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English-French Bilingualism Outside Quebec.

An Economic Portrait of Bilinguals in Canada



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English-French Bilingualism Outside Quebec: An Economic Portrait of Bilinguals in Canada

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Preface

This report provides an economic portrait of English-French bilingual workers in Canada outside Quebec, using data from the 2006 and 2016 Canadian censuses. The main indicators used to create this portrait were geographic distribution, level of education, employment by industry, and income. A customized survey was developed and carried out to complement the census data. We also gauged the contribution that bilinguals make to the gross domestic product by industry and by province.

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EXECUTIVE SUMMARY

English-French Bilingualism Outside Quebec: An Economic Portrait of Bilinguals in Canada

At a Glance

- Canada is unique as a bilingual nation, in that both of its official languages—French and English—are deeply rooted in the origins and identity of the country.
- Bilingual workers tend to occupy well-paying jobs and generally receive higher wages than their unilingual colleagues.
- Bilingual workers generate 10 per cent of Canadian GDP outside Quebec.
- This report confirms that, even outside Quebec, being bilingual is a big plus in the Canadian labour market.

Canada is unique as a bilingual nation, in that both of its official languages—French and English—are deeply rooted in the origins and identity of the country. However, while Canada at the national level is officially bilingual, the rate of bilingualism varies greatly from one province to another. These two languages clearly symbolize a duality that is ubiquitous in Canada’s culture, its values, and its public policy.

In North America, francophones make up a small minority of the total population. Given that situation, it is not surprising that mainly French-speaking Quebec has the most bilingual population in Canada. And where two languages exist, the benefits of learning the language of the majority are well documented by many Canadian and international studies. Again, unsurprisingly, it is also in Quebec that debates about the place and role of bilingualism in Canada often receive the most attention.

It is therefore interesting to look at the other side of the coin—in other words, to examine bilingualism in Canada outside Quebec. This report provides an economic portrait of bilingual (French-English) individuals in Canada outside Quebec and seeks to quantify the footprint and contribution to the economy of these bilingual Canadians. We begin with a review of the literature, followed by an economic portrait of bilinguals, using data from the 2006 and 2016 Canadian censuses. Next, we add the results of a survey, created by The Conference Board of Canada and carried out by Léger, of 1,000 bilingual workers outside Quebec. Finally, we use a methodology developed at the Conference Board to estimate the contribution of bilingual workers to Canada’s gross domestic product, by industry and by province.

Portrait of Bilinguals in Canada

The literature review shows us that in the Canadian labour market there are indeed advantages to being bilingual. In particular, the studies we looked at show that bilingual workers tend to occupy well-paying jobs

The majority of respondents have a generally positive view of the effects of bilingualism on the labour market.

and generally receive higher wages than their unilingual colleagues. However, the studies also make it clear that bilingualism, in of itself, is not the sole reason behind higher revenues. Rather, bilingual individuals are better positioned to obtain jobs in certain sectors that are better paid, such as in the public service or in management. Moreover, these studies lead us back to the idea that while bilingualism is not necessarily a skill that has additional value in the labour market, it is an indicator of the presence of valued productive characteristics, such as perseverance and adaptability. This does not mean that unilingual individuals do not possess these characteristics, only that bilingualism can be indicative of those characteristics that are otherwise difficult to observe.

Canadian census data point in the same direction. The data show that bilingual Canadians outside Quebec tend to stay in school longer and to be more likely to obtain university degrees than the general population or unilingual Canadians. We also find that bilingual workers tend to earn higher incomes and are more likely to be active in the labour market. Moreover, bilingual workers are employed mainly in the service-producing industries—particularly in public administration, educational services, health care, and professional, scientific, and technical services. The first three—public administration, educational services, and health care—are among the largest employers of bilingual workers in every province.

The results of the Conference Board survey largely corroborate what census data illustrate, and confirm the themes identified in the literature review. In addition, the survey allows us to understand the value that respondents attach to bilingualism. For example, the majority of respondents have a generally positive view of the effects of bilingualism on the labour market and believe that being bilingual allows them to advance further in their careers and obtain higher wages. Respondents also said that their bilingualism gives them more job opportunities in their field of work. Finally, we note that the majority of bilinguals who responded to the survey (59.5 per cent) learned English first.

Bilingualism and Economic Production

The last chapter of the report uses a methodology developed by the Conference Board to estimate the economic contribution of bilingual

Canadians outside of Quebec. In fact, we estimate the contribution of bilingual workers to gross domestic product (GDP) by industry and by province. We find that bilingual workers outside Quebec generate 10 per cent of Canadian GDP outside Quebec. In addition, we find that bilinguals generate around 20 per cent of GDP in educational services and in public administration outside Quebec. However, it is in the finance, insurance, and real estate industry that bilinguals create the most wealth in dollar terms, with their contribution to GDP approaching \$31 billion. Another interesting result emerges when looking at GDP at the provincial level. The work of bilinguals accounts for 38 per cent of New Brunswick's GDP and around 12 per cent of GDP in Ontario, Nova Scotia, and Prince Edward Island. Finally, we also examine GDP per capita, which is a measure of our standard of living. We find that the per capita GDP of bilinguals is higher than that of unilingual anglophones in all provinces except Alberta and Saskatchewan.

Conclusions

This report confirms that, even outside Quebec, being bilingual is a big plus in the Canadian labour market. While it is intuitively more advantageous to learn the language of the majority than learning the language of the minority, learning French in Canada outside of Quebec is closely linked to success in the job market. Knowing the second language does not on its own explain the success of bilingual individuals. But the data show that bilinguals tend to study longer, are able to obtain better-paying jobs, and contribute significantly to the economy.

The fact that proficiency in both official languages is imperative for some positions in the federal public service explains, in part, these results. However, bilinguals are also able to better position themselves in the private sector, particularly in management positions and professional services. It is true that the census and survey data used here are self-reported by respondents and therefore do not take into account the quality of the respondents' bilingualism or degree of fluency in the second official language. This, however, has very little influence on our results, since (as the literature review shows) it is not the use of the second language at work that is associated with better pay, but only the knowledge of this language.

Introduction

English-French bilingualism in Canada is unique, in that both languages are deeply rooted in the origins and identity of the country. Thus, bilingualism in Canada does not refer solely to proficiency in both official languages. The concept is also entwined in our culture, values, and public policy at all levels.

One particularity, however, is that the levels of bilingualism vary widely across Canada, even though the country is officially bilingual. Indeed, the largest share of bilinguals is found in Quebec, whereas very few are found in Saskatchewan or Newfoundland and Labrador. What is more, the only officially bilingual province is New Brunswick.

This situation, in which the country is officially bilingual but the bilingual population is not distributed evenly among the provinces and territories, and in which language also reflects values, culture, and identity, invariably leads to questions about the value of bilingualism and its role in the daily lives of Canadians and in our public policies. Numerous studies, reports, and analyses have focused on debates about official languages issues. Legislation has also been passed over the years on the status of English and French in the provinces, in government, and, in some cases, even in private enterprise.

Not surprisingly given the minority status of French in Canada and in North America, it is Quebec that has the most English-French bilinguals. The benefits of being able to speak the majority language are more obvious and tangible than those associated with knowledge of the minority language. Thus, it is also in Quebec that Canadian bilingualism is often studied or, at least, where language issues are of greater interest to the public.

Our main goal here, however, is to study English-French bilingualism outside Quebec. Specifically, we want to build an economic portrait of Canada's bilingual workers, including their level of education, income, and participation in the labour market, and the sectors of activity in which they are employed. In short, we want to get an idea of the extent and importance of bilingualism outside Quebec in the Canadian economy.

Not surprisingly given the minority status of French in Canada and in North America, it is Quebec that has the most English-French bilinguals.

We will thus be able not only to see the advantages (if any) of being bilingual, but also to understand the contribution that bilinguals outside Quebec make to the economy.

We begin this report with a brief review of the literature covering the economic advantages that bilinguals enjoy. The review is followed by an economic portrait of bilingual Canadians, based on data from the 2006 and 2016 Canadian censuses. To complement those data, we surveyed bilingual workers outside Quebec. The results of the survey, conducted by Léger, are presented in Chapter 3. Lastly, we use methodology developed by The Conference Board of Canada to estimate the contribution that bilinguals make to Canada's gross domestic product outside Quebec.

In the chapters that follow, the terms “bilingual” and “bilingualism” refer to individuals proficient in both of Canada's official languages—English and French. Note also that proficiency in the official languages is self-declared in the censuses conducted by Statistics Canada and the Léger survey. We thus have no control or indication as to the quality of individual bilingualism. Quantifying the quality of bilingualism would be a complex, and somewhat subjective, exercise.

CHAPTER 1

Literature Review

Chapter Summary

- Canadian studies show that there is a pay advantage to being bilingual, both in Quebec and in the rest of Canada.
- However, the advantage does not seem to be connected to the use of the second official language at work. This is particularly true in Canada outside Quebec. In other words, the bilingualism premium is attributable to other factors.
- Second-language proficiency could indicate to employers the existence of non-observable characteristics that have a positive impact on productivity, thereby justifying the salary gaps observed.

This chapter presents an overview of studies and other documents that examine the effects of bilingualism on individuals' prospects in the labour market. The first section contains a review of empirical research that studies the effects of bilingualism on the employment and salary prospects of individuals in Canada.

The following section contains various case studies on the advantages of bilingualism in Canada and a review of studies that explored other economic effects of bilingualism—in international trade and from employers' point of view, for example. Lastly, we briefly review the studies on the effects of bilingualism on the labour market outside Canada. Unless otherwise indicated, in this chapter the term “bilingual” means English-French bilingualism, regardless of the order in which the languages were learned.

1.1 Bilingualism and the Canadian Labour Market

This section explores studies that use empirical methods in attempting to quantify the effect of bilingualism on the Canadian labour market, particularly with respect to income and the existence or absence of what we call a “bilingualism premium.” It is true that income is but one aspect of language skills and their impacts on the labour market. Language skills can, in fact, influence the choice of occupation, job possibilities, and access to training. However, income represents a good starting point, since it likely reflects the effects of language on the other variables.

1.1.1 Christofides and Swidinsky

Louis N. Christofides and Robert Swidinsky have conducted a number of studies on various aspects of Canada's labour market, including studies of the economic variables and processes that determine employment income in Canada, participation in social well-being, the behaviour of the labour market, and the economic benefits of bilingualism. Two of their studies relate directly to the effects of bilingualism on earnings.

The first, published in 1998, used data from the 1971, 1981, and 1991 censuses to evaluate the impact of language skills on the annual earnings of Canadians.¹ The authors were particularly interested in the effect on earnings of the acquisition of a second language, such as English in Quebec or French in the rest of Canada, since the effects of the acquisition of a dominant language (as in the case of newcomers who do not speak the language of their host country) have already been studied thoroughly. The basic premise is that learning a second language is an asset in terms of human capital, as is longer schooling or the pursuit of more than one kind of training. Learning a second language should therefore have an impact on labour productivity, and thus on pay.

Using various econometric specifications, the authors concluded that the economic benefits of bilingualism (as measured by employment earnings), as compared with being a unilingual anglophone, increased between 1971 and 1991, both in Quebec and in the rest of Canada. However, unilingual and bilingual anglophone males in Quebec saw a decrease in their income by comparison with francophones in Quebec and anglophones in the rest of Canada.

Moreover, when the authors studied regional data on Canada outside Quebec, they found that the effect of bilingualism on men's earnings was felt only in Ontario and New Brunswick. For women, the effects of bilingualism outside Quebec are similar to those for men. Lastly, the authors concluded that the gains from bilingualism are higher for francophones in Quebec than they are for anglophones in the rest of Canada, which could be attributable to the minority situation of French in North America. All the results of this study are adjusted for professional

1 Christofides and Swidinsky, "Bilingualism and Earnings."

In Canada outside Quebec, bilingual women earned an average of 18.5 per cent more than unilingual women.

experience, the region of the country, urban–rural differences, marital status, level of education, occupational training, full-time worker status, occupation, industry, and worker category.

The second study by Christofides and Swidinsky, published in 2008, used the results from the previous study and looked at economic returns of the acquisition and use of a second official language in Canada.² Once again, it looked at knowledge of English as a second language in Quebec and knowledge of French as a second language in the rest of Canada, but it used more recent data. The authors were interested in francophones in Quebec who learn English and anglophones in the rest of Canada who learn French, because anglophones in Quebec and francophones in the rest of Canada are almost all bilingual.

This time, the authors also evaluated the effect of the use of the second language at work, something that had not been done before in the literature. Before this study, the data available did not indicate whether the second language learned was used at work. However, the 2001 census made it possible for the first time to know whether an individual was bilingual and to what extent their bilingualism was used at work. The objective was to determine whether the effects of knowledge of a second language on earnings reflected an individual's overall ability or were a direct consequence of the use of that language at work.

The study accordingly compared the earnings of unilingual individuals, the earnings of bilingual individuals who only use their mother tongue at work, and the earnings of bilingual individuals who did use both languages at work. For the rest of Canada, the sample selected by the authors was restricted to individuals whose mother tongue was English, who were born in Canada, were aged 15 to 64, self-identified as unilingual anglophones or English-French bilinguals, had at least a secondary school diploma or certificate, and worked full-time in 2000. For the sample in Quebec, the same restrictions were applied except for mother tongue, which had to be French, and the languages used, which had to be French only, or English and French.

2 Christofides and Swidinsky, *The Economic Returns to a Second Official Language*.

In this restricted sample, the average annual salary of bilingual men in Canada outside Quebec was 14.7 per cent higher than that of unilingual anglophone men. Moreover, at first glance, the use of French at work did not seem to be a requirement in order to secure this pay premium. In fact, bilingual men outside Quebec who used only English at work earned 15.2 per cent more than unilingual anglophone men. However, bilingual men working mainly in French earned 9.1 per cent less than their unilingual colleagues. The latter group included only a few observations, and most of such cases were probably unique. For women, the figures were similar. In Canada outside Quebec, bilingual women earned an average of 18.5 per cent more than unilingual women. Here, too, use of French was not a requirement in order to receive the higher pay. Bilingual women working only in English earned an average of 18.3 per cent more than unilingual women, while bilingual women working mostly in French earned 4.1 per cent more than unilingual women. Note that only 6.7 per cent of the sample of men in the rest of Canada were bilingual, compared with 8.7 per cent of the women. These figures contrast with those for Quebec, where 59.2 per cent of the men and 52.5 per cent of the women in the sample were bilingual.

After these initial observations—which did not account for professional experience, urban-rural differences, marital status, level of education, or region of the country (in the case of the sample for Canada outside Quebec)—the authors assessed the effects of knowledge and use of a second language, controlling for the factors mentioned above. In other words, the authors estimated the effects of bilingualism and its use at equal levels of education and experience, comparable urban–rural situation, and so on. They also made a separate assessment of the effects of bilingualism and its use, controlling for occupation and sector of activity.

Overall, the authors concluded that in Canada outside Quebec, with equal levels of education and experience and comparable geographic situations, and taking all the other factors into account, bilingual men using only English at work could expect average pay 3.8 per cent higher than that of unilingual anglophone men, while those who made frequent use of French at work could expect to be paid 5.4 per cent more than unilingual men. The authors took care to note that this gap might be

Language did not affect earnings in a given industry or occupation, but did affect the choice of industry and occupation.

the result of the learning of a second language or of non-observable characteristics, such as ability, family traits, and self-confidence, all of which could lead to better pay. The authors also noted that the difference in pay when French was used at work was not statistically significant—in other words, the use of French at work did not contribute more to employment earnings than the mere learning of French. When the authors controlled for occupation and sector of activity, they found no statistically significant effect of bilingualism on earnings.

Christofides and Swidinsky accordingly concluded that language did not affect earnings in a given industry or occupation, but did affect the choice of industry and occupation. This is reflected in the sample used, in which men with skills in French outside Quebec were over-represented in better-paid occupations and sectors of activity. For example, 22.7 per cent of bilingual men using only English at work were in management positions. Furthermore, 34.7 per cent of men in that group were in professional occupations. Of the bilingual men making frequent use of French at work, 29.3 per cent were in management positions and 30.6 per cent were in professional occupations. Average annual salaries in both types of employment were well above the overall average. By comparison, only 17.1 per cent of unilingual men were in management positions and 21.2 per cent were in professional occupations.

With respect to bilingual women in Canada outside Quebec, with all other factors constant, those who used only English at work were paid 6.6 per cent more than unilingual anglophones, while those who used French at work were paid 9.3 per cent more than unilingual women. On the other hand, the gap between the two bilingual groups was not statistically significant, and thus the use of French did not generate more financial benefits than mere knowledge of the language. Controlling for occupation and sector of activity, the authors found that while the premium for bilingualism still existed, it was reduced. Furthermore, in contrast to men, bilingual women outside Quebec (whether or not they used French at work) had access to better-paid jobs in the same occupation and sector of activity than unilingual women.

In Quebec, the authors found the expected results. The economic benefits of learning English in Quebec existed for both women and men, even when controlling for occupation and sector of activity. Moreover, using English at work widened the earnings gap, as compared with bilinguals who did not use English at work, and this was true for women as well as men. The authors believed that the gap was attributable not only to the use of English at work, but also to the fact that English was more in demand in Quebec than French was in the rest of Canada.

The authors concluded that because of the limited demand for French outside Quebec, the premium for bilingualism in the rest of Canada is related to the knowledge, rather than the use, of French. Knowledge of a second language could indicate to employers the existence of non-observable characteristics that have a positive impact on productivity, such as skill, perseverance, cognitive abilities, and quality of education.

