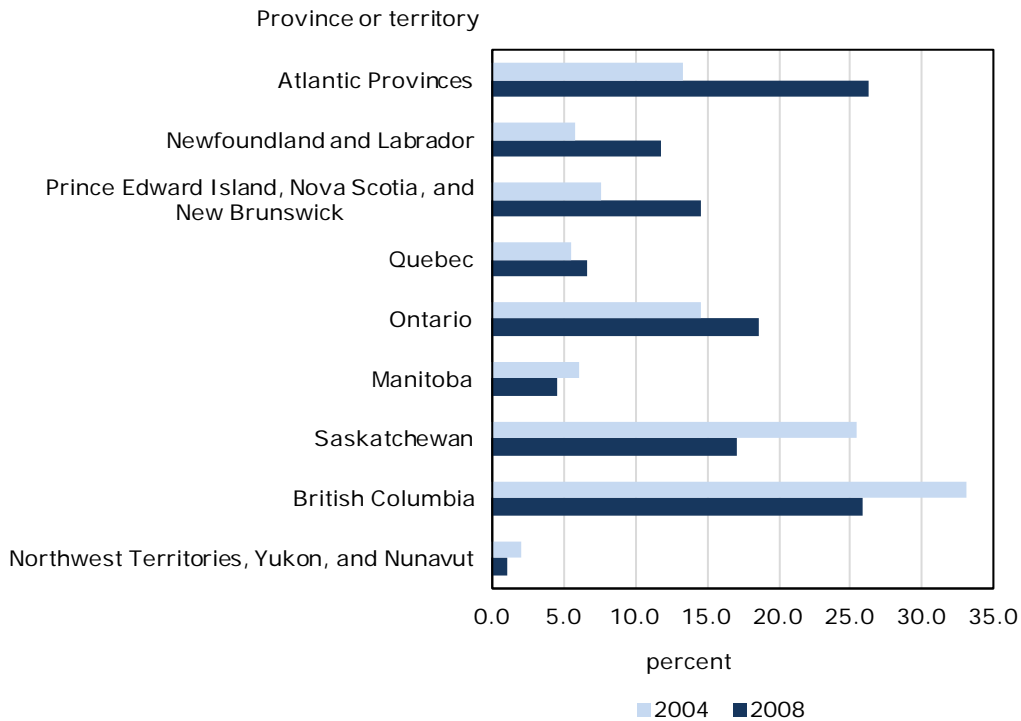
Source: Statistics Canada, Inter-provincial Workforce Database.

Province or territory of origin

A number of factors are liable to influence the likelihood that individuals residing in other provinces or territories seek employment in Alberta. Geographic distance is one consideration. Over the 2004-to-2009 period, residents of British Columbia continued to account for the largest share of inter-provincial employees in Alberta (Chart 2), and their absolute number increased over the 2004-to-2008 period (Chart 3). Similarly, a substantial share of inter-provincial employees came from Saskatchewan. Combined, these two neighbouring provinces accounted for 59% of Alberta's inter-provincial employees in 2004, although this share declined to 43% by 2008 as employees from other provinces and territories arrived in larger numbers.

Chart 2

Proportion of inter-provincial employees in Alberta by province or territory of residence, 2004 and 2008



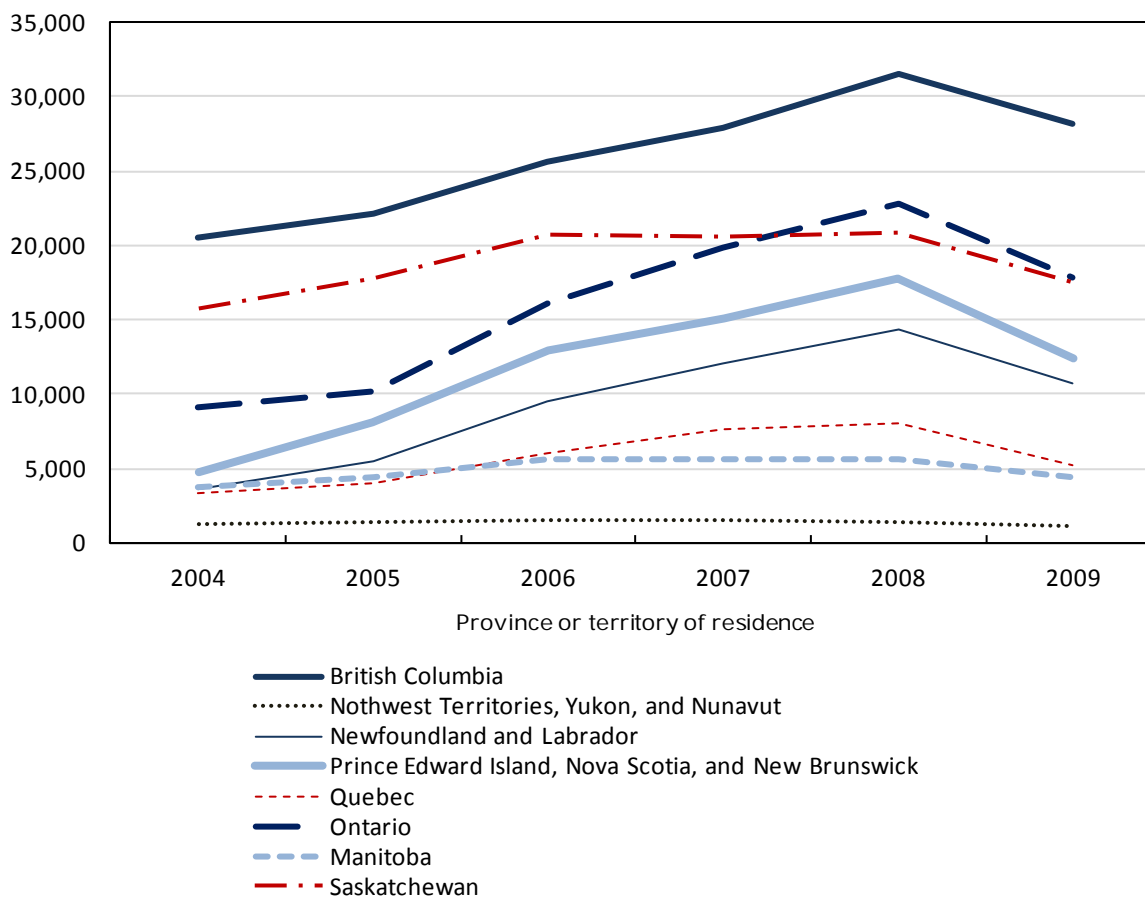
Source: Statistics Canada, Inter-provincial Workforce Database.

In spite of the distance between Atlantic Canada and Alberta, the number of inter-provincial employees from that region increased almost three-fold between 2004 and 2008. The largest increase was among those from Newfoundland and Labrador, although considerable increases were also evident among those from Prince Edward Island, New Brunswick, and Nova Scotia. By 2008, Atlantic Canadians comprised 26.3% of inter-provincial employees in Alberta, up from 13.4% in 2004.

Chart 3

Number of inter-provincial employees in Alberta by province or territory of residence, 2004 to 2009

Number of inter-provincial employees



Source: Statistics Canada, Inter-provincial Workforce Database.

The number and share of inter-provincial employees arriving from Ontario also increased over the period. Interestingly, in spite of the similarities between Ontario and Quebec in terms of population size and distance from Alberta, much smaller numbers of inter-provincial employees came from Quebec. Whether this reflects barriers associated with language, trades certification, or other factors cannot be determined from the data employed.

Inter-provincial employment can also be considered in terms of the employed population in the province or territory of origin. In other words, what proportion of employed individuals in, say, Newfoundland and Labrador, received T4 earnings from Alberta? Table 9 shows the ratio of inter-provincial employees in Alberta to the employed population in the province or territory of residence. In 2008, 5.3% of employed individuals residing in Newfoundland and Labrador received T4 earnings from Alberta, while this was the case for 2.6% and 3.8% of employed individuals residing in Prince Edward Island and Saskatchewan, respectively.¹⁸

18. In Table 9, estimates of the number of inter-provincial employees from each province of residence have not been adjusted for late tax filers or re-assessed files using the T1H. Hence, the estimates are likely to be conservative.

Table 9**Ratio of inter-provincial employees in Alberta to employment in province or territory of residence, 2004 to 2009**

	2004	2005	2006	2007	2008	2009
	percent					
Canada	0.4	0.5	0.6	0.7	0.8	0.6
Newfoundland and Labrador	1.4	2.1	3.7	4.6	5.3	4.0
Prince Edward Island	0.7	1.1	2.0	2.3	2.6	1.8
Nova Scotia	0.5	0.8	1.3	1.5	1.7	1.2
New Brunswick	0.4	0.7	1.1	1.4	1.6	1.1
Quebec	0.1	0.1	0.1	0.2	0.2	0.1
Ontario	0.1	0.2	0.2	0.3	0.3	0.3
Manitoba	0.6	0.7	0.9	0.9	0.9	0.7
Saskatchewan	3.3	3.5	4.0	3.9	3.8	3.2
British Columbia	1.0	1.0	1.1	1.2	1.3	1.2
Northwest Territories	2.1	2.2	2.2	2.1	1.9	1.8
Yukon	1.9	2.2	2.2	2.2	1.9	1.6
Nunavut	0.5	0.7	0.8	0.7	0.7	0.5

Source: Statistics Canada, Inter-provincial Workforce Database.

Industry of employment

Within Alberta, the incidence of inter-provincial employment varies considerably across industries. At the peak, in 2008, inter-provincial employees accounted for 14.1% of employment in Alberta's construction industry, 11.5% of employment in oil, gas extraction and support activities, 10.2% of employment in agriculture, forestry, and fishing, and 9% of employment in accommodation and food services (Table 10). Between 2004 and 2008, the growth of inter-provincial employment was particularly large within construction, increasing from 6.7% to 14.1%. It declined by 2.5 percentage points, to 11.6%, in 2009.

Table 10
Inter-provincial employment as a percentage of employment within industries, 2004, 2008, and 2009

	2004	2008	2009
	percent		
Total	3.6	5.7	4.7
Construction	6.7	14.1	11.6
Oil, Gas Extraction and support activities	7.1	11.5	9.3
Agriculture, Forestry, Fishing	7.3	10.2	9.4
Mining	3.8	9.3	3.3
Accommodation and Food Services	7.3	9.0	6.8
Administrative and Support, Waste Management, and Remediation Services	4.4	7.7	6.1
Management of Companies and Enterprises	4.2	7.6	5.4
Unknown industry	5.2	6.2	4.3
Transportation and Warehousing	3.9	6.0	5.4
Professional, Scientific, and Technical Services	3.1	4.8	3.5
Other Services	2.7	4.0	3.4
Information, Culture, and Recreation	3.7	3.8	3.4
Retail Trade	2.8	3.7	3.1
Wholesale Trade	1.9	3.1	3.1
Finance and Insurance; Real Estate and Leasing	2.2	3.1	2.7
Manufacturing	2.2	2.9	2.4
Educational Services	2.1	2.6	2.2
Utilities	1.0	2.2	1.4
Health Care and Social Assistance	1.3	1.8	1.5
Public Administration	1.3	1.7	1.9

Note: The dominant industry code is assigned to the business enterprise. If individuals were employed in more than one industry in Alberta, the industry in which they received the T4 slip for the highest single amount is selected.

Source: Statistics Canada, Inter-provincial Workforce Database.

