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**Post-Secondary Education Attainment in Canada  
and the United States in the 1990s**

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by

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## Abstract

With the North American Free Trade Agreement and today's knowledge-based economy, there is a premium placed on post-secondary education and the need to retain graduates in Canada. The share of graduates in the Canadian and the United States labour pools are key to competitiveness. This paper examines Canada's performance relative to the U.S. in terms of post-secondary education (PSE) attainment in the population in the latter half of the 1990s. In particular, it responds to two questions: (1) Does Canada have a higher rate of overall PSE attainment compared to the United States? and (2) Does the United States have a higher rate of university attainment compared to Canada?

Findings show that as of 1999, Canada did have a higher rate of PSE attainment compared to the United States. Yet, the gap in attainment between the two countries was not as large as it appeared to be prior to 1997 when a different system of classifying international educational program data was used. Additionally, findings show that by the end of the decade the U.S. had a higher rate of university attainment in the population compared to Canada. However, the difference between the two countries in university attainment is smaller for younger individuals than older. Thus, while a larger percentage of the U.S. population had obtained a university degree, the gap between the two countries may be narrowing.



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## 1. Introduction

With the North American Free Trade Agreement and today's knowledge-based economy, there is a premium placed on post-secondary education and the need to retain graduates in Canada. The share of graduates in the Canadian and the U.S. labour pools is key to competitiveness. However, data on post-secondary education (PSE) attainment in Canada and the U.S. appears to present contrary information regarding the share of graduates in the labour pool. Compared to the United States, Canada sometimes appears to lead by a large margin and at other times the difference is smaller. There are also data that show the U.S. out-performing Canada. This paper attempts to clarify Canada's performance relative to the U.S. regarding PSE attainment in the latter half of the 1990s. More specifically, two questions are addressed: (1) Does Canada have a higher rate of overall PSE attainment compared to the United States? and (2) Does the United States have a higher rate of university attainment compared to Canada?

PSE attainment values in this paper represent the percentage of the population 25 to 64 years of age who have completed the requirements of recognized post-secondary education programs, according to the criteria outlined in the International Standard Classification of Education (discussed below).

Examining PSE attainment levels in each country is important for several reasons. First, higher levels of PSE attainment suggest greater human capital acquisition in the broader society: a more educated populace is more likely to have the requisite skills for today's competitive economy. To be competitive with the United States, Canada needs to ensure that its own citizens are acquiring the necessary knowledge and skills, which are gained in part through post-secondary education. A comparison of PSE attainment in each country also provides the opportunity to examine issues surrounding access to higher education, the extent to which individuals complete PSE programs, and at what ages. Before presenting findings on PSE attainment, some issues surrounding the comparison of international education indicators will first be outlined, since, as will be seen, the methods used to measure and classify education attainment have an impact on the statistics that are reported.

## 2. Comparing International Education Indicators

Examining PSE attainment in an international context can be problematic because of difficulties in readily comparing education programs that may differ in objectives, content and duration across countries. To better facilitate such comparisons, the *International Standard Classification of Education (ISCED)* was implemented in 1976. The OECD notes that “the purpose of ISCED is to provide an integrated and consistent statistical framework for the collection of internationally comparable education statistics” (OECD 1999). In 1997, a modified version of this classification system, ISCED-97, was introduced to accommodate the many new types of education programs developed in recent years. Many of the changes between ISCED-76 and its successor, ISCED-97, affect how post-secondary programs are classified. A comparison of the two classification systems is presented in Table 1.