1.1.2 Lévesque

Jean-Marc Lévesque³ also studied bilingualism and earnings, and he tried to evaluate the effect of language knowledge on differences in pay between bilingual and unilingual individuals in Canada. His study, based on 1986 census data, covered three urban centres—Montréal, Toronto, and Ottawa—Hull—due to the size of their bilingual populations. As with Christofides and Swidinsky, earnings differences between language groups in the three urban centres were attributable not just to language, but also to a set of other factors, including age, sex, level of education, field of study, and occupation. For example, the author noted that in the census results, the average earnings of workers under 35 were much lower than those of workers over 35. Thus, in Montréal, where unilingual anglophones were older than bilingual anglophones, the unilinguals earned more than the bilinguals—hence, the importance of separating the effects of language from the effects of other characteristics. In conclusion, the author noted that bilingual workers in Montréal and Ottawa—Hull had higher average salaries than unilingual workers, allowing for the effects of age, sex, level of education, occupation, and sector of activity. However, the analysis did not support a conclusion that

3 Lévesque, “Bilingualism and Earnings.”

Earnings were more sensitive to proficiency in the official languages in Quebec than elsewhere in Canada.

the gap was attributable to bilingualism, since it could result from other variables, such as experience, union membership, and field of study.

1.1.3 Other Empirical Studies

A fourth report reviewed here, an essay by Alex Armstrong,⁴ examined the financial returns to bilingualism in Canada. The emphasis was on identifying those groups of workers with the most to gain from being bilingual. The author sought to identify the industries and regions of the country in which it paid to be bilingual. As in the studies discussed above, the quality of bilingualism, or the degree of proficiency in the second official language, is subjective and difficult to measure. Consequently, it is ignored.

Among the results, the author noted that the premium for bilingualism was greater for women as a whole, and that workers in the public and private sectors (excluding education and health care) received a higher premium than those in education and health care. The author also concluded that earnings were more sensitive to proficiency in the official languages in Quebec than elsewhere in Canada. In other words, the author found that being bilingual had a positive effect on employment and earnings in Quebec, but that the effect was zero in the rest of Canada.

The literature does include other empirical studies designed to determine the economic benefits of language skills for Canadians. We do not discuss them here, either because they are already years old, or because they form the basis for the studies presented here and their conclusions are not essentially different. They include studies by Gilles Grenier and François Vaillancourt,⁵ Gilles Grenier,⁶ David E. Bloom and Gilles Grenier,⁷ François Vaillancourt,⁸ Barry R. Chiswick and Paul W. Miller,⁹ and Daniel M. Shapiro and Morton Stelcner.¹⁰

4 Armstrong, *The Returns to Bilingualism in the Canadian Labour Market*.

5 Grenier and Vaillancourt, *An Economic Perspective on Learning a Second Language*.

6 Grenier, "Earnings by Language Group in Quebec."

7 Bloom and Grenier, "Economic Perspective on Language."

8 Vaillancourt, "An Economic Perspective on Language and Public Policy."

9 Chiswick and Miller, "The Endogeneity Between Language and Earnings."

10 Shapiro and Stelcner, "Language and Earnings in Quebec."

According to a CCL study, the average salary for bilinguals in Canada outside Quebec is 15 per cent higher than that of unilinguals.

1.2 Other Canadian Cases and Studies

In addition to the empirical studies, which are similar and come to similar conclusions, there is abundant literature documenting the value of language skills in Canada. In particular, a literature review conducted by Canadian Heritage in May 2016¹¹ highlighted a study by the Canadian Council on Learning (CCL) that used data from the 2006 Census and found that the employment rate was higher among bilingual (English-French) workers than among unilingual workers.

Using data from the 2011 National Household Survey, the CCL further concluded that in Quebec, the salaries of bilingual Canadians were 37 per cent higher than those of unilingual Canadians, while in the rest of Canada, the average annual salary of bilinguals was nearly 15 per cent higher than that of unilinguals.¹²

Another study, conducted in 2013 by Gilles Grenier and Serge Nadeau, analyzed the effects of the use of English or French at work in Montréal, using data from the 2006 Census.¹³ With a sample of some 200,000 adult workers—men and women—who had worked full-time in Montréal for at least a year, the authors found that there were economic incentives to using English at work for francophones and allophones.

Another study listed in the Canadian Heritage literature review, this one conducted by André Bernard, Ross Finnie, and Benoît St-Jean in 2008, looked at interprovincial mobility in Canada.¹⁴ The authors estimated that it was three times more likely for francophones in Canada outside Quebec to move to another province and 10 times more likely for anglophones from Quebec (by comparison with other Canadians) to move to another province for economic reasons. The report noted that while interprovincial migration had positive effects on earnings and productivity in Canada, it also tended to increase provincial disparities in skills and human capital.

11 Canadian Heritage, *Economic Advantages of Bilingualism*.

12 Canadian Council on Learning, *Do You Speak English?*.

13 Grenier and Nadeau, *English as the Lingua Franca*.

14 Bernard, Finnie, and St-Jean, "Interprovincial Mobility and Earnings."

According to an Ipsos survey, 81 per cent of supervisors regard bilingual employees as an asset.

For their part, Pierre-Marcel Desjardins and David Campbell chose a microeconomic approach and succeeded in demonstrating that the high rate of bilingualism in New Brunswick had economic advantages for some specific sectors.¹⁵ Thus, the positive effects of bilingualism in New Brunswick were to be seen in administrative services, call centres, finance and insurance, interprovincial and international trade, tourism, education, immigration, and language services. The authors further noted that some private sector employers hired more bilinguals than did the federal, provincial, and municipal governments.

Another perspective is provided by a 2008 Ipsos survey,¹⁶ which confirmed that the demand for bilingual capability by employers was one of the key motivations for Canadian students who chose programs in which they could learn and become proficient in both official languages. The survey also confirmed that employers regarded bilingualism as an asset for their employees, and tended to favour bilingual candidates. Furthermore, 81 per cent of the supervisors questioned said they felt that bilingual employees were valuable assets to their enterprise. The CCL came to similar conclusions on the basis of a web survey in 2013.¹⁷ The survey found that more than half of Canadian business leaders felt that bilingual workers were better adapted to the labour market than unilingual workers. Another CCL survey suggests that bilingualism is an asset in occupations in the business, administration, tourism, sports, recreation, and sales sectors.

Again from the point of view of employers, Workopolis noted that only 8.8 per cent of job postings in Canada asked for English-French bilingual candidates.¹⁸ This analysis also mentioned that in Canada, the demand for and supply of bilingual workers varied widely from region to region, from occupation to occupation, and from sector to sector. The five Canadian cities in which bilingual candidates had the greatest advantage were said to be Toronto, Guelph, Montréal, Kitchener, and Fredericton. The advantage enjoyed by bilinguals in the cities in Ontario was reportedly the result of demand exceeding supply (the scarcity of

15 Desjardins and Campbell, *Two Languages—It's Good for Business*.

16 Ipsos, *Survey of Supervisors of Bilingual Employees*.

17 Canadian Council on Learning, *Do You Speak English?*

18 Workopolis, *Thinkopolis VII*.

bilingual candidates enhanced their value), whereas their advantage in Montréal or Fredericton was somewhat diminished by the abundant supply (more bilingual candidates competing for the same positions).

With regard to sectors of activity, bilinguals were said to have an advantage in finance and accounting, information technology, human resources, and sales and marketing. In these sectors, the positions in which bilinguals had the greatest competitive advantage were reportedly billing administration, recovery, financial administration, customer service, and human resources counselling.

Lastly, The Conference Board of Canada was not left out. The Board's Alan Arcand¹⁹ studied how the economic spinoffs attributable to bilinguals could be felt at the macroeconomic level, the assumption being that the provinces with high levels of bilingualism are able to do business with more countries than the others. He estimated that in 2011, bilingual capabilities in Quebec and New Brunswick were instrumental in increasing Canadian imports and exports by US\$3.3 billion.

1.3 Elsewhere in the World

We pay scant attention to the effects of bilingualism on labour markets outside Canada, since the Canadian linguistic and cultural situation is unique. In the United States, for example, while there is no official language at the federal level, English is the dominant language and individuals who learn a second language are often immigrants learning English, which is very different from the situation in Canada, where our linguistic duality is both geographic and cultural.

One interesting case is that of Wales. Andrew Henley and Rhian Eleri Jones²⁰ began their 2003 study by asserting that studies of bilingualism often found that bilinguals were somewhat penalized in the labour market because of the negative effect that learning a second language could have on proficiency in the dominant language. However, when there was upward pressure on the pay of bilinguals, it was not necessarily

¹⁹ Arcand, *Canada, Bilingualism, and Trade*.

²⁰ Henley and Jones, *Earnings and Linguistic Proficiency in a Bilingual Economy*.

In Wales, bilingual workers are not necessarily more productive, but it seems that employers give them preference in order to comply with regulations.

associated with higher productivity, but rather with the cost of complying with legislation. This would be the case if demand for bilingual workers was high, because the regulations (that is, employment quotas) had to be complied with and the supply was low (in the case of the linguistic minority). The authors further noted that the use of Welsh did not itself produce an economic benefit, but English-Welsh bilinguals received a gross salary premium of 8 to 10 per cent in Wales. However, when accounting for differences in education and occupation, bilinguals were paid less than unilingual anglophones. According to the authors, the gross premium was attributable entirely to a selection effect—the choice to learn a second language and monetary rewards are thus said to be endogenous. In other words, bilingualism did not enhance the abilities of individuals, and was thus not the cause of higher remuneration. Rather, individuals made the choice to become bilingual because they knew they would have access to better-paid jobs. Another result confirmed this conclusion. The authors noted that the bilingualism premium was less important for those who used Welsh at work than for those employed in a unilingual workplace. This suggested that bilingual workers were not necessarily more productive, but that employers gave them preference, perhaps in part to comply with government regulations.

In the United States, in a report published by the Policy Information Center, Patricia C. Gándara looked at the effects of bilingualism on the U.S. labour market.²¹ Her report is, in fact, a review of the U.S. literature on the subject. In particular, it looked at the work of Joseph P. Robinson-Cimpian, who noted the existence of a financial penalty in the labour market for bilingual (Spanish-English) men, one that did not affect women.²² Also mentioned are Amado Alarcón, Antonio Di Paolo, Josiah Heyman, and Maria Cristina Morales who noted, surprisingly, that even in jobs where one might expect a premium for bilingualism (e.g., border guards, security agents, health care personnel), there was a pay penalty for bilinguals.²³ The authors assumed that there was a glass ceiling for Spanish-English bilinguals in

21 Gándara, *Is There Really a Labor Market Advantage to Being Bilingual in the U.S.?*

22 Robinson-Cimpian, "Labor Market Differences Between Bilingual and Monolingual Hispanics."

23 Alarcón, Di Paolo, Heyman, and Morales, "The Occupational Location of Spanish-English Bilinguals in the New Information Economy."

According to one study, U.S. employers do not see bilingualism as an acquired skill, but rather as an inherited characteristic.

the United States, which would explain these results. This glass ceiling was said to result from the discrimination suffered on the labour market by ethnic minorities whose mother tongue was not English. These results could also be attributed in part to more limited access to post-secondary education opportunities. Alarcón and the others concluded that U.S. employers did not see bilingualism as an acquired skill, but rather as an inherited characteristic. It was thought to be the result of being born in an immigrant family, rather than a skill whose acquisition required effort. There was therefore no reason to reward it. The authors acknowledged that there might be differences in the level of English proficiency among bilingual Hispanics, and that the English spoken by some immigrants or their children could be of lesser quality than that of unilingual anglophones.

However, Gándara also reviewed more recent studies, looking not only at bilingualism, but also at “bi-literacy.” Orhan Agirdag, for example, noted that young bilingual Spanish speakers earned more than young unilinguals.²⁴ Similarly, on the basis of a sample of 20-year-olds, Lucrecia Santibañez and Maria Estela Zárate estimated that bilingual hispanophones were more likely to go to university than unilinguals (anglophones or hispanophones) and bilinguals who were less proficient in English.²⁵

We conclude this chapter with a summary of a study by Gianmarco Ottaviano and Giovanni Peri that looked at cultural diversity in the United States as measured by the variety of languages spoken by the residents of U.S. cities and its effects on productivity.²⁶

24 Agirdag, “The Literal Cost of Language Assimilation for the Children of Immigration.”

25 Santibañez and Zárate, “Bilinguals in the U.S. and College Enrolment.”

26 Ottaviano and Peri, “Cities and Cultures.”

Based on data from the 1970 to 1990 censuses, the authors concluded that, all things being equal, the salaries of workers born in the United States were systematically higher in cities that were more culturally diverse. They believed that the positive effects on productivity benefited mainly better-educated workers and white workers. Lastly, they showed that workers whose mother tongue was not English, but who were proficient in that language, contributed the most to the overall productivity of workers born in the United States.

CHAPTER 2

An Economic Portrait of Bilinguals in Canada

Chapter Summary

- In Canada, bilinguals represent one-fifth of the workforce, are more likely to have a university education, and have higher incomes and a lower rate of unemployment than unilinguals.
- Outside Quebec, bilinguals represent 10 per cent of the workforce, and their average income is generally higher than that of unilingual anglophones.
- Outside Quebec, bilinguals in all provinces are more likely to have a university education, but they are almost always less likely to have at most a college diploma or degree.¹
- More than one-third of bilingual workers outside Quebec work in public administration, education, or health care and social assistance.
- In 2016, 17,600 bilinguals outside Quebec worked in legal services, representing 1.1 per cent of bilingual workers outside Quebec and 14 per cent of legal services workers outside Quebec.
- The data and results presented in this chapter are complemented by the results from a survey described in Chapter 3. The survey covered only bilingual workers outside Quebec and provides, among other things, an idea of the perceived value of bilingualism.

¹ Note that the variable examined here is the highest level of educational attainment. As such, an individual having completed university or college programs will only be counted in the “university diploma or degree” category.

This chapter uses data from the 2006 and 2016 censuses to construct a portrait of the economic situation of bilinguals in Canada. Data from the 2011 National Household Survey were omitted for methodological reasons. Moreover, our analysis covers only the provinces, since there are few English-French bilinguals in the territories. In a great majority of cases, the proportions and percentages presented here would remain the same with or without data on the territories.

Note also that census data are self-declared. This means that the respondents identify themselves as bilingual, and we make no judgment as to their levels of proficiency in both official languages. We begin this chapter with an overall portrait of Canadian bilinguals, followed by an analysis of bilinguals outside Quebec only. Each section looks at bilinguals' levels of education, employment income, and sectors of activity.

2.1 Bilingualism in Canada

In Canada, of the 28.6 million people aged 15 or over in 2016, some 5.4 million considered themselves bilingual. This represents nearly 19 per cent of the working age population. If we include only those who were employed, the proportion rises to 20.4 per cent. In other words, more than a fifth of Canadian workers were bilingual in 2016. This was a very slight increase over 2006, when 20.3 per cent of Canadian workers were bilingual. (See Table 1.)

Table 1

Bilinguals: One-Fifth of Canadian Workers

	Bilingual population aged 15 or older	Share of the population aged 15 or older (per cent)	Bilingual persons employed	Share of persons employed (per cent)
2006	4,814,880	18.9	3,687,250	20.3
2016	5,420,720	18.9	4,175,885	20.4

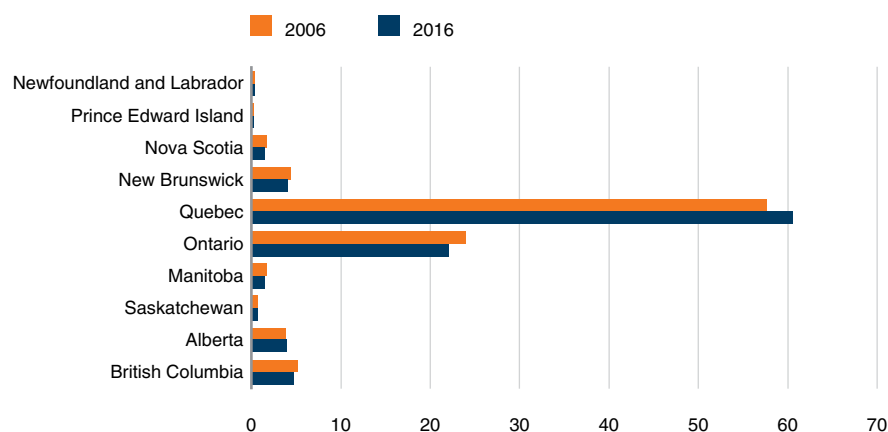
Sources: Statistics Canada; The Conference Board of Canada.

To no one's surprise, a majority (60 per cent) of bilingual Canadians live in Quebec, but bilinguals can also be found in large numbers in Ontario, British Columbia, and New Brunswick. This suggests that bilingualism is found more among francophones than among anglophones. A Statistics Canada study of the evolution of bilingualism in Canada between 1961 and 2011 confirms this, and further concludes that bilingualism is also more common in enclaves where the main language has minority status but is an official language, as is the case for francophones living outside Quebec and anglophones living in Quebec.¹ Chart 1 shows the geographic distribution of bilingual Canadians of working age.

