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- Employer top-ups
- Immigrants working in regulated occupations



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..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ^s	value rounded to 0 (zero) where a meaningful distinction exists between true zero and the value 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

Highlights

In this issue

■ Employer top-ups

- In 2008, among mothers with paid jobs who received federal (EI) or Quebec (QPIP) maternity and parental leave benefits after birth, 20% reported collecting employer 'top-up' payments.
- Top-up payments averaged \$300 per week and lasted an average of 19 weeks—suggesting that most employer plans cover only the maternity leave portion of public benefits.
- Public sector employees were significantly more likely to receive a top-up and for a longer average period of time (48% and 22 weeks) than those in the private sector (8% and 12 weeks).
- Working for a company with a staff of over 500, being employed in Quebec and having an hourly wage of \$20 or more were also associated with the receipt of employer top-ups.
- Almost all mothers (96%) with top-up benefits returned or planned to return to their same employers within 18 months of birth, compared with 77% of mothers with EI/QPIP benefits only and 46% of mothers with no benefits.

■ Immigrants working in regulated occupations

- Immigrants who studied for work in a regulated occupation outside Canada were less likely to be working in that occupation in 2006 than either immigrants who had studied in Canada, or those who were born in Canada.

- In 2006, 24% of foreign-educated immigrants with fields of study that would normally lead to work in a regulated occupation were working in the associated profession. This compares to a 62% match rate among the Canadian-born.
- While foreign-educated immigrants were less likely to work in the regulated occupations for which they studied, this discrepancy narrowed with time spent in Canada. However, this discrepancy was still evident after immigrants had been in Canada for more than 10 years.
- The match rate of immigrants into regulated occupations varied by field of study. Immigrants with fields of study in health professions had higher match rates than those who studied to be teachers, engineers and lawyers.
- Among immigrants who were not working in the regulated occupation for which they studied, many had higher levels of education than normally required for the jobs they held in 2006. More than 1 in 10 worked in jobs that normally require no formal schooling.

Perspectives

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Employer top-ups

Katherine Marshall

Although 'priceless' in many ways, there are financial costs to having children. One factor is earnings lost from employment absences after childbirth. Most mothers are employed before birth and most of those receive benefits from either the federal or Quebec maternity and parental leave programs. However, since these benefits replace only a proportion of insurable earnings—up to 75% in Quebec and 55% outside Quebec—most households experience a reduction in household income during the work absence (see *EI and QPIP*).

The costs of parental leave can go beyond short-term income losses. Birth-related employment absences may result in missed training opportunities, promotions and the accumulation of work experience, which might explain some of the persistent earnings gap between women with and without children. Long career interruptions of three or more years have been shown to be a significant factor linked to the "motherhood earnings gap" (Zhang 2009).

To compensate for earnings lost by employees on leave, some employers provide parents with a Supplemental Unemployment Benefit (SUB), also known as a top-up. The SUB is a government initiative that employers use as a means of reducing the net earnings loss of their employees on leave (see *The SUB Program*). Employer top-ups are only available to those already entitled to Employment Insurance/Quebec Parental Insurance Plan (EI/QPIP) benefits. Payments cover some or all of the difference between what parents receive from EI/QPIP and their regular earnings. The earnings replacement rate, duration of payment and coverage (mothers, fathers and adoptive parents) vary among companies. Top-ups could also indirectly enhance long-term earnings since they often stipulate a return to employment within a specified time, thus encouraging job continuity.

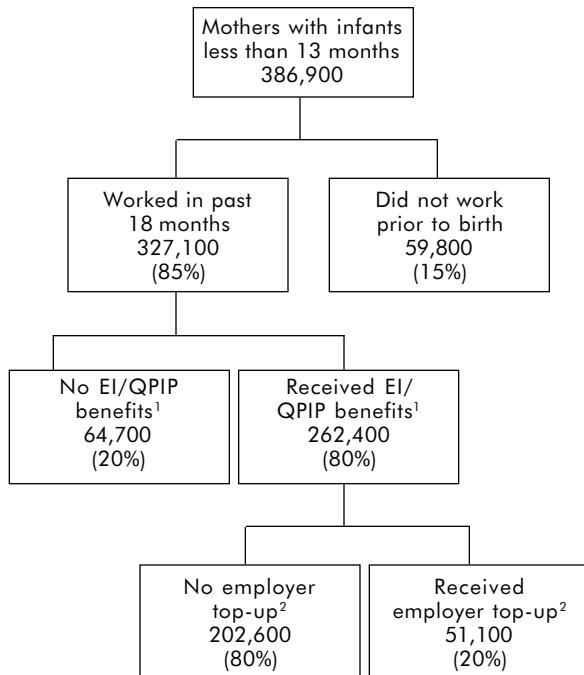
By providing a higher level of overall earnings replacement, employer top-ups may enable more parents to remain on leave for a longer period. EI maternity and parental benefits comprise a core element of the National Children's Agenda designed to help parents better manage the demands of employment and infant care (HRSDC 2005). Starting in January 2001, EI shareable parental benefits increased from 10 to 35 weeks. It is unclear whether employer top-up plans have expanded to the same degree as the public benefit programs.

Although top-ups have become a well-known discretionary employer benefit, little is known about which employees are covered. Findings from *Canada's Top 100 Employers* suggest "there has been a distinct surge in the availability of parental leave top-up payments, particularly for adoptive parents and fathers" (Yerema 2007). This study uses the Employment Insurance Coverage Survey (EICS) to examine first-time information on the trends in the proportion of mothers with a paid job who receive a maternity or parental leave benefit top-up from their employers.² By way of descriptive and regression analysis, it also addresses the question of who is likely to receive an employer top-up and whether that receipt influences the rate of returning to work, average time off, and rate of return to the previous employer (see *Data source and definitions*).

One in five mothers has an EI/QPIP employer top-up benefit

Of all new mothers in 2008, 327,000 (85%) were employed before giving birth (Chart A). Of this group, 262,000 (80%) reported receiving paid maternity and/or parental leave benefits (EI/QPIP), and 51,000 received an employer top-up to these benefits—representing one in five EI/QPIP beneficiaries.³ In

Katherine Marshall is with the Labour and Household Surveys Analysis Division. She can be reached at 613-951-6890 or perspectives@statcan.gc.ca.

Chart A Financial compensation of new mothers in 2008

1. Federal- or Quebec-paid maternity or parental leave; includes the self-employed.

2. Excludes the self-employed and unpaid family workers.

Source: Statistics Canada, Employment Insurance Coverage Survey.

2008, top-ups lasted for an average of 19 weeks with average payments of \$300 per week, such that employers collectively paid out more than \$290 million towards supplementary benefits for mothers (Table 1).

From 2000 to 2006, approximately three-quarters of previously employed mothers were in receipt of EI/QPIP benefits after birth. Those without benefits during this period included the self-employed, those without enough insurable hours of employment, and those who did not apply. With the introduction of QPIP in 2006 and the subsequent inclusion of the self-employed along with the more lenient qualifying rules, the benefit coverage rate of mothers in Quebec rose to 9 in 10 for 2007 and 2008, which also pushed up the overall national coverage rate.

The SUB Program

The federal Supplemental Unemployment Benefit (SUB) Program was introduced in 1956 with the goal of subsidizing employees with Employment Insurance (EI) benefits while they were temporarily laid-off. With EI replacing only 55% of previous earnings, a SUB payment helps to further reduce the net loss of earnings. Under the current program, employers are encouraged to create and register SUB plans that cover not only temporary work stoppages, but training, illness and injury or quarantine. Registered plans must meet the requirements of article 37 of the *Employment Insurance Regulations* set by Service Canada (Service Canada 2009). The program helps increase employees' level of earnings replacement during work absences, but the payments are not counted as insurable and as such EI benefits are not reduced. Employers are meant to gain from this program since employees are enticed to return to the same employer, which helps retain experienced employees and reduce retraining or new hiring. Financing of the plans is the sole responsibility of the employer. At the end of 2008, roughly 3,000 employers had approved SUB plans covering more than 885,000 employees (Service Canada 2008).