When measured in terms of T4 earnings, inter-provincial employees accounted for 9.9% of T4 earnings paid in Alberta's construction industry in 2008—up from 3.2% in 2004. In 2008, inter-provincial employees accounted for about 4% to 6% of T4 earnings in several other industries, including: oil, gas extraction and support activities; mining; management and remediation services;¹⁹ agriculture, forestry, and fishing; and accommodation and food services (Table 11).

19. Within the Management and Remediation Services category, the largest shares of inter-provincial employees were employed in Employment Services (e.g., temporary help agencies), Services to Building and Dwellings (e.g., janitorial services), and Investigation and Security Services (e.g., security services and locksmiths).

Table 11**Percentage of T4 earnings within industries paid to inter-provincial employees, 2004, 2008, and 2009**

	2004	2008	2009
		percent	
Total	1.5	3.4	2.9
Construction	3.2	9.9	8.5
Mining	1.9	5.7	1.7
Oil, Gas Extraction and support activities	2.8	5.2	4.6
Administrative and Support, Waste Management, and Remediation Services	1.7	5.2	3.9
Agriculture, Forestry, Fishing	3.2	4.9	4.8
Accommodation and Food Services	3.0	4.7	3.7
Unknown industry	2.3	3.8	2.5
Transportation and Warehousing	2.2	3.8	4.0
Management of Companies and Enterprises	2.3	3.6	1.6
Other Services	1.2	2.6	1.8
Professional, Scientific, and Technical Services	1.4	2.5	1.8
Wholesale Trade	1.1	1.9	2.5
Manufacturing	1.1	1.5	1.6
Utilities	0.5	1.4	0.8
Finance and Insurance; Real Estate and Leasing	1.2	1.3	1.5
Information, Culture, and Recreation	1.2	1.3	1.2
Retail Trade	0.9	1.2	1.2
Public Administration	0.5	0.8	0.9
Educational Services	0.5	0.7	0.6
Health Care and Social Assistance	0.4	0.6	0.5

Note: The dominant industry code is assigned to the business enterprise. If individuals were employed in more than one industry in Alberta, the industry in which they received the T4 slip for the highest single amount is selected.

Source: Statistics Canada, Inter-provincial Workforce Database.

Looking at the distribution of inter-provincial employees **across** industries, the largest shares were employed in (1) construction, (2) oil, gas extraction and support activities, (3) accommodation and food services, and (4) retail trade (Table 12). In 2004, over half (51.3%) of inter-provincial employees were employed in these four industries, with this share reaching 57.6% in 2008. The share of Alberta resident employees in these industries was 31% and 33% in 2004 and 2008, respectively. Over the period from 2004 to 2009, the largest shares of Alberta resident employees were found in retail trade, health care and social assistance, manufacturing, and construction.

Table 12

Distribution of inter-provincial employees and Alberta resident employees across industries, 2004, 2008, and 2009

Industry name	2004		2008		2009	
	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees
	percent					
Construction	15.9	7.9	26.4	9.4	26.0	9.3
Oil, Gas Extraction and support activities	12.0	5.8	13.8	6.5	13.0	6.2
Accommodation and Food Services	14.4	6.2	10.3	5.9	9.6	6.1
Retail Trade	9.0	11.3	7.1	11.0	7.5	11.3
Administrative and Support, Waste Management, and Remediation Services	5.8	4.4	6.2	4.3	5.7	4.2
Professional, Scientific, and Technical Services	5.6	6.6	5.6	7.1	4.7	6.6
Transportation and Warehousing	5.3	4.8	4.9	4.6	5.2	4.5
Manufacturing	5.4	8.8	3.9	8.0	3.7	7.5
Other Services	3.5	4.6	3.1	4.5	3.2	4.4
Educational Services	4.0	7.1	2.8	6.7	3.0	6.9
Wholesale Trade	2.6	5.0	2.6	4.8	3.1	4.8
Finance and Insurance; Real Estate and Leasing	3.0	5.0	2.6	4.9	2.7	4.8
Health Care and Social Assistance	2.8	8.4	2.4	8.4	2.7	8.9
Agriculture, Forestry, Fishing	2.9	1.4	2.0	1.1	2.4	1.2
Public Administration	2.7	7.5	2.0	7.2	2.9	7.6
Information, Culture, and Recreation	3.5	3.3	1.9	3.0	2.2	3.0
Management of Companies and Enterprises	0.9	0.7	1.1	0.8	1.1	0.9
Unknown industry	0.3	0.2	0.7	0.6	0.8	0.9
Mining	0.2	0.2	0.4	0.2	0.1	0.2
Utilities	0.2	0.8	0.3	0.9	0.2	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: The dominant industry code is assigned to the business enterprise. If individuals were employed in more than one industry in Alberta, the industry in which they received the T4 slip for the highest single amount is selected.

Source: Statistics Canada, Inter-provincial Workforce Database.

When considered in terms of T4 earnings, two industries—construction; and oil, gas extraction and support activities—accounted for over one-half (57%) of all T4 earnings paid to inter-provincial employees in 2008, compared to 24% of T4 earnings paid to Alberta resident employees (Table 13). This reflects the fact that these are high-paying industries and employ the largest shares of inter-provincial employees.

Table 13

T4 earnings distribution of inter-provincial employees and Alberta resident employees by industry, 2004, 2008, and 2009

Industry name	2004		2008		2009	
	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees	Inter-provincial employees	Alberta resident employees
	percent					
Construction	18.3	8.3	35.4	10.8	34.2	10.6
Oil, Gas Extraction and support activities	22.5	12.2	21.3	13.6	19.6	12.2
Professional, Scientific, and Technical Services	7.5	8.5	6.3	8.9	5.0	8.2
Transportation and Warehousing	7.8	5.2	5.3	4.6	6.6	4.6
Administrative and Support, Waste Management, and Remediation Services	3.3	3.0	5.2	3.2	4.4	3.2
Manufacturing	7.0	9.9	3.9	9.1	4.8	8.5
Accommodation and Food Services	5.0	2.4	3.5	2.3	3.4	2.4
Wholesale Trade	4.0	5.8	3.1	5.4	5.1	5.7
Other Services	2.3	3.1	2.5	3.2	1.8	3.0
Retail Trade	4.1	6.8	2.3	6.5	2.7	6.6
Finance and Insurance; Real Estate and Leasing	4.7	6.0	2.2	5.8	2.8	5.6
Management of Companies and Enterprises	1.9	1.3	1.8	1.6	1.0	1.7
Public Administration	2.6	8.0	1.7	7.2	2.6	8.1
Health Care and Social Assistance	2.0	7.5	1.2	6.9	1.4	7.9
Educational Services	2.0	6.7	1.1	5.6	1.3	6.3
Information, Culture, and Recreation	2.4	2.9	1.0	2.5	1.1	2.5
Agriculture, Forestry, Fishing	1.8	0.9	1.0	0.7	1.1	0.7
Mining	0.3	0.2	0.5	0.3	0.2	0.3
Utilities	0.4	1.3	0.5	1.4	0.4	1.5
Unknown industry	0.2	0.1	0.4	0.3	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: The dominant industry code is assigned to the business enterprise. If individuals were employed in more than one industry in Alberta, the industry in which they received the T4 slip for the highest single amount is selected.

Source: Statistics Canada, Inter-provincial Workforce Database.

There are large differences in the distributions of male and female inter-provincial employees across industries. In 2009, one-half of all male inter-provincial employees were employed in just two industries—construction; and oil, gas extraction and support activities—while about one-third of all female inter-provincial employees (36%) were employed in two different industries—accommodation and food services; and retail trade (Table 14).

Table 14**Distribution of inter-provincial employees across industries (top ten in 2009) by gender, 2004, 2008, and 2009**

	2004	2008	2009
	percent		
Men			
Construction	22.2	33.8	33.6
Oil, Gas Extraction and support activities	16.9	17.7	16.7
Professional, Scientific, and Technical Services	6.3	6.0	4.7
Administrative and Support, Waste Management, and Remediation Services	6.1	5.9	5.4
Accommodation and Food Services	8.5	5.5	5.3
Transportation and Warehousing	6.8	5.4	5.7
Manufacturing	6.7	4.5	4.4
Retail Trade	5.3	4.0	4.6
Other Services	3.0	2.8	2.8
Wholesale Trade	2.9	2.6	3.3
Women			
Accommodation and Food Services	26.8	23.4	21.2
Retail Trade	16.6	15.8	15.2
Health Care and Social Assistance	7.0	7.2	7.8
Educational Services	7.5	6.3	6.6
Administrative and Support, Waste Management, and Remediation Services	5.2	6.9	6.3
Construction	2.8	6.1	6.0
Professional, Scientific, and Technical Services	4.1	4.5	4.7
Public Administration	3.9	3.3	4.5
Finance and Insurance; Real Estate and Leasing	4.4	4.2	4.4
Other Services	4.4	3.8	4.2

Note: The dominant industry code is assigned to the business enterprise. If individuals were employed in more than one industry in Alberta, the industry in which they received the T4 slip for the highest single amount is selected.

Source: Statistics Canada, Inter-provincial Workforce Database.

5 Employment and earnings

Employment

The employment patterns of inter-provincial employees may vary along a number of dimensions. For example, individuals may work on a full-time basis in Alberta over the entire year, on a '9-days-in/6-days-out' basis, on a part-year basis, or by taking on summer employment in Alberta and then returning home. Between these patterns, individuals may work in seasonal jobs in their province or territory of residence and commute to work in Alberta during the off-season. Although information on weeks worked during the year is not available on the data file, some insights can be gained by considering whether inter-provincial employees received T4 earnings only in Alberta or in both Alberta and other provinces and territories.

In 2004, 66% of inter-provincial employees received T4 earnings from Alberta **and** from another province or territory, while 34% received T4 earnings only from Alberta (Table 15). The share employed only in Alberta was slightly higher in 2008 (at 37.1%), and increased further to 44.8% in 2009.

In most years, there was little difference in the shares of men and women receiving T4s outside of Alberta.²⁰ However, there was a strong correlation with age, as inter-provincial employees in older age groups were more likely than others to work exclusively in Alberta (i.e., to receive T4s only from Alberta). Indeed, there was a difference of at least 20 percentage points in this respect between inter-provincial employees aged 18 to 24 and inter-provincial employees aged 45 or older. This is reflected in differences across marital status as well. Across provinces and territories of residence, the share of inter-provincial employees receiving T4 earnings only from Alberta was highest among those from Saskatchewan and Newfoundland and Labrador, and lowest among those from Quebec and the Northwest Territories.