Chart 1

A Majority of Bilingual Canadians Live in Quebec or Ontario

(geographic distribution of bilingual Canadians aged 15 or older, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

1 Lepage and Corbeil, *The Evolution of English–French Bilingualism in Canada From 1961 to 2011*.

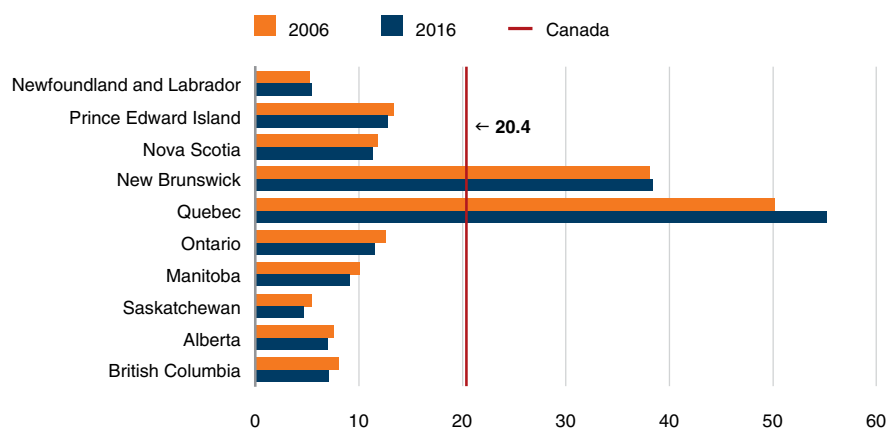
The situation changes slightly if we focus not on the geographic distribution of bilinguals, but rather on the proportion of the population aged 15 or older in each province that is bilingual. Thus, in 2016, more than a third of those aged 15 or older in New Brunswick were bilingual, 10.9 per cent were bilingual in Ontario, and 8.5 per cent were bilingual in Manitoba. In Quebec, 49.5 per cent of those aged 15 or older were bilingual.

With regard to employment, the situation is similar. In 2016, 55.2 per cent of Quebec employees were bilingual, compared with 38.4 per cent of employees in New Brunswick and 11.5 per cent of employees in Ontario. Chart 2 shows the share of bilingual employees by province in 2006 and 2016.

Chart 2

The Share of Bilingual Workers Is Highest in Quebec and New Brunswick

(share of bilingual workers among all workers by province, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

It is apparent at once that the proportion of bilingual workers per province varied very little during the decade between the 2006 and 2016 censuses. With the exception of Quebec, the proportion of bilingual workers changed by 1.1 percentage points or less, in absolute terms, in each province of Canada.

In Quebec, the share of bilingual workers increased by five percentage points between the two censuses. This suggests that the slight increase in the share of bilingual employees in Canada occurred mainly among those whose first language is French, given that French is the dominant mother tongue in Quebec. This observation is also supported by the literature reviewed in Chapter 1.

2.1.1 Education

In Canada, the data indicate that bilinguals attain higher levels of education than francophone or anglophone unilinguals. According to the data for 2016, 20.4 per cent of bilinguals aged 15 or older had at most a bachelor's degree, 7.6 per cent a master's, and 1.5 per cent a doctorate. Among anglophones, 15.8 per cent had a bachelor's degree, 4.4 per cent had a master's, and 0.7 per cent had a doctorate. Among the francophones, 6.7 per cent had a bachelor's degree, 1.4 per cent a master's, and 0.2 per cent a doctorate. (See Table 2.) Note that with respect to anglophones, however, there are proportionally fewer bilinguals in Canada that had received, at most, a college certificate or diploma. Overall, 20.5 per cent of Canadian anglophones reached that level, whereas the share was 19.7 per cent among bilinguals.

Table 2

Bilinguals Are More Educated

(level of education by official languages proficiency in 2016, per cent)

	College or cégep	Bachelor's	Master's	Doctorate	Other post-graduate	All university certificates and degrees
Anglophones	20.5	15.8	4.4	0.7	1.5	25.8
Francophones	14.3	6.7	1.4	0.2	0.9	12.2
Bilinguals	19.7	20.4	7.6	1.5	2.7	36.6

Sources: Statistics Canada; The Conference Board of Canada.

On the other hand, more anglophones and francophones left school earlier. Only 12 per cent of bilinguals did not complete secondary school, whereas the proportion for anglophones is 17.2 per cent and for francophones it is 29.7 per cent.

2.1.2 Employment Income

Canadian bilinguals also tend to have higher incomes than unilingual anglophones and francophones, although the difference in median income between bilinguals and anglophones is not large. In 2016, Canadian bilingual workers had a median income of \$42,324, whereas anglophones earned \$41,228 and francophones \$33,611. The situation was similar in 2006, when bilingual workers had a median income of \$32,646, anglophones \$31,494, and francophones \$27,055.

Furthermore, judging by their participation and unemployment rates in 2006 and 2016, bilinguals tend to participate more in the Canadian economy. Of the three groups examined here (anglophone unilinguals, francophone unilinguals, and bilinguals), bilinguals had the highest participation rate and the lowest unemployment rate in 2016. In 2006, the participation rate for bilinguals was the highest and their unemployment rate the lowest, at the same level as for anglophones. (See Table 3.)

Table 3

Bilinguals Participating in the Labour Market

(participation and unemployment rates, per cent)

	2006 participation rate	2016 participation rate	2006 unemployment rate	2016 unemployment rate
Anglophones	67.6	65.8	6.4	7.9
Francophones	59.7	56.2	7.3	7.8
Bilinguals	72.6	71.7	6.4	7.0

Sources: Statistics Canada; The Conference Board of Canada.

2.1.3 Sectors of Activity

Census data also identify the sectors of activity in which bilinguals are concentrated. Here, we are using the North American Industry Classification System (NAICS) to identify the sectors of the economy that employ bilingual workers. The system is designed to provide common definitions of the industrial structure of the three member countries of the North American Free Trade Agreement (NAFTA).^{2,3}

2 Statistics Canada, "North American Industry Classification System (NAICS) Canada 2012."

3 As of this writing, the NAICS codes have not been affected by the new Canada–United States–Mexico Agreement (CUSMA).

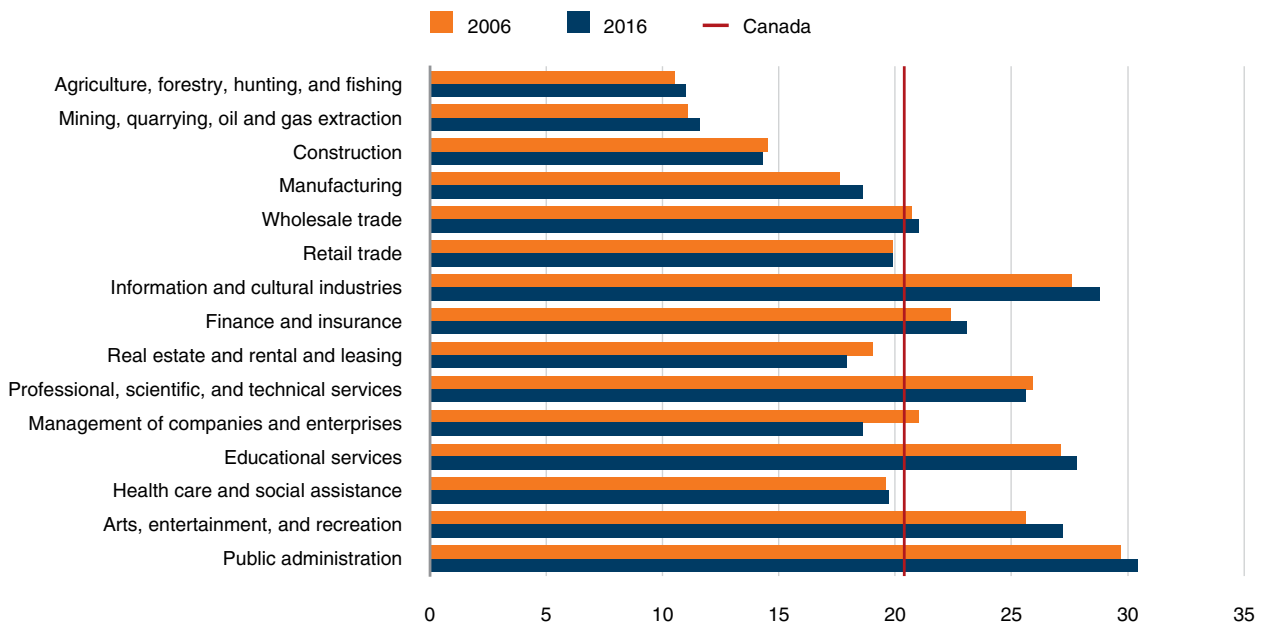
Across Canada, bilinguals are more likely to work in health care and social assistance (10.3 per cent of bilingual workers), retail trade (10.5 per cent), educational services (9.4 per cent), public administration (8.8 per cent), and professional, scientific, and technical services (8.1 per cent).

What is more interesting, however, is that bilinguals are over-represented in public administration; cultural industries; wholesale trade; educational services; arts, entertainment, and recreation; professional, scientific, and technical services; and finance and insurance. In other words, the proportion of bilinguals in all these sectors of activity is higher than their proportion of all workers (20.4 per cent). Chart 3 illustrates these data. On the other hand, bilinguals are under-represented in primary industries (agriculture, forestry, fishing and hunting, and mining) and in construction, among others.

Chart 3

Bilingual Workers Are Over-Represented in Public Administration

(share of bilingual workers by industry, per cent)



Note: Bilingual workers make up 20.4 per cent of all workers in Canada. (In this report, we use Statistics Canada's industry classification to identify the sectors of activity of Canadian workers. In the charts and tables, we present the industries in the same order as Statistics Canada.)
Sources: Statistics Canada; The Conference Board of Canada.

In contrast to Canada-wide bilingualism, the proportion of bilinguals outside Quebec fell slightly between 2006 and 2016.

These data may partially explain the differences in pay between bilinguals and unilinguals in Canada. Indeed, bilingual workers are over-represented in sectors of activity that are generally associated with better-paid jobs, such as public administration and finance. For instance, 69.3 per cent of Canadian workers are anglophones, but only 61.8 per cent of Canadian workers in public administration are anglophones.

2.2 Canadian Bilingualism Outside Quebec

Bilingualism in Quebec is well-documented, and the literature discussed in Chapter 1 describes a few of the advantages of being bilingual in Quebec, including access to the rest of the North American market.

We now turn to Canadian bilingualism outside Quebec. While we know that bilinguals are much less numerous in the rest of Canada, it is nevertheless interesting and important to build their socioeconomic portrait.

In 2016, in Canada outside Quebec, there were some 2.1 million working-age bilinguals, or 9.7 per cent of Canadians outside Quebec aged 15 or older. This was a slight increase from the 2 million bilinguals in 2006. However, in contrast to Canada-wide bilingualism, the proportion of bilinguals outside Quebec fell slightly between 2006 and 2016, both within the working-age population and among workers, despite an increase in the absolute number of bilinguals aged 15 or older and in the number of bilingual workers outside Quebec during the same period. Table 4 illustrates these data.

Table 4
Bilinguals Outside Quebec

	Bilinguals aged 15 or older	Share of the population aged 15 or older (per cent)	Bilinguals employed	Share of people employed (per cent)
2006	2,041,310	10.5	1,569,415	11.3
2016	2,136,500	9.7	1,620,440	10.3

Sources: Statistics Canada; The Conference Board of Canada.

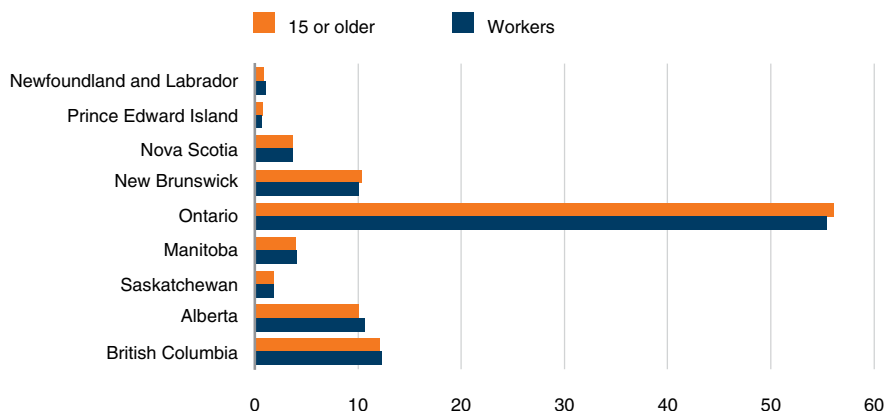
While over 20 per cent of Canadian workers are bilingual, the proportion falls to 10.3 per cent when the data are limited to Canada outside Quebec. This could be indicative of the fact that in a bilingual economy, there are more economic advantages to learning the dominant language than there are to learning the minority language. One can imagine that a Quebec francophone can see more economic potential in learning English than an Alberta anglophone would see in learning French. (This idea is emphasized in the literature reviewed in Chapter 1.) That said, the lower prevalence of bilingualism in Canada outside Quebec is largely attributable to the minority situation of French in North America.

When we look at the geographic distribution of bilinguals in Canada outside Quebec, we find few surprises—56.1 per cent of bilinguals aged 15 or older live in Ontario, 12.1 per cent in British Columbia, and 10.3 per cent in New Brunswick. Conversely, very few bilinguals live in Prince Edward Island (0.7 per cent), Newfoundland and Labrador (0.9 per cent), or Saskatchewan (1.8 per cent). If we look at bilinguals in the workforce, the data vary only slightly. Chart 4 shows the geographic distribution for all bilinguals and workers outside Quebec.

Chart 4

The Majority of Bilinguals Outside Quebec Live and Work in Ontario

(geographic distribution of bilinguals outside Quebec in 2016, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

2.2.1 Education

As with bilinguals across Canada as a whole, those outside Quebec graduate from university at an above-average rate. In 2016, 24.1 per cent of the population aged 15 or older outside Quebec had at least a bachelor's degree. Among bilinguals, the proportion rose to 37.1 per cent. Among anglophone unilinguals, it was 23.1 per cent. What is more, a larger share of bilinguals than unilingual anglophones obtain a university degree in each of the provinces outside of Quebec. In Quebec, bilinguals are more likely than unilingual francophones to graduate from university.

With respect to college education, proportionally speaking, fewer bilinguals outside Quebec obtained, at most, a college certificate or diploma.⁴ In 2016, 19.9 per cent of those aged 15 or older in Canada outside Quebec had left school after completing a college program; the proportion was 20.6 per cent among anglophones and 17.6 per cent among bilinguals.

These proportions are higher than in 2006, when only 18.7 per cent of those aged 15 or older outside Quebec had secured at least a bachelor's

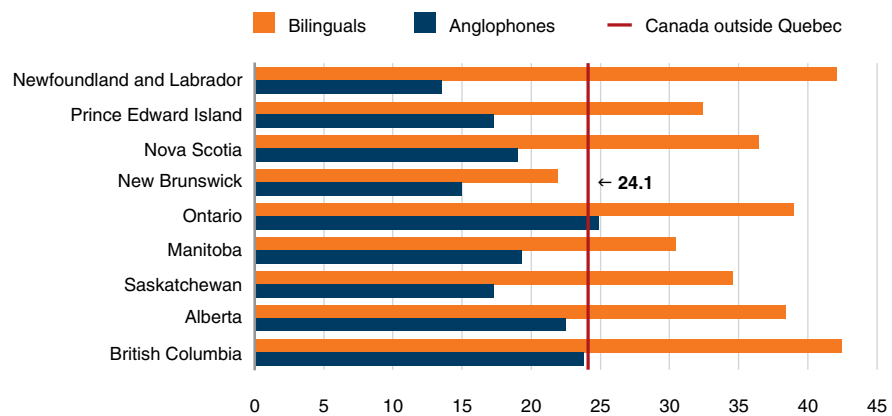
⁴ Note that the variable studied here is the highest educational level attained. Thus, when we refer to college diplomas, we are considering only those who did not go beyond the college level.

degree. The proportion was 31.2 per cent for bilinguals and 17.5 per cent for anglophone unilinguals. The gap between bilinguals and unilinguals with at least a bachelor's degree widened between 2006 and 2016. Charts 5 and 6 illustrate the educational levels attained in 2016, by province.

Chart 5

Bilinguals in Canada Outside Quebec Stay in School Longer

(bachelor's degree or higher among those aged 15 or older, 2016, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

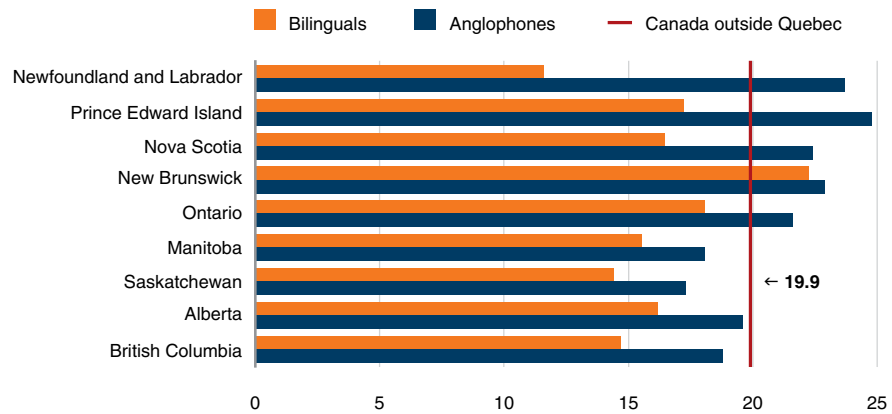
Chart 5 shows that in every province except New Brunswick, the share of bilinguals with at least a bachelor's degree is higher than the average for all Canadians outside Quebec (24.1 per cent). However, the proportion of anglophones and of those aged 15 or older in New Brunswick with at least a bachelor's degree is also well below the Canadian average outside Quebec. We can also see that bilinguals with university degrees are still over-represented in relation to their numbers in each province. For example, 46.5 per cent of New Brunswickers with at least a bachelor's degree are bilingual, whereas bilinguals represent only 35.5 per cent of those aged 15 or older in the province. Table 5 shows the share of bilingual university graduates in each province, as well as their population shares.