SUB plans can also supplement EI or QPIP maternity or parental benefits and EI compassionate care benefits, but they do not need to be registered. Although employers with maternity and parental leave SUB plans, also known as 'top-ups,' do not have to obtain formal approval from Human Resources and Skills Development Canada, records must be kept and two conditions regarding the supplementary payments must be met. First, top-ups must not exceed an employee's normal weekly earnings, and second, the payment must not reduce other accumulated employment benefits such as banked sick leave, vacation leave, or severance pay.¹

A study of the maternity and parental leave SUB plans found in major collective agreements, including those covering more than 200 employees in sectors under federal jurisdiction or more than 500 employees under provincial jurisdiction, indicates that most have a number of standard conditions. For example, most plans restrict top-up payments to employees with a minimum number of weeks or months of service, employees must prove they are eligible for EI/QPIP benefits, and coverage is usually offered to full-time regular staff only (HRSDC 2007). Furthermore, most employees must sign an agreement committing to returning to work within a set period of time and for a minimum period of time and acknowledge that failure to do so results in their indebtedness to the company for the amount of benefit received. A 93% income replacement rate of combined EI/QPIP benefits and top-up payments is assumed to equal the usual full salary, due to tax and other advantages. However, the agreements offer a range of different replacement rates, and the offered number of weeks of top-up payments is even more variable (Ibid.).

Among EI/QPIP benefit recipients, the proportion also receiving an employer top-up (around 1 in 5) has remained stable over the nine-year period, as has the average duration of the top-up benefit payments (around 18 weeks). Although parental leave benefits

Table 1 Receipt of paid maternity and parental leave benefits and employer top-ups among previously employed mothers

	2000	2001	2002	2003	2004	2005	2006	2007	2008
All mothers with infants less than 13 months	231	252	278	274	'000 292	328	311	322	327
Receipt of EI/QPIP benefits¹					%				
Total	73	75	74	77	79	74	75	78	80
Quebec	F	F	79	80	78	73	83	93	90
Outside Quebec	F	F	72	76	79	74	72*	72*	76*
Receipt of top-up for those with EI/QPIP²									
Total	20	17	18	19	19	27	16	24	20
Quebec	F	F	F	24	F	32	25 ^E	27 ^E	28
Outside Quebec	F	F	18	17	19	25	13*	22	17*
Average weeks of top-up					weeks				
Total	16	17	18	17	17	18	16	18	19
Quebec	F	F	F	19	F	19	17	17	22
Outside Quebec	F	F	18	16	16	18	16	19	18
Average top-up payment³	F	F	F	F	per week (current \$) 270	320	260	330	300

* significantly different with Quebec at the 0.05 level; tests done for 2004/2008 as bootstrap weights available for these years, allowing for a more accurate calculation of standard errors

1. Federal Employment Insurance or Quebec Parental Insurance.

2. Excludes the self-employed.

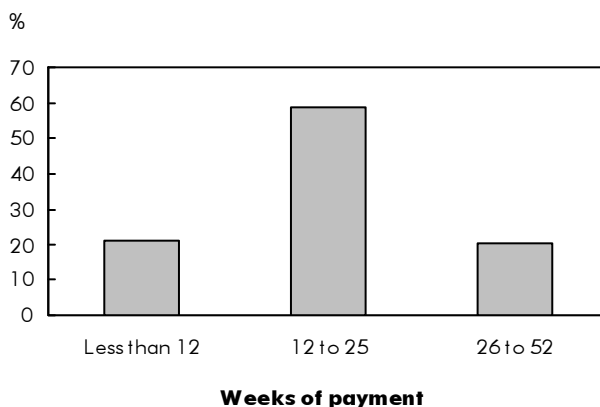
3. Based on valid responses of \$800 or less; the variable contains a high percentage of 'not stated.'

Source: Statistics Canada, Employment Insurance Coverage Survey.

increased from 10 to 35 weeks starting in 2001, there was no corresponding increase in the duration of top-ups. Many employers may not top-up extended parental leave benefits because of the cost or terms imbedded in collective bargaining agreements (HRSDC 2007).

The top-up payment period averaged between 16 and 19 weeks,⁴ or about four months, suggesting that most women receive a top-up to their paid maternity leave only: 15 weeks for women outside Quebec and 18 weeks for women in Quebec (as of January 1, 2006). Some companies also cover the two-week waiting period: "...a number of collective agreements also stipulate that the employer will provide employees on maternity leave with an allowance to offset the two-week waiting period for EI benefits" (Ibid. 2007).

Most mothers, 80% in 2008, reported receiving payments for less than six months—further evidence that most top-up benefits do not cover the entire paid leave period (Chart B). However, as will be shown,

Chart B Most mothers with an employer top-up receive benefits for under six months

Source: Statistics Canada, Employment Insurance Coverage Survey, 2008.

most new mothers eligible for EI/QPIP benefits are on leave for almost one year. Therefore, with only a minority of women receiving top-up payments for six months or longer, the reality is that relatively few mothers are on paid leave with full earnings replacement—EI/QPIP plus an employer top-up—for the duration of their time off.

One-half of public sector employees are in receipt of an employer top-up

More mothers with paid jobs in Quebec reported having an employer top-up to their EI/QPIP benefits in 2008 than did mothers outside Quebec—28% versus 17% (Table 2). When several employer attributes are controlled for in a logistic regression model—such as firm size, sector and rate of unionization—Quebec employees are 2.7 times more likely to receive a maternity or parental leave top-up from their employers than are those living elsewhere. Research has shown that Quebec was one of the first provinces to include paid maternity leave in collective agreements. Also, the first major SUB plan for maternity leave was implemented in 1979 in Quebec by a group of public sector unions (Moloney 1989).

With a top-up rate of 39%, working in a unionized job appears to be strongly associated with this employer benefit. However, regression results indicate that unionization is not a key factor. Two workplace characteristics that do significantly increase the chances of receiving a top-up include working for a larger versus smaller company, and working in the public versus the private sector. Large companies of over 500 employees, whether unionized or not, often have the human and financial resources to use incentives, such as top-up plans and other discretionary benefits, to recruit and retain employees. Not only do larger companies have a greater ability to oversee and pay for such benefits, but their large workforce also allows for savings through economies of scale. “By spreading liability over a large number of participants, premiums are lower. Larger firms need more people and, especially in labor-short boom times, need incentives to recruit. They also tend to have more employees who are covered by collective bargaining contracts” (Social.jrank 2009).

Since the SUB Program is a government-initiated program, public sector workplaces are more likely to participate. The public sector includes, for example, employees in all levels of public administration, Crown corporations, public schools, universities, and hospi-

Table 2 Personal and job characteristics of mothers with paid jobs in receipt of an employer top-up to their maternity or parental benefits

	Mothers with EI/QPIP ¹	Received top-up	Odds ratios ²
	'000	%	
All mothers³	254	20	...
Province of residence			
Quebec	74	28	2.7**
Outside Quebec (ref.)	180	17	1.0
Education			
University degree	85	30	n.s.
Less than university degree (ref.)	169	15	1.0
Union status			
Unionized (ref.)	86	39	1.0
Non-unionized	168	11	n.s.
Job tenure			
Less than 3 years (ref.)	106	11	1.0
3 to 5 years	64	22	n.s.
6 years or more	81	31	n.s.
Size of company			
1 to 500 employees (ref.)	93	10	1.0
Over 500 employees	118	35	2.9***
Unknown	43	F	n.s.
Sector			
Public	81	48	5.7***
Private (ref.)	154	8	1.0
Unknown	19	F	n.s.
Hourly earnings			
Less than \$20.00 (ref.)	137	9	1.0
\$20.00 to \$24.99	43	30	2.7*
\$25.00 or more	71	36	2.3*

1. Employment Insurance or Quebec Parental Insurance benefits.

2. This regression calculation indicates whether certain variables significantly increase or decrease the odds of having an employer top-up, n.s. not significantly different from reference group (1.0), * significant at the 0.05 level, ** at the 0.01 level and *** at the 0.001 level.

3. Individual variable categories may not add to the total due to non-response.

Source: Statistics Canada, Employment Insurance Coverage Survey, 2008.

tals (see *Data source and definitions*). One in two mothers (48%) working in the public sector received an employer top-up to their EI/QPIP benefits—making them 5.7 times more likely to do so than their counterparts in the private sector. While one-quarter of public sector employees are not unionized, 40% of this group still received a top-up.