Table 15
Percentage of inter-provincial employees who receive T4s only in Alberta or in Alberta and other provinces or territories, by socio-demographic characteristics, 2004, 2008 and 2009

	2004		2008		2009	
	T4 earnings only from Alberta	T4 earnings from Alberta and other provinces or territories	T4 earnings only from Alberta	T4 earnings from Alberta and other provinces or territories	T4 earnings only from Alberta	T4 earnings from Alberta and other provinces or territories
	percent					
Total	34.0	66.0	37.1	62.9	44.8	55.2
Men	34.2	65.8	38.0	62.0	46.2	53.8
Women	33.4	66.6	34.4	65.6	41.0	59.0
Aged 18 to 24	25.0	75.0	25.6	74.4	31.5	68.5
Aged 25 to 34	33.9	66.1	35.8	64.2	42.6	57.4
Aged 35 to 44	41.1	58.9	41.3	58.7	49.7	50.3
Aged 45 to 54	43.2	56.8	45.2	54.8	52.8	47.3
Aged 55 to 64	51.2	48.8	51.9	48.1	58.9	41.1
Aged 65 or over	67.2	32.8	66.9	33.1	72.7	27.3
Married/Living common-law	41.7	58.3	43.5	56.5	51.0	49.0
Single	29.3	70.7	31.8	68.2	39.1	60.9
Newfoundland and Labrador	44.3	55.7	51.8	48.2	55.3	44.7
Prince Edward Island	22.9	77.1	29.1	70.9	34.2	65.8
Nova Scotia	28.3	71.7	33.7	66.3	40.9	59.1
New Brunswick	28.4	71.6	37.2	62.8	45.2	54.8
Quebec	17.7	82.3	23.0	77.0	32.0	68.0
Ontario	28.8	71.2	32.3	67.7	41.9	58.1
Manitoba	28.2	71.8	31.0	69.0	36.2	63.8
Saskatchewan	42.7	57.3	43.6	56.4	50.2	49.8
British Columbia	33.9	66.1	36.1	63.9	45.2	54.8
Northwest Territories	17.5	82.5	23.0	77.0	23.5	76.5
Yukon	21.0	79.0	29.1	70.9	28.4	71.6
Nunavut	x	x	x	81.9	x	81.6

Note: All T4 records were included. Some records may show earnings equal to zero.

Source: Statistics Canada, Inter-provincial Workforce Database.

20. However, in 2009, men were more likely than women to receive T4 earnings only in Alberta (46.2% and 41%, respectively).

A more detailed assessment of the role that Alberta employment plays in the total earnings of inter-provincial employees is provided in Table 16. By definition, individuals who received T4s only from Alberta received 100% of their T4 earnings from that province. However, among inter-provincial employees who received T4s from Alberta and another province or territory, considerable variation is evident.

In 2008, 18.1% of inter-provincial employees received less than 25% of their total T4 earnings from Alberta. This was most often the case among women and younger individuals, particularly those aged 18 to 24. In terms of province or territory of residence, inter-provincial employees from Quebec, Manitoba, and the territories were more likely than those from other provinces to receive less than 25% of their total T4 earnings from Alberta.

For another one-quarter of inter-provincial employees (26.7%), T4 earnings from Alberta accounted for 25% to 74% of their total T4 earnings during the year. At the high end of the spectrum, over one-half (55.3%) of inter-provincial employees received more than 75% of their total T4 earnings from Alberta in 2008. This number increased to almost 61% in 2009. Strong attachment to the Alberta labour market, as evidenced by this earnings measure, was prevalent among employees in older age groups, particularly those aged 45 to 64, and among those from the Atlantic Provinces and Saskatchewan.

Table 16**Ratio of T4 earnings in Alberta to total T4 earnings among inter-provincial employees, 2004, 2008, and 2009**

	2004				2008				2009			
	0% to 24%	25% to 49%	50% to 74%	75% to 100%	0% to 24%	25% to 49%	50% to 74%	75% to 100%	0% to 24%	25% to 49%	50% to 74%	75% to 100%
	percent											
Total	24.5	14.9	12.0	48.5	18.1	13.5	13.2	55.3	17.2	11.5	10.7	60.7
Male	23.4	14.9	12.1	49.6	16.4	13.4	13.3	56.9	15.5	11.4	10.6	62.5
Female	26.9	15.0	11.9	46.2	22.8	13.8	12.7	50.6	21.5	11.7	11.0	55.8
Aged 18 to 24	27.2	17.8	14.3	40.8	22.3	16.6	16.0	45.1	21.8	14.8	14.1	49.2
Aged 25 to 34	25.7	14.3	11.6	48.4	18.8	14.0	13.0	54.1	18.6	12.3	10.9	58.3
Aged 35 to 44	22.1	13.1	10.4	54.4	16.6	12.0	12.1	59.3	15.5	10.1	9.6	64.8
Aged 45 to 54	21.5	11.9	9.7	56.9	14.6	11.2	11.3	63.0	13.9	9.1	8.5	68.4
Aged 55 to 64	17.6	10.0	8.8	63.7	12.2	9.5	10.2	68.1	11.3	8.0	7.4	73.2
Aged 65 or over	10.9	x	x	75.8	9.0	7.0	7.5	76.4	8.7	5.7	5.5	80.1
Married/Living common-law	22.5	12.4	10.2	54.9	16.0	11.9	11.7	60.4	15.3	10.0	9.2	65.6
Single	25.7	16.4	13.2	44.7	19.7	14.8	14.3	51.2	18.9	12.9	12.1	56.1
Newfoundland and Labrador	12.7	10.7	12.1	64.5	7.0	8.5	11.4	73.1	9.6	8.5	9.6	72.3
Prince Edward Island	21.7	24.4	x	40.8	13.3	15.1	16.2	55.4	15.6	14.0	13.4	57.0
Nova Scotia	18.5	15.7	15.0	50.8	11.9	13.0	14.7	60.4	13.3	11.0	11.6	64.1
New Brunswick	20.7	15.8	17.1	46.4	12.7	13.5	14.6	59.3	14.0	11.9	11.3	62.8
Quebec	29.7	23.6	16.2	30.4	23.7	20.2	16.3	39.8	20.5	16.2	14.1	49.3
Ontario	27.9	15.7	13.2	43.2	20.0	14.8	14.9	50.3	18.0	12.3	11.6	58.1
Manitoba	28.8	16.5	12.6	42.1	23.6	15.7	13.4	47.2	24.5	12.9	11.1	51.5
Saskatchewan	20.2	12.4	10.5	56.9	18.2	11.6	10.5	59.7	17.5	9.8	8.7	64.0
British Columbia	26.9	15.0	11.2	46.9	21.6	13.9	12.8	51.7	18.3	11.7	10.6	59.4
Northwest Territories, Yukon, Nunavut	42.7	15.8	10.3	31.2	36.6	15.1	12.0	36.3	38.2	15.8	9.3	36.7

Note: All T4 records were included. Some records may show earnings equal to zero.

Source: Statistics Canada, Inter-provincial Workforce Database.

Earnings

Whether or not an inter-provincial employee received T4 earnings only in Alberta is an important consideration when one is examining the earnings distributions of this group. As shown in Table 17, the median earnings received in Alberta by all inter-provincial employees was \$16,347 in 2009, less than half of the median earnings received by Alberta resident employees (\$40,610). Median earnings are much lower among inter-provincial employees who worked in Alberta and other provinces or territories (at \$9,260) than among those who worked only in Alberta (at \$33,035). Differences in the age profiles of these groups (as shown in Table 15) and the likelihood of part-year employment account for at least part of this difference.

Table 17
T4 earnings from Alberta, 2009

	25th percentile	Median	75th percentile	Mean
2009 dollars				
All				
Interprovincial employees	5,454	16,347	42,994	31,955
Worked in Alberta and other provinces or territories	2,851	9,260	23,195	18,237
Worked in Alberta only	12,918	33,035	69,819	48,856
Alberta resident employees	19,301	40,610	68,953	54,887
Men				
Interprovincial employees	7,667	21,519	53,261	38,020
Worked in Alberta and other provinces or territories	4,077	12,412	28,521	21,916
Worked in Alberta only	17,216	42,580	80,457	56,755
Alberta resident employees	25,840	51,174	82,906	68,645
Women				
Interprovincial employees	2,764	8,013	19,629	15,877
Worked in Alberta and other provinces or territories	1,504	4,696	11,440	9,345
Worked in Alberta only	7,244	15,622	34,845	25,266
Alberta resident employees	15,000	31,893	52,466	39,450

Note: Although total earnings are restricted to \$1,000 or more, some T4 records may show Alberta earnings equal to zero.

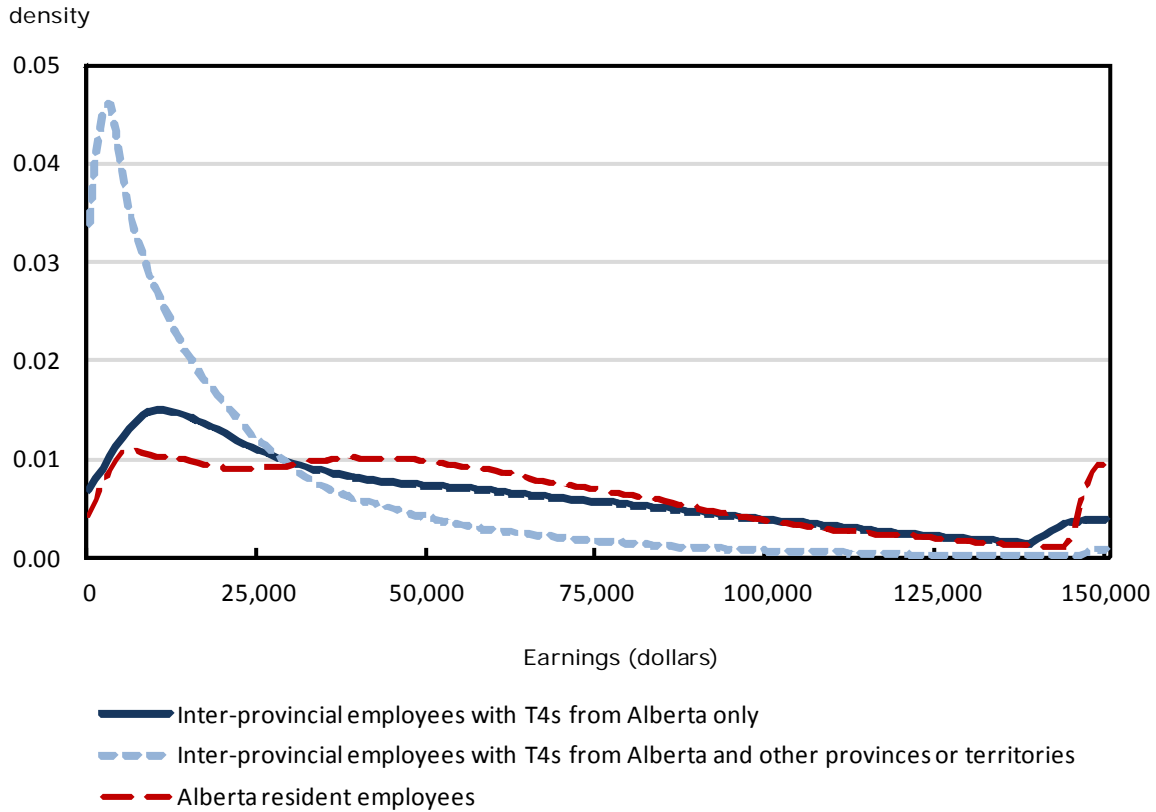
Source: Statistics Canada, Inter-provincial Workforce Database.

The earnings of female inter-provincial employees are relatively low, with the overall median (at \$8,013) about one-quarter of the median of female Alberta resident employees (at \$31,893). Again, female inter-provincial employees tend to be young and are disproportionately employed in accommodation and food services and retail trade—two low-paying industries. Among male inter-provincial employees, those who worked only in Alberta had earnings that were closer to those of Alberta resident employees, particularly towards the upper end of the earnings distribution. Indeed, at the 75th percentile, these male inter-provincial employees had received earnings comparable to those of Alberta residents (at \$80,457 and \$82,906, respectively).