At the college level, Chart 6 shows that, compared with the average for those aged 15 or older in Canada outside Quebec (19.9 per cent), fewer bilinguals obtained at most a college diploma or certificate in every province, except New Brunswick.

Chart 6

Fewer Bilinguals in Canada Outside Quebec End Their Education at the College Level

(those aged 15 or older who achieved at most a college certificate or diploma, 2016, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

Table 5

Bilinguals Outside Quebec Are Over-Represented in Universities

(2016, per cent)

	Bilinguals among those aged 15 or older	Bilinguals among those with at least a bachelor's degree	Anglophones among those aged 15 or older	Anglophones among those with at least a bachelor's degree
British Columbia	6.7	11.6	89.8	86.9
Alberta	6.6	10.9	92.0	88.6
Saskatchewan	4.5	8.6	94.9	91.1
Manitoba	8.5	12.9	90.4	86.8
Ontario	10.9	16.3	86.4	82.8
New Brunswick	35.5	46.5	56.8	51.1
Nova Scotia	10.2	18.0	89.5	81.9
Prince Edward Island	12.0	20.3	87.5	79.1
Newfoundland and Labrador	4.6	13.1	95.3	86.8
Canada outside Quebec	9.7	15.0	87.8	84.1

Sources: Statistics Canada; The Conference Board of Canada.

The census data also show us that bilingual Canadians outside Quebec are under-represented at the college level. Out of all those aged 15 or older outside Quebec whose highest educational attainment is at the college level, 8.6 per cent were bilingual, while 9.7 per cent of those aged 15 or older outside Quebec were bilingual in 2016. Table 6 illustrates these data at the provincial level.

Table 6
Bilinguals Outside Quebec Are Generally Under-Represented at the College Level
(percentage, 2016)

	Bilinguals among those aged 15 or older	Bilinguals among those who went no further than the college level
British Columbia	6.7	5.4
Alberta	6.6	5.6
Saskatchewan	4.5	3.8
Manitoba	8.5	7.4
Ontario	10.9	9.4
New Brunswick	35.5	36.3
Nova Scotia	10.2	7.7
Prince Edward Island	12.0	8.7
Newfoundland and Labrador	4.6	2.3
Canada outside Quebec	9.7	8.6

Sources: Statistics Canada; The Conference Board of Canada.

In addition to level of education, the censuses also provide data on the fields of study chosen by Canadians and bilinguals outside Quebec. Among all individuals in Canada outside Quebec with a post-secondary education, architecture, engineering, and related technologies were the preferred fields of study in 2006 and 2016, closely followed by business administration.

Among bilinguals, the most popular fields of study in 2006 and 2016 were business administration; social sciences; law; and architecture, engineering, and related technologies. More interesting, the 2016 Census data allow us to calculate that 14.9 per cent of Canadians outside Quebec who successfully completed a program in social sciences and law are bilingual. Among those who completed post-secondary education in business administration, 10.2 per cent are bilingual. For architecture,

engineering, and related technologies, 8.1 per cent of Canadian graduates outside Quebec in those fields are bilingual. Table 7 shows the fields of study preferred by Canadians outside Quebec.

Table 7
Fields of Study Preferred by Canadians Outside Quebec
 (2016)

	Bilinguals	Anglophones
British Columbia	Social sciences and law	Architecture, engineering, and related technologies
Alberta	Architecture, engineering, and related technologies	Architecture, engineering, and related technologies
Saskatchewan	Architecture, engineering, and related technologies	Architecture, engineering, and related technologies
Manitoba	Business administration and public administration	Architecture, engineering, and related technologies
Ontario	Business administration and public administration	Business administration and public administration
New Brunswick	Business administration and public administration	Architecture, engineering, and related technologies
Nova Scotia	Business administration and public administration	Architecture, engineering, and related technologies
Prince Edward Island	Business administration and public administration	Business administration and public administration
Newfoundland and Labrador	Education	Architecture, engineering, and related technologies
Canada outside Quebec	Business administration and public administration	Architecture, engineering, and related technologies

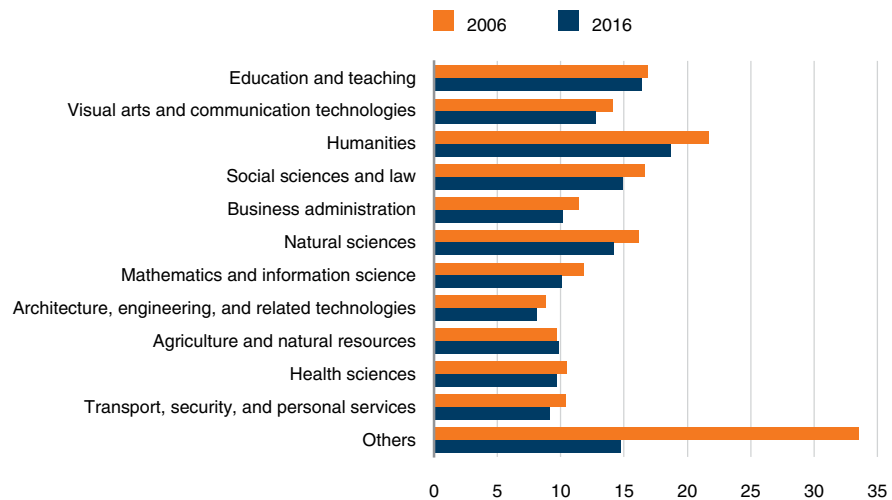
Sources: Statistics Canada; The Conference Board of Canada.

We can see that in all provinces, as is the case for Canada outside Quebec as a whole, most bilinguals who completed post-secondary education chose a program in business administration or public administration. This was not the case with anglophones. In seven out of nine provinces, anglophones were most likely to have chosen architecture, engineering, or related technologies. This may be due in part to the language skills required in those professions. Bilingualism is more likely to be an asset in business administration than it is in engineering or architecture. Chart 7 shows the shares of bilingual Canadians outside Quebec in each of the fields of post-secondary study, as listed in the censuses. One interesting fact is that, outside Quebec, bilinguals account for nearly 20 per cent of all graduates in the humanities, but only 8.1 per cent of graduates in architecture, engineering, and related technologies.

Chart 7

Fields of Post-Secondary Study in Canada Outside Quebec

(share of bilinguals among graduates, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

2.2.2 Employment Income

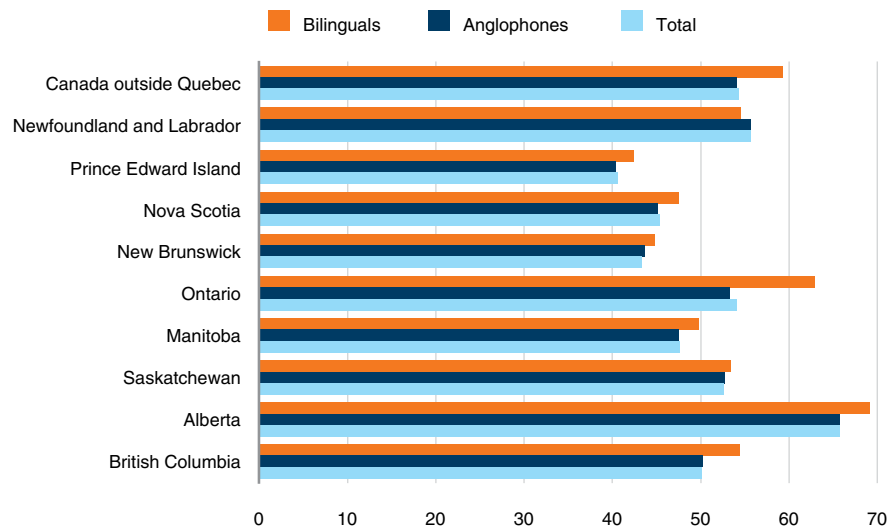
As for all Canadian bilinguals, those living outside Quebec generally earn higher average salaries than do unilinguals. The average income of bilinguals is higher than that of anglophones in all provinces except Newfoundland and Labrador. Median income is also higher for bilinguals, except in Newfoundland and Labrador and in Prince Edward Island.

The employment income of bilingual workers is particularly high in Alberta and low in Atlantic Canada, but this is not fundamentally different from the situation of unilingual anglophones. It is in Ontario, where bilinguals earn an average of \$9,632 more than anglophones, that the difference between them is greatest. This could be attributed to the larger number of federal government jobs in Ottawa, since we know that bilinguals are over-represented in public administration, and those jobs are generally well-paid. Chart 8 shows the average income of bilinguals and anglophones outside Quebec by province.

Chart 8

Bilinguals Earn More Almost Everywhere

(average income, \$ millions)



Sources: Statistics Canada; The Conference Board of Canada.

As is repeatedly emphasized in the literature, being bilingual is not the reason for higher salaries, but bilinguals are better placed to occupy better-paid positions.

Lastly, with respect to participation and unemployment rates, bilinguals are also well-placed, with a higher participation rate than anglophones in every province. Bilinguals are also less affected by unemployment, except in British Columbia. (See Table 8.)

Table 8
Bilinguals Outside Quebec Are Active in the Labour Market
(2016)

	Participation rate: bilinguals	Participation rate: anglophones	Unemployment rate: bilinguals	Unemployment rate: anglophones
British Columbia	69.5	64.7	7.0	6.6
Alberta	76.3	72.1	8.4	9.0
Saskatchewan	73.3	68.3	6.3	7.1
Manitoba	71.6	66.0	5.9	6.8
Ontario	69.4	65.4	7.4	7.4
New Brunswick	66.6	60.3	10.7	10.9
Nova Scotia	69.4	60.4	9.1	10.1
Prince Edward Island	70.3	66.0	11.3	12.4
Newfoundland and Labrador	70.2	58.1	12.0	15.8
Canada	71.7	65.8	7.0	7.9

Sources: Statistics Canada; The Conference Board of Canada.

2.2.3 Sectors of Activity

Now that we know that bilinguals outside Quebec stay in school longer and have higher average incomes than anglophones, it becomes interesting to see what sectors of activity they work in.

The 2016 Census shows that among bilingual workers outside Quebec, 12.1 per cent work in educational services, 11.2 per cent in public administration, 10.3 per cent in health care and social assistance, and 9.1 per cent in retail trade. It also shows that among bilingual workers, few (just 0.2 per cent) work in management of companies and enterprises.

When we compare bilinguals to all workers outside Quebec, we find that they are relatively more numerous in the cultural industries; professional, scientific, and technical services; educational services; arts, entertainment, and recreation; and public administration. Table 9 compares the share of all Canadian workers outside Quebec in each sector of activity with the share of bilingual workers outside Quebec in those same sectors.

Table 9

What Sectors Do They Work in Outside Quebec?

(workers and bilinguals outside Quebec by sector, 2016, per cent)

	Proportion of workers outside Quebec	Proportion of bilingual workers outside Quebec
Agriculture, forestry, fishing, and hunting	2.3	1.5
Mining, quarrying, and oil and gas extraction	1.6	1.4
Utilities	0.7	0.6
Construction	7.0	4.9
Manufacturing	7.4	4.8
Wholesale trade	3.3	2.6
Retail trade	10.6	9.1
Transportation and warehousing	4.5	3.4
Cultural industries	2.1	2.6
Finance and insurance	4.0	4.1
Real estate services	1.7	1.3
Professional, scientific, and technical services	6.6	7.6
Enterprise management	0.2	0.2
Administrative and support services	4.0	3.3
Educational services	6.9	12.1
Health care and social assistance	10.4	10.3
Arts, entertainment, and recreation	2.0	2.7
Accommodation and food services	6.7	6.4
Other services	4.0	3.5
Public administration	5.9	11.2

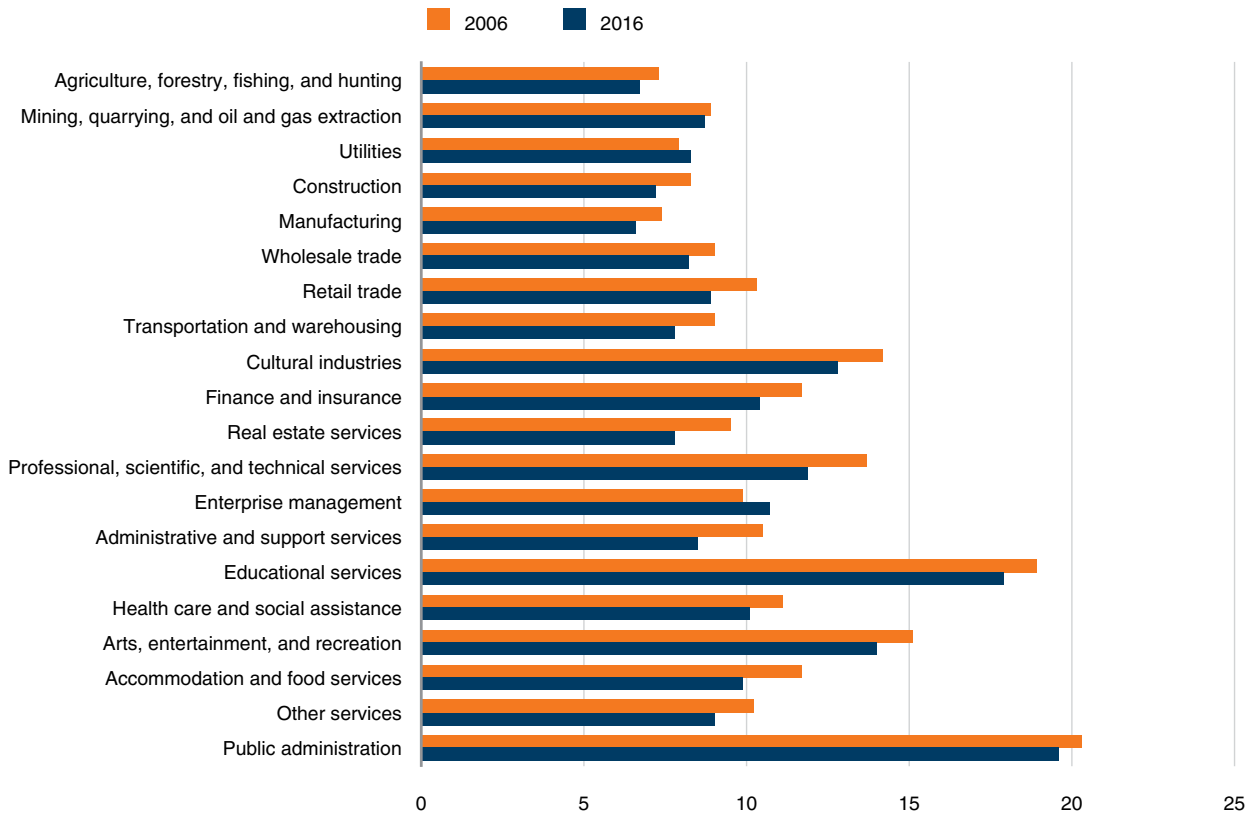
Sources: Statistics Canada; The Conference Board of Canada.

We also see that while just 10.3 per cent of all workers outside Quebec are bilingual, 19.6 per cent of public administration workers outside Quebec are bilingual; 17.9 per cent of workers outside Quebec in educational services are bilingual; 14 per cent of workers in arts, entertainment, and recreation outside Quebec are bilingual; and 11.9 per cent of workers in professional, scientific, and technical services outside Quebec are bilingual. The share of bilinguals in each sector of activity has varied little over time. Chart 9 shows the share of all jobs occupied by bilinguals in each sector of the economy outside Quebec.

Chart 9

One-Fifth of Workers in Public Administration Are Bilingual

(bilingual workers outside Quebec as a share of workers outside Quebec, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

At the provincial level, the results are broadly similar. In particular, bilingual workers are over-represented in public administration in all nine of the provinces outside Quebec. This is also the case in educational services; arts, entertainment, and recreation; and cultural industries. Bilinguals are also over-represented in professional, scientific, and technical services (that is, their share of jobs in this sector is greater than their share of jobs overall) in Canada outside Quebec, except for in New Brunswick, where their share of jobs in these professions is 0.2 percentage points below their share of all jobs.

Bilingual workers
are over-
represented
in public
administration in
every province.

As well, bilinguals are often under-represented in the goods-producing industries (e.g., manufacturing, construction, the primary and utilities sector) in most provinces. The exception is Ontario, where 25.3 per cent of workers in mining are bilingual (as compared with 11.5 per cent of all Ontario workers). This could be indicative of two factors: employers in the services sector set greater store by linguistic assets than do employers in the goods sector; or more bilinguals elect to seek jobs in the services sector. In reality, both factors are probably in play. Furthermore, given that a large proportion of bilinguals pursue post-secondary education, and given that they choose to study business administration, public administration, and social sciences and law, it is not surprising that they are more numerous in the service industries than in the goods-producing industries.