Data source and definitions

The Employment Insurance Coverage Survey (EICS), a supplement to the Labour Force Survey, is conducted four times per year and collects information about coverage under the Employment Insurance (EI) program. In 2000, women at home with infants under 13 months began being interviewed regarding access to maternity, parental and adoption benefits. Questions in this section relate to additional payments from employers, private insurance or other benefits while mothers are on leave from a job following the birth of a child. Respondents are asked to report on the number of weeks payments were received and the payment amounts. It is not possible to determine the percentage of total weekly earnings replaced by the payments. More than one-quarter of respondents did not know the amount they received. Finally, outliers with values of more than \$800 per week were excluded from the calculations (representing 1% of records in 2008).

The **target population** for this article includes all mothers with children age 0 to 12 months. In 2008, approximately 1,250 mothers were interviewed, representing a weighted count of 387,000.

The **firm size** refers to the total number of employees found at all locations of the mother's employer.

The **public sector** refers to those employed in federal, provincial or municipal public administration, Crown corporations, liquor control boards, public primary and secondary schools, universities, hospitals and public libraries, and other government institutions. The **private sector** consists of all other employees.

A **logistic regression model** is used to examine the probability of receiving an employer top-up among all previously employed mothers with paid jobs and who were in receipt of EI/QPIP benefits. Bootstrap estimation techniques were employed to adjust for the complex sampling design of the survey.

Finally, having a wage of at least \$20 per hour significantly increases the likelihood of receiving an employer top-up compared with those with lower wages. The top-up rate among those earning less than \$20 was 9%, compared with 30% for those with a \$20 to \$24.99 hourly wage, and 36% for those who earn \$25 per hour or more. Those with high earnings are more likely to be in professional or skilled jobs and are more costly to replace for companies. Employers use various forms of non-wage compensation to recruit and retain employees—and top-ups may be one such benefit. Other research indicates that higher quality jobs are associated with both better wages and better benefits (Marshall

2003a). Conversely, those with low wages are the least likely to receive supplementary benefits.

Duration of payments similar for most employees

Although women in Quebec are more likely to receive an employer top-up than those in other provinces, the duration of payments is not significantly longer—22 versus 18 weeks, respectively (Table 3). The only job characteristic to have a strong significant influence on the number of weeks of top-up payments received is the sector of employment. Mothers employed in the public sector received payments for an average of 22 weeks compared with 12 weeks for those in

the private sector. This is further indication that employer top-ups are a common and substantial benefit mainly for public sector employees.

Almost all women with top-ups return to work and to the same employer

Most employers offering a top-up do so on condition that the mother return to her job within a fixed period of time and remain with the employer for a period of time or

Table 3 Average weeks of payments for mothers with employer top-ups

	Weeks
All mothers	19
Province of residence	
Quebec (ref.)	22
Outside Quebec	18
Education	
University degree (ref.)	21
Less than university degree	18
Union status	
Unionized (ref.)	21
Non-unionized	16
Job tenure	
Less than 3 years (ref.)	17
3 to 5 years	17
6 years or more	22*
Size of company	
1 to 500 employees (ref.)	18
Over 500 employees	20
Sector	
Public (ref.)	22***
Private	12
Hourly earnings	
Less than \$20.00 (ref.)	20
\$20.00 to \$24.99	18
\$25.00 or more	20

* significantly different from the reference group (ref.) at the 0.05 level, *** at the 0.001 level

Source: Statistics Canada, Employment Insurance Coverage Survey, 2008.

EI and QPIP

Starting in January 2006, the Quebec Parental Insurance Plan (QPIP) replaced the federal Employment Insurance (EI) program for the administration of paid benefits associated with birth or adoption for parents in Quebec. Below is a summary of the benefits and rules for the two programs in 2009. More detailed information on the two programs can be found on the respective government websites (<http://www.rqap.gouv.qc.ca/> and <http://www.servicecanada.gc.ca/>).

EI	QPIP (basic plan)¹
Birth mothers <ul style="list-style-type: none"> ■ 15 weeks of maternity leave ■ 55% of average earnings up to a maximum of \$42,300 in 2009 (\$447 per week) ■ Two-week waiting period ■ Requires 600 hours of paid work in past year ■ Self-employed excluded ■ Non-flexible Birth fathers <ul style="list-style-type: none"> ■ Not applicable All parents (birth and adoptive) <ul style="list-style-type: none"> ■ 35 weeks of parental leave ■ Taken by one or shared by both parents ■ Same rules as maternity leave but no second waiting period required 	Birth mothers <ul style="list-style-type: none"> ■ 18 weeks of maternity leave ■ 70% of average earnings up to a maximum of \$62,000 in 2009 (\$835 per week) (adjusted every year) ■ No waiting period ■ Requires at least \$2,000 of earnings in past year ■ Covers salaried and self-employed ■ Some flexibility¹ Birth fathers <ul style="list-style-type: none"> ■ 5 weeks of paternity leave All parents (birth and adoptive) <ul style="list-style-type: none"> ■ 32 weeks parental leave for birth parents, 37 weeks parental leave for adoptive parents ■ Taken by one or shared by both parents ■ Same rules as maternity leave except for benefit rate: 7 weeks at 70%, rest at 55% for birth parents; 12 weeks at 70%, rest at 55% for adoptive parents

1. Parents can choose between the basic and the special plan. For all types of benefits (maternity, paternity, parental or adoption), the special plan offers fewer benefit weeks (15, 3, 25 and 28, respectively) at an income-replacement rate of 75%.

she must repay the benefits (see *The SUB Program*). Therefore employer top-ups act as a strong incentive for women to not only return to the paid workforce, but also to stay with the same employer. In 2008, of all mothers with a paid job before childbirth, 96% with a top-up returned to the same employer compared with 77% of mothers with EI/QPIP benefits and no top-up, and 46% of mothers without any benefits (Table 4). Furthermore, where virtually all mothers with top-ups returned or planned to return to employment within 18 months, 85% of those with EI/QPIP benefits but no top-up stated they would return to work, compared with 71% of mothers without benefits. These findings align with research show-

ing that women's labour market attachment is strongest in countries where women have access to extended paid leave programs, public day care facilities and other family support programs (Rønsen and Sundström 2002). Whether it's the risk of repayment or the desire to re-enter the labour force—women with top-ups are not only more likely to go back to work, but back to their previous jobs.

Of the mothers who had returned or planned to return to work, those with EI/QPIP benefits, with or without an employer top-up, were on leave for an average of 46 to 48 weeks. This is significantly longer than for women without paid leave benefits, who returned after an average of 34 weeks. Although longer

Table 4 Mothers with infants less than 13 months who were employed in a paid job before birth

	Mothers employed before birth	Received EI/QPIP ¹		No paid benefits
		and employer top-up benefits	and no employer top-up benefits	
All mothers	299,000	51,100	203,500	44,400
		%		
Returned or plans to return to same employer	100	100	100	100
Yes	76	96	77*	46*
No	10	F	9 ^E	25 ^E
Will not return within 18 months	15	F	15	29
		weeks		
Mothers with a spouse				
Average weeks off for returning mothers	45.5	47.8	46.3	34.3*
Average weeks claimed by fathers ²	1.9	2.6 ^E	1.6	F
Average weeks off by couple	47.4	50.3	48.0*	37.1*
		%		
Couple will claim all available EI/QPIP benefits	91	88	93	F

* significantly different from those with EI/QPIP and top-up at the 0.05 level

1. Employment Insurance or Quebec Parental Insurance benefits.

2. Averaged over all couples. The average weeks for fathers who claimed benefits was seven.
Source: Statistics Canada, Employment Insurance Coverage Survey, 2008.

leave may impose some costs for employers, the high return-to-work rate equates to positive employee retention.

