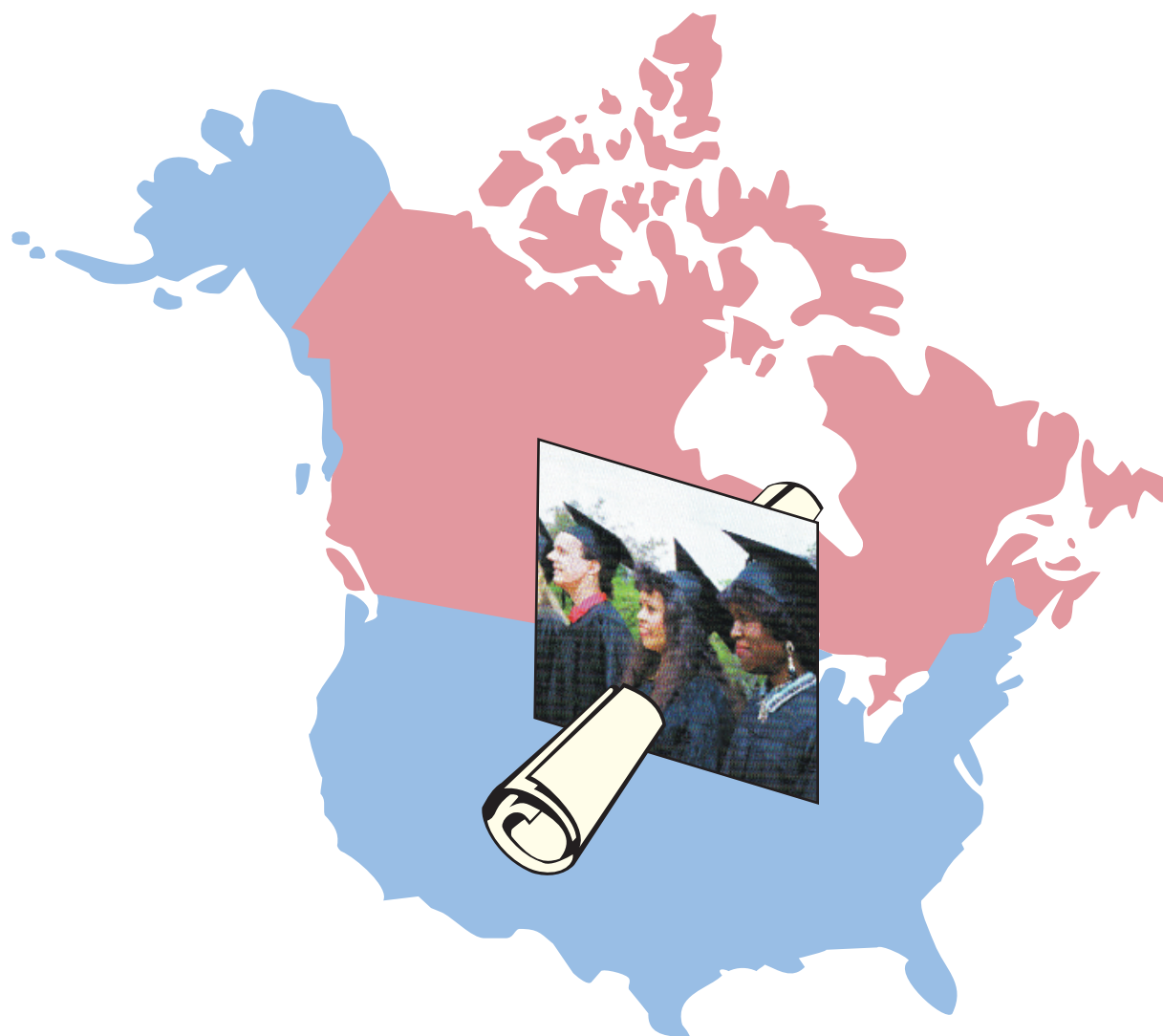


# South of the Border

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## Graduates from the Class of '95 Who Moved to the United States



An Analysis of Results from the  
*Survey of 1995 Graduates Who Moved to the United States*



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*Survey of 1995 Graduates Who Moved to the United States*

**JEFF FRANK AND ÉRIC BÉLAIR**

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Julie McAuley was the project manager at Statistics Canada who oversaw the development of the survey as well as the preparation of the resulting data. Project team members were Lynn Barr-Telford (content), Scott Buchanan (processing), Pierre David (methodology), Huguette Demers (processing), Jeff Frank (content), Lorne Klassen (programming), Lloyd Nieman (field operations), Kevin Smith (field operations) and Janet Zinnicker (processing).

The survey was conducted through Statistics Canada's regional office in Winnipeg. Carol DeBaets (Project Supervisor) and Tanis Kemerle (Senior Interviewer) led the team of interviewers: Eleanor Denischuk, Anita Elkow, Tasha Felix, Dawn Graham, Donnalyn Grant, Francine Hebert, Shawn Linden, Joyce Phelps, Georgette Philippot and Marlene Watcher.

Jeff Frank (Statistics Canada) and Éric Bélair (HRDC) analysed the survey results and prepared

this report, with technical and editorial assistance from Kerry Barnes.

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Serge Desjardins and Patrick Dessureault of HRDC coordinated the production of the publication.

## Symbols

The following are symbols used throughout this publication:

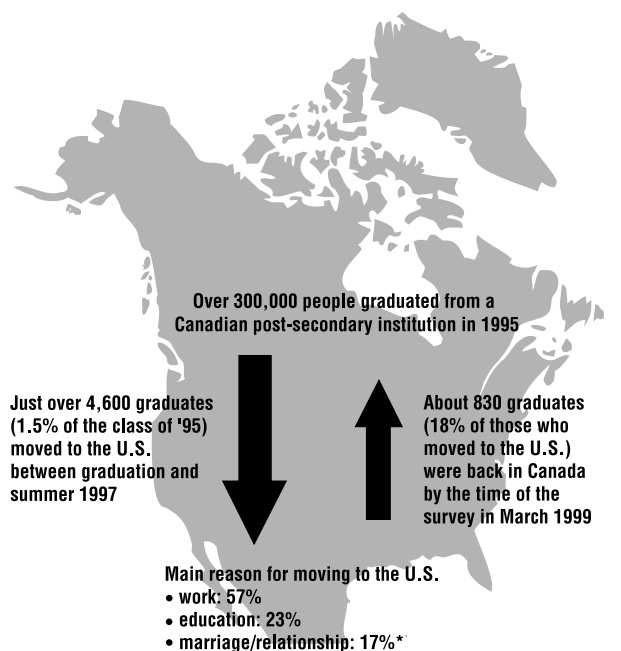
- \* numbers marked with this symbol have a coefficient of variation between 16.6 percent and 33.3 percent and are less reliable than unmarked numbers.
- data are not reliable enough to be released; coefficient of variation is greater than 33.3 percent.

# HIGHLIGHTS

Statistics Canada, in partnership with Human Resources Development Canada, conducted the *Survey of 1995 Graduates Who Moved to the United States* (SGMUS) in March 1999. The survey covered post-secondary graduates from the class of '95 who moved to the U.S. between graduation and the summer of 1997 (but did not include those who were exclusively American citizens returning to the U.S. after studying in Canada). These graduates were surveyed to obtain information on their characteristics, reasons for relocating to the U.S., education and work experiences, and plans for the future. (See Figure 1-1.) The movements of graduates to other countries, or of foreign students and graduates into Canada, were beyond the scope of the survey.

**Figure 1-1**

**Flow of post-secondary graduates from the class of '95**



Source: *Survey of 1995 Graduates Who Moved to the United States*

- The movement of graduates from the class of 1995 to the U.S. was relatively small. Only 1.5 percent of the more than 300,000 men and women who graduated from a Canadian post-secondary institution in 1995 moved to the U.S. between graduation and the summer of 1997.
- Master's and PhD graduates were over-represented among the approximately 4,600 graduates who relocated to the U.S., as were health, engineering and applied sciences graduates. Nearly one in five of the graduates who moved worked as a nurse upon arrival in the U.S.
- About 360 (12%) of the 3,000 PhD graduates from the class of '95 moved to the U.S. Most of the PhD graduates who moved (84%) were Canadian citizens (58%\* were Canadian citizens by birth). The remainder were landed immigrants or foreign students.

- Those who relocated to the U.S. reported above-average grades. About 44 percent ranked themselves in the top 10 percent of their graduating class in their field of study. In addition, graduates who moved were somewhat more likely than their comparable counterparts who remained in Canada to have received scholarships or other academic awards. It would appear that those who moved did tend to be high-quality graduates.
- Texas was the destination state for 16 percent\* of the graduates who relocated to the U.S. Other common destination states included California (11%\*), New York (10%\*) and Florida (8%\*).
- In addition to economic forces, social factors played a compelling role in motivating some people to move. More than half of the 1995 graduates who relocated (57%) did so mainly for work, and another 23 percent for education purposes. But about 17 percent\* relocated for marriage or relationships, and by far the majority of these people were women.
- Many graduates were drawn to the U.S. by greater availability of jobs, either in a particular field or in general. Among the 2,600 graduates who moved for work (57% of all those who relocated), greater availability of jobs *in a particular field* was the factor most commonly cited (44%) as having attracted them to the U.S. Higher salaries in the U.S. (39%) and greater availability of jobs *in general* (35%) were the next most frequently stated factors. Very few graduates explicitly cited lower taxes as a factor that attracted them to the U.S.
- Most graduates who had a job arranged to start upon arrival in the U.S. found their job through their own initiative: by responding to advertisements (28%), through personal connections (21%\*) or by sending out unsolicited résumés or applications (20%\*). Another 12 percent\* found their jobs in the U.S. through on-campus recruitment campaigns or job postings. Very few were contacted directly by a U.S. employer or head-hunter. This suggests that only a modest number of graduates from the class of '95 had been directly recruited by U.S. employers and that traditional job search methods were the norm for these graduates who moved to prearranged jobs in the U.S.
- Compared with graduates who remained in Canada, those who moved to the U.S. tended to find work that was more closely related to their fields of study, required higher skill levels and paid higher salaries. Much of this report analyses the graduates' work experiences in detail. For example:  

After taking inflation and purchasing power parity into account, the median annual earnings of bachelor's graduates working in applied and natural sciences jobs upon arrival in the U.S. was \$47,400, considerably higher than the \$38,400 earned by their counterparts in Canada. The gap in salaries between bachelor's graduates in health occupations upon arrival in the U.S. and those who remained in Canada was similar.
- By March 1999, about 830 or 18 percent\* of the graduates had returned to Canada. Of these, one-half (52%\*) reported having done so for work-related reasons. Another 38 percent\* moved back to Canada for marriage or relationship reasons, or for other family-related reasons.