Lastly, Table 10 shows the three sectors of activity employing the most bilinguals in each province (as a share of their pool of bilingual workers). Clearly, more bilingual employees are to be found in the public sector in all provinces. Among the three industries that employ the most bilinguals in each province, health care and social assistance, educational services, or public administration account for at least two of them in every case.

Based on these results, we look at three sectors—health care and social assistance, educational services, and public administration—in greater detail. We also look at the characteristics of employees in professional services, since bilinguals are over-represented in that sector in every province except New Brunswick. Another reason why it is helpful to study this category of workers is that it includes occupations that are generally stable and well-paid.

Table 10

Bilingual Workers Are Concentrated in the Public Sector

(number of workers, 2016)

	Bilingual workers	Sector	Bilinguals per sector	Proportion of all bilingual workers (per cent)
Newfoundland and Labrador	16,125	Educational services	2,865	17.8
		Retail trade	2,180	13.5
		Public administration	1,730	10.7
Prince Edward Island	11,030	Public administration	1,670	15.1
		Educational services	1,340	12.1
		Accommodation and food services	1,245	11.3
Nova Scotia	59,120	Public administration	7,645	12.9
		Educational services	7,525	12.7
		Retail trade	6,555	11.1
New Brunswick	162,620	Health care	21,960	13.5
		Retail trade	17,615	10.8
		Public administration	17,500	10.8
Ontario	898,190	Public administration	114,000	12.7
		Educational services	110,610	12.3
		Health care	87,350	9.7
Manitoba	65,515	Educational services	9,435	14.4
		Health care	8,145	12.4
		Public administration	7,065	10.8
Saskatchewan	30,225	Educational services	4,605	15.2
		Health care	3,350	11.1
		Retail trade	2,790	9.2
Alberta	172,140	Educational services	20,310	11.8
		Health care	17,205	10
		Retail trade	15,215	8.8
British Columbia	167,795	Educational services	25,840	13
		Health care	19,355	9.8
		Professional services	19,340	9.8

Sources: Statistics Canada; The Conference Board of Canada.

Health Care and Social Assistance

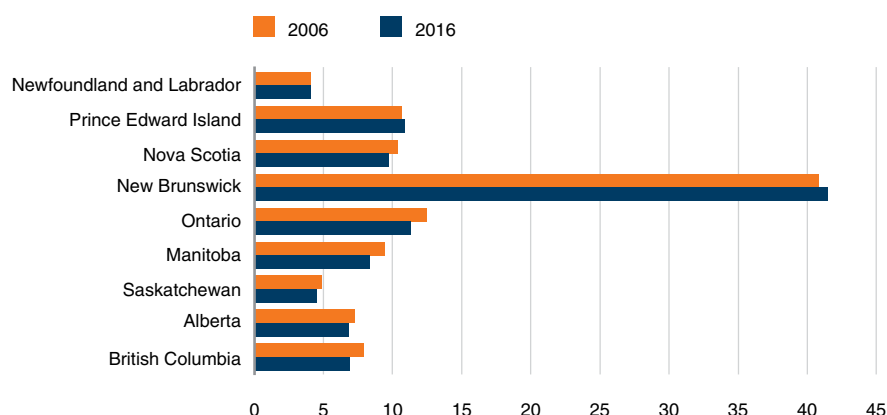
In 2016, the health care and social assistance sector employed some 1.6 million Canadians outside Quebec. Of these, 89.3 per cent were unilingual anglophones and 10.1 per cent were bilingual. Their share in the industry is slightly lower than their share among all workers outside Quebec (10.3 per cent).

The share of bilinguals in the sector varies widely from province to province. For example, 41.5 of employees in the sector in New Brunswick are bilingual, but only 4.1 per cent in Newfoundland and Labrador are bilingual. Chart 10 shows these variations. We can also see that the participation of bilinguals in this sector remains stable over time.

Chart 10

Share of Bilingual Employees in the Health Care and Social Assistance Sector

(bilingual workers in the sector as a share of all workers in the sector, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

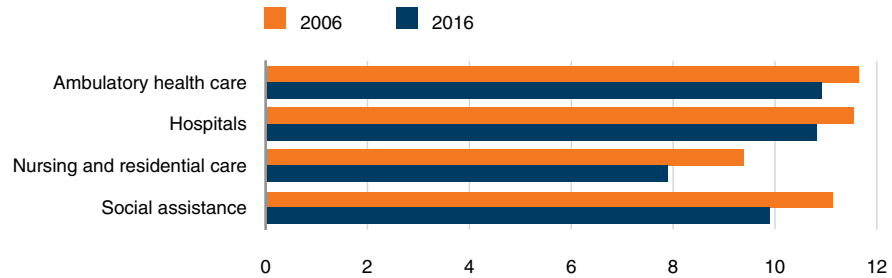
Taking only bilingual workers into account, the raw data indicate that Ontario has the most bilinguals working in health care and social assistance, with 87,350 bilinguals in the sector in 2016. New Brunswick and British Columbia follow far behind with 21,960 and 19,355 bilingual workers, respectively.

Looking more closely at the sector, we see that bilinguals represent between 8 and 11 per cent of workers in each subsector of health care and social assistance. For example, in 2016, 10.9 per cent of workers outside Quebec in ambulatory health care services were bilingual. The shares were 10.8 per cent in hospitals, 7.9 per cent in nursing and residential care facilities, and 9.9 per cent in social assistance. (See Chart 11.)

Chart 11

The Share of Bilingual Workers Varies Little in the Subsectors of Health Care

(share of bilinguals by subsector, per cent)



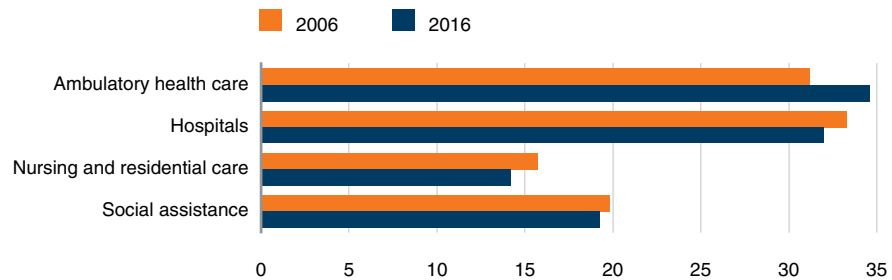
Sources: Statistics Canada; The Conference Board of Canada.

That said, bilinguals in health care work mainly in ambulatory health care and in hospitals. These two subsectors employ more than two-thirds of the bilinguals in health care and social assistance. (See Chart 12.)

Chart 12

Bilingual Workers Are Concentrated in Ambulatory Health Care

(breakdown of bilingual workers in health care and social assistance by subsector, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

Lastly, Table 11 shows the number of bilingual workers in each subsector, by province. We can see that Canada-wide trends are replicated at the provincial level.

Table 11

In Health Care, Bilinguals Are Concentrated in Ambulatory Health Care and in Hospitals

(bilingual workers by subsector, 2016)

	Health care and social assistance	Ambulatory health care	Hospitals	Nursing and residential health care	Social assistance
Newfoundland and Labrador	1,635	530	565	95	450
Prince Edward Island	1,035	310	295	170	255
Nova Scotia	6,425	2,040	2,140	1,175	1,065
New Brunswick	21,960	5,315	8,715	4,180	3,755
Ontario	87,350	30,690	27,335	12,265	17,055
Manitoba	8,145	2,195	2,595	1,505	1,850
Saskatchewan	3,350	875	1,235	550	695
Alberta	17,205	7,015	4,945	1,960	3,285
British Columbia	19,355	8,640	5,385	1,735	3,595
Canada outside Quebec	167,150	57,815	53,410	23,720	32,215

Sources: Statistics Canada; The Conference Board of Canada.

Educational Services

In 2016, 196,140 bilinguals outside Quebec worked in educational services. That works out to 12.1 per cent of all bilingual employees outside Quebec, or 17.9 per cent of employees outside Quebec in educational services.

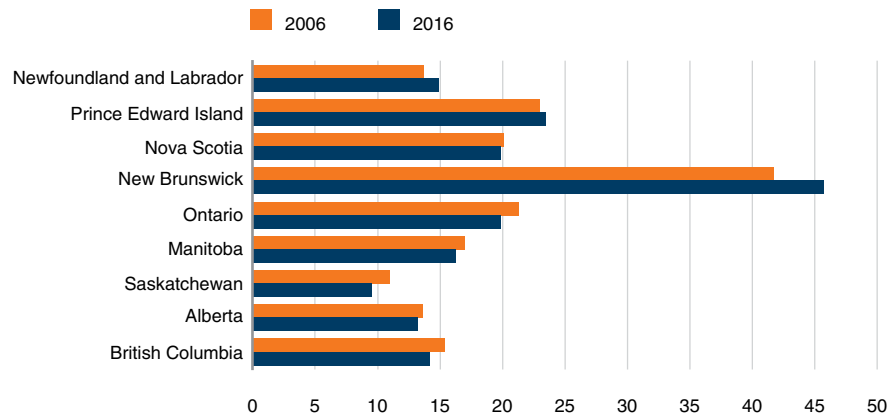
At the provincial level, the profile of bilinguals in the industry is similar to that in health care. Bilinguals make their presence felt most in New Brunswick, where they represent 45.7 per cent of provincial employees in educational services. In the other provinces, the share of bilinguals in educational services varies from 9 to 24 per cent. (See Chart 13.) Their numbers in the sector are also fairly stable over time. That said, we do see a marked increase in New Brunswick and a slight reduction in Ontario, the Prairies, and British Columbia between 2006 and 2016.

Interestingly, if we analyze the distribution of bilinguals province by province, the educational services sector employs only 7.8 per cent of bilingual workers in New Brunswick, the lowest percentage among the nine provinces under review. On the other hand, it is in Newfoundland and Labrador that educational services employ the most bilinguals as a share of their pool of bilingual workers, at 17.8 per cent.

Chart 13

Share of Bilingual Employees in Educational Services

(per cent)



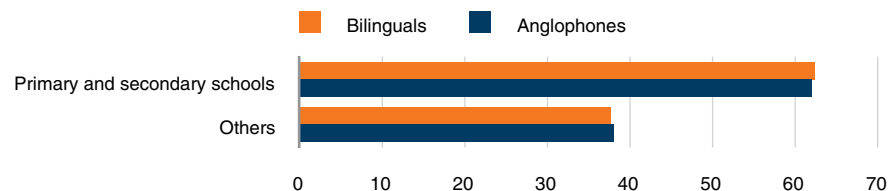
Sources: Statistics Canada; The Conference Board of Canada.

Census data also indicate that bilinguals and anglophones who work in educational services do so mainly in primary and secondary schools. More than 60 per cent of bilinguals and anglophones in educational services work in primary or secondary establishments. (See Chart 14.)

Chart 14

A Majority of Workers in Educational Services Are to Be Found in Primary and Secondary Schools

(share of workers in educational services by subsector, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

With respect to the share of bilinguals in this subsector, they represent 18.0 per cent of workers in primary and secondary schools, down slightly from 2006, when it was 18.6 per cent.

Lastly, Table 12 provides numbers for bilinguals and anglophones in the primary and secondary school subsector, by province. Not surprisingly, it is Ontario that has the most workers—anglophones and bilinguals—in the subsector, followed by British Columbia and Alberta.

Table 12

The Majority of Workers in Primary and Secondary Schools Are in Ontario, British Columbia, and Alberta

(number of workers, 2016)

	Anglophones	Bilinguals
Newfoundland and Labrador	9,075	1,595
Prince Edward Island	2,655	885
Nova Scotia	17,725	4,465
New Brunswick	8,420	8,140
Ontario	276,520	70,330
Manitoba	34,775	6,895
Saskatchewan	29,620	3,035
Alberta	81,885	12,515
British Columbia	88,175	13,880

Sources: Statistics Canada; The Conference Board of Canada.

Public Administration

The third important sector of activity for Canadian bilinguals is public administration, which, again, is not surprising given that Canada is officially bilingual. It is therefore to be expected that some jobs in public administration require a knowledge of both official languages. This is especially true at the federal level and in New Brunswick, the only officially bilingual province.

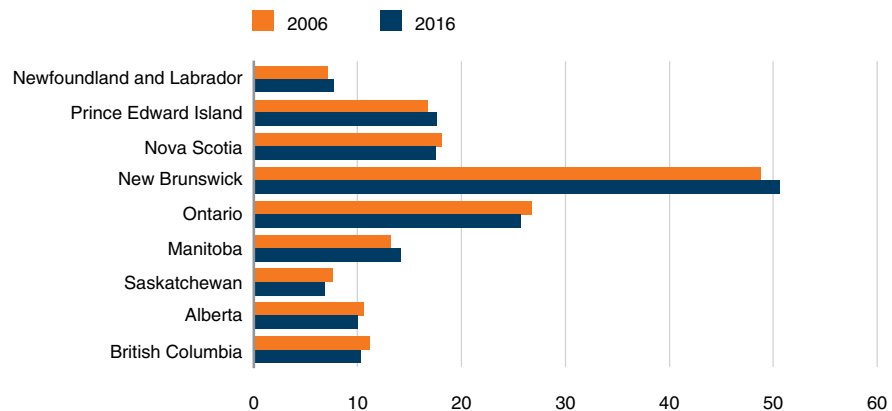
Outside Quebec, of the 1.6 million bilingual workers in 2016, 181,340 worked in public administration—11.2 per cent of bilingual workers. These 181,340 workers also represented 19.6 per cent of all workers in public administration outside Quebec, a high proportion if we compare it with the share of bilingual workers among all workers outside Quebec (10.3 per cent).

At the provincial level, bilinguals also represent a significant share of all government employees. In particular, 50.6 per cent of workers in public administration in New Brunswick were bilingual in 2016. The share was lowest—6.8 per cent—in Saskatchewan. Chart 15 shows these results.

Chart 15

Share of Bilingual Employees in Public Administration

(share of bilinguals in the sector, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

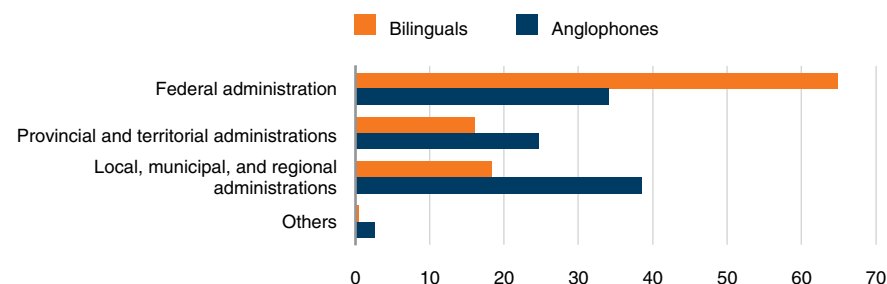
If we look at the distribution of bilingual workers in the provinces, public administration employs from 7 to 15 per cent of them, depending on the province. Prince Edward Island employs the highest share of its bilingual workers in public administration at 15.1 per cent.

Looking at the subsectors of public administration, we find that 64.9 per cent of all bilinguals working in the sector are employed on the federal side. Few work for provincial or local governments. This contrasts with anglophones, who are more evenly distributed among the various levels of government, as Chart 16 shows.

Chart 16

Bilinguals Are Concentrated in Federal Administration

(breakdown of bilingual and anglophone employees in public administration by subsector in 2016, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

The result is the same at the provincial level, where, depending on the province, between 45 and 77 per cent of bilinguals working in public administration are federal employees, as Table 13 shows.

Table 13

Bilinguals Work in Federal Administration in Every Province

(breakdown of bilingual workers in public administration by subsector in 2016, per cent)

	Federal administration	Provincial and territorial administrations	Local, municipal, and regional administrations
Newfoundland and Labrador	57.2	29.2	12.1
Prince Edward Island	72.2	23.4	4.2
Nova Scotia	76.5	15.2	7.8
New Brunswick	55.0	29.3	15.4
Ontario	70.9	10.7	17.9
Manitoba	52.3	28.0	19.4
Saskatchewan	50.6	27.3	20.9
Alberta	45.6	23.2	30.9
British Columbia	54.5	21.1	22.8

Sources: Statistics Canada; The Conference Board of Canada.

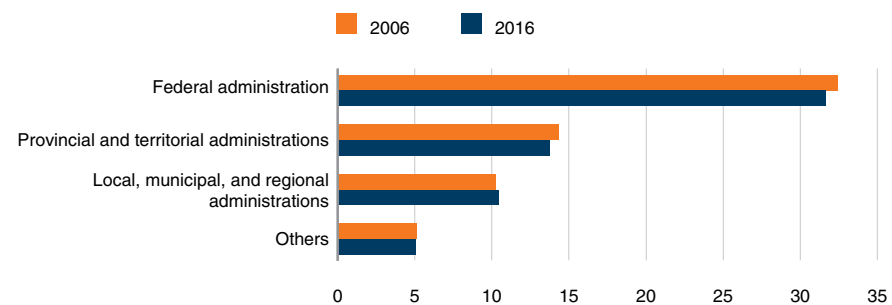
Lastly, the census data show that bilinguals occupy over 30 per cent of federal government jobs, but only 13.8 per cent of the jobs in provincial and territorial administrations and 10.4 per cent of jobs in local, municipal, and regional administrations. The share of bilinguals in all these subsectors has decreased slightly since 2006, except in

local administrations, where their numbers increased between the two censuses. (See Chart 17.) Note that bilinguals occupy nearly 20 per cent of jobs outside Quebec in public administration as a whole. Clearly, they are very much over-represented in federal administration.