Table 1: Comparison of ISCED-76 and ISCED-97

<u>ISCED 1976</u>		<u>ISCED 1997</u>	
<i>Level</i>		<i>Level</i>	
0	Education preceding the first level	0	Pre-primary level of education
1	Education at the first level	1	Primary level of education
2	Education at the second level, first stage	2	Lower secondary level of education (2A, 2B and 2C)
3	Education at the second level, second stage	3	Upper secondary level of education (3A, 3B, 3C)
5	Education at the third level, first stage, of the type that leads to an award not equivalent to a first university degree	4	Post-secondary, non-tertiary education (4A, 4B, 4C)
		5	First stage of tertiary education 5B, 1 <sup>st</sup> , 2 <sup>nd</sup> qualifications (short or medium duration) 5A, 1 <sup>st</sup> degree (medium duration)
6	Education at the third level, first stage, of the type that leads to a first university degree or equivalent		5A, 1 <sup>st</sup> degree (long) 5A, 2 <sup>nd</sup> degree
7	Education at the third level, second stage of the type that leads to a post-graduate university degree or equivalent	6	Second stage of tertiary education (leading to an advanced research qualification)
9	Education not definable by level		

Some of the key differences between the two classification systems include:

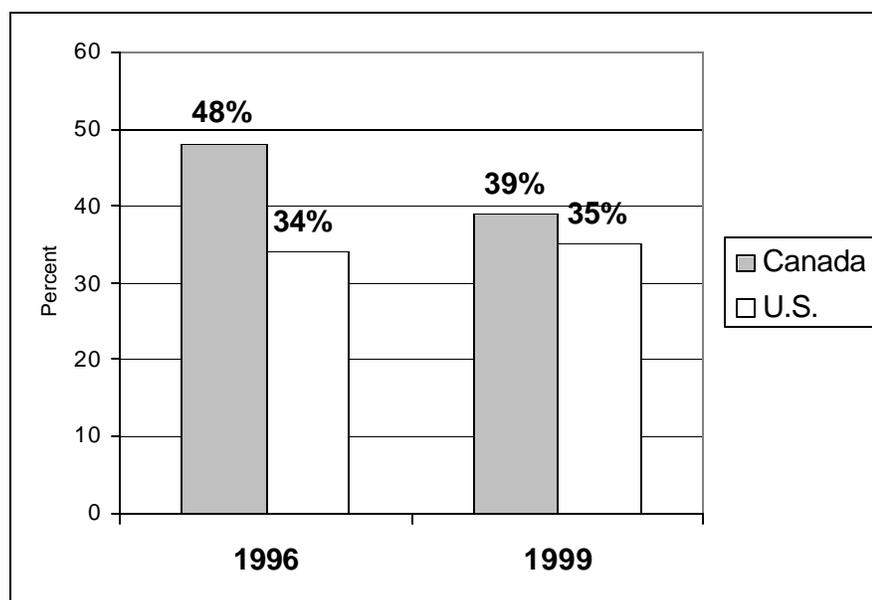
- ISCED-76 was comprised of 9 education levels, while ISCED-97 has 6 levels that also include sub-categories.
- A multi-dimensional classification framework was introduced with ISCED-97. This provided more detailed information on all education programs including: (1) type of subsequent education or destination to which a program leads; (2) program orientation (general education, pre-vocational, vocational); (3) length of program; and (4) position in the national degree and qualification structure.
- A new education level, Level 4, was introduced with ISCED-97. This education category straddles the boundary between upper secondary programs and post-secondary education. With ISCED-76, such programs were classified as Level 3 or Level 5.
- With ISCED-97, post-secondary education is comprised of only two categories: Level 5 and Level 6. Level 5 is subdivided into two sub-categories, 5A and 5B. Level 5A reflects theory-based programs that can lead to advanced research qualifications or professions with high skill requirements. This category includes university undergraduate degree programs. Level 5B programs are more practically oriented or occupationally specific. The revised Level 6 captures programs leading to advanced research qualifications (e.g., doctoral programs).

The implication is that what was considered a post-secondary program under ISCED-76 might no longer be so with the revised system. For example, the definition of a “non-university post-secondary” program is now more narrowly defined; i.e., some programs are now classified as “Level 4” which are not regarded as tertiary programs. In terms of international comparability, this change represents an improvement over the former system, since PSE programs can vary widely between countries. A multi-dimensional approach for classifying tertiary programs provides the opportunity to make more accurate comparisons.