- By 1999, 36 percent of graduates still in the U.S. were non-citizen permanent residents (e.g. green card holders). Over one half of graduates still in the U.S. in 1999 (56%) continued to live there as temporary residents. Of these, 44 percent planned to obtain permanent residence status in the U.S. within the next two years, 38 percent did not plan to do so and 19 percent\* did not know whether they would pursue permanent residence status in the U.S.
- All graduates still in the U.S. in 1999 were asked whether they intended to return to Canada to live: 43 percent were planning to return, 29 percent were not and 27 percent did not know.

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# 1. INTRODUCTION

## 1.1 BACKGROUND

Concern over the movement of skilled workers to the United States (U.S.) is not a new development in Canada's history. For a variety of reasons, however, the issue of the "brain drain" to the U.S. has been receiving a great deal of attention in the late 1990s. The growth of the knowledge economy has increased the demand for highly educated and skilled workers on both sides of the border. This demand may be even more intense in the U.S. where many knowledge industries are concentrated and where the economy has been thriving.

The period of fiscal restraint that characterized much of the mid- to late-1990s in Canada may also have encouraged some people in certain occupations and industries to look south for opportunities – nursing serves as a good example. In addition, the establishment of the North American Free Trade Agreement has provided a mechanism that makes it relatively simple for Canadians in a range of occupations to enter the U.S. as temporary workers. Finally, some have argued that current differences in personal income tax and in currency exchange rates have made working in the U.S. more attractive to Canadians.

## 1.2 ABOUT THE SURVEY

In the summer of 1997, Statistics Canada, on behalf of Human Resources Development Canada (HRDC), conducted the *1997 National Survey of 1995 Graduates* (NGS). For this survey, slightly more than 43,000 out of the 300,000 graduates who had obtained a post-secondary diploma, certificate or degree in Canada in 1995 were interviewed. The objective was to gather information concerning their studies and labour market experience since graduating. At that time, it was found that in addition to the graduates interviewed as part of the NGS, a number of other graduates had moved to the U.S. These graduates were not interviewed at that time as they were not part of the survey's target population.

The issue of post-secondary graduates relocating to the U.S. is of keen interest in the current debate over the "brain drain." In conducting the *Survey of 1995 Graduates Who Moved to the United States* (SGMUS), an attempt was thus made to trace and interview the 1995 graduates who were living in the U.S. during the summer of 1997. This survey was developed by Statistics Canada and HRDC and was conducted in March 1999. It obtained information on the graduates concerning their relocation to the U.S., including their:

- level and field of study;
- activities prior to moving to the U.S.;
- reasons for moving;

- work experiences in the U.S.;
- plans for the future; and
- individual characteristics.

## 1.3 TARGET POPULATION

The graduates surveyed for the SGMUS had completed their requirements for a certificate, diploma or degree in Canada during the 1995 calendar year in trade/vocational, college or university programs.

The survey included graduates who moved to the U.S. who:

- graduated from university programs that led to bachelor's, master's or PhD degrees, or that lead to specialized certificates or diplomas;
- graduated from post-secondary programs (i.e. programs of one year's duration or longer that normally require secondary school completion or its equivalent for admission) in Colleges of Applied Arts and Technology, Collèges d'enseignement général et professionnel (CEGEP, excluding those completing programs that lead to university enrolment), community colleges, technical schools or similar institutions; or
- graduated from skilled trade programs (i.e. pre-employment programs that are normally three months or more in duration). A trade/vocational school is a public educational institution that offers courses to prepare people for employment in a specific occupation, such as heavy equipment operator, automotive mechanic or upholsterer. Many community colleges and technical institutes offer certificates or diplomas at the trade level.

The survey excluded:

- graduates from private post-secondary institutions (e.g. computer training and commercial secretarial schools);

- those who completed "continuing education" courses at universities and colleges (unless they led to degrees or diplomas);
- those who took part-time trade courses (e.g. adult education evening courses) while employed full time;
- those who completed vocational programs that lasted less than three months or that were not in the skilled trades (e.g. basic training and skill development); and
- those in apprenticeship programs.

It is possible that some graduates from the class of '95 moved to the U.S. after the summer of 1997, that is, after the NGS was completed.<sup>1</sup> It is also probable that some of the graduates who moved to the U.S. after graduating in 1995 had returned to Canada before the NGS was conducted. At the time of the NGS, these two groups of graduates would not have been identified as being residents of the U.S., and therefore are not part of the population surveyed in the SGMUS.

The SGMUS identified a number of American graduates who obtained a diploma in Canada in 1995 and then returned to the U.S. These were students who had returned to their native country and, therefore, were not interviewed as part of this survey.<sup>2</sup> They made up approximately 10 percent\* of all 1995 graduates who moved to the U.S. after graduation. However, non-American graduates who had student visas, graduated in 1995 in Canada,

<sup>1</sup> Results from the SGMUS indicate that graduates who moved to the U.S. tended to do so upon or shortly after graduation. (See Figure 3-5.) It is highly probable, therefore, that relatively few 1995 graduates moved to the U.S. after 1997.

<sup>2</sup> A small number of graduates had dual citizenship, Canadian and American, prior to moving and they were interviewed as part of the SGMUS.



and moved to the U.S. were interviewed for the survey. This latter group comprised an extremely small percentage of the total number of graduates who moved.

In total, interviews were successfully completed with 531 individuals. After weighting and adjusting for non-response, this group represents approximately 4,600 graduates who moved to the U.S. between graduation in 1995 and the summer of 1997. It is these graduates who are the subject of the analysis in this report.<sup>3</sup>

## 1.4 ABOUT THIS REPORT

This report examines specifically 1995 graduates who moved to the U.S. It provides important contextual information that has not been systematically collected before on the characteristics and activities of these post-secondary graduates. The movements of graduates to other countries, or of foreign students and graduates into Canada, were beyond the scope of the survey.

Results from this survey will help to answer questions such as: Were those graduates who left for the U.S. our “best and brightest?” For those who went because of work, what exactly drew them to the U.S.? Did they move because of the availability of jobs in their field? Were they attracted by higher salaries and lower taxes? For those who left to further their education, what attracted them to study at an American institution? The answers to these and other questions may have important policy implications for governments, businesses and post-secondary institutions.

Section 2 of this report provides an estimate of the magnitude of the flow of 1995 graduates to the U.S. It also addresses how this group compared with

graduates who remained in Canada along important characteristics (such as field and level of study).

The third section traces in a more or less chronological manner the experiences of graduates as they made the move from Canada to the U.S. It documents their activities while still in Canada, the factors and processes surrounding their relocation, and their activities upon arrival in the U.S. Another subsection examines their current activities and plans for the future: some had already returned to Canada; how many others plan to do so? A separate analysis focusing on the unique situation of health graduates is also included.

Section 4 pulls together aspects of the various job-related information collected by the survey to give a larger picture of the graduates’ labour market situation from the time before relocating to the U.S. to the time of the survey in March 1999. A comparison between jobs held by graduates who moved to the U.S. and those who remained in Canada is also included.

The final section of the report summarizes the major findings and offers some conclusions based on what has been learned from the survey results.

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<sup>3</sup> See Appendix B: Methodological Overview for additional information on the SGMUS.

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## 2. CHARACTERISTICS OF GRADUATES WHO MOVED TO THE UNITED STATES

This section establishes a profile of the 1995 graduates who relocated to the U.S. after graduation and compares their characteristics with those of 1995 graduates who remained in Canada. Information on this latter group comes from the *1997 National Survey of 1995 Graduates* (NGS).

### NUMBER AND PROPORTION OF GRADUATES WHO MOVED TO THE UNITED STATES

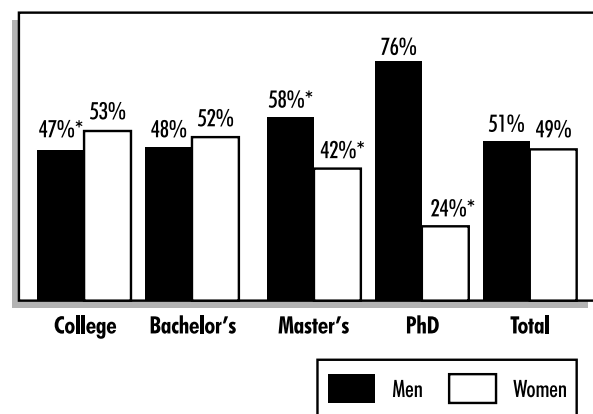
Just over 4,600 graduates of the class of '95 moved to the U.S. between graduation in 1995 and the summer of 1997. This figure represents 1.5 percent of the roughly 300,000<sup>4</sup> people who graduated from a Canadian post-secondary institution in 1995.

Women accounted for one half of the graduates who moved to the U.S., compared with 57 percent of those who remained in Canada. Moreover, when health graduates (who were primarily female nurses) were excluded, the majority of graduates who relocated to the U.S. (62%) were men.

Among the graduates who moved, women and men were more or less equally represented at the college level (53% and 47%\*, respectively) and at the bachelor's level (52% and 48%, respectively). However, men were more strongly represented at the master's and PhD levels. Among the graduates who moved, 58 percent\* of those with a master's degree and 76 percent of those with a PhD were men. (See Figure 2-1.)