Chart 17

Bilinguals Occupy Over 30 Per Cent of Jobs in Federal Administration Outside Quebec

(share of bilinguals in subsectors of public administration, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

Professional, Scientific, and Technical Services

Professional, scientific, and technical services are an important sector of activity for Canadian bilinguals, since they include the fields in which we find jobs that are generally stable and well-paid, and where demand for workers is rising. Some of these fields are science, research, and development; engineering; accounting; law; and computer science. Some 7.6 per cent of bilingual workers outside Quebec work in this sector, compared with 6.6 per cent for anglophone workers. As well, 11.9 per cent of workers in this sector are bilingual, a higher share than the 10.3 per cent for all workers outside Quebec.

In all, of the 1.6 million Canadian bilingual workers outside Quebec in 2016, 123,690 worked in professional services. These bilinguals were prominent in computer systems design and related services (23,580 workers); architectural, engineering, and related services (20,700); management, scientific, and technical consulting services

(19,940); and legal services (17,600). Table 14 shows the breakdown of bilinguals by subsector in professional, scientific, and technical services.

Table 14

Breakdown of Bilinguals in Professional Services

(bilingual workers by subsector in 2016, number and percentage)

	Number of bilingual workers	Breakdown of bilinguals in professional, scientific, and technical services (per cent)
Legal services	17,600	14.2
Accounting and related services	12,315	10.0
Architectural, engineering, and related services	20,700	16.7
Specialized design services	5,115	4.1
Computer systems design and related services	23,580	19.1
Management, scientific, and technical consulting services	19,940	16.1
Scientific research and development services	6,145	5.0
Advertising, public relations, and related services	8,465	6.8
Other professional, scientific, and technical services	9,825	7.9
Total	123,690	100

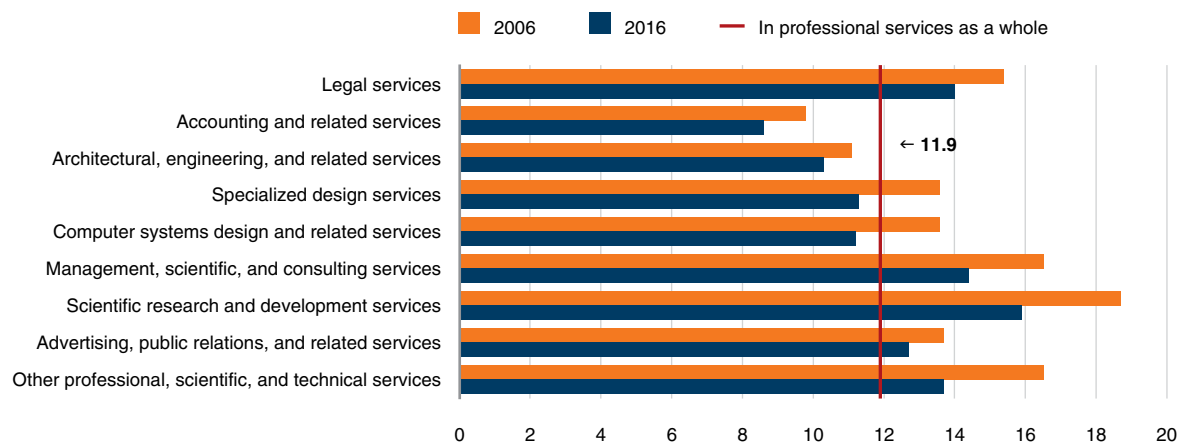
Sources: Statistics Canada; The Conference Board of Canada.

Looking at the numbers of bilinguals in each of these subsectors as a share of all workers, we see that bilinguals are very much over-represented in research and development, consulting services, legal services, and advertising services. More than 12 per cent of workers outside Quebec in these subsectors are bilingual, whereas bilinguals make up 11.9 per cent of those in professional services (and 10.3 per cent of all employees outside Quebec), as shown in Chart 18. We also see that the share of bilinguals has decreased slightly since 2006 in each of these subsectors.

At the provincial level, the data show that Ontario accounts for the majority of bilinguals outside Quebec working in professional services (59.6 per cent), followed by British Columbia (15.6 per cent) and Alberta (11.1 per cent). Bilinguals are over-represented in professional services in Atlantic Canada (except for Newfoundland and Labrador) and Ontario, but under-represented on the Prairies and in British Columbia. For example, 38.2 per cent of workers in professional services in New Brunswick are bilingual, as are 13.1 per cent of those in Ontario, but only 6.6 per cent of those in Saskatchewan. These data are shown in Table 15.

Chart 18

Share of Bilingual Employees in Professional, Scientific, and Technical Services, by Subsector
(share of bilinguals, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

Table 15

Number and Proportion of Bilingual Workers in Professional, Scientific, and Technical services

(bilingual workers in professional services by province, number and percentage, 2016)

	Bilingual workers in professional services	Proportion of bilingual workers in professional services (per cent)
Newfoundland and Labrador	975	8.5
Prince Edward Island	545	14.7
Nova Scotia	3,540	13.6
New Brunswick	6,685	38.2
Ontario	73,725	13.1
Manitoba	2,975	10.3
Saskatchewan	1,690	6.6
Alberta	13,735	8.3
British Columbia	19,340	9.9

Sources: Statistics Canada; The Conference Board of Canada.

Again at the provincial level, the data show that the subsectors that have the most bilingual workers by province are architecture and engineering, and computer systems design. For example, a third of the bilingual workers in professional services in Newfoundland and Labrador work in architectural, engineering, or related services. In Ontario, 19.9 per cent

The prevalence of bilingual workers in legal services varies widely from province to province.

of bilingual workers in professional services are employed in computer systems design, and 29.4 per cent of bilinguals in professional services in Alberta work in architectural, engineering, or related services.

To conclude this section, we take a quick look at legal services. This is a special sector within professional services, because the federal *Official Languages Act* provides that in the administration of justice in federal courts, either English or French “may be used by any person in, or in any pleading in or process issuing from, any federal court.”⁵ The Act also states that “every federal court has, in any proceedings before it, the duty to ensure that any person giving evidence before it may be heard in the official language of his choice, and that in being so heard the person will not be placed at a disadvantage by not being heard in the other official language.”⁶ Lastly, subsection 530(1) of the Criminal Code states that an accused has the right to “be tried before a justice of the peace, provincial court judge, judge or judge and jury ... who speak the official language of Canada that is the language of the accused.”⁷ It is interesting, therefore, to look at the number of bilingual workers in legal services as a whole, in each province.

In 2016, legal services (which includes the “offices of legal practitioners, known as lawyers, barristers and solicitors, primarily engaged in the practice of law ... establishments primarily engaged in drafting and approving legal documents (and) establishments of legal practitioners ... primarily engaged in providing legal and paralegal services”⁸) employed some 125,320 workers outside Quebec. Of these, 85.8 per cent were unilingual anglophones and 14 per cent were bilingual. The prevalence of bilingual workers in legal services varies widely from province to province. For example, 44.3 per cent of workers in legal services in New Brunswick are bilingual, compared with only 7.3 per cent in Newfoundland and Labrador. These data are shown in Table 16.

5 Government of Canada, *Official Languages Act*.

6 Ibid.

7 Government of Canada, “Language of Accused.”

8 Statistics Canada. “North American Industry Classification System (NAICS) Canada 2012.”

Table 16

Bilinguals Are Not Numerous in Legal Services

(bilingual workers as a share of all workers in legal services in 2016, number and per cent)

	Number of bilingual workers in legal services	Total number of workers in legal services	Bilingual workers as a proportion of all workers in legal services (per cent)
Newfoundland and Labrador	95	1,305	7.3
Prince Edward Island	70	450	15.6
Nova Scotia	485	3,415	14.2
New Brunswick	890	2,010	44.3
Ontario	10,850	70,885	15.3
Manitoba	430	3,600	11.9
Saskatchewan	265	3,105	8.5
Alberta	1,745	16,740	10.4
British Columbia	2,685	23,455	11.4
Total for Canada outside Quebec	17,600	125,320	14.0

Sources: Statistics Canada; The Conference Board of Canada.

These data raise questions as to whether the supply of bilingual workers in legal services is adequate, particularly in Newfoundland and Labrador, Saskatchewan, and Alberta. If we make a comparison with, say, educational services, we see that bilinguals are more numerous, proportionally, than in legal services. In 2016, 23.5 per cent of workers in educational services in Prince Edward Island were bilingual, compared with 15.6 per cent of workers in legal services. This difference is true for all the provinces we looked at, with the largest difference in Prince Edward Island and the smallest in New Brunswick (where 45.7 per cent of workers in educational services were bilingual, compared with 44.3 per cent in legal services.)

2.3 Summary

In this chapter, we put together an economic portrait of bilingual Canadians, covering education, revenue, and employment. We first looked at the country as a whole, but most of the analysis focused on the portrait of Canadian bilinguals outside Quebec. What the 2006 and 2016 census data show is not surprising, since it is consistent with the observations and conclusions discussed in the literature review in Chapter 1.

A little over 10 per cent of Canadian workers outside Quebec are bilingual, and more than half of them live in Ontario. Moreover, nearly a third of bilingual workers outside Quebec live in British Columbia, Alberta, or New Brunswick.

Census data indicate that bilinguals stay in school longer. In Canada outside Quebec, the share of bilinguals with at least a bachelor's degree is higher than the share of anglophones. The same is true in each of the provinces individually. Moreover, the data show that relatively fewer bilinguals in Canada have earned no more than a college certificate or diploma, compared with all Canadians aged 15 or older and compared with anglophones.

The preferred fields of study for bilinguals outside Quebec are business administration or public administration; social sciences and law; and architecture, engineering, and related technologies, in that order. We further note that, at the provincial level, anglophones are more likely to choose architecture, engineering, and related technologies, whereas bilinguals are more inclined to choose business administration or public administration. Another interesting statistic is that bilinguals outside Quebec represent almost 20 per cent of social sciences graduates outside Quebec, but only 8.1 per cent of architecture, engineering, and related technologies graduates.

When it comes to employment income, bilinguals earn more, on average, than unilinguals. Only in Newfoundland and Labrador is the average income of bilinguals no higher than that of anglophones. It is in Ontario where the difference in income between anglophones and bilinguals is most marked, with bilinguals earning an average of about \$9,600 more than anglophones. The employment income of bilingual workers is particularly high in Alberta and low in Atlantic Canada, but this is also the case for unilingual anglophones. It is important to highlight that bilingualism is not necessarily the reason for higher pay. Instead, bilinguals tend to be better placed to secure better-paid jobs. Another interesting point is that the participation rate of bilinguals in the labour market is higher than that of anglophones, while their unemployment rate is lower.

Bilingualism is not the reason for better pay, but bilinguals are better placed to secure some better-paid jobs.

We also note that in all provinces, bilingual workers are concentrated mainly in the services sector, rather than in the goods-producing industries. We also know that, whereas bilinguals represent 10.3 per cent of workers outside Quebec, they represent 19.6 per cent of workers outside Quebec in public administration; 17.9 per cent in educational services; 14 per cent in arts, entertainment, and recreation; and 11.9 per cent in professional, scientific and technical services. Moreover, health care, educational services, and public administration account for 33.6 per cent of bilingual workers in Canada outside Quebec—for a total of 544,630 workers. On the other hand, management of companies and enterprises, mining, and utilities are the three sectors that account for the fewest bilinguals in Canada outside Quebec. Those three sectors employed 34,830 bilingual workers in 2016, or just 2.1 per cent of bilingual workers outside Quebec. However, those same sectors employed the fewest anglophones outside Quebec in 2016, at just 2.5 per cent.

Lastly, looking at the data in greater detail, we see that in health care, bilingual workers are found mainly in ambulatory care, and hospitals. These two subsectors employ more than two-thirds of bilingual employees in health care and social assistance. In educational services, most of the bilingual workers are employed in primary and secondary schools. Over 60 per cent of them work in that subsector. In public administration, 64.9 per cent of bilinguals work for the federal government, while only 16.2 per cent work in provincial or territorial administration, and 18.3 per cent work in local, municipal, or regional administration.

To complement these findings, The Conference Board of Canada designed a survey, which was conducted by Léger, of 1,000 bilingual respondents outside Quebec. Using the results from the survey, we can compare and corroborate the census data, and explore other aspects of bilingualism in Canada. These results are presented in the next chapter.

CHAPTER 3

A Survey of Canadian Bilinguals

Chapter Summary

- Most respondents to the survey (59.5 per cent of the sample) learned English before they learned French.
- In most cases, the highest level of education attained in a bilingual establishment by survey respondents was the secondary level. However, 189 respondents obtained at least a bachelor's degree in a francophone or bilingual establishment.
- Moreover, 236 respondents had at least a college certificate or diploma.
- Nearly a third of respondents work in education, health care, or public administration.

In this chapter, we present the results of the survey designed by The Conference Board of Canada and conducted by Léger. Among other things, we present data on the post-secondary institutions attended by bilinguals, the origins of the respondents' bilingualism, and the respondents' perception of the usefulness of bilingualism in the labour market in Canada outside Quebec. While the survey provides only an overview of the bilingual population outside Quebec, the sample of 1,000 respondents is still representative of that population. The survey responses were weighted on the basis of province of residence, sex, and age.

3.1 Profile of Respondents

Of the 1,000 respondents to our survey, more than half live in Ontario, 18 per cent live in British Columbia, and 9 per cent in Alberta. Only one respondent lives in Prince Edward Island, and only 13 live in Newfoundland. Table 17 provides a breakdown of the respondents. The breakdown is similar to that found in Canadian census data.

Table 17
Geographic Distribution of Bilinguals in the Survey
(number and percentage)

	Number of respondents	Percentage of the sample
Newfoundland and Labrador	13	1.3
Prince Edward Island	1	0.1
Nova Scotia	29	2.9
New Brunswick	51	5.1
Ontario	577	57.7
Manitoba	39	3.9
Saskatchewan	15	1.5
Alberta	95	9.5
British Columbia	180	18.0
Total	1,000	100.0

Sources: Léger; The Conference Board of Canada.

It is a little surprising to see how many individuals with English as their mother tongue went on to learn French.

The survey also indicates the order in which the two official languages were learned: 111 of the 1,000 respondents learned French first, 595 learned English first, and 81 learned English and French at the same time as their first languages. Some 97 respondents (9.7 per cent of the sample) first learned a language other than English or French. These results are not surprising in a survey of bilingual Canadians outside Quebec. It is only to be expected that a majority of respondents would have learned English first. However, it is a little surprising to see how many individuals with English as their mother tongue went on to learn French. Our review of the literature indicates that in a bilingual economy, it is more common for the minority to learn the dominant language, rather than the reverse. In our case, it is possible that some of the individuals whose mother tongue is English came from francophone communities or had at least one francophone parent or some other connection to the French language, which would partly explain the preponderance of anglophones learning French.

Since most of the respondents learned English first, it is interesting to find out how all the respondents learned French. It turned out that 27 per cent of the respondents came from francophone families or lived in a francophone community. Moreover, 32.3 per cent of the sample attended a francophone primary or secondary school, and 23.8 per cent of the respondents attended a primary or secondary French immersion school.

Lastly, 20.3 per cent of the respondents learned French in some other way, such as with a spouse or taking French courses in school or in the workplace.¹

3.2 Education and Occupations

As Canadian census data show, the respondents to the survey (all of whom are bilingual workers outside Quebec) stayed in school longer. Among them, 41.8 per cent have a bachelor's degree, 20.2 per cent have post-graduate qualifications (e.g., a master's, a doctorate, an MD), and 21.7 per cent have a college certificate or diploma (excluding cégep

¹ The total number of answers to this question exceeds 100 per cent because respondents could choose more than one answer.

diplomas). Only 0.3 per cent of respondents mentioned other academic credentials, such as a JD or a DESS (specialized study diploma). This could be an outlier, since respondents with such qualifications could have elected to answer “bachelor’s” or “post-graduate degree” to that question. Lastly, only 90 respondents left school after obtaining their secondary school diploma.

Even more interesting, the survey enabled us to determine how many bilingual workers had attended a francophone or bilingual educational institution. Table 18 shows these results.

Table 18
Highest Academic Level Attained in a Bilingual or Francophone Educational Institution

	Number of respondents	Percentage of the sample
Primary	99	9.9
Secondary	359	35.9
Apprenticeship or trade school	61	6.1
Cégep	71	7.1
College	47	4.7
Bachelor’s	138	13.8
Post-graduate (e.g., master’s, doctorate)	47	4.7
Other academic qualification (e.g., JD, DESS)	3	0.3
None/not applicable	175	17.5
Total	1,000	100.0

Sources: Léger; The Conference Board of Canada.

We see that 82.5 per cent of the respondents attended a bilingual or francophone institution at some point. In most cases, the highest level attained in a bilingual or francophone institution was secondary school graduation. However we note that many respondents attended a francophone or bilingual university or college. In fact, 23.6 per cent obtained at least a college diploma in a bilingual or francophone institution. Even though the respondents to the survey were living outside Quebec when they answered our questions, this does not mean that they did not study in Quebec.