Charts 4 and 5 show the distributions of inter-provincial employees and Alberta resident employees in terms of Alberta T4 earnings received in 2009. Inter-provincial employees who received T4 earnings in Alberta and another province or territory are highly concentrated towards the left (or lower end) of the distribution; this is particularly so among women.

Chart 4

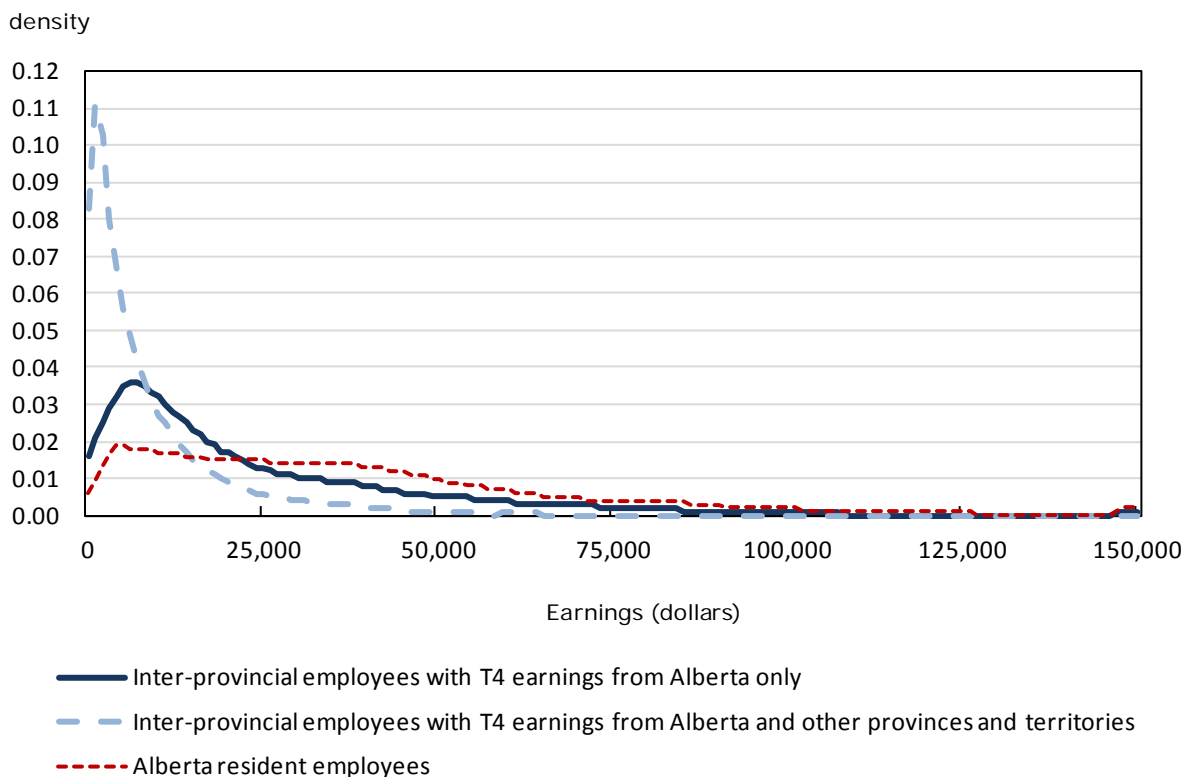
Distribution of Alberta T4 earnings of inter-provincial employees and Alberta resident employees, 2009 — Men



Source: Statistics Canada, Inter-provincial Workforce Database.

Chart 5

Distribution of Alberta T4 earnings of inter-provincial employees and Alberta resident employees, 2009 — Women



Source: Statistics Canada, Inter-provincial Workforce Database.

Differentiating between inter-provincial employees working partly and fully in Alberta in comparing earnings with Alberta resident employees is important. Other factors, such as age, gender, marital status, and working industry, need also to be taken into consideration.

Table 18 shows the difference in earnings between inter-provincial employees working in Alberta only and Alberta resident employees by age and gender, taking into account different socio-economic characteristics. It presents the results of 30 different regressions showing only the coefficient results on the dichotomous variable worked in Alberta only.

As observed in Table 17, male inter-provincial employees working only in Alberta earned \$11,890 less than male Alberta resident employees. In Table 18, when controls for age and marital status are used, this difference in earnings decreases. In other words, if inter-provincial employees and Alberta resident employees had the same age distribution and the same marital status composition, the earnings differential between the two groups would be \$10,098. However, when controls for industry composition and firm size are added, the difference in earnings between the two groups increases. Again, this means that, if inter-provincial employees were working in exactly the same industries and in firms of the same size as Alberta resident employees, they would be earning \$18,469 less. This remaining difference in earnings could be explained by other factors, such as education. However, given the limitation of administrative data, this information is not available.

Table 18**Differences in earnings between inter-provincial employees working in Alberta only and Alberta resident employees, coefficients from earning regressions, 2009**

	Controls				
	Worked in Alberta only	Age	Marital status	Industry	Firm size
	coefficient				
Men	-11,890	-11,332	-10,098	-15,701	-18,469
Aged less than 35	-3,539	-3,176	-2,257	-6,591	-8,416
Aged 35 or more	-16,744	-16,970	-15,662	-21,667	-25,256
Women	-14,183	-10,741	-10,836	-9,480	-9,925
Aged less than 35	-9,625	-7,477	-7,584	-6,972	-7,327
Aged 35 or more	-14,761	-14,391	-14,495	-12,118	-12,696

Note: Results on "worked only in Alberta" coefficients from 30 different regressions. The models progressively add up controls. All coefficients presented are significant at the 1% level. The base group is represented by Alberta resident employees of average age who are married and employed in a firm with 1 to 19 employees in the manufacturing sector.

Source: Statistics Canada, Inter-provincial Workforce Database.

The difference in earnings between inter-provincial employees and Alberta resident employees is smaller for men younger than 35 (\$3,539) than for men aged 35 or older (\$16,744). For the two age groups, the difference is decreasing as controls for age and marital status are added. However, when controls for industry and firm size are applied, the difference in earnings between inter-provincial employees and Alberta resident employees increases again.

For women, a different pattern is observed. In contrast to men, as controls are added to the regressions, the differences in women's earnings decrease. For women, the difference in earnings between inter-provincial employees working only in Alberta and Alberta resident employees is \$14,183 as observed in Table 17. As controls for age and marital status are added, the difference decreases to \$10,836. Adding controls for industry and firm size decreases the gap in earnings to \$9,925. Although these factors can explain partly the difference in earnings between the two groups, other factors, such as education, also have to be taken into consideration.

Earnings by industry

Median T4 earnings from Alberta vary largely by industry. Again, the distinction between inter-provincial employees who worked exclusively in Alberta and inter-provincial employees who worked in Alberta and elsewhere is important. Our discussion focuses on the former group.

Among male inter-provincial employees working only in Alberta, median earnings of those employed in construction—which accounted for one-third of male inter-provincial employment—were \$51,200. This was comparable to the median earnings of Alberta resident men employed in that industry (at \$50,095). Towards the upper end of the earnings distribution (75th percentile), male inter-provincial employees in construction earned almost \$86,400.

In oil, gas extraction and support activities—which accounted for about 17% of male inter-provincial employment—median earnings were just under \$60,000—considerably lower than the median earnings of Alberta resident men in that industry (at \$93,328). Towards the upper end of the earnings distribution (75th percentile) in oil, gas extraction and support activities, earnings were about \$96,000 and about \$145,000 among male inter-provincial employees and male Alberta resident employees, respectively.

Among female inter-provincial employees working only in Alberta, median earnings of those employed in accommodation and food services or in the retail trade were around \$10,000, somewhat lower than the median earnings of Alberta resident women employed in those industries. Female inter-provincial employees are concentrated in the two industries in which earnings are lowest.

Table 19

T4 earnings of inter-provincial employees and Alberta resident employees by industry, 2009

	Inter-provincial employees who worked only in Alberta				Alberta resident employees			
	25th percentile	Median	75th percentile	Mean	25th percentile	Median	75th percentile	Mean
2009 dollars								
Men								
Total	17,216	42,580	80,457	56,755	25,840	51,174	82,906	68,645
Accommodation and Food Services	6,751	14,124	32,880	25,974	10,283	21,173	32,869	27,188
Administrative and Support, Waste Management, and Remediation Services	11,927	28,588	63,042	45,344	14,963	33,792	59,473	48,573
Agriculture, Forestry, Fishing	9,799	14,850	24,307	22,032	15,454	31,993	48,700	37,617
Construction	23,977	51,204	86,391	60,577	27,402	50,095	78,962	66,099
Educational Services	4,673	10,967	33,000	24,939	26,307	62,646	85,763	61,450
Finance and Insurance; Real Estate and Leasing	11,888	30,000	68,925	71,270	27,295	52,854	92,037	94,655
Health Care and Social Assistance	9,118	20,833	45,458	37,049	30,388	54,298	87,524	73,501
Information, Culture, and Recreation	6,567	16,634	48,500	40,081	16,831	44,864	73,519	58,754
Management of Companies and Enterprises	14,141	23,779	60,573	49,919	35,702	63,942	108,151	141,244
Manufacturing	17,272	45,152	94,633	63,648	34,153	53,229	82,507	68,857
Mining	x	x	x	x	52,824	77,197	94,801	82,183
Oil, Gas Extraction and support activities	28,010	59,937	95,840	69,909	54,579	93,328	145,218	117,809
Other Services	10,375	28,467	55,937	38,311	20,894	41,164	62,500	48,680
Professional, Scientific, and Technical Services	14,132	30,681	69,222	49,591	36,000	64,700	100,657	85,146
Public Administration	18,347	43,992	61,732	44,181	46,939	65,921	86,787	67,491
Retail Trade	6,762	15,268	34,091	26,864	13,198	30,154	52,000	42,010
Transportation and Warehousing	27,065	53,333	83,037	61,609	30,051	52,215	75,327	62,602
Unknown industry	7,091	19,129	38,329	29,430	11,050	25,000	46,800	36,135
Utilities	22,359	57,156	108,504	70,689	66,386	92,610	122,174	107,239
Wholesale Trade	28,305	66,364	130,065	86,317	35,802	55,501	83,087	74,956
Women								
Total	7,244	15,622	34,845	25,266	15,000	31,893	52,466	39,450
Accommodation and Food Services	5,294	10,243	19,813	16,721	7,384	14,708	25,112	18,693
Administrative and Support, Waste Management, and Remediation Services	9,186	19,400	43,304	28,950	11,962	26,311	43,523	32,755
Agriculture, Forestry, Fishing	7,591	12,457	18,225	16,279	9,390	19,798	33,878	25,294
Construction	11,941	25,164	51,647	35,843	17,500	34,836	53,347	45,178
Educational Services	5,101	10,713	29,378	21,756	19,396	39,093	66,685	44,324

See note at end of table.