### 3. PSE Attainment in Canada and the United States

Post-secondary education attainment in the Canadian and United States populations for individuals 25 to 64 years of age is presented in Figure 1 for the years 1996 and 1999. The 1996 data were classified using ISCED-76, while the 1999 data are based on ISCED-97. Canadian data are collected by Statistics Canada as part of the Labour Force Survey. United States data are from the Current Population Survey and are collected by the Census Bureau and Bureau of Labour Statistics.

**Figure 1: Post-Secondary Education Attainment of the Population Aged 25 to 64, 1996 and 1999**



The 1996 data show that a larger share of the Canadian population (48%) completed post-secondary education relative to the share of the U.S. population (34%). These figures include individuals who had completed either university degrees or non-university post-secondary programs.

The more recent data, however, present a modified picture regarding PSE attainment in the two countries. The percentage of the Canadian population aged 25 to 64 that had completed post-secondary education as of 1999 (39%) was still higher relative to the share of the U.S. population (35%) although not to the same extent as it was in 1996 (OECD 2001). The gap in attainment rates narrows from a 14-percentage-point difference in Canada's favour in 1996 to a 4-percentage-point

narrows from a 14-percentage-point difference in Canada's favour in 1996 to a 4-percentage-point difference in 1999. The dramatic fall in the Canadian PSE attainment figures requires explanation, especially since the proportion of attainment in the U.S. appears to have remained stable.

It is possible that the decrease in Canadian PSE attainment from 1996 to 1999 could be accounted for by a reduction in PSE enrollment in the 1990s. However, additional OECD data show that Canadian PSE enrollment from 1995 to 1999 decreased by less than 2 percentage points (Ibid.).

The decline in PSE attainment in Canada in the latter half of the 1990s is largely attributable to a change in how it is measured, due to the introduction of ISCED-97. With ISCED-97 the percentage of non-university PSE attainment (Level 5B) is reduced since apprenticeship, trades certificate and short-term diploma programs are now classified as Level 4 (non-tertiary) programs. In Canada, Level 5B now primarily reflects community college, Quebec CEGEP and university certificate programs below the bachelor's level. Thus, the reduction in the overall percentage of Canadian PSE attainment from 1996 to 1999 (48% to 39%) is mainly due to this new method of categorizing and reporting of education programs.<sup>1</sup>

In contrast, PSE attainment in the U.S. changed only marginally from 1996 to 1999, and actually increased by 1 percentage point (from 34% to 35%). This shows that the implementation of ISCED-97, and particularly the introduction of the Level 4 (non-tertiary) category, had little effect on the calculation of U.S. PSE attainment.

What is suggested from these data is that the difference in Canada and U.S. PSE attainment from the mid to the late 1990s is attributable to an over-estimation of non-university tertiary attainment in Canada prior to the implementation of the revised education classification system in 1997.