That said, we also asked the respondents who obtained at least a college diploma in a bilingual or francophone institution to name the one they attended. The answers to this question led to a number of findings. First, 79.2 per cent of the respondents who said they obtained at least one college diploma in a francophone or bilingual institution (187 respondents) named the institution. However, some of these 187 respondents named colleges or universities that are not bilingual or francophone. This could be attributable to a misunderstanding of the question. Or it could be that they attended anglophone colleges or universities that offer some programs in French but are not bilingual institutions. This is true of Ryerson University, for example, which offers a program that teaches people French, and a program in business French and translation. Second, 41 respondents named a Quebec or foreign institution. That leaves 146 respondents who did their post-secondary studies in a bilingual institution in Canada outside Quebec and named the institution. The most-often-attended post-secondary bilingual institutions in Canada outside Quebec that were named were the University of Ottawa, with 19 respondents (which equals 12.7 per cent of the 146 respondents who completed their post-secondary studies in Canada outside Quebec and named the institution they attended); the University of Moncton, with 14 respondents (9.6 per cent); the Collège communautaire du Nouveau-Brunswick, with nine respondents (6.1 per cent); York University, with seven respondents (4.8 per cent);² and Simon Fraser University, with six respondents (4.2 per cent). Table 19 shows how many respondents studied in a member institution of the Association des collèges et universités de la francophonie canadienne (ACUFC). We used this list to identify bilingual or francophone academic institutions in Canada outside Quebec.

2 These seven respondents mentioned York University. We assume that they were referring to Glendon College at York University.

Table 19

Highest Academic Level Attained in an ACUFC Member Institution

(out of 146 respondents to the survey who studied in a bilingual institution outside Quebec and named that institution)

	Number of respondents
University of Alberta (Saint-Jean Campus)	5
Centre de formation médicale du Nouveau-Brunswick	0
Collège de l'Île	0
Collège Boréal	2
Collège communautaire du Nouveau-Brunswick	9
Collège éducentre	0
Collège Mathieu	0
Royal Military College of Canada	2
Dominican University College	0
Glendon College, York University	7
La Cité universitaire francophone, University of Regina	2
La Cité	3
University of Ottawa	19
University of Hearst	0
University of Moncton	14
University of Saint-Boniface	2
University of Sudbury	0
Laurentian University	4
St. Paul University	0
Université Sainte-Anne	1
Simon Fraser University	6
Total	76

Sources: Léger; The Conference Board of Canada.

We also collected data on the respondents' fields of study and the last post-secondary institution they attended, whether bilingual, francophone, or anglophone. Of all the respondents who completed post-secondary studies, 314 named the last institution attended. Of those, 69 studied in an institution in Quebec or abroad, leaving 245 bilingual respondents who named a post-secondary educational institution in Canada outside Quebec as the last institution attended. Not surprisingly, the institutions most frequently attended are in the provinces where the most bilinguals live. Thus, 77 respondents attended institutions in Ontario, 23 studied in British Columbia, 25 in New Brunswick, and six in Alberta. In all, 73 institutions outside Quebec were mentioned in the survey. The most

popular fields of study among the respondents to our survey were public and business administration, languages and literature, social sciences, health, and education. (These results confirm the findings in Chapter 2.) Table 20 lists the fields of study mentioned by survey respondents.

Table 20
Fields of Study Mentioned in the Survey

	Number of respondents	Percentage of the sample	Percentage of respondents who answered the question
Skilled trades	14	1.4	4.0
Recreation	4	0.4	1.2
Transport	4	0.4	1.2
Languages and literature	37	3.7	11.0
Communications	6	0.6	1.8
Information technology and telecommunications	26	2.6	7.6
Social services	6	0.6	1.7
Social sciences	35	3.5	10.4
Public administration	34	3.4	10.1
Health	31	3.1	9.2
Science and mathematics	28	2.8	8.1
Arts	7	0.7	2.2
Business administration	53	5.3	15.5
Engineering	26	2.6	7.5
Education	29	2.9	8.6
Total	340	34.0	100.0

Sources: Léger; The Conference Board of Canada.

Lastly, we asked the respondents to specify their field of employment. From the answers to this question, we found that there were 307 respondents working in health, education, or the legal professions. (See Table 21.) Among those working in education, 25 identified themselves as university professors, eight said they taught at the post-secondary level, eight were primary school teachers, and two taught in secondary schools. In health, the occupations most frequently cited were nursing (18 respondents), social work (eight), public administration (five), and medicine (five). In the legal field, seven respondents said they were jurists, seven said they were public servants, seven said they were attorneys, and five said they were paralegals. As well, information technologies seemed to attract bilinguals (71 respondents), as did public service (48) and manufacturing (44).

Table 21

Fields of Employment Mentioned in the Survey

	Number of respondents	Percentage of the sample	Percentage of respondents who answered the question
Education	131	13.1	14.0
Health care	128	12.8	13.6
Legal professions	48	4.8	5.1

Sources: Léger; The Conference Board of Canada.

3.3 Other Attributes

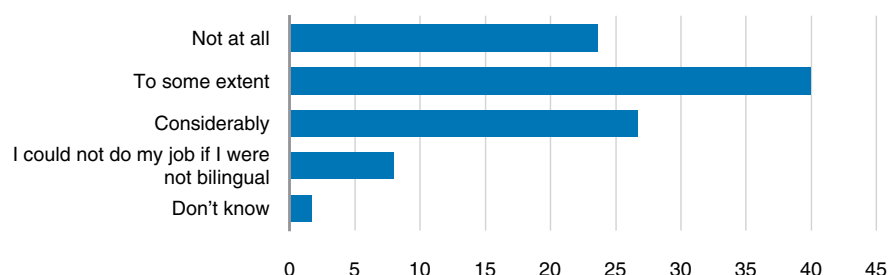
In this section, we present answers to questions that are more qualitative in nature, as we seek to understand the value the respondents attach to their bilingualism.

First, when we asked respondents whether being bilingual had made it possible for them to progress further in their career or if it would one day enable them to do so, 400 answered “To some extent”; 267 said “Considerably”; and 80 chose “I could not do my job if I were not bilingual.” However, 236 answered “Not at all.” (See Chart 19.) These results show that Canadians see an advantage in their bilingualism, but it is not always tangible or quantifiable. It is also true that almost a quarter of the bilinguals outside Quebec who completed our survey saw no advantage in their bilingualism from a career point of view.

Chart 19

Bilinguals’ Perception of Career Advancement and Official Languages Proficiency

(responses, percentage of respondents)



Sources: Léger; The Conference Board of Canada.

Next, we asked the respondents if they believed that their bilingualism could lead to higher pay. A majority of respondents answered “To some extent” (528) or “Considerably” (316). However, 127 answered “Not at all.” When we asked the respondents to put a number to the impact of bilingualism on their annual salary, 225 answered that their bilingualism did not bring them higher pay, 299 said that their bilingualism enabled them to earn less than \$10,000 more, 211 felt that their bilingualism premium was between \$10,000 and \$50,000, 86 said that their bilingualism premium was between \$50,000 and \$100,000, and 28 believed that their bilingualism brought them more than \$100,000 in additional pay. Overall, 843 respondents said they believed that bilingualism could lead to higher pay. Of that number, 624 were able to quantify the difference. These results are shown in Table 22.

Table 22
Estimated Bilingual Premiums

	Respondents
Bilingualism can lead to higher pay	
Not at all	127
To some extent	528
Considerably	316
Don't know	30
By how much has bilingualism enabled you, or could enable you, to increase your pay?	
\$0	225
Less than \$10,000	299
\$10,000 to \$50,000	211
\$50,000 to \$100,000	86
Over \$100,000	28
Don't know	151

Sources : Léger, Le Conference Board du Canada.

We also asked respondents whether their bilingualism gave them access to more employment possibilities in their field. The vast majority—818—answered “To some extent” or “Considerably,” while 150 answered “Not at all.” Lastly, we asked respondents whether they believed that employers use bilingualism as an indicator of overall ability. Only 156 respondents strongly agreed with this idea, 511 agreed

somewhat, 134 disagreed somewhat, and 79 strongly disagreed. These results indicate that in the labour market, there are other advantages to bilingualism than those of a purely monetary nature.

The answers to the five questions discussed in this chapter constantly bring us back to the ideas identified in our literature review. We have in mind, for example, the results of the studies by Christofides and Swidinsky³ that found that the use of the second language at work had no significant impact on the bilingualism premium. (Only 80 respondents had an absolute need for both languages to do their work.) The literature we reviewed also tells us that employers can use bilingualism as an indicator of overall ability, an idea that the respondents to our survey seem to confirm.

3 Christofides and Swidinsky, *The Economic Returns to a Second Official Language: English in Quebec and French in the Rest-of-Canada*.

CHAPTER 4

Bilingualism and Economic Output

Chapter Summary

- Outside Quebec, bilinguals make a significant contribution to GDP in public administration and educational services.
- However, the economic output of bilinguals is concentrated in the finance, insurance, and real estate services sector. In other words, that sector accounts for the largest share of GDP produced by bilinguals in Canada outside Quebec.
- In New Brunswick, the economic contribution of bilingual workers represents 38.7 per cent of the province's GDP. In Ontario, bilinguals generate 12.1 per cent of GDP. However, bilinguals produce only 4.4 per cent of Saskatchewan's GDP.

Having studied the social and economic profile of Canadian bilinguals, in this chapter we look at their contribution to the Canadian economy. Using gross domestic product to measure the size of the economy, we seek an understanding of how bilinguals contribute to Canada's economic wealth.

In this chapter, we determine the proportion of Canada's GDP directly attributable to bilingual workers. This provides a good estimate of the role of bilinguals in wealth creation, by province and by economic sector. Lastly, we determine whether bilinguals' contribution to the economy differs in any way from the contribution of unilinguals.

4.1 Canada's Gross Domestic Product

In 2016, Canada's GDP stood at \$1,684.20 billion, an increase of 1.6 per cent annually, on average, since 2006, when it was \$1,433.30 billion. The finance, insurance, and real estate services sector ranked first, followed by the primary and utilities sector, manufacturing, construction, and health care and social assistance. Table 23 shows the size of each sector in the Canadian economy and their relative importance.

Table 23
Finance, Insurance, and Real Estate Services Account for One-Fifth of Canada's GDP

(GDP in 2016, \$ millions; share of total, per cent)

	GDP	Share of the total
All sectors	1,684,239	100
Agriculture, forestry, fishing, and hunting	27,831	1.7
Mining, quarrying, and oil and gas extraction	137,139	8.1
Utilities	38,236	2.3
Construction	118 078	7.0
Manufacturing	174,416	10.4
Wholesale trade	95,250	5.7
Retail trade	91,779	5.4
Transportation and warehousing	74,782	4.4

(continued ...)

Table 23 (cont'd)

Finance, Insurance, and Real Estate Services Account for One-Fifth of Canada's GDP

(GDP in 2016, \$ millions; share of total, per cent)

	GDP	Share of the total
Information and cultural industries	52,320	3.1
Finance, insurance, and real estate services	339,267	20.1
Professional, scientific, and technical services	104,213	6.2
Management of companies and enterprises	37,269	2.2
Waste management and remediation services	5,952	0.4
Educational services	88,845	5.3
Health care and social assistance	112,613	6.7
Arts, entertainment, and recreation	12,942	0.8
Accommodation and food services	36,543	2.2
Other services	32,513	1.9
Public administration	106,661	6.3

Sources: Statistics Canada; The Conference Board of Canada.

We can see that of the five sectors mentioned above, only in finance, insurance, and real estate services are bilinguals not under-represented in terms of employment. The share of bilinguals employed in the primary and utilities sector, manufacturing, construction, and health care is lower than their share of all employment, which was 20.4 per cent in 2016.

That said, the public sector, which is important for bilingual workers, does contribute to the Canadian economy. Health care and social assistance, educational services, and public administration accounted for 18.3 per cent of Canada's GDP in 2016. It is particularly helpful, therefore, to look at the contribution of bilinguals to the economic output of those sectors, for Canada and for each province. To that end, we used methodology developed at The Conference Board of Canada to estimate the share of the GDP of each province and each sector that is attributable to bilingual workers. The methodology assumes that the productivity of bilingual workers in a given sector of activity and province is the same as that of unilingual workers in the same sector and province. The assumption is corroborated by our literature review, which indicates that wage differentials between bilinguals and unilinguals are attributable not to higher productivity, but to other factors, such as the sector of activity or the province of residence.

4.2 Bilinguals and GDP Outside Quebec

If we leave out Quebec, the GDP of the nine other provinces combined was close to \$1,349.8 billion in 2016. As was the case for the country as a whole, the most important sectors of activity were finance, insurance, and real estate services; the primary and utilities sector; construction; manufacturing; and health care and social assistance. These five sectors accounted for 59.9 per cent of Canada's GDP outside Quebec, or \$808.8 billion.

In 2016, bilinguals' contribution to Canada's GDP outside Quebec was 10 per cent, which, not surprisingly, matches their share of employment. It was in public administration that they contributed the most—21.8 per cent—to GDP for that sector. Their contribution was also significant in educational services (18.4 per cent of the sector's GDP), cultural industries (13.2 per cent of GDP), arts, entertainment, and recreation (13.1 per cent of GDP), and professional, scientific, and technical services (12.1 per cent of GDP). Table 24 shows their contribution to Canada's economic output outside Quebec.

Table 24
Contribution by Bilinguals to GDP Outside Quebec
(2016)

	Contribution in \$ millions	Contribution as a percentage
Gross domestic product, all sectors	134,788	10.0
Primary sector and utilities	11,032.60	6.4
Construction	7,081.90	7.3
Manufacturing	8,344.90	6.4
Wholesale trade	6,162.50	8.2
Retail trade	6,179.80	8.7
Transportation and warehousing	4,727.70	7.8
Cultural industries	5,566.10	13.2
Finance, insurance, and real estate services	30,568.20	9.5
Professional, scientific, and technical services	9,116.70	12.1
Educational services	12,831.50	18.4
Health care and social assistance	8,959.40	10.3
Arts, entertainment, and recreation	1,332.10	13.1
Accommodation and food services	2,695.50	9.3
Other services	2,254.80	8.8
Public administration	17,934.20	21.8

Sources: Statistics Canada; The Conference Board of Canada.

Per capita GDP
of bilinguals is
\$90,360 in Alberta
and \$42,805
in P.E.I.

The table shows that while it is in public administration, educational services, and cultural industries that bilinguals contribute the largest shares, it is in finance, insurance, and real estate services that they generate the greatest gross value added—\$30.6 billion. This sector accounts for 22.7 per cent of the economic output generated by bilinguals. The story is similar for anglophone unilinguals outside Quebec—24.2 per cent of their output is generated in finance, insurance, and real estate services.

Of the five most important sectors of activity in Canada outside Quebec, it is in health care and social assistance that the contribution of bilinguals is most strongly felt. They generate 10.3 per cent of GDP in that sector outside Quebec.

For purposes of comparison, the contribution of bilinguals outside Quebec to GDP in finance, insurance, and real estate services is 9.5 per cent; in construction, it is 7.3 per cent; and in manufacturing and primary and utilities, it is 6.4 per cent.

Anglophone unilinguals in Canada outside Quebec generate 92.7 per cent of GDP in the primary and utilities sector, 91.9 per cent in construction, 91.2 per cent in manufacturing, 89.9 per cent in finance, insurance, and real estate services, and 89.1 per cent in health care and social assistance. The difference between the contribution to GDP by anglophones and bilinguals is hardly surprising, since anglophones represent between 80 and 90 per cent of employment outside Quebec in every sector of the economy.

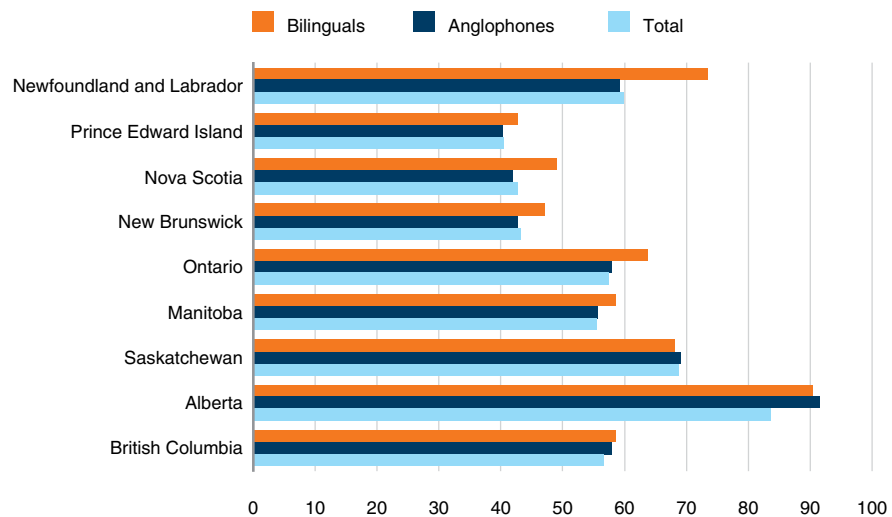
Thus, GDP per capita offers a more accurate measure, and is a good indicator of the standard of living. Outside Quebec, per capita GDP for all those aged 15 or older is \$61,569. The figure for unilingual anglophones is \$62,502, and for bilinguals it is \$63,329. At the provincial level, GDP per capita varies significantly for bilinguals. For instance, we estimate that bilinguals' GDP per capita is \$90,360 in Alberta, while it is only \$42,805 in Prince Edward Island. These differences are also found among anglophones and in the population as a whole. If we compare bilinguals to anglophones, the per capita GDP generated by bilinguals is higher in British Columbia, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. It is in

the latter province that we find the greatest difference, with per capita GDP for bilinguals exceeding that for unilinguals by \$14,000. Chart 20 shows the differences in per capita GDP between bilinguals and anglophones in each of the nine provinces under review.