An employer top-up may lessen the financial impact of childbirth, but since it generally lasts for less than six months, it may not influence the total leave time a mother takes. Most women experience some income loss while on leave since EI/QPIP replaces a maximum of 55% to 75% of previous earnings. However, this level of compensation, with or without an employer top-up, appears to enable most women to remain at home for most of the benefit period. Mothers eligible for EI/QPIP must claim and use the benefits or forfeit them. The results

suggest that the opportunity to be at home during the first year of an infant's life outweighs the net earnings loss. Indeed, among couples where at least the mother is entitled to EI/QPIP benefits, 9 in 10 report that the family will claim all benefits available—with no significant difference between those with or without an employer top-up. Of couples who do not claim all available benefits, 50% report the reason for not doing so as either work-related or their own preference to return to work.

Conclusion

With 85% of women working at a paid job before giving birth, employers must regularly manage the short-term absences of new

mothers, and, increasingly, of new fathers too. Paid maternity and parental leave programs allow parents time away from the job to care for their newborns with some level of earnings replacement. The federal Employment Insurance (EI) and Quebec Parental Insurance Plan (QPIP) programs allow parents to take up to one year of combined benefits, and under all provincial and territorial labour codes, they are guaranteed employment with their previous employer upon return to work (Baker and Milligan 2005).

With most parents in the labour force, some employers offer policies to help employees manage their work and family responsibilities.⁵ Some employers offer a Supplemental Unemployment Benefit, a plan that tops up EI/QPIP maternity benefits and, in certain instances, parental leave benefits. The program is regulated by Human Resources and Skills Development Canada but is financed by employers. Payment level and duration varies from company to company. In 2008, 1 in 5 mothers who received EI/QPIP benefits after birth also received an employer top-up. The average weekly top-up for these mothers, which lasted for an average of 19 weeks, was \$300. This implies that many employer top-ups cover only the maternity leave portion of public benefits.

Working for a public sector employer significantly increases the chances of a mother receiving a top-up and the length of the payment period: 48% of mothers in the public sector received a top-up for an average of 22 weeks compared with 8% and 12 weeks for those in the private sector. Working for a company with a staff of

more than 500, being employed in Quebec and having an hourly wage of \$20 or more were also associated with the receipt of employer top-ups.

Of mothers with an employer top-up, only 1 in 5 received payments for six months or more. Therefore only a fraction of all mothers receive full-earnings replacement for the entire period they are on leave. Whether or not the top-up replaces full-earnings or lasts the full EI/QPIP benefit period, the program influences career continuity such that 96% of mothers with a top-up returned to the same employer.

Perspectives

■ Notes

1. Further details about SUB plans for maternity and parental leave can be found on Service Canada's website (<http://www.servicecanada.gc.ca/eng/ei/employers/supplements.shtml>).
2. The Employment Insurance Coverage Survey does not collect information on top-ups for fathers. Moreover, the participation rate and average time off for fathers is still substantially less than for mothers (Marshall 2008).
3. Self-employed are excluded.
4. The median number of weeks also ranged between 16 and 18 for the 2000 to 2008 period.
5. Research shows that one-third of employees are offered at least one form of non-monetary personal or family support program such as on-site child care, elder care, employee assistance or fitness programs (Marshall 2003b).

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Immigrants working in regulated occupations

Danielle Zietsma

In 2006, there were 3.6 million immigrants in Canada's labour force, many of whom were highly educated. Education levels of more recent immigrants have risen in recent years such that, by 2006, 42% of immigrants who had landed in Canada since 2001 had a university degree. At the same time, 16% of the Canadian-born had university degrees. In addition to high levels of education, many of these immigrants also came with foreign work experience.

One of the principal goals of Canadian immigration policy is to fill gaps in the labour market. With the aging of the baby boomers, a number of occupational shortages have emerged in the Canadian labour market, particularly in health care professions (such as physicians, nurses and pharmacists) and in management occupations. Shortages are projected to continue as boomers exit the labour market (Human Resources and Skills Development Canada 2007). Some projections imply that immigrants could account for nearly all labour force growth as soon as 2011 (Statistics Canada 2003).

Despite their high levels of educational attainment, many recent immigrants struggle in the labour market. In 2006, immigrants who had been in Canada for less than 10 years had higher unemployment rates and lower employment rates than those born in Canada. Furthermore, many of these immigrants were unable to find jobs in their chosen fields. And, in recent years, immigrants have become more likely to be in low income (Picot, Hou and Coulombe 2007).

New immigrants to Canada indicate that they faced a number of challenges in the Canadian labour market, most importantly: not enough Canadian job experience, lack of connections in the job market and foreign credentials not being recognized (Schellenberg and Maheux 2007). Others suggest that newcomers may lack knowledge about getting their skills recog-

nized, employers may lack knowledge about foreign credentials, and there may be real differences in the quality of foreign credentials relative to domestic qualifications (Kustec, Thompson and Xue 2007).

For many occupations, hiring is based on the employer's decision that the candidate has an acceptable combination of education and experience to do the job. For those seeking work in regulated occupations, another hurdle is added. Regulated occupations are governed by provincial regulatory bodies and/or professional associations and have very specific requirements regarding the credentials necessary to practice the occupations. This study focuses on the regulated occupations since a clear relationship exists between educational credentials and the ability to meet the requirements of the occupation.

Many occupations for which immigrants have trained are regulated occupations. These include engineering, medicine, nursing and teaching. For immigrants who wish to work in a regulated occupation, practicing that occupation outside Canada is not considered sufficient and they must prove that their foreign credentials meet Canadian standards.

In 2006, of the 1.5 million university-educated, working-age immigrants (15 years of age and over), 41% had studied in fields that would typically place them in regulated occupations compared to 39% of Canadian-born university graduates.

This study examines the extent to which immigrants in 2006 with a field of study that typically leads to a regulated occupation were working in that occupation (see *Data source and definitions*). For example, how likely are immigrants with engineering degrees to find work as an engineer? It then examines how this match rate varies across provinces and by the immigrants' source countries, and the amount of time they spent in Canada. Finally, it looks at the type of work performed by those not working in the occupations for which they studied.

Danielle Zietsma is with the Labour Statistics Division. She can be reached at 613-951-4243 or perspectives@statcan.gc.ca.

1.8 million graduates from fields of study leading to regulated professions

In 2006, there were 1.8 million university degree holders in Canada from fields of study that would typically lead to work in a regulated occupation. Of these, 208,700 were immigrants educated in Canada, while 403,900 were immigrants who were foreign-educated (Table 1).

Immigrants with a degree in a regulated field of study who studied outside Canada had an unemployment rate that was much higher than that for Canadian-educated immigrants with similar degrees. In 2006, foreign-educated immigrants from regulated fields of study had an unemployment rate of 7.0%, while immigrants with Canadian degrees in regulated fields of study had an unemployment rate of 4.2%, a gap of 2.8 percentage points.

Table 1 Labour force activity of university graduates with regulated field of study, by immigrant status and location of study

	Total	Canadian-born	Immigrants	
			Studied in Canada	Studied outside Canada
			'000	
Population	1,819.8	1,207.2	208.7	403.9
Labour force	1,437.0	961.2	170.3	305.5
Employed	1,384.3	937.1	163.2	284.1
Unemployed	52.7	24.1	7.1	21.4
Not in labour force	382.8	246.0	38.3	98.4
			%	
Participation rate	79.0	79.6	81.6	75.6
Unemployment rate	3.7	2.5	4.2	7.0
Employment rate	76.1	77.6	78.2	70.3

Source: Statistics Canada, Census of Population, 2006.

Data source and definitions

Unless otherwise stated, all data are from Statistics Canada's 2006 Census of Population. Since census data are randomly rounded to the nearest 0 or 5, not all numbers will reflect totals and there may be slight differences among tables.

Who's included in this study?

Immigrants and persons born in Canada who meet all of the following criteria:

- non-institutional resident
- age 15 or over
- university degree holder
- have a field of study that typically leads to a nationally regulated occupation
- employed
- immigrant who obtained university credentials outside Canada
- not a senior manager (since no skill level information is available for this group)

Occupations that are regulated in all Canadian provinces and chosen for study:

Architects	Optometrists
Accountants	Pharmacists
Chiropractors	Doctors
Dentists	Physiotherapists
Dietitians/Nutritionists	Registered Nurses
Engineers	Teachers
Lawyers	Veterinarians
Occupational Therapists	

A note on **regulated occupations**: Occupations that are regulated either by the provinces or by professional associations are generally regulated because they have a responsibility either for public health or to protect consumers/clients. For this reason, educational and any additional requirements are clearly defined and licensure cannot be obtained unless requirements are clearly met.