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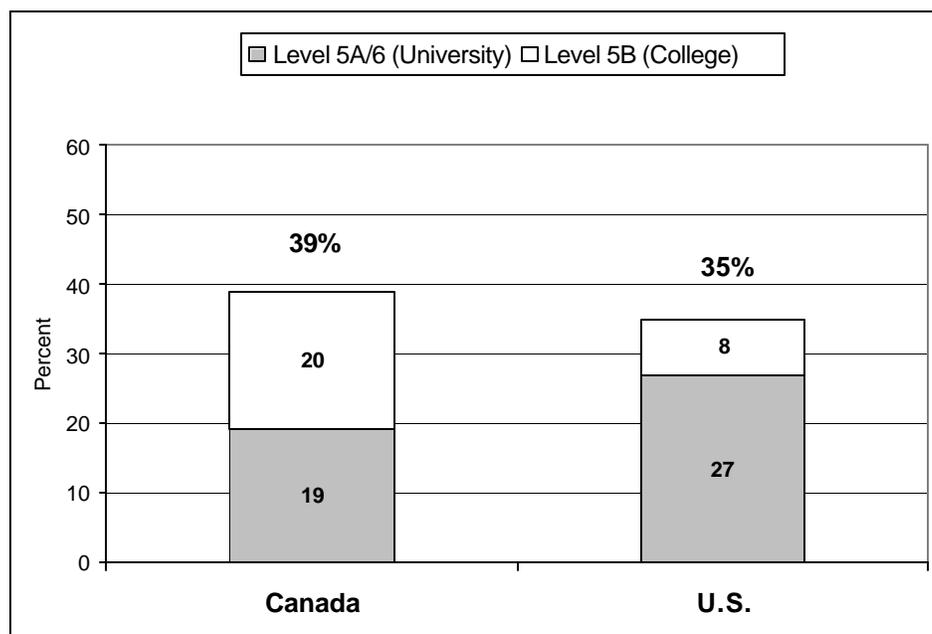
<sup>1</sup> There may still be some inflation of Level 5B tertiary attainment in Canada due to possible ambiguity in the wording of education attainment questions in the Canadian Labour Force Survey. More specifically, some individuals who have not completed legitimate Level 5B programs might still be classified as having done so. Thus, the "actual" level of Canadian PSE attainment might be somewhat lower than what is presented in Figure 1.

#### 4. University and Non-University PSE Attainment

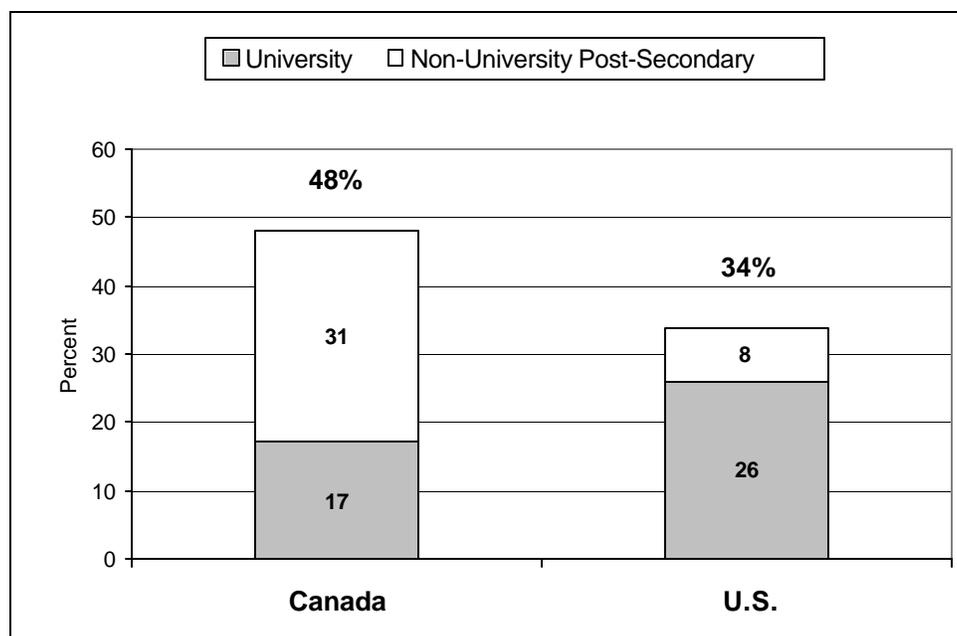
Again, post-secondary education includes both university and non-university programs. A closer look at the statistics for Canada and the United States and specifically for the type of post-secondary education reveals some interesting differences.

For non-university PSE attainment, 20% of Canadians had attained a Level 5B education (e.g., community college) by 1999, compared to only 8% of Americans (Figure 2). This difference is most likely due to structural differences in how post-secondary programs have been developed and organized in the two countries. For example, compared to the United States, Canada has a more developed community college system that grants diplomas and certificates instead of degrees.