Table 19**T4 earnings of inter-provincial employees and Alberta resident employees by industry, 2009 (concluded)**

	Inter-provincial employees who worked only in Alberta				Alberta resident employees			
	25th percentile	Median	75th percentile	Mean	25th percentile	Median	75th percentile	Mean
2009 dollars								
Finance and Insurance; Real Estate and Leasing	10,047	22,871	39,835	30,351	20,590	36,265	52,907	43,601
Health Care and Social Assistance	6,764	14,123	28,576	20,802	22,368	38,900	59,484	44,012
Information, Culture, and Recreation	5,909	10,912	24,765	21,226	10,316	25,000	46,586	32,741
Management of Companies and Enterprises	7,703	18,361	39,384	29,490	21,573	40,610	61,496	57,562
Manufacturing	11,551	23,030	41,760	33,903	21,769	36,080	51,552	43,161
Mining	x	x	x	x	27,058	48,863	70,236	63,851
Oil, Gas Extraction and support activities	16,016	31,824	53,683	44,009	37,692	65,512	102,177	79,584
Other Services	5,867	11,270	24,234	18,110	11,500	22,253	37,112	27,640
Professional, Scientific, and Technical Services	10,000	20,688	42,000	31,872	20,685	39,462	59,914	46,966
Public Administration	10,654	20,566	49,355	29,985	29,687	48,742	66,692	50,510
Retail Trade	4,799	10,176	21,939	15,593	8,779	18,749	32,500	23,924
Transportation and Warehousing	20,573	36,781	46,925	37,025	20,085	37,147	53,764	42,666
Unknown industry	3,757	9,300	20,973	18,551	7,560	16,104	27,500	22,057
Utilities	x	x	x	x	40,779	59,215	83,009	69,572
Wholesale Trade	10,403	21,138	41,922	32,125	21,383	36,514	51,198	43,439

Note: Although total earnings are restricted to \$1,000 or more, some T4 records may show Alberta earnings equal to zero.

Source: Statistics Canada, Inter-provincial Workforce Database.

Earnings before and after becoming inter-provincial employees

Earnings are correlated with various personal and job characteristics, many of which are not directly observed on the administrative data files used for this analysis. For example, it may be that individuals who do not have viable employment options in their province or territory of residence, such as those with lower skill levels or no postsecondary credentials, are the most likely to seek employment elsewhere. Because the administrative data do not include information on educational attainment or occupation, it is difficult to take this into account directly.

Table 20 (for men) and Table 23 (for women) show annual median earnings of inter-provincial employees²¹ and of employees who never became inter-provincial employees in Alberta²² by age group. The top portion of each table shows annual median earnings in 2004 to 2006 before individuals became inter-provincial employees. With only a few exceptions, 'future' male inter-provincial employees (Table 20) earned less in their province or territory of residence in the period from 2004 to 2006 than other employees. Overall, 'future' male inter-provincial

21. Inter-provincial employees (base definition) in 2007 and/or 2008 are workers who did not work or live in Alberta between 2004 and 2006 and reported at least one year of positive T4 earnings between 2004 and 2006.

22. Those who are defined as 'other employees' are workers who did not live in Alberta at any time between 2004 and 2008, have positive T4 earnings in 2007 and/or 2008, and reported at least one year of positive T4 earnings between 2004 and 2006.

employees aged 35 to 49 had median earnings of \$34,802 in the period from 2004 to 2006, compared with \$48,458 for other employees—a difference of \$13,655, or 39%. Large differences were also evident within other age groups.

The second part of Table 20 shows median earnings in 2007/2008, when inter-provincial employees were actually working in Alberta, and the bottom portion of the table shows the change in annual median earnings between 2004-to-2006 and 2007/2008—before and after entry into inter-provincial employment. Overall, the median earnings of men aged 35 to 49 who did not become inter-provincial employees increased by 5.2%, while the median earnings of men belonging to that age group who did so increased by 38.0%. Similarly, the median earnings of men in the younger and older age groups who became inter-provincial employees increased by 87.8% and 22.3%, respectively, over this period, while the median earnings of men in the younger and older age groups who did not become inter-provincial employees increased by a smaller proportion or did not increase at all.

The increase in median earnings associated with inter-provincial employment was largest among men residing in the Atlantic Provinces. Among those aged 35 to 49, median earnings were 42% to 79% higher in 2007/2008 than they were in 2004-to-2006. The median earnings of men in those provinces who did not become inter-provincial employees increased by 6% to 11%.

Table 20

Annual median earnings of inter-provincial employees and other employees, 2004 to 2006 and 2007/2008 — Men

	Aged 18 to 34		Aged 35 to 49		Aged 50 to 64	
	Other employees	Inter-provincial employees	Other employees	Inter-provincial employees	Other employees	Inter-provincial employees
2009 dollars						
Annual median earnings in 2004 to 2006						
Canada (without Alberta)	18,737	12,621	48,458	34,802	50,202	40,271
Newfoundland and Labrador	11,956	12,109	35,857	25,555	36,874	27,197
Prince Edward Island	13,601	13,821	34,091	25,742	33,355	26,499
Nova Scotia	15,100	11,917	42,255	31,561	42,964	31,725
New Brunswick	15,760	12,373	38,175	30,495	38,920	34,420
Quebec	18,902	9,334	42,961	34,517	44,310	42,153
Ontario	19,276	9,861	54,029	34,966	55,905	49,150
Manitoba	17,967	13,185	43,989	35,419	47,016	41,795
Saskatchewan	19,236	16,882	47,250	43,776	47,393	43,305
British Columbia	19,559	15,249	50,416	45,052	54,494	50,931
Northwest Territories, Yukon, Nunavut	18,738	12,797	50,942	35,600	60,149	x
2009 dollars						
Annual median earnings in 2007/2008						
Canada (without Alberta)	26,361	23,701	50,980	48,018	48,366	49,265
Newfoundland and Labrador	18,088	28,188	39,910	45,688	35,955	40,842
Prince Edward Island	18,057	22,619	35,973	32,251	32,011	44,691
Nova Scotia	21,723	23,167	44,732	44,730	41,703	44,536
New Brunswick	22,028	24,266	40,358	47,154	38,018	50,893
Quebec	25,037	15,728	44,624	41,968	42,024	48,094
Ontario	27,355	17,818	56,223	44,055	53,561	56,449
Manitoba	25,902	24,864	47,507	47,316	46,530	54,285
Saskatchewan	29,337	31,771	52,019	54,190	47,750	48,878
British Columbia	29,410	28,168	54,438	53,481	53,389	53,971
Northwest Territories, Yukon, Nunavut	29,765	21,941	59,557	43,443	64,441	x
percentage change						
Relative percentage change in annual median earnings between 2004-to-2006 and 2007/2008						
Canada (without Alberta)	40.7	87.8	5.2	38.0	-3.7	22.3
Newfoundland and Labrador	51.3	132.8	11.3	78.8	-2.5	50.2
Prince Edward Island	32.8	63.7	5.5	25.3	-4.0	68.7
Nova Scotia	43.9	94.4	5.9	41.7	-2.9	40.4
New Brunswick	39.8	96.1	5.7	54.6	-2.3	47.9
Quebec	32.5	68.5	3.9	21.6	-5.2	14.1
Ontario	41.9	80.7	4.1	26.0	-4.2	14.9
Manitoba	44.2	88.6	8.0	33.6	-1.0	29.9
Saskatchewan	52.5	88.2	10.1	23.8	0.8	12.9
British Columbia	50.4	84.7	8.0	18.7	-2.0	6.0
Northwest Territories, Yukon, Nunavut	58.8	71.5	16.9	22.0	7.1	x

Note: 'Other employees' are defined as those who did not live in Alberta at any time between 2004 and 2008, have positive T4 earnings in 2007 and/or 2008, and reported at least one year of positive T4 earnings between 2004 and 2006.

Source: Statistics Canada, Inter-provincial Workforce Database.

The prospects for earning higher wages and salaries are no doubt an important consideration in decisions to work inter-provincially. Further detail on the absolute and relative earnings changes achieved by men who became inter-provincial employees in Alberta in 2007 or 2008 relative to their earnings in 2004-to-2006 are shown in Tables 21 and 22. As shown in Table 21, of the male inter-provincial employees whose initial earnings in their province or territory of residence were over \$50,000, about 42% experienced an increase in T4 earnings of more than \$25,000 following their entry into inter-provincial employment. Across all prior earnings categories, about 20% to about 39% of men saw gains of this magnitude. More broadly, 53% to 62% saw gains of \$10,000 or more. Similarly, most men saw significant gains in relative terms following entry into inter-provincial employment (Table 22).

Table 21
Change in T4 earnings following inter-provincial employment in Alberta — Men

	Decrease in T4 earnings			Increase in T4 earnings				
	More than \$15,000	\$15,000 to \$5,000	\$4,999 to \$0	\$0 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$24,999	\$25,000 or more
	percent							
Pre-earnings in province or territory of residence								
Less than \$10,000	...	0.8	6.5	19.1	20.2	15.8	17.7	19.9
\$10,000 to \$14,999	...	6.1	9.4	14.0	14.2	12.5	18.2	25.7
\$15,000 to \$29,999	2.6	9.5	8.1	10.1	10.1	10.1	16.8	32.6
\$30,000 to \$49,999	8.9	8.4	6.2	6.5	7.9	8.3	14.6	39.2
\$50,000 or more	15.9	6.3	4.2	5.1	6.2	6.6	13.9	41.8

Source: Statistics Canada, Inter-provincial Workforce Database.

Table 22
Relative change in T4 earnings following inter-provincial employment in Alberta — Men

	0% to 49%	50% to 74%	75% to 99%	100% to 149%	150% to 199%	200% or more
	percent					
Pre-earnings in province or territory of residence						
Less than \$10,000	2.0	2.4	2.8	8.2	9.7	74.8
\$10,000 to \$14,999	4.4	4.7	6.3	17.2	16.8	50.5
\$15,000 to \$29,999	5.7	6.1	8.5	21.7	19.6	38.3
\$30,000 to \$49,999	5.9	7.0	10.6	29.5	23.5	23.5
\$50,000 or more	7.1	7.0	12.3	43.7	21.0	8.9

Source: Statistics Canada, Inter-provincial Workforce Database.

Considering changes in earnings among women who became inter-provincial employees, one observes similar patterns in the increase in earnings before and after working in Alberta. As shown in Table 23, the median earnings of women aged 35 to 49 who became inter-provincial employees in 2007/2008 increased by 30%, compared with an increase of just under 10% among those who did not become inter-provincial employees. Within this age group, increases in median earnings were largest among women from Newfoundland and Labrador (64.9%) and smallest among women from Ontario (10.8%). Increases in the median earnings of younger and older women who became inter-provincial employees were also substantial, at 70.9% and 20.4%, respectively.