**Figure 2-1**

**Distribution of graduates who moved to the U.S., by gender and level of study**



Source: *Survey of 1995 Graduates Who Moved to the United States*

<sup>4</sup> In this study, all calculations reporting a percentage of graduates who moved to the U.S. in relation to the total number of graduates in a given group are based on the following denominator: number of graduates from the NGS + number of graduates from the SGMUS. Graduates who were living outside Canada and the U.S. when the NGS was being conducted are excluded from the denominator because their exact numbers are not known. Including them in the denominator would have resulted in slightly smaller percentages than those reported.

## RESIDENCE STATUS IN CANADA BEFORE MOVING TO THE UNITED STATES

About 84 percent of the graduates who moved to the U.S. were Canadian citizens by birth and 11 percent\* were Canadian citizens by naturalization. A small number of graduates were landed immigrants or foreign visa students prior to moving. Graduates with foreign student visas accounted for only a small percentage at every level of study.

The percentage of graduates who were Canadian citizens by birth before moving tended to decrease with the level of study. At the college level, 96 percent of graduates who moved to the U.S. were Canadian citizens by birth. This level dropped to 86 percent at the bachelor's level, 76 percent at the master's level and 58 percent\* at the PhD level. If graduates who were Canadian citizens by naturalization are included, 84 percent of graduates with a PhD were Canadian citizens before moving.

Some of those who graduated in Canada in 1995 were exclusively American citizens who then returned home to the U.S. These graduates were not part of the survey and are therefore not included in this analysis.

## RELOCATING TO THE UNITED STATES, BY LEVEL OF CERTIFICATION

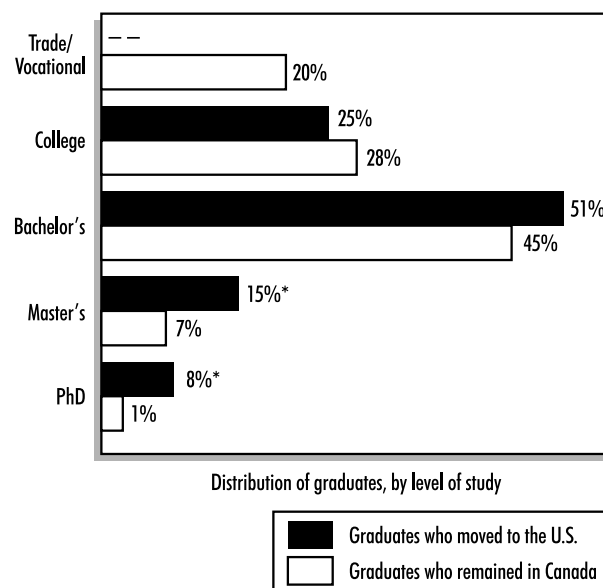
The distribution of graduates who moved to the U.S. varied considerably by level of study, compared with those who remained in Canada. Many of the graduates who moved were among the most highly qualified of the class of '95.

Master's and PhD graduates were strongly represented among those who moved. Master's and PhD graduates represented 15 percent\* and 8 percent\*, respectively, of all post-secondary graduates who relocated to the U.S. In comparison, only 7 percent

of graduates who remained in Canada obtained a master's degree and fewer than 1 percent had a PhD in 1995. (See Figure 2-2.)

Figure 2-2

### Master's and PhD graduates over-represented among the movers



-- estimate not reliable enough to report

Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

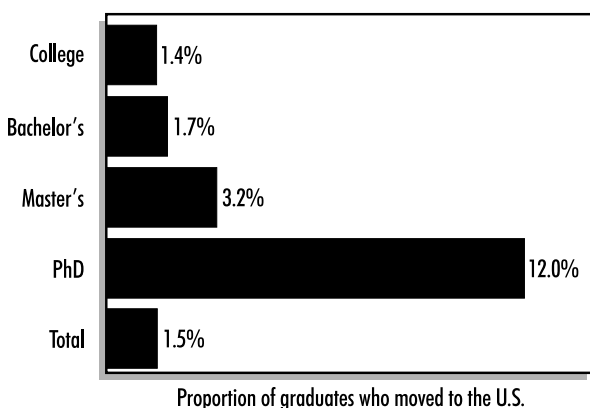
Just over one half of the graduates who relocated had obtained a bachelor's degree in 1995, compared with 45 percent of those who remained in Canada. College graduates made up about one quarter of all graduates who stayed in Canada, and a similar proportion of those who moved. Graduates of trade/vocational school programs comprised 20 percent of graduates who remained in Canada; however, they constituted only a minute percentage of graduates who moved to the U.S.

Except among PhD graduates, the proportion of graduates who moved is notably very small at every level of study. In fact, less than 2 percent of all

college and bachelor's graduates moved to the U.S. About 3 percent of all master's graduates and an extremely small percentage of trade/vocational school graduates relocated. However, a relatively large percentage of PhD graduates (12%) moved to the U.S. (See Figure 2-3 and Supplementary Table A-1 in Appendix A.)

**Figure 2-3**

**About 12% of all PhD graduates moved to the U.S.**



Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

### RELOCATING TO THE UNITED STATES, BY FIELD OF STUDY

Twenty percent\* of all university graduates who moved to the U.S. were health graduates, while health graduates made up only 8 percent of the university graduates who remained in Canada. Graduates in engineering and applied sciences were the next largest group of graduates who moved (13%\*). Graduates in this field of study were over-represented among those who moved to the U.S., as engineering and applied sciences graduates accounted for 7 percent of all graduates who stayed in Canada. Social sciences graduates accounted for 13 percent\* of the graduates who moved, compared

## Harmonized fields of study

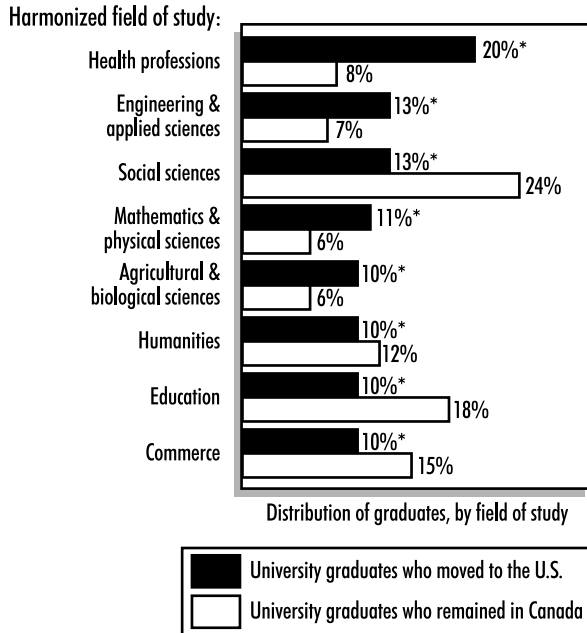
Traditionally, two systems are used to classify fields of study at the post-secondary level:

- the Community College Student Information System (CCSIS); and
- the University Student Information System (USIS).

Post-secondary institutions assign codes for fields of study according to the two systems. The first system is used to classify fields of study for college and trade/vocational school programs, while the second one is used for university programs. Because there are two distinct classification systems, the two groups are often examined separately. Given the limited sample of the SGMUS, this report instead uses the harmonized classification of fields of study used in the 1996 Census, which combines the two classification systems into a single system.

with 24 percent of the university graduates who remained in Canada. (See Figure 2-4.)

Ninety-three percent of the engineering and applied sciences graduates who moved to the U.S. were men. Men also accounted for 72 percent\* of graduates from mathematics and physical sciences programs who moved to the U.S. Women, however, made up 82 percent of university health graduates who moved to the U.S. These percentages were similar to, though slightly higher than, those observed for graduates who stayed in Canada.

**Figure 2-4****Health, engineering and mathematics university graduates over-represented among the movers**

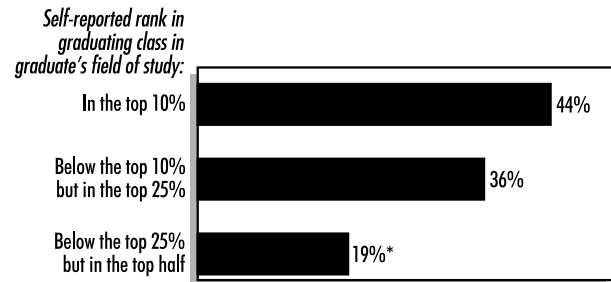
Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

Most (54%) of the college graduates who moved to the U.S. were in health-related fields of study. About 71 percent of these health graduates were women. Only 15 percent of the graduates who stayed in Canada were health graduates from college programs. The majority of health graduates who moved to the U.S. were nurses.<sup>5</sup> The percentages for other fields of study were too small to be presented.

**“QUALITY” INDICATORS**

Were the graduates who moved to the U.S. among the top of their graduating class? Graduates were asked to assess their own academic performance in relation to the rest of the graduates in their field of study. Forty-four percent of the graduates who moved to the U.S. ranked themselves among

the top 10 percent academically. About 36 percent ranked below the top 10 percent but in the top 25 percent. (See Figure 2-5.) The 1995 graduates interviewed for the NGS were not asked a similar question, thus preventing any direct comparison with graduates who stayed in Canada.

**Figure 2-5****Nearly one half of the graduates who moved ranked themselves near the top of their graduating class**

Source: Survey of 1995 Graduates Who Moved to the United States

Another “quality” indicator relates to whether graduates obtained scholarships or other academic awards. About 19 percent of the graduates who stayed in Canada received a scholarship or other academic award, whereas this proportion rises to 36 percent for the graduates who moved to the U.S. At every level of study, proportionately more had received a scholarship or other academic award among the graduates who moved compared with those who remained. For example, at the bachelor's level, 36 percent shared this distinction, compared with 25 percent of graduates who did not move.