For the regulated occupations selected for this study, detailed occupational requirements are in Appendix I. Some nationally regulated occupations have been excluded from the study due to small numbers of immigrants studying and/or working in those fields.

While a small number of the Canadian-born may have studied abroad (fewer than 150,000 out of over 3 million), these people have been left in the Canadian-born group since they are few in number and do not affect the overall results.

The main indicator employed in this study is the '**match rate**'—the total number of people working in the selected regulated occupations divided by the total number of employed people from the fields of study that would typically lead them to work in those occupations.¹ (See Appendix II for a list of the fields of study that constitute a match with NOC occupations as defined by Human Resources and Skills Development Canada.)

Table 2 University graduates of fields leading to regulated occupations, by location of study

	Canadian-born	Immigrants		Canadian-born	Immigrants	
		Studied in Canada	Studied outside Canada		Studied in Canada	Studied outside Canada
Field of study	1,207,220	208,675	403,910	100	100	100
Architecture	16,390	4,140	11,115	1	2	3
Accounting	100,235	27,220	40,050	8	13	10
Chiropractics	6,455	450	420	1	0	0
Dentistry	12,965	3,770	5,735	1	2	1
Diet/Nutrition	4,630	635	720	0	0	0
Engineering	209,300	74,440	211,825	17	36	52
Law	96,865	10,955	18,165	8	5	4
Occupational therapy	10,550	1,115	810	1	1	0
Optometry	3,350	340	440	0	0	0
Pharmacy	23,295	4,965	8,890	2	2	2
Medicine	36,050	9,405	19,980	3	5	5
Physiotherapy	14,190	1,725	2,880	1	1	1
Nursing	101,210	13,225	19,030	8	6	5
Teaching	563,945	55,150	60,710	47	26	15
Veterinary medicine	7,790	1,140	3,140	1	1	1

Source: Statistics Canada, Census of Population, 2006.

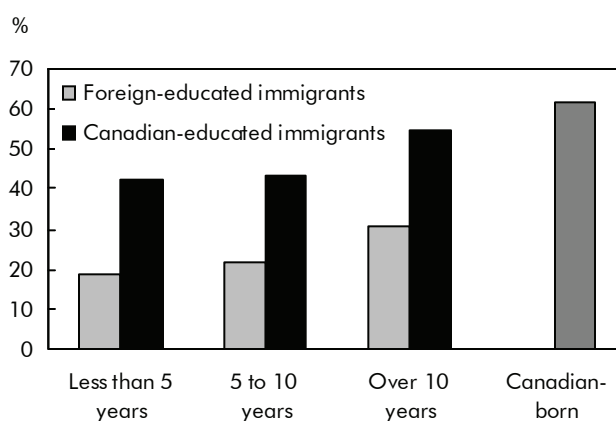
Engineering graduates most numerous among immigrants

In 2006, the field of study distribution differed between immigrants and those born in Canada. Among immigrants from a field of study that typically leads to a regulated occupation, over one-half (52%) of foreign-educated graduates had engineering degrees (Table 2). Among the Canadian-born, education was the number one field of study (47%), while engineering was the second at 17%.

Foreign-educated immigrants less likely to work in their fields of study

Foreign-educated immigrants with fields of study that typically lead to regulated professions were less likely to work in these professions compared to the Canadian-born. Among those employed in 2006, 62% of the Canadian-born were working in the regulated profession for which they trained compared to only 24% of foreign-educated immigrants.

Both the length of time spent living in Canada and where they studied had an impact on immigrants' ability to find work in the regulated profession for which they studied. In 2006, regardless of how long immigrants had been in Canada, those who had studied in

Chart A Match rates by immigrant type, location of study and period of landing

Source: Statistics Canada, Census of Population, 2006.

Canada had much higher match rates than immigrants who had studied abroad (Chart A). Those who landed in Canada in 1996 or earlier and held a Canadian degree had match rates that were twice as high as their

foreign-educated counterparts. In fact, with more time in Canada, the match rates for both foreign- and Canadian-educated immigrants increased.

While the differences in match rates between Canadian- and foreign-educated immigrants with the same landing period show that Canadian-educated immigrants do not face the obstacle of foreign credential recognition (and are less likely to have foreign work experience), they also reflect other factors. For example, the differences might also indicate that these immigrants are more likely to speak an official language with greater ease, have more knowledge of the Canadian labour market, and have more established networks through which to find employment.

To focus on the recognition of foreign credentials, immigrants who obtained their university degrees in Canada have been excluded from the sample for the remainder of the study.

Foreign-educated immigrants less likely to find work in their trained professions

Canadian-born and foreign-educated immigrants in regulated health occupations generally had the highest match rates (Table 3). These included medicine, occupation therapy, chiropractics and nursing. While these fields had high match rates for the Canadian-born, the same was not always true for foreign-educated immigrants. Immigrants who trained as chiropractors had a match rate that was comparable to the Canadian-born match rate (84% versus 87%). Immigrants who trained as nurses and occupational therapists had match rates that were lower than that for their Canadian-born counterparts, (56% versus 73% for nurses and 65% versus 82% for occupational therapists), but nevertheless had some of the highest match rates among foreign-educated immigrants.

Among the health professions, veterinary medicine had one of the lowest match rates for immigrants—29%, compared to 83% for the Canadian-born. Of the Canadian-born who studied dentistry, 82% worked as dentists compared to 44% of immigrants.

Immigrants who studied law outside Canada had the lowest match rates of all fields of study leading to a regulated occupation. While 69% of the Canadian-born who studied law worked as lawyers, the corresponding figure was 12% for immigrants, making the Canadian-born with law degrees almost 6 times as likely as immigrants to be working as lawyers.

Table 3 Match rates of employed foreign-educated immigrants working in the corresponding occupation, by immigrant type

	Canadian-born		Foreign-educated immigrants	
	Total	Match rate	Total	Match rate
		%		%
Field of study	937,050	62	284,080	24
Chiropractics	5,745	87	345	84
Occupational therapy	9,345	82	560	65
Medicine	31,040	92	12,865	56
Nursing	78,880	73	13,150	56
Pharmacy	18,760	84	6,020	45
Dentistry	12,310	82	2,165	44
Physiotherapy	10,465	90	3,750	44
Optometry	2,760	95	340	38
Veterinary medicine	6,580	83	2,225	29
Architecture	13,860	56	7,695	26
Teaching	85,410	50	29,445	24
Diet/Nutrition	408,795	62	35,860	20
Accounting	3,225	60	435	20
Engineering	167,260	42	157,930	19
Law	82,615	69	11,295	12

Source: Statistics Canada, Census of Population, 2006.

Engineering was the most common field of study in a regulated occupation for immigrants. Of the 157,900 immigrants who studied engineering and were employed, 30,000 were working as engineers, a match rate of 19%. Slightly more Canadian-born graduates studied engineering (167,300), with a match rate more than double that of immigrants (42%).

While 92% of the Canadian-born who studied medicine were working as doctors in 2006, immigrants with the same field of study were less likely to be working as doctors (56%).

Match rates by province

While match rates among the Canadian-born were similar from province to province, match rates for foreign-educated immigrants were more varied (Table 4). The provincial match rates for the Canadian-born fell between 59% and 65%, while for immigrants they ranged from a low of 19% in Quebec to a high of 60% in Newfoundland and Labrador.