Table 23

Annual median earnings of inter-provincial employees and other employees, 2004 to 2006 and 2007/2008 — Women

	Aged 18 to 34		Aged 35 to 49		Aged 50 to 64	
	Other employees	Inter-provincial employees	Other employees	Inter-provincial employees	Other employees	Inter-provincial employees
2009 dollars						
Annual median earnings in 2004 to 2006						
Canada (without Alberta)	13,744	6,995	31,694	16,765	33,412	16,889
Newfoundland and Labrador	9,170	5,158	22,528	10,019	20,285	8,548
Prince Edward Island	10,326	5,289	26,489	x	26,894	x
Nova Scotia	11,259	5,929	26,811	14,553	28,800	13,435
New Brunswick	11,694	6,563	25,085	12,252	24,828	10,555
Quebec	14,178	6,390	30,189	17,619	30,559	x
Ontario	14,148	6,741	34,840	19,340	37,064	18,123
Manitoba	13,441	7,331	29,708	16,058	31,898	21,592
Saskatchewan	12,701	7,407	30,230	19,151	31,884	21,429
British Columbia	13,788	8,065	30,349	20,983	35,304	23,674
Northwest Territories, Yukon, Nunavut	16,042	9,744	41,214	x	49,630	x
2009 dollars						
Annual median earnings in 2007/2008						
Canada (without Alberta)	18,444	11,954	34,730	21,841	33,185	20,326
Newfoundland and Labrador	13,348	12,168	25,527	16,522	19,419	14,020
Prince Edward Island	13,570	10,095	28,964	x	26,182	x
Nova Scotia	15,399	11,232	29,627	18,908	28,482	18,999
New Brunswick	15,929	10,729	27,534	18,231	24,422	19,930
Quebec	18,182	11,129	33,206	19,647	29,956	x
Ontario	19,221	11,313	37,580	21,423	36,573	19,657
Manitoba	18,212	11,864	32,945	23,026	31,806	22,910
Saskatchewan	18,109	13,062	34,078	26,545	32,613	24,624
British Columbia	19,006	13,052	33,886	24,612	34,930	25,249
Northwest Territories, Yukon, Nunavut	24,799	14,469	48,708	x	52,877	x
percentage change						
Relative percentage change in annual median earnings between 2004-to-2006 and 2007/2008						
Canada (without Alberta)	34.2	70.9	9.6	30.3	-0.7	20.4
Newfoundland and Labrador	45.6	135.9	13.3	64.9	-4.3	64.0
Prince Edward Island	31.4	90.9	9.3	x	-2.6	x
Nova Scotia	36.8	89.4	10.5	29.9	-1.1	41.4
New Brunswick	36.2	63.5	9.8	48.8	-1.6	88.8
Quebec	28.2	74.2	10.0	11.5	-2.0	x
Ontario	35.9	67.8	7.9	10.8	-1.3	8.5
Manitoba	35.5	61.8	10.9	43.4	-0.3	6.1
Saskatchewan	42.6	76.4	12.7	38.6	2.3	14.9
British Columbia	37.8	61.8	11.7	17.3	-1.1	6.7
Northwest Territories, Yukon, Nunavut	54.6	48.5	18.2	x	6.5	x

Note: 'Other employees' are defined as those who did not live in Alberta at any time between 2004 and 2008, have positive T4 earnings in 2007 and/or 2008, and reported at least one year of positive T4 earnings between 2004 and 2006.

Source: Statistics Canada, Inter-provincial Workforce Database.

In terms of variation in absolute and relative earnings gains, inter-provincial employment was associated with higher earnings in most cases, but the magnitude of change was not as large as that observed among men. As shown in Table 24, between 5.1% and 28% of women experienced earnings gains of more than \$25,000 during the 2007/2008 period of inter-provincial employment, relative to the 2004-to-2006 period, and 31.1% to 55.6% experienced earnings gains of \$10,000 or more. However, a larger portion of women than men working inter-provincially experienced an absolute decline while working in Alberta. For example, among women whose earnings in 2004-to-2006 were over \$50,000, 30.7% had lower earnings during the 2007/2008 period of inter-provincial employment, and 20.9% experienced an earnings decline of more than \$15,000. The factors underlying this outcome cannot be discerned from the data at hand.

Table 24
Change in T4 earnings following inter-provincial employment in Alberta — Women

	Decrease in T4 earnings			Increase in T4 earnings				
	More than \$15,000	\$15,000, to \$5,000	\$4,999 to \$0	\$0 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$24,999	\$25,000 or more
	percent							
Pre-earnings in province or territory of residence								
Less than \$10,000	...	1.0	10.1	30.4	27.3	15.4	10.8	5.1
\$10,000 to \$14,999	...	9.7	15.5	19.8	18.7	13.5	13.1	9.7
\$15,000 to \$29,999	4.5	17.1	11.8	15.1	13.2	11.4	14.0	13.0
\$30,000 to \$49,999	15.0	11.4	7.1	10.8	11.2	12.9	14.7	16.7
\$50,000 or more	20.9	5.8	4.0	5.4	8.3	11.4	16.2	28.0

Source: Statistics Canada, Inter-provincial Workforce Database.

In Table 25, again, a large portion of inter-provincial employees increased their earnings by working in Alberta, notwithstanding their level of pre-earnings in their province or territory of residence. More than 40% of those who earned between \$30,000 and \$49,999 (42.1%) and those who earned more than \$50,000 (50.8%) had a relative change in earnings of 100% to 149%. However, of those who earned \$15,000 or more, about 30% had a decrease in earnings by working in Alberta. A majority of those who earned less than \$10,000 (61.3%) more than doubled their earnings by working in Alberta.

Table 25**Relative change in T4 earnings following inter-provincial employment in Alberta — Women**

	0% to 49%	50% to 74%	75% to 99%	100% to 149%	150% to 199%	200% or more
	percent					
Pre-earnings in province or territory of residence						
Less than \$10,000	2.7	3.7	4.7	13.3	14.4	61.3
\$10,000 to \$14,999	7.4	7.4	10.5	24.3	20.4	30.1
\$15,000 to \$29,999	11.1	10.4	11.8	29.7	19.0	17.9
\$30,000 to \$49,999	11.3	9.6	12.6	42.1	15.5	8.9
\$50,000 or more	10.9	8.7	11.1	50.8	12.3	6.1

Source: Statistics Canada, Inter-provincial Workforce Database.

Contribution to family earnings

Earnings from Alberta have a considerable impact on family total earnings of inter-provincial employees. Table 26 shows that, on average, married and common-law inter-provincial employees contributed 51.6% of total family earnings with their T4 earnings from Alberta in 2009. For 30.9% of inter-provincial employees, T4 earnings from Alberta accounted for more than 75% of total family earnings. In contrast, Alberta T4 earnings accounted for less than 25% of total family earnings for 28.8% of inter-provincial employees. Men contributed more to their family earnings than women. Similarly, older employees contributed more to family earnings than younger employees. The ratio of Alberta earnings to total family earnings also varies by province or territory of residence for inter-provincial employees.

Table 26**Ratio of T4 earnings in Alberta to total T4 family earnings among married or common-law inter-provincial employees, 2009**

	Ratio				Mean
	0% to 25%	25% to 49%	50% to 74%	75% to 100%	
	percent				
Total	28.8	20.8	19.4	30.9	51.6
Men	23.5	19.3	21.5	35.6	56.4
Women	48.0	26.3	11.9	13.9	34.4
Aged 18 to 24	43.8	24.3	14.4	17.5	38.1
Aged 25 to 34	32.3	20.9	17.8	29.0	49.0
Aged 35 to 44	26.6	19.2	19.9	34.3	54.3
Aged 45 to 54	27.7	22.1	21.3	28.8	51.0
Aged 55 to 64	23.8	20.5	20.5	35.1	56.2
Aged 65 or more	16.9	13.9	19.8	49.4	66.8
Newfoundland and Labrador	21.4	21.8	22.1	34.8	56.6
Prince Edward Island	26.3	25.6	22.9	25.1	49.7
Nova Scotia	24.5	23.6	21.1	30.8	53.3
New Brunswick	25.7	22.1	20.9	31.3	53.1
Quebec	30.7	21.5	19.5	28.3	49.5
Ontario	31.6	20.0	16.0	32.4	51.2
Manitoba	34.4	22.0	19.1	24.6	45.8
Saskatchewan	29.0	20.7	19.4	30.9	51.4
British Columbia	30.6	19.6	19.4	30.3	50.8
Northwest Territories, Yukon, and Nunavut	57.0	x	x	x	31.7

Note: The restrictions on age and total earnings apply to inter-provincial employees, not to their families. Although total earnings are restricted to \$1,000 or more, some T4 records may show Alberta earnings equal to zero. The definition of 'family' from the Statistics Canada Census is used.

Source: Statistics Canada, Inter-provincial Workforce Database.

Table 26 showed how gender, age, and province/territory of residence independently affect family earnings. Table 27 shows how each characteristic (gender, age, and province/territory of residence) affects the ratio of T4 earnings to total family earnings when all characteristics are taken into account simultaneously.

Table 27**Regression results on the ratio of T4 earnings in Alberta to total T4 family earnings among married or common-law inter-provincial employees, 2009**

	Regression results	
	coefficient	standard error
Men	0.219 **	0.024
Worked in Alberta only	0.334 **	0.020
Age group (Aged 18 to 24)		
Aged 25 to 34	0.073	0.041
Aged 35 to 44	0.060	0.042
Aged 45 to 54	-0.012	0.041
Aged 55 to 64	0.007	0.044
Aged 65 or over	0.078	0.068
Province or territory of residence (Ontario)		
Newfoundland and Labrador	-0.025	0.036
Prince Edward Island	0.022	0.080
Nova Scotia	-0.042	0.046
New Brunswick	-0.067	0.049
Quebec	-0.054	0.053
Manitoba	-0.115 *	0.052
Saskatchewan	-0.067 *	0.034
British Columbia	-0.077 *	0.031
Northwest Territories	-0.213	0.141
Yukon	-0.123	0.179
Nunavut	-0.141	0.294
Constant	0.232 **	0.045

* significant at 5%; ** significant at 1%

Note: Omitted group in parentheses.

Source: Statistics Canada, Inter-provincial Workforce Database.

Male inter-provincial employees contribute significantly more than female inter-provincial employees to family earnings. The difference in the ratio was 21.9 percentage points between men and women when taking all other characteristics into account. Inter-provincial employees working only in Alberta also contributed significantly more (a difference of 33.4 percentage points) to total family earnings than those who worked partly in Alberta. The age of inter-provincial employees did not make a difference in the contribution to their family earnings as none of the regression coefficients on age were significant. Finally, inter-provincial employees from Manitoba, Saskatchewan, and British Columbia contributed less to family earnings than those from Ontario (the omitted group). The contribution to family earnings of inter-provincial employees from other provinces and territories was not significant.

Employment over time

Inter-provincial employees' association with the province of Alberta may take several different forms over subsequent years. For example, individuals working inter-provincially may develop social and professional networks and obtain information on housing markets, which in turn may increase the likelihood of permanent residential relocation to the province. Alternatively, individuals working inter-provincially may develop strong ties with a given employer, but choose to retain their primary residence in their province or territory of origin. The employment relationship that is established may be long-term nonetheless. The prevalence of such outcomes is the focus of this section.

To assess these changes over time, it is necessary to limit the discussion and data to individuals who started a new spell of employment in Alberta in 2005 or later. This is because

inter-provincial employees are identified on the basis of their province or territory of work and residence over at least two years. Someone observed in inter-provincial employment in 2004 (the first year of the reference period for this study that serves to define inter-provincial employee) may have started working on that basis only in that year or may have been working on that basis for many years. Duration cannot be estimated in this case. When 2005 is taken as the starting point, inter-provincial employment is observed (plus the two prior years of work and residence), and duration can be accurately estimated.

Using a longitudinal framework, Table 28 shows the percentage of inter-provincial employees in each entry cohort who moved to Alberta in a subsequent year. This is defined as a change to Alberta as the province or territory of residence reported on their T1 tax returns. Of all inter-provincial employees in the 2005 inter-provincial entry cohort, fully 26% identified Alberta as their province or territory of residence at least once between 2006 and 2010, and 11% identified Alberta three or more times. Later, entry cohorts had fewer years in which to move, and hence the percentages are lower.