These results indicate that those who moved did tend to be above-average graduates from the class of '95.

<sup>5</sup> For more detail, see the box entitled Focus on Health Graduates in Section 3.

## 3. PATHWAYS TO THE UNITED STATES

This section documents the activities of graduates who relocated to the U.S. It begins by examining the activities of these graduates prior to moving. Next, it describes the factors and processes surrounding their relocation to the U.S., followed by their activities upon arrival. The final subsection examines the graduates' current activities and their plans for the future.

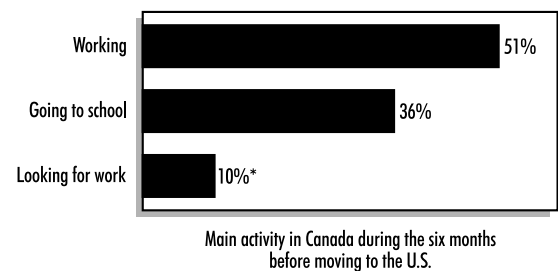
### 3.1 ACTIVITIES IN CANADA BEFORE MOVING

Graduates were asked about their main activity in Canada during the six months before they relocated to the U.S. Depending on exactly when the person graduated and then moved to the U.S., this period could have been anytime between the summers of 1994 and 1997.<sup>6</sup>

During the six months before relocating to the U.S., about one half (51%) of the graduates who moved were working and another 10 percent\* were looking for work. Going to school was the main activity for 36 percent of the graduates. (See Figure 3-1.) For some, relocation to the U.S. came right after graduation, thus explaining the seemingly high proportion who reported school as their main activity. Very few reported something else as their main activity but this most often involved family responsibilities.

**Figure 3-1**

**About one half of the graduates were working during the six months before moving to the U.S.**



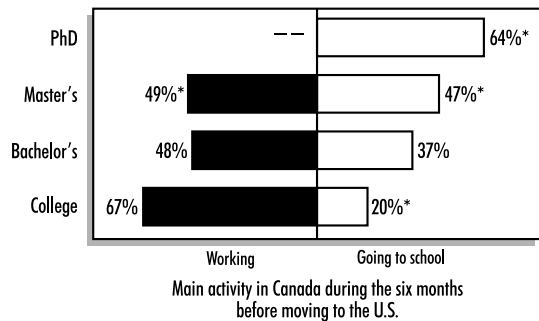
Source: Survey of 1995 Graduates Who Moved to the United States

College graduates were most likely to have been working (67%) prior to their relocation to the U.S., while about one half of bachelor's and master's graduates (48% and 49%\*, respectively) were working during this time. In contrast, most PhD graduates (64%\*) reported school as their main activity during this period. (See Figure 3-2.) Due to the small numbers involved, it is not possible to report any differences among sub-groups in the proportions that were looking for work.

<sup>6</sup> A small proportion of graduates actually moved to the U.S. prior to graduation in 1995. Some completed their program requirements in 1994 while not formally graduating until 1995, while others may have completed program requirements at a distance or returned temporarily to complete their requirements. See also Section 3.2.

Figure 3-2

**Before relocating to the U.S., PhDs were most likely to have been in school, while college graduates tended to be working**



-- estimate not reliable enough to report

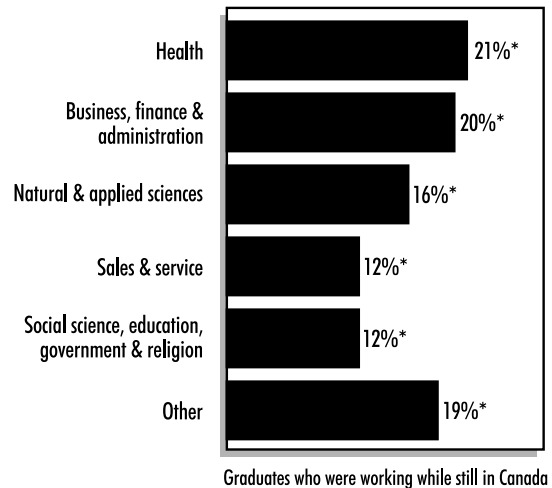
Source: Survey of 1995 Graduates Who Moved to the United States

Among those who were working in Canada during the six months before relocating to the U.S., jobs in the health field (21%\*) and in business, finance and administration occupations (20%\*) were most common. (See Figure 3-3.) Presumably, some of the jobs held by these recent graduates were still transitional or student jobs, as many in this group were still in the midst of their school-work transitions. This was particularly true of those with business, finance and administration jobs which tended to require skills at the intermediate level only.<sup>7</sup>

Graduates who were working while still in Canada reported earnings associated with the job they held during the six months before moving to the U.S. Those who were earning less than \$20,000 (21%\*) and from \$20,000 to \$29,999 (35%) accounted for over one half of the group. Salaries over \$40,000 were relatively rare: 15 percent\* of those working earned this amount. (See Figure 3-4.) As already noted, many of these recent graduates were still in the midst of their school-work transitions.

Figure 3-3

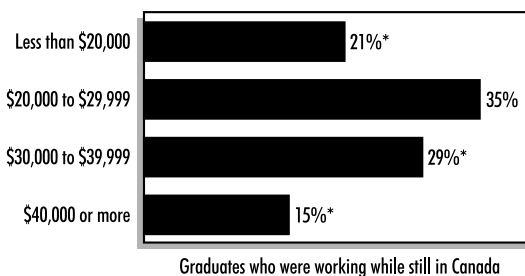
**Occupations of graduates working while still in Canada**



Source: Survey of 1995 Graduates Who Moved to the United States

Figure 3-4

**Over one half of the graduates who were working while still in Canada were earning less than \$30,000 per year<sup>1</sup>**



<sup>1</sup> Annual earnings expressed in 1999 Canadian dollars.

Source: Survey of 1995 Graduates Who Moved to the United States

These salary figures, therefore, include many transitional and student jobs.

<sup>7</sup> For more information on skill levels, see Section 4.1.



## About the Earnings Data

All earnings data in this report relate to a specific job and are presented as annual amounts in 1999 Canadian dollars, before taxes and other deductions.

Respondents to the *Survey of 1995 Graduates Who Moved to the United States* provided earnings information for up to three jobs:

### **JOB1**

- This was the job graduates held during the six months before moving to the U.S.
- Depending on when the graduate actually moved, this could have been as early as 1994 or as late as the first half of 1997.

### **JOB2**

- This was the job graduates had arranged to start upon arrival in the U.S.
- Depending on when the graduate actually moved, this could have been as early as 1995 or as late as the summer of 1997.

### **JOB3**

- This was the job graduates held at the time of the survey (March 1999).
- This job could have been held in either the U.S. or in Canada (for those who had returned to Canada).

### **Annual amounts**

Respondents provided earnings information for each job on the basis that was easiest for them (e.g. hourly, daily, weekly, monthly, yearly). All earnings data were then equated to a yearly amount, employing the same algorithm used by the *1997 National Survey of 1995 Graduates* (NGS).

### **Accounting for inflation**

All earnings data presented in this report have been adjusted for inflation to represent 1999 dollars. Each of the graduates' jobs was adjusted individually, as jobs were held at different times depending on when the individual actually moved to the U.S. Earnings data for JOB1 were adjusted using monthly figures from Statistics Canada's Consumer Price Index. Information for JOB2 was adjusted using U.S. monthly inflation figures. Earnings data for JOB3 did not require adjustment for inflation.

### **Purchasing power parity**

Earnings data reported in U.S. dollars were adjusted to reflect differences in purchasing power between Canada and the U.S. The rate used to adjust earnings data (\$1US=\$1.25CAN) is the most recent estimate available from Statistics Canada and is based on the difference in the cost of private final consumption in 1995 between Canada and the U.S.

### **Factors not taken into account**

Earnings and income data are often used or interpreted as indicators of well-being. International comparisons of earnings are complicated by the fact that earners live in different circumstances which can vary considerably between and within countries (as well as between and within provinces and states). Not taken into account in the earnings data presented in this report are various forms of taxes, public services and other factors related to quality of life.

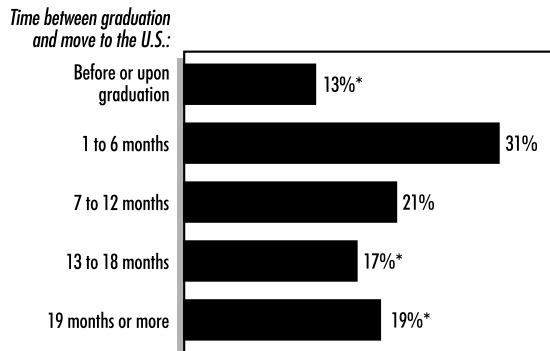
## 3.2 MAKING THE MOVE: FACTORS AND PROCESSES

This section explores various aspects of the move, including the factors that attracted graduates to the U.S. and the process by which they got there.

### *TIME BETWEEN GRADUATION AND RELOCATION TO THE UNITED STATES*

Graduates from the class of '95 who moved to the U.S. tended to do so upon or shortly after graduation. In fact, 13 percent\* actually moved before or upon graduation (see footnote 6). Within one year of graduation, about two thirds of the group under study had made their move to the U.S. (See Figure 3-5.) Mobility tends to be high among young people with high levels of educational attainment in general. These data indicate further that the period around graduation from a post-secondary institution was characterized by a high degree of mobility among these recent graduates.

**Figure 3-5**  
**About two thirds of graduates who moved to the U.S. did so within one year of graduation**



Source: Survey of 1995 Graduates Who Moved to the United States

### *LAST PROVINCE OF RESIDENCE*

Graduates were asked in which province they were living before moving to the U.S. For many, this would have been the province where they were studying, as more than one third (36%) reported going to school as their main activity during the six months before relocating to the U.S.<sup>8</sup> Others would have remained in their province of study to work or to look for work. Still others may have returned to their original home province before moving, or could have moved to a different province before relocating to the U.S.