Table 4 Match rates of foreign-educated immigrants working in the corresponding occupation, by immigrant type and province

	Canadian-born	Foreign-educated immigrants
	%	
Province		
Newfoundland and Labrador	63	60
Prince Edward Island	63	37
Nova Scotia	60	40
New Brunswick	62	37
Quebec	59	19
Ontario	62	24
Manitoba	65	26
Saskatchewan	61	38
Alberta	62	31
British Columbia	62	22

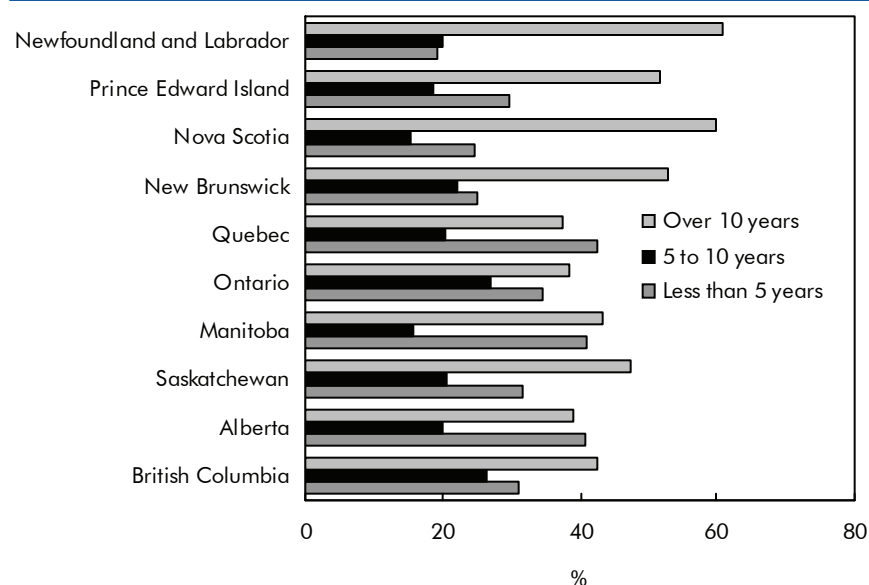
Source: Statistics Canada, Census of Population, 2006.

Foreign-educated immigrants living in Canada's most popular immigrant destinations (Ontario, British Columbia and Quebec) had the lowest match rates. Immigrants in Quebec were the least likely to find a career match in their field of study, with 19% of immigrants working in the regulated occupation most commonly associated with their field of study. British Columbia was next with a match rate of 22%, and Ontario's rate was 24%. In all of these provinces, the match rates for immigrants were less than one-half the match rates of the Canadian-born in their respective provinces.

Newfoundland and Labrador had the highest match rate for immigrants at 60%, three percentage points behind the Canadian-born in the province. However, their numbers were small: 605 in total.

While the mix of fields of study can have an impact on overall provincial match rates, other factors, like distribution of immigrants by period of landing, could also affect overall match rates. More specifically, provinces with higher concentrations of more recent immigrants could have lower match rates than those with higher concentrations of immigrants who have been in Canada for longer than 10 years since more recent immigrants are less likely to be working in the regulated occupation for which they trained.

Quebec, with the lowest match rate, also had the highest proportion of immigrants who had studied for regulated occupations (42%) and landed after 2001 (Chart B). Elsewhere the results were less clear cut. In general, the Atlantic provinces had higher proportions of immigrants who had landed prior to 1996. Match rates for immigrants were also above the national average in Saskatchewan and Alberta, regions that had strong labour markets in 2006. Ontario's match rate for foreign-educated immigrants mirrored the national average at 24%. In contrast, Quebec and British Columbia had match rates that were below the national average.

Chart B Proportion of employed immigrants who studied for work in regulated occupations, by province and time since landing

Source: Statistics Canada, Census of Population, 2006.

Immigrants with the highest match rates studied in countries with similar education systems and language of instruction as Canada

Immigrants with the highest match rates studied in English-speaking countries, the official language spoken by the majority of Canadians. In fact, these immigrants had very similar match rates to the Canadian-born. Immigrants who studied in Ireland, New Zealand and South Africa had match rates that were similar to the 62% rate for the Canadian-born, while the match rate for all immigrants was 24%. Immigrants from Australia and the United Kingdom also had match rates that were well above the average (Table 5).

Table 5 Highest match rates by country where degree earned¹

	Foreign-educated immigrants	Match rate
Country where immigrants' highest degree earned		%
Ireland	810	59
New Zealand	575	57
Republic of South Africa	3,790	56
Australia	2,105	50
United Kingdom	17,975	44
Jamaica	605	41
Trinidad and Tobago	270	41
Israel	1,145	39
United States of America	22,225	39
Hungary	790	36

1. Includes only countries of highest degree with at least 200 immigrants who have a field of study that would typically lead them to work in a regulated occupation.

Source: Statistics Canada, Census of Population, 2006.

Table 6 Lowest match rates by country where degree earned

	Foreign-educated immigrants	Match rate
Country where immigrants' highest degree earned		%
Ukraine	6,995	14
Algeria	2,750	13
Cuba	1,020	12
South Korea	5,835	12
Haiti	555	12
El Salvador	645	12
Belarus	1,050	10
Morocco	720	9
Republic of Moldova	585	9
Kazakhstan	740	7

Source: Statistics Canada, Census of Population, 2006.

At the other end of the spectrum, immigrants with the lowest match rates often obtained their degrees in developing countries (Table 6). Immigrants who studied in Kazakhstan had the lowest match rate, with 7% working in the associated regulated occupation.

What are the actual occupations of the unmatched?

The unmatched are university graduates who studied for a regulated occupation but are employed in a different occupation. Based on match rates of 62% for the Canadian-born and 24% for all immigrants, there remains a substantial fraction of both groups who were unmatched. In total, in 2006 there were approximately 365,000 Canadian-born graduates and

216,000 foreign-educated immigrants who were working in occupations to which their studies would not typically lead.

The top two occupations held by unmatched immigrants in 2006 were in professional occupations in natural and applied sciences, followed by technical occupations related to natural and applied sciences, and accounting for 33% of unmatched immigrants (Table 7).

The next two occupations were clerical and sales and service occupations. Twenty-six percent of unmatched immigrants were working in these occupations, which would not normally require a degree.

Among the Canadian-born, the most common occupations among the unmatched in 2006 were 'other managers' (which includes managers outside senior management), followed by teachers and professors. Clerical occupations were in the top 10 for unmatched Canadian-born graduates, with 6% of the Canadian-born falling here. Unmatched immigrants, however, were even more likely to work in clerical occupations, with 16% holding clerical jobs. Sales and service occupations accounted for less than 1% of positions among the Canadian-born working outside their field of study compared to 10% for immigrants.

Thus it appears a much higher proportion of highly qualified immigrants than Canadian-born graduates are working in occupations requiring less education than they have acquired. This hypothesis can be addressed more directly by assigning skill levels to occupations (see, for example, Galarneau and Morissette 2008).

Table 7 Actual occupations of immigrants with degrees related to regulated occupations, by immigrant type (unmatched)

Rank		Unmatched immigrant	
		Total	%
1.	Professional occupations in natural and applied sciences	20,460	17
2.	Technical occupations related to natural and applied sciences	19,105	16
3.	Clerical occupations	18,540	16
4.	Sales and service occupations	11,545	10
5.	Specialist managers	9,815	8
6.	Other managers, not elsewhere classified	8,785	7
7.	Teachers and professors	7,975	7
8.	Managers in retail trade, food and accommodation services	7,655	7
9.	Assemblers in manufacturing	7,215	6
10.	Machine operators in manufacturing	6,305	5

Source: Statistics Canada, Census of Population, 2006.

Are the unmatched Canadian-born more likely to work in highly skilled jobs than unmatched immigrants?

The Department of Human Resources and Skills Development's National Occupational Classification System (NOC) not only classifies occupations, but also includes a skill level associated with each of its occupations. There are four main skill levels: university degree; college or apprenticeship training; high school; and short-work demonstration (for example, a demonstration on how to operate a cash register or how to serve food to customers). University graduates who are working in occupations that require less than a university education are considered 'overqualified' for their positions.

Since all people in the sample have university degrees, the percentage of those working in occupations requiring less than university is the overqualification rate. In 2006, 57% of unmatched Canadian-born graduates were overqualified compared to 77% of immigrants (Table 8).

Table 8 Distribution of unmatched university degree holders

Skill level usually required by occupation	Canadian-born	Immigrants
	%	
University degree (any level)	43	23
College or apprenticeship training	34	35
High school	19	31
Short-work demonstration	4	11
Overqualification rate	57	77

Source: Statistics Canada, Census of Population, 2006.