Table 28
Percentage of inter-provincial employees moving to Alberta, 2004 to 2009

	Never moved to Alberta	Lived in Alberta between 2006 and 2010				
		One year	Two years	Three years	Four years	Five years
		percent				
2005	74.0	6.2	4.8	4.2	4.0	6.8
2006	78.9	6.1	4.5	4.5	6.1	...
2007	81.5	6.2	4.9	7.4	...	...
2008	85.7	6.8	7.5	...	...	...
2009	86.6	13.4	...	...	...	...

Note: Only those who are starting a new spell of inter-provincial work are included. Those who were inter-provincial employees in year $t-1$ (t minus 1) were not included in the calculation.

Source: Statistics Canada, Inter-provincial Workforce Database.

With respect to the 2005 entry cohort, Table 29 shows that women were slightly more likely than men to move to Alberta in subsequent years (29.1% and 24.7%, respectively) and that younger employees were far more likely to move than older ones. In terms of province or territory of origin, inter-provincial employees from the Atlantic Provinces were most likely to relocate to Alberta, while individuals from Quebec were least likely (14.7%).

Table 29
Characteristics of inter-provincial employees
who subsequently moved to Alberta, 2005
cohort

	2005 cohort
	percent
Total	26.0
Men	24.7
Women	29.1
Aged 18 to 24	30.3
Aged 25 to 34	27.7
Aged 35 to 44	23.5
Aged 45 to 54	20.0
Aged 55 to 64	13.2
Aged 65 or over	7.2
Single	28.6
Married/Living common-law	21.6
Newfoundland and Labrador	31.9
Prince Edward Island	32.7
Nova Scotia	31.6
New Brunswick	26.9
Quebec	14.7
Ontario	26.2
Manitoba	24.4
Saskatchewan	25.9
British Columbia	25.4
Northwest Territories	29.8
Yukon	26.7
Nunavut	18.8

Note: Only those who are starting a new spell of inter-provincial work are included. Inter-provincial employees who started to work in Alberta in 2005 and who lived in Alberta at least one year between 2006 and 2010.

Source: Statistics Canada, Inter-provincial Workforce Database.

The number of years inter-provincial employees work in Alberta depends on the exposure to that effect. When measuring the total number of years worked in Alberta, it is therefore important to consider inter-provincial employees who eventually moved to Alberta as described above. Excluding those employees, from a longitudinal standpoint, most inter-provincial employees are employed in Alberta for only one year. Table 30 shows the number of consecutive years inter-provincial employees were employed in Alberta given their initial year of entry.²³ Of those who started working in Alberta in 2005 and never subsequently moved to Alberta, 62.2% worked in the province for only one year, while 18.9% did so for two consecutive years. Some 19% worked in Alberta for three or more consecutive years. The patterns are much the same for individuals who found inter-provincial employment in Alberta in subsequent years.

23. It is important to note that, methodologically, the total number of inter-provincial employees in the longitudinal analysis cannot add up to the total number of inter-provincial employees in Table 3 in the cross-sectional analysis. Adding up cross-sectional number would mean counting every person present each year.

Table 30**Percentage distribution of consecutive years as inter-provincial employees according to first year of work in Alberta, 2005 to 2009**

	Number of consecutive years				
	One	Two	Three	Four	Five
	percent				
2005	62.2	18.9	6.3	4.4	8.3
2006	62.5	19.1	7.3	11.1	...
2007	61.1	21.4	17.5	...	...
2008	65.2	34.8	...	...	...
2009	100.0	...	...	...	...

Note: Only those who are starting a new spell of inter-provincial work are included. Those who were inter-provincial employees at $t-1$ (t minus 1) and those who eventually moved to Alberta were not included in the calculation.

Source: Statistics Canada, Inter-provincial Workforce Database.

Of course, an individual may work in Alberta for a year or two, work only in his/her province or territory of residence the following year, and return to Alberta subsequently. Counting the number of **non-consecutive** years of inter-provincial employment in Alberta captures these patterns (Table 31).^{24,25} Of the inter-provincial employees who arrived in Alberta in 2005, over half (53.4%) worked in the province for only one year between 2005 and 2010. Another 20.9% worked in the province for only two years. Inter-provincial employees first observed in later years are observed for fewer years and hence are less likely to work two or more non-consecutive years in Alberta.

Table 31**Percentage distribution of non-consecutive years as inter-provincial employees according to first year of work in Alberta, 2005 to 2009**

	Number of non-consecutive years				
	One	Two	Three	Four	Five
	percent				
2005	53.4	20.9	10.0	7.4	8.3
2006	56.6	22.0	10.3	11.1	...
2007	58.2	24.3	17.5	...	...
2008	65.2	34.8	...	...	...
2009	100.0	...	...	...	...

Note: Only those who are starting a new spell of inter-provincial work are included. Those who were inter-provincial employees at $t-1$ (t minus 1) and those who eventually moved to Alberta were not included in the calculation.

Source: Statistics Canada, Inter-provincial Workforce Database.

Looking more closely at the 2005 'entry cohort' of inter-provincial employees, one observes that some socio-demographic characteristics are correlated with years of non-consecutive employment in Alberta (Table 32). Men tend to work more non-consecutive years as inter-provincial employees than women. While 65.8% of women in the 2005 entry cohort worked only one year in Alberta, this was the case for 48.6% of men. After five years of work, 9.8% of male inter-provincial employees were still in Alberta compared with 4.4% of women. In terms of age, employees under 35 were most likely to work in Alberta for only one year (about 58.6%), while this was the case for about 48% of those aged 35 to 64. Individuals aged 55 to 64 were most likely to have inter-provincial employment over at least three non-consecutive years. Across

24. In cases where a person worked in Alberta in 2005, 2007, and 2008, this means three non-consecutive years of work but only one consecutive year of work from the initial entrance in 2005.

25. Again, those who eventually moved to Alberta are not included.

provinces and territories of residence, employees from Newfoundland and Labrador, Saskatchewan, and Nova Scotia were the most likely to work in Alberta for five non-consecutive years.

Table 32

Percentage distribution of number of non-consecutive years as inter-provincial employees by socio-demographic characteristics, 2005 cohort

	Number of non-consecutive years				
	One	Two	Three	Four	Five
	percent				
Total	53.4	20.9	10.0	7.4	8.3
Men	48.6	21.6	11.3	8.8	9.8
Women	65.8	19.1	6.7	3.9	4.4
Aged 18 to 24	58.6	22.6	8.9	5.4	4.5
Aged 25 to 34	56.8	20.6	9.3	6.4	6.8
Aged 35 to 44	47.9	19.1	11.1	9.1	12.8
Aged 45 to 54	43.8	19.7	11.5	10.2	14.8
Aged 55 to 64	45.9	19.3	12.4	11.7	10.7
Aged 65 or over	53.9	19.8	9.9	9.1	x
Married/Living common-law	56.7	22.1	9.4	6.1	5.7
Single	48.4	19.1	10.9	9.4	12.2
Newfoundland and Labrador	31.7	19.6	13.9	15.4	19.4
Prince Edward Island	36.2	23.1	15.4	x	x
Nova Scotia	44.8	21.1	11.4	10.9	11.8
New Brunswick	47.3	22.8	12.0	8.3	9.6
Quebec	70.3	18.6	5.9	3.1	2.1
Ontario	68.4	17.9	6.4	3.7	3.6
Manitoba	56.4	22.0	9.8	6.3	5.5
Saskatchewan	41.1	24.3	13.0	9.8	11.7
British Columbia	57.4	20.5	9.1	6.2	6.8
Northwest Territories, Yukon, and Nunavut	62.5	20.9	8.9	4.3	3.4

Note: Only those who are starting a new spell of inter-provincial work are included. Those who were inter-provincial employees at $t-1$ (t minus 1) and those who eventually moved to Alberta were not included in the calculation.

Source: Statistics Canada, Inter-provincial Workforce Database.

The number of years inter-provincial employees are employed in Alberta may be determined by many factors, such as employment opportunities in their province or territory of residence and the intrinsic and extrinsic costs and benefits of working inter-provincially.

6 Firm-level perspective on inter-provincial employment

Thus far, inter-provincial employment in Alberta has been viewed largely from the perspective of labour supply—that is, with a focus on the individuals travelling to Alberta for work. The other side of the coin is labour demand—that is, the firms that employ these individuals. The administrative data employed make it possible to identify business enterprises, defined as firms

that issued at least one T4, *Statement of Remuneration Paid*, to a paid employee.²⁶ The term 'firms in Alberta' refers to business enterprises that issued at least one T4 in Alberta.

Information on firms in this section is presented at the national level. National-level estimation includes information on a given firm from all provinces and territories where it is established. It is an aggregate measure. Considering national-level information is more representative of the employment environment and the earnings conditions and benefits associated with each firm.²⁷

In 2008, 13.2% of firms in Alberta employed at least one inter-provincial employee; that proportion declined to 11.4% in 2009 (Table 33). There is a strong correlation between firm size and the likelihood of employing one or more inter-provincial employees. This is because firms are not weighted by employment size and because the probability of employing at least one inter-provincial employee is far greater in a firm employing 500 employees than in one employing 20. Of all small firms (fewer than 20 employees) operating in Alberta, about 8% to 9% employed at least one inter-provincial employee, while 54% to 65% of large firms (i.e., firms with 500 or more employees) operating in the province employed at least one.

26. Every firm where a worker was employed is counted. If a worker has multiple jobs at different firms, all firms will be included. Calculations are based on the Alberta workforce (T4 only). For this reason, the results are not comparable to the sections where the focus was on workers.

27. Provincial firm information represents information concerning firms present in Alberta. The information can be about the whole firm (if it is established only in Alberta) or can relate only to the branch level (if the firm is represented in more than one province or territory).

Table 33
Firms in Alberta, 2004, 2008, and 2009

	Percentage of firms in Alberta employing at least one inter-provincial employee	Percentage of firms' Alberta workforce consisting of inter-provincial employees		Percentage of firms' Alberta T4 earnings paid to inter-provincial employees	
		All firms	Firms employing at least one inter-provincial employee	All firms	Firms employing at least one inter-provincial employee
percent					
Firm size					
2004					
Fewer than 20 employees	8.0	2.2	27.0	1.8	22.8
20 to 99 employees	43.4	4.9	11.4	3.9	8.9
100 to 499 employees	50.5	4.8	9.5	4.0	7.8
500 or more employees	53.4	2.9	5.4	2.2	4.1
Total	11.9	2.4	20.3	2.0	16.9
2008					
Fewer than 20 employees	9.1	2.7	29.3	2.3	25.0
20 to 99 employees	50.0	6.5	13.1	5.2	10.5
100 to 499 employees	56.3	6.7	11.9	5.5	9.8
500 or more employees	63.5	4.5	7.1	3.5	5.5
Total	13.2	3.0	22.7	2.5	19.2
2009					
Fewer than 20 employees	7.8	2.3	29.7	2.0	25.7
20 to 99 employees	44.3	5.5	12.3	4.4	9.9
100 to 499 employees	54.0	5.3	9.8	4.4	8.2
500 or more employees	65.4	4.1	6.3	3.3	5.1
Total	11.4	2.6	22.6	2.2	19.3

Note: Firms are classified by size on the basis of the Longitudinal Employment Analysis Program dataset. Calculations are based on the total number of employees in a firm during the year. Firm size represents size of the firm at the national level.

Source: Statistics Canada, Inter-provincial Workforce Database.