Although Ontario accounted for 41 percent of college and university graduates from the class of '95 who remained in Canada, Ontario was the last province of residence for over one half (57%) of those who relocated to the U.S. In contrast, 11 percent\* of the graduates who moved to the U.S. were last living in Quebec – a province which accounted for 28 percent of post-secondary graduates who remained in Canada.<sup>9</sup> (See Figure 3-6.) Linguistic factors may have contributed to the proportionately small number of graduates who reported Quebec as their last province of residence.

### *DESTINATION IN THE UNITED STATES*

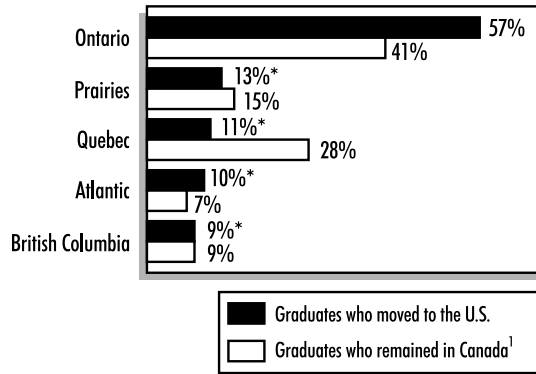
Nearly one half of the graduates who moved to the U.S. ended up in a handful of states. Texas was the top destination state, accounting for just under 16 percent\* of the graduates who relocated. Other common destination states included California (11%\*), New York (10%\*) and Florida (8%\*). (See Figure 3-7.)

<sup>8</sup> For many, the province of study would also have been the original home province of residence.

<sup>9</sup> Excluding those completing CEGEP programs that lead to university enrolment.

**Figure 3-6**

**Over one half of the graduates were living in Ontario just before moving to the U.S.**

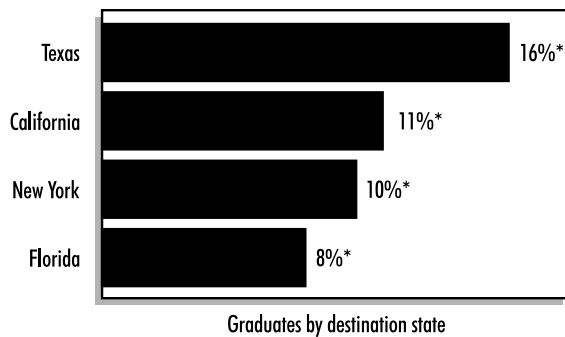


<sup>1</sup> Includes college and university graduates but not trade/vocational graduates.

Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

**Figure 3-7**

**Texas was the most common destination state**



Source: Survey of 1995 Graduates Who Moved to the United States

Among the approximately 360 PhD graduates who moved to the U.S., about one-quarter (26%\*) made their way to California. Nearly 275 college graduates (representing 24%\* of all college graduates who moved to the U.S.) went to Texas. In addition, disproportionate numbers of those who moved to Texas and Florida had graduated from health-related

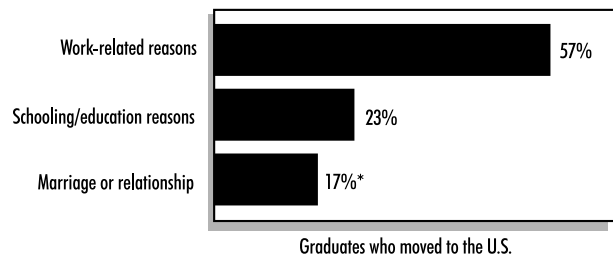
fields.<sup>10</sup> About one half (51%\*) of the approximately 360 movers who had graduated from commerce, management and business administration programs relocated to New York state.

### REASONS FOR MOVING TO THE UNITED STATES

“Work” was the most common response graduates gave when asked for the single main reason for moving to the U.S. Over one half of the graduates who moved south (57%) did so mainly for work. In addition, 23 percent moved for education, presumably to pursue graduate studies at an American institution. Another 17 percent\* moved mainly for marriage or relationship reasons. (See Figure 3-8.)

**Figure 3-8**

**Main reason for moving to the U.S. was work-related for over one half of the graduates**



Source: Survey of 1995 Graduates Who Moved to the United States

Although those moving mainly for work-related reasons were equally likely to have been men or women, most of those who moved because of education were men (84%). In 1996-97, men accounted for 51 percent of enrolments in Canadian

<sup>10</sup> For more detail, see the box entitled Focus on Health Graduates.

universities.<sup>11</sup> Pursuing graduate studies at an American institution, therefore, would appear to be a predominantly male phenomenon. Meanwhile, women accounted for the vast majority (86%) of those who reported moving to the U.S. for marriage or relationship reasons.

PhD and college graduates were most likely to have moved to the U.S. for work-related reasons, with about four out of five graduates in each of these categories moving because of work. In contrast, only about four in ten of those with bachelor's degrees (43%), the most numerous group among the members of the class of '95 who went to the U.S., moved because of work. One third of the bachelor's graduates (33%) moved to the U.S. for education-related reasons. Another 22 percent\* moved for marriage or relationship reasons.

Examining field of study, one notable pattern emerged among the data: college and university graduates in health-related fields were most likely to have moved because of work. In fact, 98 percent of college and 77 percent of university graduates whose field of study was in health or in the health sciences reported work as the main reason for having moved to the U.S.

### WORK-RELATED FACTORS THAT ATTRACTED GRADUATES TO THE UNITED STATES

Graduates who reported work as their main reason for moving to the U.S. were asked a more detailed question about the work-related factors that attracted them. The results reported below, therefore, apply only to the 2,600 graduates (57% of the entire group) whose main reason for moving was work-related.

The question was open-ended, so as not to influence respondents to mention factors that may not have otherwise occurred to them. Interviewers

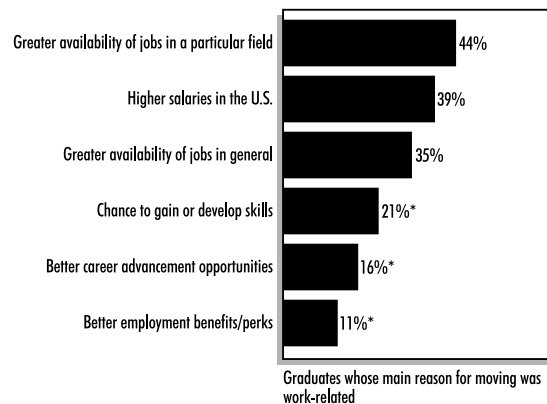
checked off up to five factors as they were reported by the respondent (most gave only two or three). The question was worded as follows:

*What aspects of the job or other work-related factors attracted you to the United States after graduation? Please be as specific as possible.*

In general, the factors most commonly given shared the theme of *opportunity*. Greater availability of jobs in a particular field or industry was cited by 44 percent of graduates whose main reason for moving to the U.S. was work-related. In addition, 35 percent mentioned greater availability of jobs in general, 21 percent\* noted the chance to gain or develop skills, and 16 percent\* cited better career advancement opportunities. (See Figure 3-9.)

**Figure 3-9**

#### Work-related factors<sup>1</sup> that attracted graduates to the U.S.



<sup>1</sup> Multiple responses were allowed.

Source: Survey of 1995 Graduates Who Moved to the United States

Better *compensation* was also a common theme. Nearly four in ten graduates (39%) mentioned higher salaries in the U.S. – making this the second most commonly cited factor that attracted graduates

<sup>11</sup> Statistics Canada, Centre for Education Statistics.

who moved for work. Also, about one in ten (11%\*) noted that better employment benefits or perks attracted them to the U.S.

Somewhat surprisingly, given the debate and media coverage of this issue, an insignificant proportion of graduates explicitly said that lower taxes in the U.S. were a factor that attracted them to work there. For some, however, lower taxes may have been implicit in mentioning higher salaries. Also, differences in Canadian and U.S. personal income tax rates tend to be smaller at lower income levels. At this early stage in their careers, many of these graduates may have been most concerned with finding an opportunity in their field.

#### *EDUCATION-RELATED FACTORS THAT ATTRACTED GRADUATES TO THE UNITED STATES*

As already noted, 23 percent of the graduates from the class of '95 who moved to the U.S. (representing about 1,050 individuals) reported schooling or education as their main reason for moving. This group was asked an additional question about the detailed education-related factors that attracted them to the U.S. Once again, the question was open-ended so as not to unduly influence their answers. Multiple responses were also allowed.

By far the most commonly cited education-related factor attracting graduates to the U.S. was the *availability* of a program in a particular or specialized field. Among graduates who moved mainly for education, 62 percent mentioned this factor. The other most frequently cited factors related to notions of *quality* or *excellence*. For example, one in five (21%\*) noted the academic reputation of the program or institution. Very few graduates mentioned quality of research facilities, or scholarships or other

forms of funding as factors that attracted them to study in the U.S.

As graduates who moved to the U.S. mainly for education represent a relatively small group, cross-tabulations by level of certification or by field of study did not yield meaningful results.

#### *BASIS OF ADMISSION TO THE UNITED STATES*

Four out of five graduates who moved south (80%) entered the U.S. as temporary residents. In addition, about 300 graduates (6%\*) were American citizens (with dual Canadian/U.S. citizenship<sup>12</sup>) and 13 percent\* had permanent residence status (e.g. a green card). Within this latter group, the vast majority (86%) obtained permanent residence/green card status through family sponsorship; employer sponsorship and other methods were far less common.

Graduates who entered the U.S. as temporary residents did so most often by obtaining a TN visa under the provisions of the North American Free Trade Agreement (NAFTA). Over one half of graduates who entered the U.S. as temporary residents (57%) did so using a TN visa. (See Figure 3-10.) Considering only those temporary residents whose main reason for moving to the U.S. was work-related, four out of five (80%) entered the U.S. on a TN visa.