When it came to working in an occupation that required no formal education (known as a short-work demonstration), unmatched immigrants were almost three times as likely to be in these occupations. While 11% of unmatched immigrants were working in these types of jobs in 2006, this was the case for 4% of the unmatched Canadian-born.

Summary

This study found that, in 2006, immigrants who studied for a regulated occupation outside Canada were less likely to be working in that occupation compared to both immigrants who studied in Canada and those who were born in Canada.

In 2006, there were 284,000 employed foreign-educated immigrants from fields of study that would normally lead to work in a regulated occupation. Of this number, 24% were working in their trained professions. In contrast, 163,000 Canadian-educated immigrants studied for work in a regulated occupation, with a match rate of 53%. The match rate among the Canadian-born was 62%.

While foreign-educated immigrants were less likely to work in the regulated occupations for which they held degrees, this discrepancy narrowed with time spent in Canada. However, even after 10 years in Canada, foreign-trained immigrants trailed the match rate of the Canadian-born by 27 percentage points, while Canadian-educated immigrants trailed by 6 percentage points.

The match rate also varied by regulated occupation for which an individual had studied. Immigrants with fields of study in health professions had higher match rates than those who studied to be teachers, engineers and lawyers. While match rates for foreign-educated doctors and nurses were both 56%, the rate was much lower for those who studied teaching (24%), and was lower still for those who studied engineering (the most common field of study among foreign-educated immigrants) at 19%. Immigrants who were law graduates had the lowest match rate of all fields of study at 12%.

On a provincial level, match rates were highest for immigrants in the East, particularly in Newfoundland and Labrador (with rates similar to the Canadian-born). Match rates for immigrants were also above the national average in Saskatchewan and Alberta, regions that had strong labour markets in 2006. In contrast, Quebec and British Columbia had match rates that were below the national average, while Ontario's match rate mirrored the national average.

Foreign-educated immigrants who were not working in the regulated occupation typically associated with their field of study were often working in professional occupations in natural and applied sciences and technical occupations related to natural and applied sciences. However, large shares of these immigrants were also working in clerical occupations and sales and service occupations despite their high levels of educational attainment.

While all of the unmatched foreign-educated immigrants in the study had university degrees that could

Table 9 Match rates, immigrants, by country where degree earned

	Total	Match rate		Total	Match rate
Country of highest degree		%	Country of highest degree (concluded)		%
Ireland (Eire)	810	59	Bangladesh	1,840	23
New Zealand	575	57	Venezuela	850	22
Republic of South Africa	3,790	56	Jordan	300	22
Australia	2,105	50	Argentina	1,140	21
United Kingdom	17,975	44	India	25,915	21
Jamaica	605	41	Armenia	235	21
Trinidad and Tobago	270	41	Lebanon	1,985	21
Israel	1,145	39	Congo, Democratic Republic	285	21
United States of America	22,225	39	Slovakia	975	21
Hungary	790	36	Turkey	1,290	21
Kenya	365	36	Iraq	1,930	21
Hong Kong, Special Administrative Region	1,810	34	Pakistan	8,230	21
Netherlands	1,040	33	Syria	970	21
Nigeria	935	33	Brazil	1,015	20
Sweden	385	32	Taiwan	2,560	20
Belgium	760	32	Philippines	39,455	19
Egypt	5,525	30	Thailand	345	19
Croatia	815	30	Japan	1,360	19
Poland	7,995	30	Bulgaria	2,120	18
Serbia and Montenegro	2,200	30	Colombia	3,115	18
Czech Republic	970	29	Viet Nam	1,330	17
Yugoslavia, n.o.s.	2,400	29	Peru	1,275	17
Greece	210	29	Latvia	365	16
Singapore	405	28	Indonesia	405	16
Bosnia and Herzegovina	1,585	27	Mexico	2,090	16
Chile	785	27	Sudan	360	15
Iran	6,705	27	People's Republic of China	32,505	15
France	4,750	26	Russian Federation	10,440	15
Italy	700	26	Albania	1,505	15
Sri Lanka	1,435	25	Ukraine	6,995	14
Germany	2,530	24	Algeria	2,750	13
Guyana	330	24	Cuba	1,020	12
Romania	13,860	24	South Korea	5,835	12
Switzerland	520	24	Haiti	555	12
Macedonia	455	23	El Salvador	645	12
			Belarus	1,050	10
			Morocco	720	9
			Republic of Moldova	585	9
			Kazakhstan	740	7

Source: Statistics Canada, Census of Population, 2006.

lead to work in a regulated occupation, many of them had considerably more education than what would normally be required for the jobs they did find in 2006. While 57% of the unmatched Canadian-born were overqualified, this was the case for 77% of unmatched immigrants. Foreign-educated immigrants were also more commonly found in low-skill

jobs. In 2006, 11% of foreign-educated immigrants were working in occupations whose skill level required a short-work demonstration and no formal education compared to just 4% of the Canadian-born.

Overall, these results accord with studies that point to some barriers for foreign-trained immigrants intending to work in their chosen occupations in Canada. Results from a survey of Canadian employers by the Public Policy Forum showed that many employers make their hiring decisions based on their perception that the credentials or experience are not equivalent without verifying them (Public Policy Forum 2004). The survey also indicated that many employers—particularly employers in regulated occupations—did not value foreign work experience as much as Canadian work experience. Other research indicates that the lower valuation placed on the foreign work experience of immigrants plays a role in the immigrant-native earnings gap (Green and Worswick 2002).

Perspectives

Notes

1. Match rates among immigrants are related to a number of factors that are beyond the scope of this study: foreign credential recognition, recognition of foreign work experience, personal characteristics, labour market conditions, and personal choices (for example, the desire to re-qualify for a regulated occupation in Canada).

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Appendix I Employment requirements among NOC occupations regulated in all Canadian provinces¹

Regulated occupation	Employment requirements
Architects	<ul style="list-style-type: none"> • A bachelor's degree from an accredited school of architecture or Completion of the syllabus of studies from the Royal Architectural Institute of Canada (RAIC) is required. • A master's degree in architecture may be required. • Completion of a three-year internship under the supervision of a registered architect is required. • Completion of the architect registration examination is required. • Registration with the provincial association of architects in the province of work is required. <p>Landscape architect:</p> <ul style="list-style-type: none"> • A bachelor's degree in landscape architecture is required. • A master's degree in landscape architecture may be required. • In Ontario and British Columbia, landscape architects require a two-year internship and the successful completion of a provincial registration exam. • In the remaining provinces and territories, landscape architects usually require two years of landscape design experience and an interview by their respective provincial associations to receive association certification.
Accountants	<ul style="list-style-type: none"> • Chartered accountants require a university degree and completion of a professional training program approved by a provincial institute of chartered accountants and, depending on the province, either two years or 30 months of on-the-job training and membership in a provincial Institute of Chartered Accountants upon successful completion of the Uniform Evaluation (UFE). • Certified general accountants and certified management accountants require a university degree and completion of a training program approved by the Society of Certified General Accountants or Society of Management Accountants and several years of on-the-job training and certification by the Certified General Accountants Association or the Society of Management Accountants. • Auditors require education, training and recognition as indicated for chartered accountants, certified general accountants or certified management accountants and some experience as an accountant. • Auditors may require recognition by the Institute of Internal Auditors. • To act as a trustee in bankruptcy proceedings, auditors and accountants must hold a licence as a trustee in bankruptcy. • Licensing by the provincial or territorial governing body is usually required for accountants and auditors practising public accounting.

Additional information:

- There is limited mobility among the three professional accounting designations (CA, CGA and CMA).
- Progression to auditing or accounting management positions is possible with experience.

Chiropractors

- A minimum of two years of university undergraduate studies in sciences and completion of a four- or five-year program at an institution accredited by the Accreditation Commission of the Council on Chiropractic Education and completion of the examinations of the Canadian Chiropractic Examining Board and of the provincial licensing body are required.
- Licensure by a regulatory body is required in all provinces and in the Yukon.

Dentists

- One to four years of pre-dentistry university studies, or, in Quebec, completion of a college program in sciences and a university degree from a recognized dental program are required.
- Licensing by a provincial or territorial regulatory body is required.
- Dentists in general practice can move into a specialized practice through advanced training.
- Licensing for specializations is required.