Chart 20

Bilinguals Generate More Wealth Almost Everywhere

(per capita GDP, \$ 000s)



Sources: Statistics Canada; The Conference Board of Canada.

Again at the provincial level, it is in Ontario that bilinguals produce the highest absolute value—\$76,486.7 million, or 12.1 per cent of Ontario's economic output. However, it is in New Brunswick that the contribution by bilinguals is most strongly felt, accounting for 38.7 per cent, or \$10,383.3 million, of that province's GDP. The lowest contribution by bilinguals is in Saskatchewan, at just 4.4 per cent of the province's GDP. Chart 21 shows the size of the provincial economies, and the contribution by bilinguals.

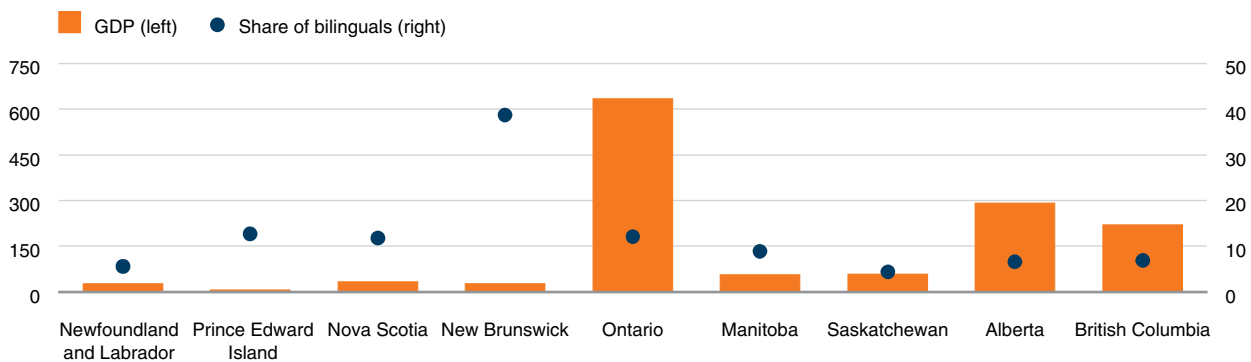
Lastly, we see that the economic output of bilinguals is not particularly diversified. Between 40 and 60 per cent of their output by province comes from the three biggest sectors in each province, as shown in Table 25. For example, the primary sector, educational services, and

finance account for 57.8 per cent of GDP generated by bilinguals in Newfoundland and Labrador, whereas in Saskatchewan, the primary sector, finance, and educational services account for 50.2 per cent of bilinguals' output. We also note that the health care and social assistance sector does not rank among the top three sectors where bilinguals generate the most value added in any province, which tells us that health care is not a high-productivity industry.

Chart 21

Bilinguals' Contribution to Wealth Is Most Significant in New Brunswick

(size of the economy, \$ billions; share of bilinguals, per cent)



Sources: Statistics Canada; The Conference Board of Canada.

Table 25

Output of Bilinguals

(GDP, 2016)

	Sector	Share of all output generated by bilinguals (per cent)
N.L.	Primary sector and utilities	33.3
	Educational services	13.1
	Finance, insurance, and real estate services	11.4
P.E.I.	Public administration	19.4
	Finance, insurance, and real estate services	18.4
	Educational services	13.5
N.S.	Finance, insurance, and real estate services	21.1
	Public administration	18.3
	Educational services	12.1

(continued ...)

Table 25 (cont'd)
Output of Bilinguals
(GDP, 2016)

	Sector	Share of all output generated by bilinguals (per cent)
N.B.	Finance, insurance, and real estate services	22.0
	Public administration	14.5
	Manufacturing	10.3
Ont.	Finance, insurance, and real estate services	24.4
	Public administration	15.9
	Educational services	9.9
Man.	Finance, insurance, and real estate services	21.6
	Public administration	12.4
	Educational services	10.0
Sask.	Primary sector and utilities	23.2
	Finance, insurance, and real estate services	16.1
	Educational services	10.9
Alta.	Primary sector and utilities	25.8
	Finance, insurance, and real estate services	17.5
	Construction	8.1
B.C.	Finance, insurance, and real estate services	24.4
	Educational services	10.9
	Professional, scientific, and technical services	8.9

Sources: Statistics Canada; The Conference Board of Canada.

There are a few conclusions we can draw from all these data. It is in public administration that the contribution of bilinguals outside Quebec is most strongly felt. They account for more than one-fifth of output in that sector outside Quebec. Next is the educational services sector, where bilinguals generate 18.4 per cent of output. And in third place is the cultural industries sector, where bilinguals generate 13.2 per cent of output.

We also see that the health care and social assistance sector is not among the most important for bilinguals. This is not surprising, since we know that bilingual workers are slightly under-represented here in relation to their share of the total workforce, even though it is a sector that employs a substantial share of bilinguals in almost all provinces.

Another finding is that, as is the case for Canada as a whole, the output of bilinguals outside Quebec is concentrated in finance, insurance, and real estate services. Of the \$134.8 billion generated by bilinguals in 2016, 22.7 per cent was in finance, insurance, and real estate services, 13.3 per cent in public administration, and 9.5 per cent in educational services. This suggests that bilinguals working in finance, insurance, and real estate services are more productive than those who work in public administration or educational services, given that educational services employs 12.1 per cent of bilinguals, public administration employs 11.2 per cent, and finance, insurance, and real estate services employs 4.1 per cent.

Conclusion

This report begins with the idea that English-French bilingualism in Canada is unique, by reason of the link that exists between these two languages and the origins and identity of the country. Canadian bilingualism is in fact much more than proficiency in two languages—it involves a geographic, cultural, and political duality that generates passion, and is deeply rooted in the country’s identity. One result of that duality is a wide variation in the rate of bilingualism from region to region across Canada. Although the country is officially bilingual, what we see is not so much a uniformly bilingual country as the coexistence of two languages and identities.

That said, there are both macro- and microeconomic factors that encourage Canadians to become bilingual. This is particularly true in Quebec, where we find the highest number of bilingual individuals in the country, mainly because of the minority situation of French in North America. It is also in Quebec that issues involving official languages and the role of bilingualism usually attract the most attention.

This report examines the role of bilingualism in Canada outside Quebec. It looks at the bilingualism situation outside Quebec and builds an economic portrait of Canadian bilingual workers. The portrait covers topics such as education, income, labour market participation, and the sectors of activity in which bilinguals are employed. We also endeavour to quantify the share and contribution of bilingualism outside Quebec to the Canadian economy.

The report begins with a literature review of studies that explore the economic benefits of bilingualism in the labour market. The studies and reports we consulted show that bilingual Canadians outside Quebec are generally paid more than unilinguals, that bilinguals are over-represented in occupations and sectors that are generally better-paid (such as

The majority of respondents to our survey believe that bilingualism can help them progress in their careers.

management or the public service), and that bilinguals are more likely to pursue post-secondary education. The literature is categorical on one point, however—bilingualism is not a direct cause of higher pay. Rather, higher pay is attributed to non-observable characteristics, such as perseverance or adaptability and the ability of bilinguals to land better-paid jobs. To be clear, these findings imply not that unilingual anglophones are less capable, but that proficiency in a second language can indicate the presence of these non-observable characteristics to employers.

We then use data from the 2006 and 2016 censuses to construct an economic portrait of bilinguals in Canada. We find that compared with unilingual anglophones, bilinguals outside Quebec stay in school longer, have higher incomes, and are more active in the labour market. It is also clear that bilinguals are concentrated in the service industries, rather than in the production of goods. In particular, they are over-represented in public administration; educational services; and professional, scientific, and technical services (among others). More importantly, in every province, at least two of the following three sectors—health care, educational services, and public administration—are among the top employers of bilinguals.

To complement these results, we surveyed 1,000 bilingual workers outside Quebec. The survey corroborated the findings from the census data and the conclusions from the literature review. The survey also indicated that bilinguals have a generally positive perception of the impact of bilingualism on success in the labour market. For example, most respondents believe that bilingualism can help them progress in their careers and secure better jobs and better pay. We also found that most respondents learned English before they learned French.

The final chapter of the report uses a unique methodology developed by the Conference Board to estimate the contribution to the economy by bilinguals outside Quebec. It does this by estimating the contribution by bilingual workers to GDP, by industry and by province. We found that 10 per cent of Canadian GDP outside Quebec is generated by bilingual workers. More importantly, bilinguals generate about 20 per cent of GDP in the educational services and public administration sectors

The share of bilingual workers outside Quebec is unlikely to vary significantly over the next few years.

outside Quebec. That said, bilinguals make their biggest contribution in dollar terms—nearly \$31 billion—in finance, insurance, and real estate services. Another interesting result emerges when we look at provincial GDP. Bilinguals generate 38 per cent of New Brunswick's GDP, and about 12 per cent of GDP in Ontario, Nova Scotia, and Prince Edward Island. Lastly, we looked at per capita GDP, which is a measure of the quality of life. We found that the per capita GDP of bilinguals is higher than that of anglophone unilinguals in all provinces except Alberta and Saskatchewan.

In short, the report confirms that bilingualism has positive effects on the Canadian labour market, even outside Quebec. In other words, while it is intuitively more advantageous to learn the language of the majority (English in Canada outside Quebec) than to learn the language of the minority, learning French in Canada outside Quebec has an important connection to success in the labour market. While merely learning a second language does not explain the successes of bilinguals, the data show that bilinguals tend to stay in school longer and are capable of securing better-paid jobs while making an important contribution to the economy. The fact that proficiency in both official languages is imperative for certain positions in the federal public service does explain at least some of these results. However, bilinguals are also able to position themselves better in the private sector, particularly in professional services.

Clearly, the decision to learn a second language can be due to economic motivations. It is what explains, in part, the higher rate of bilingualism in Quebec than elsewhere in Canada. In the next few years, we do not anticipate major changes in the factors that encourage Canadian workers outside Quebec to become bilingual. English will remain the universal language in science and new technologies, and the demand for bilingual workers will remain high in public services, among others. We therefore believe that the numbers of bilingual workers in Canada outside Quebec will not vary significantly in the years ahead. However, the economic contribution of bilinguals in Canada could increase, particularly if they

continue to pursue post-secondary studies. Lastly, we note that the value of bilingualism is not limited to pay or other financial advantages. Bilingualism also has well-documented cultural and historic values, even though those aspects were not within the ambit of this report.

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APPENDIX A

Bibliography

Agirdag, Orhan. "The Literal Cost of Language Assimilation for the Children of Immigration: The Effects of Bilingualism on Labor Market Outcomes." In *The Bilingual Advantage, Language, Literacy, and the U.S. Labor Market*, ed. by Patricia Gándara and Rebecca M. Callahan. Bristol: Multilingual Matters, 2014.

Alarcón, Amado, Antonio Di Paolo, Josiah Heyman, and Maria Cristina Morales. "The Occupational Location of Spanish-English Bilinguals in the New Information Economy: The Health and Criminal Justice Sector in the U.S. Borderlands With Mexico." In *The Bilingual Advantage, Language, Literacy, and the U.S. Labor Market*, ed. by Patricia Gándara and Rebecca M. Callahan. Bristol: Multilingual Matters, 2014.

Arcand, Alan. *Canada, Bilingualism, and Trade*. Ottawa: The Conference Board of Canada, 2013.

Armstrong, Alex. *The Returns to Bilingualism in the Canadian Labour Market*. Ottawa: Carleton University, 2004.

Bernard, André, Ross Finnie, and Benoît St-Jean. "Interprovincial Mobility and Earnings." *Perspectives on Labour and Income*, 2008.

Bloom, David, and Gilles Grenier. "Economic Perspective on Language: the Relative Value of Bilingualism in Canada and the United States." In *Language Loyalties: A Sourcebook on the Official English Controversy*, ed. by James Crawford. Chicago: University of Chicago Press, 1992.

Canadian Council on Learning. *Do You Speak English? Les avantages du bilinguisme au Canada*. Ottawa: Canadian Council on Learning, 2008.

Canadian Heritage. *Economic Advantages of Bilingualism*. Ottawa: Canadian Heritage, 2016. Accessed October 18, 2018. <https://www.caslt.org/files/learn-languages/pch-bilingualism-lit-review-final-en.pdf>.

Chiswick, Barry R., and Paul W. Miller. "The Endogeneity Between Language and Earnings: International Analyses." *Journal of Labor Economics*, 1995.

Christofides, Louis N., and Robert Swidinsky. "Bilingualism and Earnings: A Study Based on 1971, 1981, and 1991 Census Data." In *Economic Approaches to Language and Bilingualism*, ed. by Albert Breton, 123–85. Ottawa: Canadian Heritage, 1998. Accessed October 18, 2018. <https://eric.ed.gov/>.

—. *The Economic Returns to a Second Official Language: English in Quebec and French in the Rest-of-Canada*. Discussion Paper. Bonn: IZA Institute of Labor Economics, 2008.

Desjardins, Pierre-Marcel, and David Campbell. *Two Languages—It's Good for Business: Study on the Economic Benefits and Potential of Bilingualism in New Brunswick*. Fredericton: Office of the Commissioner of Official Languages for New Brunswick, 2015.

Gándara, Patricia. *Is There Really a Labor Market Advantage to Being Bilingual in the U.S.?* Princeton: Educational Testing Service, 2015. Accessed October 18, 2018. <https://onlinelibrary.wiley.com/doi/pdf/10.1002/ets2.12054>.

Government of Canada. "Language of Accused." Accessed October 10, 2018. <https://laws-lois.justice.gc.ca/eng/acts/C-46/section-530.html>.

—. *Official Languages Act*. Accessed October 10, 2018. <https://laws-lois.justice.gc.ca/eng/acts/O-3.01/page-1.html>.

Grenier, Gilles. "Earnings by Language Group in Quebec in 1980 and Emigration From Quebec Between 1976 and 1981." *Canadian Journal of Economics* 20, no. 4 (1987): 774–91.

Grenier, Gilles, and Serge Nadeau. *English as the Lingua Franca and the Economic Value of Other Languages: The Case of the Language of Work in the Montréal Labour Market*. Working Paper, Ottawa: University of Ottawa, 2011.

Grenier, Gilles, and François Vaillancourt. *An Economic Perspective on Learning a Second Language*. Ottawa: University of Ottawa, 1982.

Henley, Andrew, and Rhian Eleri Jones. *Earnings and Linguistic Proficiency in a Bilingual Economy*. Aberystwyth: University of Wales Aberystwyth, 2003.

Ipsos. *Survey of Supervisors of Bilingual Employees*. Ottawa: Canadian Parents for French, 2008.

Lepage, Jean-François, and Jean-Pierre Corbeil. *The Evolution of English–French Bilingualism in Canada From 1961 to 2011*. Ottawa: Statistics Canada, 2013. <http://publications.gc.ca/site/eng/9.576710/publication.html>.

Lévesque, Jean-Marc. “Bilingualism and Earnings.” *Perspectives on Labour and Income* 1, no. 1 (Summer 1989). Accessed October 10, 2018. <https://www150.statcan.gc.ca/n1/pub/75-001-x/1989002/2277-eng.pdf>.

Ottaviano, Gianmarco I.P., and Giovanni Peri. “Cities and Cultures.” *Journal of Urban Economics*, 2005. Accessed October 10, 2018. http://giovanniperi.ucdavis.edu/uploads/5/6/8/2/56826033/ottaviano_peri_2005.pdf.

Robinson-Cimpian, Joseph P. “Labor Market Differences Between Bilingual and Monolingual Hispanics.” In *The Bilingual Advantage: Language, Literacy, and the U.S. Labor Market*, ed. by Patricia Gándara and Rebecca M. Callahan. Bristol: Multilingual Matters, 2014.

Santibañez, Lucrecia, and Estela Zárate. “Bilinguals in the U.S. and College Enrollment.” In *The Bilingual Advantage, Language, Literacy, and the U.S. Labor Market*, ed. by Patricia C. Gándara and Rebecca M. Callahan. Bristol: Multilingual Matters, 2014.

Shapiro, Daniel M., and Morton Stelcner. "Language and Earnings in Quebec: Trends Over Twenty Years, 1970–1990." *Canadian Public Policy* 23, no. 2 (1997): 115–40.

Statistics Canada. "North American Industry Classification System (NAICS) Canada 2012." Last modified January 11, 2019. Accessed October 10, 2018. <https://www.statcan.gc.ca/eng/subjects/standard/naics/2012/index>.

Statistics Canada. "2006 Census of Population." Last modified February 1, 2019. Accessed October 10, 2018. <https://www12.statcan.gc.ca/census-recensement/2006/index-eng.cfm>.

Statistics Canada. "2016 Census of Population." Last modified February 1, 2019. Accessed October 10, 2018. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/index-eng.cfm>.

Vaillancourt, François. "An Economic Perspective on Language and Public Policy in Canada and the United States." In *Immigration, Language, and Ethnicity: Canada and the United States*, ed. by Barry R. Chiswick. Washington: AEI Press, 1992.

Workopolis. *Thinkopolis VII: How Relevant Is Bilingualism to Your Career in Canada in 2015?* Toronto: Workopolis, 2015.



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