**Figure 2: Post-Secondary Education Attainment of the Population Aged 25 to 64, by Type, 1999**



Findings on university attainment show that by the end of the decade a larger percentage of the American population had obtained at least one university degree compared to the Canadian population. As of 1999, more than one-quarter of Americans (27%) aged 25 to 64 had obtained a university degree compared to about one-fifth of Canadians (19%) (Figure 2). These rates of university attainment are similar to those found for the two countries in the mid-1990s (Figure 3).

**Figure 3: Post-Secondary Education Attainment of the Population Aged 25 to 64, by Type, 1996**

The gap in the Canada and United States university attainment values once again reflects differences in the tertiary education systems of the two countries. It has been noted, for example, that the United States has more degree-granting institutions and programs per capita, compared to Canada (Skolnik and Jones 1992). The more focused emphasis on university attainment in the United States compared to Canada is evident in the percentage difference.

Despite the higher percentage of university attainment among the U.S. population, a somewhat different picture emerges when specific age cohorts are examined. Recent OECD data on university attainment by age level for Canada and the United States are presented in Table 2.

These 1999 data show that more Americans than Canadians in each age cohort had obtained a university degree. Degree attainment in the U.S. ranged from 23% to 30% across the age groups, while it ranged from 14% to 23% among the Canadian groups. A 10-percentage-point difference is found in favour of the United States for the 45 to 54-year-old age group, followed by a similar 9-percentage-point gap for the 55 to 64 and 35 to 44-year-old age groups. For the youngest age grouping, those aged 25 to 34, a 6-percentage-point difference is found (i.e., U.S. 29% and Canada 23%). This

increasing university attainment in Canada is also shown by the 9-percentage-point difference between the youngest (23%) and oldest (14%) age groups. In the U.S. population, the gap between the youngest (29%) and oldest (23%) cohorts is somewhat smaller. Thus, although a larger percentage of the U.S. population had obtained a university degree, the gap between the two countries may be narrowing.

**Table 2: University Attainment in Canada and the United States, by Age Group, 1999**

<u>Age</u>	<u>Canada (%)</u>	<u>United States (%)</u>
25 to 34	23	29
35 to 44	18	27
45 to 54	20	30
55 to 64	14	23
<i>Total 25 to 64</i>	<i>19</i>	<i>27</i>

Source: *Education at a Glance: OECD Indicators*, 2001 Edition. OECD, Paris.

## 5. Conclusion

The main purpose of this paper was to clarify Canada's performance in PSE attainment relative to the United States for the latter half of the 1990s. This comparison is useful to help clarify published data in recent years which appear to present contradictory findings on tertiary attainment in the two countries.

By the end of the decade Canada did have a higher rate of overall PSE attainment compared to the United States. OECD data from 1999 show that 39% of Canadians 25 to 64 years of age had completed PSE, while 35% of Americans had done so. The 4-percentage-point gap in favour of Canada is smaller than findings from prior to 1997. This smaller gap mainly results from a difference in how PSE attainment is measured, rather than from a decline in tertiary enrolment in Canada.

Measurement changes occurred with the implementation of the revised international education classification system, ISCED-97. Thus, the recent reduction in the PSE attainment gap between the two countries does not warrant focused policy attention.

Findings also show that the United States did have a higher rate of university attainment in the population compared to Canada by the end of the 1990s. Data from 1999 show that 27% of Americans had obtained a university degree compared to 19% of Canadians. Yet, this finding masks the fact that the gap in university attainment between the two countries is smaller for younger than for older individuals. For individuals 25 to 34 years of age, the difference in university attainment is only 6 percentage points in favour of the U.S. while the gap is 9 to 10-percentage points for individuals 35 years of age and older. The findings suggest that the gap in university attainment between Canada and the U.S. may be narrowing. Changes in the difference between age cohorts in the two countries should be monitored.



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