On average, inter-provincial employees comprised 3.0% of firms' Alberta workforce and 2.5% of T4 earnings paid by Alberta firms in 2008. Inter-provincial employees also made up, on average, 22.7% of the Alberta workforce of firms hiring at least one inter-provincial employee and received 19.2% of the T4 earnings paid by those firms.

The proportion of firm-level workforces consisting of inter-provincial employees also varies by size category. About one-half of medium-sized firms operating in Alberta (those employing 100 to 499) employed inter-provincial employees. These inter-provincial employees accounted for about 12% of employment in each firm's Alberta operations. As a proportion of Alberta T4s issued by these firms, inter-provincial employees accounted for about 10%.²⁸

Of the large firms (firms with 500 or more employees) with operations in Alberta, slightly fewer than two-thirds employed at least one inter-provincial employee in 2008. In these firms, inter-provincial employees accounted for about 7% of employment in their firm's Alberta operations and about 6% of T4 earnings paid in the province.

28. The percentage of firms employing inter-provincial employees is calculated by dividing the number of inter-provincial employees by the total number of workers employed by each firm in Alberta during a given year. Firms are then classified by size according to the categories available on the LEAP file.

Table 34
Regression on propensity of hiring inter-provincial employees among Alberta firms, 2009

	Regression results	
	coefficient	standard error
Industry (Manufacturing)		
Accommodation and Food Services	0.170 **	0.005
Administrative and Support, Waste Management, and Remediation Services	0.030 **	0.004
Agriculture, Forestry, Fishing	0.007 **	0.007
Construction	0.035 **	0.005
Educational Services	0.032 **	0.008
Finance and insurance; Real Estate and Leasing	-0.031	0.004
Health Care and Social Assistance	-0.022 *	0.005
Information, Culture, and Recreation	0.031 **	0.007
Management of Companies and Enterprises	-0.024 **	0.005
Mining	0.075 **	0.014
Oil, Gas Extraction and support activities	0.031 **	0.005
Other Services	-0.023 **	0.005
Professional, Scientific, and Technical Services	-0.041 **	0.027
Public Administration	0.063 **	0.004
Retail trade	0.041 **	0.005
Transportation and Warehousing	0.011 **	0.005
Unknown industry	-0.023 **	0.005
Utilities	-0.036 **	0.021
Wholesale Trade	-0.042	0.005
Firm size (fewer than 20 employees)		
20 to 99 employees	0.344 **	0.003
100 to 499 employees	0.456 **	0.005
500 or more employees	0.573 **	0.007
Unknown	-0.139	0.292
Constant	0.076 **	0.004

* significant at 5%; ** significant at 1%.

Note: Firm size represents firm size at the national level. Omitted group in parentheses.

Source: Statistics Canada, Inter-provincial Workforce Database.

When considering simultaneously industry and firm size (Table 34), the correlation between firm size and the percentage of firms in Alberta employing at least one inter-provincial employee remains strong. Among industries, accommodation and food services, mining, public administration, retail trade, and construction, educational services, oil and gas extraction, and information, culture and recreation are more likely than firms in manufacturing (omitted category in the regression) to hire inter-provincial employees.

7 Conclusion

Robust economic growth through most of the 2000s made Alberta an attractive destination for job seekers. While many moved to Alberta on a permanent basis, others maintained a permanent residence elsewhere but commuted to Alberta to work. Between 2004 and 2008, the number of inter-provincial employees in Alberta nearly doubled and, in most of those years, exceeded the in-flow of permanent residents to the province.

While some of the inter-provincial workers observed in this study subsequently made a residential move to Alberta, at least as identified on their T1 tax return, most did not. Of those who remained in their province or territory of residence, their reasons for doing so cannot be discerned from the data employed. It is likely that factors such as family ties, social networks, organizational arrangements (e.g. daycare, school enrolment), home ownership, and quality of life were important factors. Nonetheless, the prospects of readily-available jobs elsewhere had appeal. When weighed against the costs of moving inter-provincially, the benefits of working inter-provincially was the option chosen by these individuals. Quite clearly, people react to employment opportunities in various ways, and, more broadly, labour markets adjust in various ways.

Residential mobility and employment mobility can be examined at different levels of geography. This analysis of employment mobility was located at the inter-provincial level, and is situated in cell 'D' of the two-by-three matrix presented in Figure 4. Other forms of labour adjustment include individuals moving residentially within a province or territory to take advantage of employment opportunities (Cell 'A'), individuals maintaining their residence in one region of a province or territory but commuting to another for work (Cell 'B'), or individuals moving from one province or territory to another (Cell 'C'). Among individuals from abroad, immigrants and temporary foreign workers in Canada are differentiated by the residential or employment nature of their mobility and are captured in Cells 'E' and 'F', respectively. The broad concept of shadow populations is largely captured by the groups in the bottom row of the matrix.

Figure 4
Residential mobility and employment mobility

	Intra-provincial	Inter-provincial	International
Residential mobility	A	C	E
Employment mobility	B	D	F

Labour market adjustment occurs through all the types of mobility identified in Figure 4, and a comprehensive overview would take each into account. However, while information on residential mobility is available on survey and administrative sources, information on employment mobility remains scarce. With the exception of the Census 2B Long Form and the 2011 National Household Survey, information on place of work is not currently collected on household surveys or available below the provincial level on administrative data sources. This remains an area where further data development is required.

The types of mobility shown in Figure 4 are inter-related. As documented in the report, a significant minority of inter-provincial employees in Alberta subsequently moved to the province, and conceptually shifted from Cell 'D' to Cell 'C'. Inter-provincial employment may have been a stepping stone towards residential relocation, providing individuals with an opportunity to establish networks and accumulate information before incurring the costs of a long-distance move. Intra-provincial and international employment and residential mobility warrant examination along the same lines.

In terms of inter-provincial employment in Alberta, many individuals from across Canada travelled to the province for work during the 2000s. In 2004, there were approximately 62,000 to 67,500 inter-provincial employees in Alberta, accounting for 3.6% to 3.8% of provincial employment. By 2008, the number of inter-provincial employees had increased to about 122,500 to 133,000, and their share of provincial employment had increased to 5.7% to 6.2%. These figures fell somewhat in 2009 following the economic recession.

Over the reference period, the majority of inter-provincial employees in Alberta were men, and many were under age 35. Nonetheless, as the number of inter-provincial employees in Alberta increased through the 2000s, it was largely older workers who joined the ranks. By 2009, almost one-third of inter-provincial employees in the province were aged 45 or older. The changing age profile of this group was reflected in its marital profile, with the share of inter-provincial employees who were married or living common-law increasing over the period.

Job opportunities in Alberta also attracted growing numbers of individuals from more distant provinces. While large shares of inter-provincial employees continued to commute from British Columbia and Saskatchewan, the shares from Ontario and the Atlantic Provinces increased markedly. By 2008, one-in-four inter-provincial employees in Alberta were commuting from the Atlantic Provinces. The economic impact of inter-provincial employment on smaller 'sender' communities and provinces was beyond the scope of this analysis. However, given that almost 5.3% of T4 recipients in Newfoundland and Labrador received earnings from Alberta in 2008, the impact may have been significant.

A high degree of heterogeneity was evident in the employment and earnings of inter-provincial employees. While over-half of male inter-provincial employees were employed in construction or oil and gas extraction, over one-third of female inter-provincial employees were employed in accommodation and food services or retail trade. Another important factor differentiating individuals within the inter-provincial employee population is whether they received T4 earnings only in Alberta or in Alberta and another province or territory. The presence of T4s from another province or territory strongly suggests that work in Alberta was undertaken on a part-year basis. This is consistent with the fact that individuals identified as 'part-year' in this way were highly skewed towards the lower end of the Alberta T4-earnings distribution. Thus, while some inter-provincial employees earned high salaries in Alberta, many received fairly modest earnings, at least in part because they worked in the province only a portion of the year. This is one factor to keep in mind when considering that, although inter-provincial employees accounted for 5.7% to 6.2% of Alberta's T4 workforce, only 3.4% to 3.6% of Alberta T4 earnings in 2008 were paid to inter-provincial employees.

Inter-provincial employees who received T4 earnings only from Alberta were more evenly represented across the earnings distribution, and it is among this group that higher earning individuals are found. Among male inter-provincial employees who worked only in Alberta, the median earnings of those in construction or in oil and gas extraction were about \$51,000 and \$60,000, respectively, and one-in-four men in these industries had annual earnings in excess of about \$86,000 or \$96,000, respectively.

Within Alberta, inter-provincial employees were an important source of labour supply through much of the 2000s. In 2008, such employees accounted for 10% or more of total employment within construction, oil and gas extraction, and agriculture, forestry and fishing. In many other industries, inter-provincial employees accounted for 5% to 10% of the workforce. In that year, 13% of firms operating in Alberta employed at least one inter-provincial employee. Among this subset of firms, just under 20% of their Alberta T4 earnings were paid to inter-provincial employees.

Furthermore, just as inter-provincial employment is important for some firms, it is certainly important for some individuals and their families. For example, among inter-provincial employees who were married or living common-law, earnings from Alberta accounted for over one-half of their total family earnings during the year, on average. In this respect, employment relationships and their financial dimensions spanned long distances. Of course, having one partner (or parent) away from home for extended periods may have had other consequences as well.

Finally, although this report focused on inter-provincial employment in Alberta, the extent to which labour market adjustment occurs through employment mobility across other provinces, territories, and regions remains a matter for further research.

8 Appendix tables

Table 35

Individuals with T4s from Alberta — Match rates with T1FF and T1H data without sample restrictions, 2003 to 2010

	Total number of individuals		T1FF matched			T1FF or T1H matched		Not matched with either T1FF or T1H	
	counts		counts	percent	counts	percent	counts	percent	
2003	1,867,633		1,661,189	88.9	1,773,337	95.0	94,296	5.0	
2004	1,922,408		1,726,401	89.8	1,837,748	95.6	84,660	4.4	
2005	2,027,003		1,801,789	88.9	1,912,122	94.3	114,881	5.7	
2006	2,181,729		1,912,840	87.7	2,039,596	93.5	142,133	6.5	
2007	2,278,395		1,995,280	87.6	2,132,582	93.6	145,813	6.4	
2008	2,338,909		2,056,392	87.9	2,185,404	93.4	153,505	6.6	
2009	2,264,708		1,987,188	87.7	1,987,188	87.7	277,520	12.3	
2010	2,265,275		1,985,410	87.6	1,985,410	87.6	279,865	12.4	

Note: There are no age or total earnings restrictions. T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*.

Source: Statistics Canada, Inter-provincial Workforce Database.

Table 36

Inter-provincial employees as a percentage of the Alberta workforce with all unmatched T4–T1FF–T1H records excluded from the calculation, 2004 to 2010

	Base definition	Base definition excluding Alberta residents at t-1	Base definition excluding Alberta and unknown residents at t-1
	percent		
T4-T1FF matched			
2004	3.8	3.6	3.4
2005	4.4	4.2	4.0
2006	5.5	5.3	5.0
2007	5.9	5.6	5.4
2008	6.3	6.0	5.8
2009	5.2	4.9	4.4
2010	...	4.7	4.2
T4-T1FF-T1H matched			
2004	3.9	3.7	3.5
2005	4.5	4.3	4.0
2006	5.6	5.4	5.1
2007	6.0	5.8	5.4
2008	...	6.1	5.8

Note: T1FF and T1H refer respectively to *T1 Family File* and *T1 Historical file*.

Source: Statistics Canada, Inter-provincial Workforce Database.

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