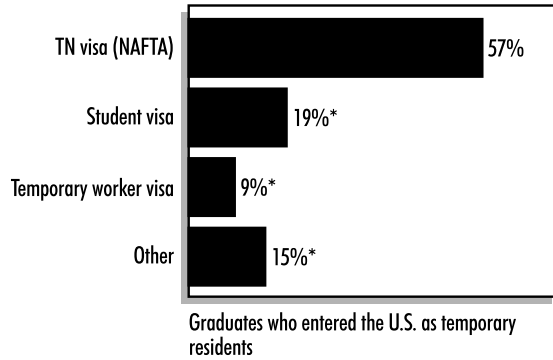
Obtaining a TN visa is a relatively simple procedure compared with other more traditional temporary U.S. work visas. One must have an offer of a temporary job that falls under one of the professional occupations covered by the NAFTA, appropriate qualifying credentials, a letter from the

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<sup>12</sup> Recall that graduates who were exclusively American citizens who had been studying in Canada and subsequently returned home to the U.S. were not included in the survey.

**Figure 3-10**

**Over one half of those who entered the U.S. as temporary residents did so under the North American Free Trade Agreement**



*Source: Survey of 1995 Graduates Who Moved to the United States*

employer giving details of the work assignment, and a nominal fee must be paid. Moreover, a TN visa can be issued directly at the border whereas other temporary work visas typically take six to ten weeks to process.

A TN visa gives temporary residence status for up to one year and a TN visa holder is eligible to reapply after that year has ended. Other temporary worker visas require the employer to make a more formal application to the U.S. labour or immigration departments and involve higher fees. Also, an unlimited number of TN visas can be issued in a year, while the numbers of other types of temporary work visas issued to foreign workers each year are limited. Most of these other temporary work visas, however, are valid for up to three years.

TN visas were likely being used to gain entry to the U.S. in cases where other types of temporary work visas may have been used in the past, simply because a TN visa is much easier to obtain. To illustrate, a specialized temporary work visa (H1A) exists

for registered nurses. However, 99 percent of graduates who entered the U.S. as temporary residents to work as registered nurses had a TN visa.

Only 9 percent\* of graduates who entered the U.S. as temporary residents did so using other types of temporary work visas. Examples include those for registered nurses (H1A), specialty occupations (H1B), temporary non-agricultural workers (H2A), temporary agricultural workers (H2B) and trainees (H3).

As this survey is a snapshot of a particular group during a specific period, this source alone cannot assess whether overall rates of entering the U.S. as a temporary worker among recent graduates have changed over time.

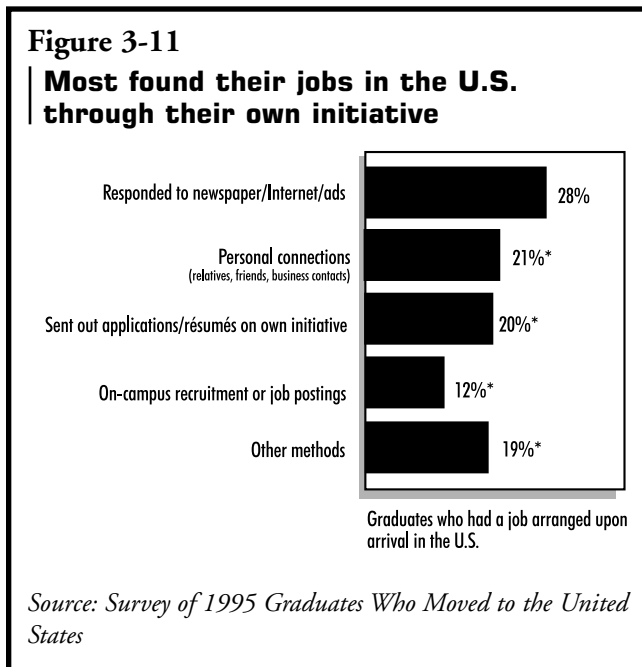
Student visas were the second most commonly used type of temporary residence visa (19%\*), matching closely the 23 percent of the graduates who moved mainly for education. Among the 15 percent\* of graduates who entered the U.S. using other types of visas, those issued to exchange visitors or to fiancé(e)s of U.S. citizens were most common.

### 3.3 ACTIVITIES UPON ARRIVAL IN THE UNITED STATES

Nearly two thirds (64%) of all the graduates who moved to the U.S. had a job arranged to start before moving. Not surprisingly, this proportion was highest (89%) for those whose main reason for moving was work-related. In contrast, only about one third (32%) of graduates whose main reason for moving was not work-related had a job prearranged. Students with jobs (including teaching and research assistants) accounted for about one half of this latter group. Across fields of study, those who graduated from health-related programs were most likely to have had a job prearranged (83%).

## FINDING EMPLOYMENT IN THE UNITED STATES

Graduates who had a job arranged to start when they arrived in the U.S. (regardless of their main reason for moving) were asked further questions about how they found their jobs. About 3,000 graduates had a job prearranged and most got their jobs through their own initiative: by responding to job advertisements (28%), through personal contacts (21%\*), or by sending out résumés or applications on their own (20%\*). Finding a job through on-campus recruitment programs or job postings (12%\*) was less common. Very few graduates were contacted directly by a U.S. employer or headhunter, were transferred to the U.S. or found their jobs by registering with an employment agency. (See Figure 3-11.)



Thus, the popular conception that large numbers of recent graduates are being aggressively recruited by U.S. employers did not apply to the class of '95. While some active recruitment was certainly taking place, this was not how most of these graduates secured their U.S. jobs. Instead, most found

employment in the U.S. using traditional job search methods. Further research using additional sources of data would be required to assess any changes in this pattern over time.

## INCENTIVES OFFERED<sup>13</sup>

Just under one half of graduates who had a job arranged upon arrival in the U.S. (48%) were offered some type of incentive (in addition to employment) by their U.S. employer. Graduates who held master's degrees were most likely to have received incentives (65%\*), compared with 52 percent of bachelor's and 38 percent\* of college graduates. Among occupational categories, 58 percent of graduates in health occupations and 55 percent\* of those in natural and applied sciences<sup>14</sup> jobs received incentives.

Among the approximately 1,400 graduates who were offered incentives by their U.S. employers, payment of moving expenses (56%) and signing bonuses (37%\*) were the most common types of incentive. In addition, 22 percent\* received education-related benefits that respondents perceived as incentives.

<sup>13</sup> The conceptual distinction between "incentives" and job "benefits" is difficult to make. Some of the responses that are normally thought of as regular benefits (such as paid vacation time) were not analysed. Still, some of the included responses could also be considered common practice (e.g. payment of moving expenses). Furthermore, no information source exists that offers a baseline comparison: one would ideally have information on the kinds of incentives Canadian employers are using, how often they are offered and to whom. Still, the SGMUS provides some information on the issue of incentives.

<sup>14</sup> The natural and applied sciences occupational category includes scientists, engineers, architects and urban planners, mathematicians, systems analysts and computer programmers. Technical occupations related to natural and applied sciences are also included in this category.

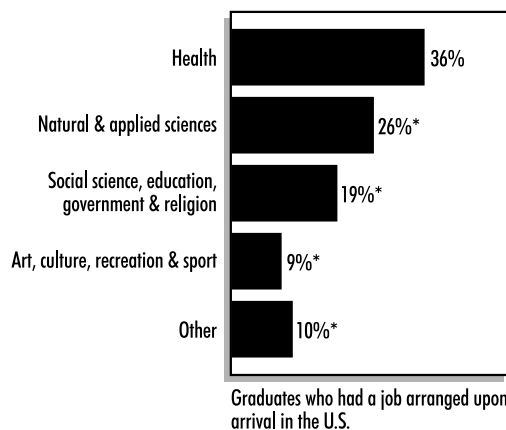
Over one half (57%\*) of the graduates who were offered incentives and had jobs arranged in health occupations received signing bonuses from their U.S. employers. Among all graduates receiving incentives, 76 percent of those working in natural and applied sciences and 44 percent\* in health occupations had their moving expenses paid.

### *OCCUPATIONAL PROFILE AND SALARIES EARNED*

Among graduates who moved to the U.S. and had a job arranged, there was a distinct shift in their occupational profile compared with their profile while still in Canada. Once in the U.S., graduates were far less likely to be working in business, finance and administration occupations or in sales and services jobs than they had been in Canada, where these tended to be student or transitional jobs. (See Section 3.1.) Instead, graduates were even more concentrated by this time in health occupations (36%), natural and applied sciences (26%\*), and in social science, education, government and religion (19%\*). (See Figure 3-12.)

**Figure 3-12**

#### **Occupations of graduates working upon arrival in the U.S.**

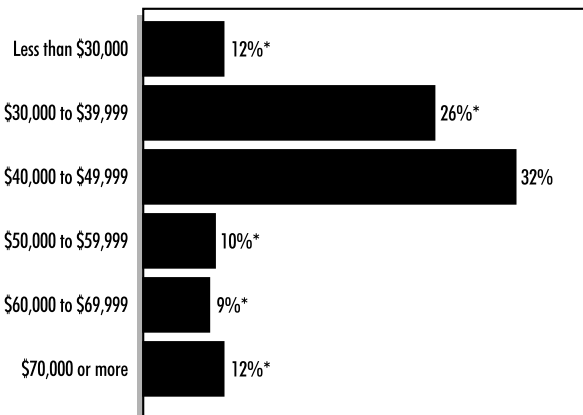


Source: Survey of 1995 Graduates Who Moved to the United States

This progression was also reflected in the salaries earned by graduates who had jobs arranged upon arrival in the U.S. A markedly smaller proportion were earning under \$30,000 (12%\*), compared with 56 percent among those working while still in Canada. At the higher end of the pay scale, nearly two-thirds (63%) were earning \$40,000 or more upon arrival in the U.S., compared with just 15 percent\* of those working before moving. To some extent, this may reflect an expected shift out of transitional and student jobs and into more career-related positions. (See Figure 3-13.)