Dietitians/Nutritionists

- Dietitians require a master's or bachelor's degree in dietetics, nutrition or a related field such as food and nutritional science or biochemistry and approximately 40 weeks of supervised practicum training.
- Registration with a regulatory body is required in all provinces for dietitians.
- Membership in the national association, Dietitians of Canada, may be required for dietitians to practise.
- Nutritionists usually require the same education and training as dietitians.
- Registration with a regulatory body is required for nutritionists in British Columbia, Alberta, Quebec and (as a registered dietitian-nutritionist) New Brunswick.
- Membership with the national association, Dietitians of Canada, and/or a provincial regulatory body is available for nutritionists who have the same education and practicum training as dietitians.

Engineers

- A bachelor's degree in civil engineering or in a related engineering discipline is required.
- A master's degree or doctorate in a related engineering discipline may be required.
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practise as a Professional Engineer (P.Eng.).
- Engineers are eligible for registration following graduation from an accredited educational program, and after three or four years of supervised work experience

in engineering and passing a professional practice examination.

Additional information:

- There is considerable mobility between civil engineering specializations at the less senior levels.
- Engineers often work in a multidisciplinary environment and acquire knowledge and skills through work experience that may allow them to practise in associated areas of science, engineering, urban planning, sales, marketing or management.
- Supervisory and senior positions in this unit group require experience.

Lawyers

Lawyers:

- Two to three years of undergraduate studies or, in Quebec, completion of college program and a bachelor's degree from a recognized law school and successful completion of the bar examination and completion of a period of articling are required.
- Licensing by the provincial or territorial law society is required.

Notaries (Quebec):

- A bachelor's degree from a recognized law school and a Diploma of Notarial Law (D.D.N.) or a master's degree of law with specialization in notarial law and a 32-week vocational training program are required.
- Registration with the Corporation of Notaries is required.

Additional information:

- Lawyers wishing to practise in another province may be required to pass examinations set by the provincial law society.

Judges:

- Extensive experience as a lawyer or as a professor of law with continuous membership in the bar association is usually required.
- Membership in good standing with a provincial or territorial law society or bar association is required.
- Judges are appointed by federal or provincial cabinet.
- Those appointed to more senior positions in a court, such as chief justice, usually have experience as judges in that court.

Occupational Therapists

- A university degree in occupational therapy including supervised fieldwork is required or graduation from an occupational therapy program approved by the World Federation of Occupational Therapists (WFOT) is accepted in some provinces.
- Completion of the national certification examination may be required.
- Licensure with a regulatory body is required in all provinces.
- Membership in the national association, Canadian Association of Occupational Therapists, is required in some provinces.

- Occupational therapists may obtain expertise in a particular area through additional training or experience.

Optometrists

- One to three years of college or university, with a concentration in mathematics and science courses and a four-year university program in optometry are required.
- Licensing by the provincial or territorial regulatory governing body is required.

Pharmacists

- A bachelor of science degree in pharmacy is required.
- Pharmacists also require practical training under the supervision of a pharmacist.
- Licensure is required in all provinces and territories for community and hospital pharmacists.

Doctors

General practitioners and family physicians:

- A bachelor's degree or In Quebec, completion of a college program and one year of pre-medicine university studies is usually required.
- Graduation from an approved medical school and two to three years of family medicine residency training are required.
- Completion of the qualifying examinations of the Medical Council of Canada and licensing by the provincial or territorial licensing authority are required.

Additional information:

- General practitioners and family physicians may become specialist physicians with additional training.

Specialist physicians:

- A bachelor of science degree or, in Quebec, completion of a college program and one year of pre-medicine university studies is usually required.
- Graduation from an approved medical school and specific specialty training are required.
- Completion of the certifying examinations of the Royal College of Physicians and Surgeons of Canada and licensing by the provincial or territorial licensing authority are required.

Specialists in clinical medicine:

- Four to five years of specialty residency training are required.
- Two years of subspecialty training may also be required.

Specialists in laboratory medicine:

- Four to five years of specialty residency training are required.

Specialists in surgery:

- Five to six years of specialty residency training are required.
- Two years of subspecialty training may also be required.

Additional information:

- Progression to management positions, such as director of laboratory medicine or

chief of surgery, is possible with experience.

Physiotherapists

- A university degree in physiotherapy and a period of supervised practical training are required.
 - A licence or registration with a regulatory body is required to practise physiotherapy in all provinces.
 - Completion of the Physiotherapy National Exam, administered by the Alliance of Physiotherapy Regulatory Boards, may be required.
-

Registered Nurses

Head nurses:

- Completion of a university, college or other approved registered nursing program is required.
- Courses in management studies such as the Nursing Unit Administration Course offered by the Canadian Hospital Association or other degree, diploma, certificate or studies in management or administration may be required.
- Registration as a registered nurse by a provincial or territorial regulatory body or, in Manitoba, Saskatchewan, Alberta and British Columbia, provincial registration as a registered psychiatric nurse is required.
- Clinical experience as a registered nurse is required.

Registered nurses:

- Completion of a university, college or other approved registered nursing program is required.
- Additional academic training or experience is required to specialize in a specific area of nursing.
- A master's or doctoral degree in nursing is usually required for clinical nurse specialists, clinical nurses, nursing consultants and nursing researchers.
- Registration with a regulatory body is required in all provinces and territories.

Nurse practitioners:

- A master's degree in nursing, or a nursing program or other advanced nurse practitioner diploma program is required.
- Registration with a regulatory body is required in all provinces and territories.
- In Ontario, successful completion of the Extended Class Registration Examination (ECRE) is required for registration as Registered Nurse in the Extended Class RN(EC).

Registered psychiatric nurses:

- Completion of a university or college registered psychiatric nursing program is required.
- Registration with a regulatory body is required in Manitoba, Saskatchewan, Alberta and British Columbia.

Additional information:

- Nurses trained exclusively as registered psychiatric nurses (RPN) are regulated in

Manitoba, Saskatchewan, Alberta and British Columbia. In all other provinces and territories, registered nurses (RN) may work as psychiatric nurses without separate registration.

- Registered nurses may progress to supervisory and managerial positions with experience.

Teachers

Secondary school teachers:

- Teachers of academic subjects require a bachelor's degree in education which is often preceded by a bachelor's degree in the arts or sciences.
- Teachers of vocational or technical subjects require a bachelor's degree in education which is usually preceded by specialized training or experience in the subject.
- Instructors of trades in Quebec require completion of an apprenticeship training program and industry or trade certification.
- Department heads usually require several years of teaching experience.
- To specialize in special education or English or French as a second language, additional training is required.
- A provincial teaching certificate is required.

Elementary school teachers:

- A bachelor's degree in education is required.
- Additional training is required to specialize in special education or second- language instruction.
- A provincial teaching certificate is required. Additional certification is required to teach English or French as a second language.

Veterinarians

- Two to four years of pre-veterinary university studies or, in Quebec, completion of a college program in health science and a four-year university degree in veterinary medicine and completion of national certification examinations are required.
- Provincial licensing is required.
- Entry into research positions may require postgraduate study.

1. HRSDC National Occupational Classification (NOC) manual.

Appendix II Criteria for 'match,' National Occupational Classification (NOC) code and field of study (Classification of Instructional Programs [CIP] code) concordance

Occupations	NOC	CIP CODE(S)
Architects	2151, 2152	81, 85
Certified General Accountants	1111	1187-1192
Certified Management Accountants	1111	
Chartered Accountants	1111	
Chiropractors	3122	971
Dentists	3113	977-989
Dieticians/Nutritionists	3132	1148, 1149
Civil, electric and electronics, mechanical, chemical, industrial and manufacturing, metallurgical and materials, geological, petroleum, aerospace, computer, and other professional engineers	2131-2134, 2141-2148	310-351
Lawyers	4112	524-536
Occupational therapists	3143	1120
Optometrists	3121	1089
Pharmacists	3131	1096
Physicians	3111, 3112	1059
Physiotherapists	3142	1122
Registered Nurses	3151, 3152	1071-1083, 1085-1088
Elementary school and kindergarten teachers	4142	216-302
Secondary school teachers	4141	
Veterinarians	3114	1128-1140