**Figure 3-13**

#### **Nearly two thirds of working graduates were earning \$40,000 or more upon arrival in the U.S.<sup>1</sup>**



<sup>1</sup> Annual earnings expressed in 1999 Canadian dollars.

Source: Survey of 1995 Graduates Who Moved to the United States

Section 4.4 includes a comparison of the salaries of graduates who relocated to the U.S. with those of graduates who remained in Canada for the two largest occupational categories.



### 3.4 CURRENT ACTIVITIES AND PLANS FOR THE FUTURE

#### *GRADUATES WHO RETURNED TO CANADA*

When the survey was conducted in March 1999, 18 percent\* of the graduates under study (representing about 830 individuals) had moved back to Canada since the summer of 1997. Among those who returned, one-half (52%\*) reported having done so for work-related reasons. Another 38 percent\* moved back to Canada for marriage or relationship reasons, or for other family-related reasons. Few returned for education or for other reasons.

Among graduates who came back for work-related reasons, four out of five (78%\*) had a job pre-arranged upon returning to Canada. These graduates were asked what work-related factors attracted them back to Canada. Due to the small numbers involved, however, the results are not reliable enough to have any significance.

The maximum period that these graduates could have spent in the U.S. was from sometime during 1994 until just before the time of the survey, a period of five years or so. The average number of months spent in the U.S. by returning graduates was 27.

#### *WORK EXPERIENCES OF GRADUATES WHO RETURNED TO CANADA*

The estimated number of graduates who returned to Canada and were working in 1999 was relatively small (about 700). Sample size limitations, therefore, preclude any detailed analysis of this group. Still, it can be said that graduates in health occupations accounted for more than one half (53%\*) of

working graduates who returned to Canada; those in natural and applied sciences jobs made up about one-third (32%\*). Nearly one-half (47%\*) were earning between \$30,000 and \$49,999 per year, and 27 percent\* were earning \$50,000 or more.<sup>15</sup>

#### *GRADUATES STILL IN THE UNITED STATES*

The vast majority of the original group under study (82%) was still in the U.S. at the time of the survey. As of March 1999, about 3,800 graduates from the class of '95 who had moved to the U.S. between graduation and summer 1997 were still living there. Of these, 85 percent were working and 10 percent\* were going to school.

Over one half of those still in the U.S. in 1999 (56%) continued to live there as temporary residents. About 800 people who had originally arrived in the U.S. as temporary residents had obtained permanent residence or green card status by 1999. By this time, more than one third (36%) of the graduates still living in the U.S. were non-citizen permanent residents.

The remainder of the graduates living in the U.S. in 1999 (8%\*) were U.S. citizens. As was the case at the time of arrival in the U.S., most of these graduates held dual Canadian/American citizenship.<sup>16</sup> Only an extremely small proportion of graduates had become U.S. citizens by 1999. This is not surprising as gaining American citizenship can require many years of residence.

<sup>15</sup> A comparison of earnings distributions across all jobs over the survey period is presented in Section 4.

<sup>16</sup> Recall that those who were exclusively American citizens who had been studying in Canada and then returned to the U.S. were excluded from the survey.

## Focus on Health Graduates

Health graduates were a large component of the 1995 graduates who moved to the U.S. The health sector in Canada has undergone major restructuring over the last few years and the 1995 health graduates entered the labour market during difficult conditions. This may explain why some decided to seek employment opportunities and better working conditions in the U.S. Despite the limited sample of the SGMUS, the large number of health graduates allows a more detailed analysis of this group.

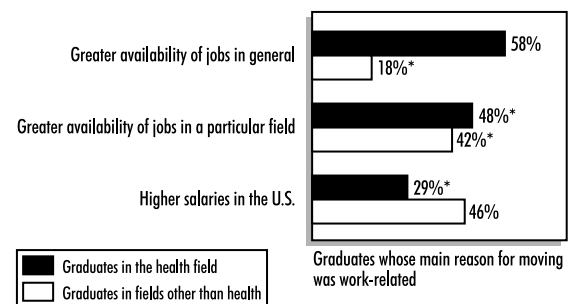
Over 1,300 health graduates moved to the U.S. between graduation in 1995 and the summer of 1997, representing nearly 30 percent of the total number of graduates who moved. At the college level, health graduates accounted for 54 percent of all graduates who moved. The proportion at the university level was lower, at 20 percent\*. Women made up the majority (77%) of the health graduates who moved. In total, about 4 percent of all 1995 health graduates moved to the U.S. About 52 percent of the health graduates who moved had Ontario as their last province of residence. The figure for all graduates was slightly higher, at 57 percent. Of the health graduates who moved, 47 percent went to Texas or Florida. Of all the graduates who chose Texas or Florida, 56 percent were graduates of a health program.

Health graduates were the most likely to move for reasons related to work. In fact, 87 percent stated that their main reason for moving was work-related, compared with 57 percent of all graduates. It

is not surprising, therefore, that a large percentage of health graduates began working upon their arrival in the U.S. (83% compared with 64% for all fields of study). Health graduates who moved for work-related reasons stated that greater availability of jobs was the factor that most often attracted them to the U.S. Among these graduates, 58 percent cited greater availability of jobs in general (compared with 18%\* of graduates in fields other than health), and 48 percent\* cited greater availability of jobs in a particular field (compared with 42%\*). Higher salaries were a less important factor for health graduates than they were for graduates in other fields of study. (See Figure 3-14.)

**Figure 3-14**

**Work-related factors<sup>1</sup> that attracted graduates to the U.S.: health vs. other graduates**



<sup>1</sup> Multiple responses were allowed.

Source: Survey of 1995 Graduates Who Moved to the United States

A large proportion of health graduates who had work arranged to start upon their arrival in the U.S. found their job through their own initiative. One-third (33%\*) found their job by sending out employment

applications or résumés, compared with only 12 percent\* of graduates in other fields who had a job arranged upon arrival.

Of all the graduates who had a job in Canada prior to moving to the U.S., nearly 21 percent\* were working in the health sector. About 60 percent of these health care workers were nurses. Of all the graduates who had work arranged upon arrival in the U.S., 36 percent had jobs in the health sector. About 850 graduates (79% of those working in health) were working as nurses upon their arrival.

When the survey was conducted in March 1999, the percentage of graduates employed in the health sector had not changed, and about 71 percent of those working in health occupations in the U.S. were nurses.

Just over 20 percent\* of the health graduates who moved to the U.S. had returned to Canada by the time of the survey, compared with 18 percent\* of graduates overall. Health graduates constituted 33 percent\* of all graduates who had returned. About 53 percent\* of all graduates who came back to Canada and who were working upon their return, had jobs in the health sector, indicating that employment conditions may have improved in this sector.

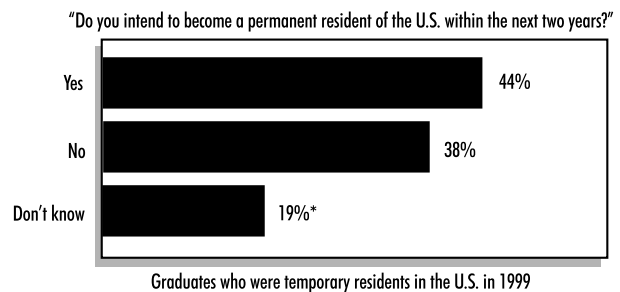
Health graduates who were still in the U.S. at the time of the survey were among the least likely to have plans to return to Canada. In fact, only 31 percent\* were planning to return to Canada to live, compared with 43 percent of all graduates who were still in the U.S.

## PLANS FOR THE FUTURE

Among graduates who in 1999 were still living in the U.S. as temporary residents, 44 percent stated that they planned to become permanent residents within the next two years. Another 38 percent said they did not plan to do so, and 19 percent\* replied “don’t know” to this question. (See Figure 3-15.)

**Figure 3-15**

**Many who were temporary residents in the U.S. in 1999 planned to become permanent residents within the next two years**



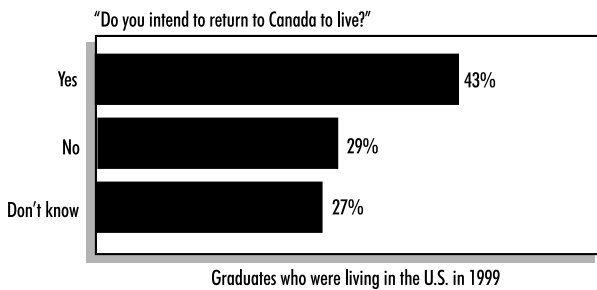
Source: Survey of 1995 Graduates Who Moved to the United States

The graduates still living in the U.S. were also asked about plans to return to Canada. More than four in ten (43%) planned to return to Canada to live. Three in ten (29%) did not intend to return to Canada, and about the same proportion (27%) answered “don’t know” to the question. (See Figure 3-16.) Although there was some variation in intentions to return to Canada across level of certification, field of study and occupation, the differences were not distinct enough to be statistically significant.

Those who indicated that they intended to return to Canada to live were further asked when they planned to do so. One in five (19%\*) said they would return to Canada within two years, 14 percent\* said in three to five years, and 24 percent\* planned to return in six years

**Figure 3-16**

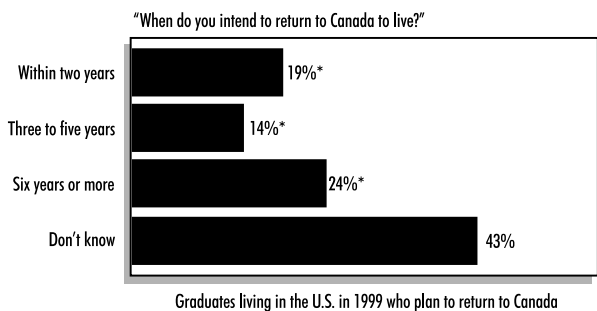
**43% of the graduates still in the U.S. intend to return to Canada to live**



Source: Survey of 1995 Graduates Who Moved to the United States

**Figure 3-17**

**Many of those who plan to return to Canada do not know when they will do so**



Source: Survey of 1995 Graduates Who Moved to the United States

or more. A substantial proportion (43%) did not know when they would return. (See Figure 3-17.)

Thus, a significant proportion of graduates still in the U.S. in 1999 were planning to obtain permanent residence status in the U.S. At the same time, many also intended to return to Canada, though they did not necessarily know when they would do so. In some cases (15%\* of those who were temporary residents in the U.S. at the time of the survey), the same people expressed these apparently

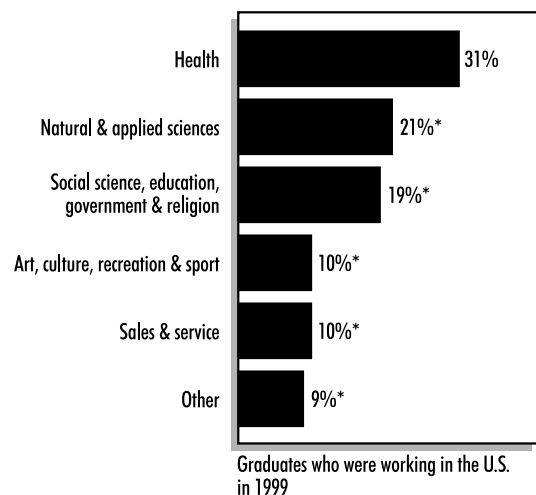
contradictory intentions. These findings, however, are indicative of a highly skilled and mobile population. Many of these graduates from the class of '95 would appear to be keeping their options open and retaining access to the U.S. labour market.

### *WORK ACTIVITIES OF GRADUATES STILL IN THE UNITED STATES*

Among the approximately 3,200 graduates who were working in the U.S. in 1999, jobs in the health field (31%) and in natural and applied sciences (21%\*) were still the most common. (See Figure 3-18.) These proportions, however, were somewhat smaller than what they had been among all working graduates upon arrival in the U.S.

**Figure 3-18**

**Occupations of graduates working in the U.S. in 1999**



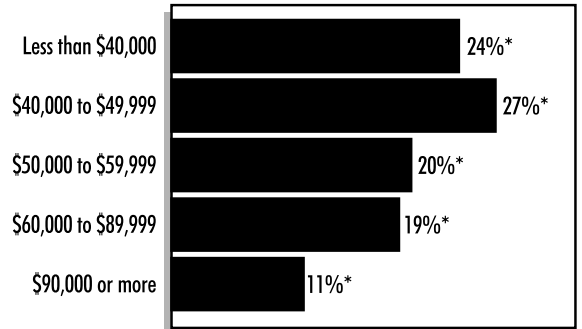
Source: Survey of 1995 Graduates Who Moved to the United States

As would be expected, salaries among those working in the U.S. in 1999 had also increased. In fact, one half of the working graduates in the U.S. were earning \$50,000 or more per year by this time. One in ten (11%\*) was earning \$90,000 or more. (See Figure 3-19.)

The next section includes a more detailed examination of the information collected about the various jobs graduates held during the period covered by the survey.

**Figure 3-19**

**In 1999, one half of the graduates working in the U.S. were earning \$50,000 or more<sup>1</sup>**



Graduates who were working in the U.S. at the time of the survey

<sup>1</sup> Annual earnings expressed in 1999 Canadian dollars.

*Source: Survey of 1995 Graduates Who Moved to the United States*

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## 4. ANALYSIS OF JOBS OVER THE SURVEY PERIOD

To examine more closely the labour market experiences of graduates from the class of '95 who moved to the U.S., this section compares the various jobs held by this group over the survey period. Recall that the survey collected information on the following jobs:

### JOB1

- This was the job graduates held during the six months before moving to the U.S.
- Depending on when the graduate actually moved, this could have been as early as 1994 or as late as the first half of 1997.

### JOB2

- This was the job graduates had arranged to start upon arrival in the U.S.
- Depending on when the graduate actually moved, this could have been as early as 1995 or as late as the summer of 1997.

### JOB3

- This was the job graduates held at the time of the survey (March 1999).
- This job could have been held in either the U.S. or in Canada (for those who had returned to Canada).

The section also includes a comparison between these graduates' labour market experiences and those of similar graduates who remained in Canada.

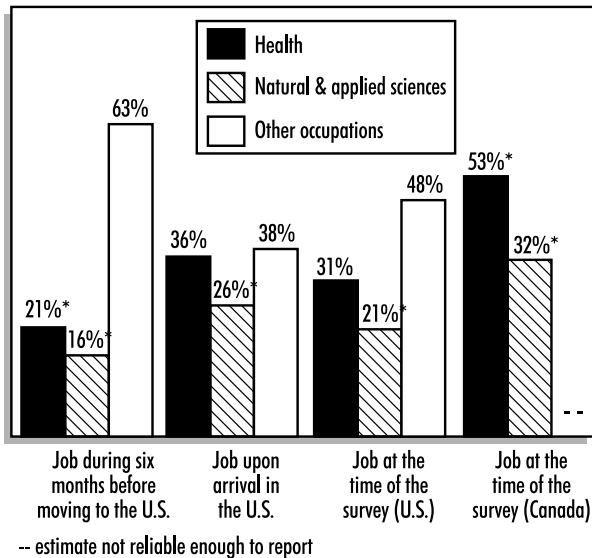
### 4.1 OCCUPATION, RELATEDNESS TO STUDIES AND SKILL LEVEL

The jobs held by graduates during the six months before moving to the U.S. were most likely to have been transitional or student jobs; recall that two thirds of those who moved did so within a year of graduation. By the time of arrival in the U.S., substantial proportions of working graduates had secured more career-related positions. This pattern extended to the jobs held at the time of the survey, both for the graduates who were still in the U.S. and for the smaller group that had returned to Canada by that time.

Before moving to the U.S., relatively small proportions of working graduates were in health (21%\*) and in natural and applied sciences occupations (16%\*). Upon arrival in the U.S. these proportions increased to 36 percent and 26 percent\*, respectively. (See Figure 4-1 and Table 1.) Working graduates still in the U.S. at the time of the survey were slightly less concentrated in these occupational categories. This was largely because those who had returned to Canada by 1999 were more concentrated in health (53%\*) and in natural and applied sciences jobs (32%\*).

Figure 4-1

**Concentration of working graduates in health and natural & applied sciences jobs over the survey period**



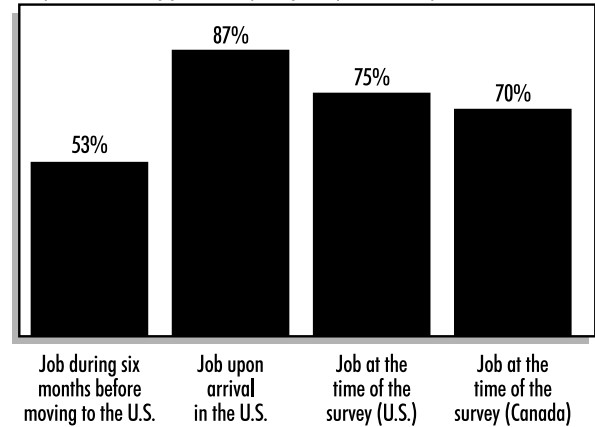
Source: Survey of 1995 Graduates Who Moved to the United States

About one half of the jobs (53%) held by graduates before moving to the U.S. were closely related to their studies. This proportion jumped to 87 percent for the graduates who had a job arranged upon arrival in the U.S. The proportion of working graduates who reported their job as being closely related to their studies declined somewhat for the jobs held at the time of the survey, whether in the U.S. (75%) or in Canada (70%). (See Figure 4-2.) It would appear that some graduates move into jobs that are outside of their original field of study, or perhaps take on duties such as supervision that they consider further removed from their studies.

Figure 4-2

**Jobs held upon arrival in the U.S. were most related to the graduates' studies**

Proportion of working graduates reporting their job was "closely related" to their studies



Source: Survey of 1995 Graduates Who Moved to the United States

There was also a clear shift toward jobs with higher skill levels,<sup>17</sup> as the proportion of graduates in management and professional jobs jumped from 51 percent while still in Canada to 84 percent upon arrival in the U.S. A notable proportion of graduates were in occupations requiring only intermediate skills (26%\*) while still in Canada. In contrast, the proportion of graduates working in jobs at this skill level upon arrival in the U.S. was too small to be reported.

By the time of the survey in March 1999, 81 percent of those still in the U.S. and 91 percent of working graduates who had moved back to Canada were in professional or management occupations. (See Figure 4-3.) This may have been related to a greater degree of mobility among graduates who initially moved to the U.S. mainly for work.

<sup>17</sup> Skill levels associated with different occupations are based on the National Occupational Classification (NOC). For details, refer to the box entitled National Occupational Classification.



**Table 1**

**Employed graduates<sup>1</sup> by occupational category and skill level<sup>2</sup>**

	Business, finance & administration	Natural & applied sciences	Health	Social science, education, government & religion	Art, culture, recreation & sport	Sales & service	Trades, transport & equipment operation	Primary industry occupations	Processing, manufacturing & utilities	Total
Management occupations	JOB1	--	--	--	--	--	--	--	--	--
	JOB2	--	--	--	--	--	--	--	--	--
	JOB3	--	--	--	--	--	--	--	--	9%*
Skill level A: Professional	JOB1	14%*	16%*	12%*	--	--	--	--	--	48%
	JOB2	24%*	35%	19%*	--	--	--	--	--	82%
	JOB3	18%*	29%	19%*	--	--	--	--	--	72%
Skill level B: Technical	JOB1	--	--	--	--	--	--	--	--	15%*
	JOB2	--	--	--	--	--	--	--	--	14%*
	JOB3	--	--	--	--	--	--	--	--	14%*
Skill level C: Intermediate	JOB1	14%*	--	--	--	--	--	--	--	26%*
	JOB2	--	--	--	--	--	--	--	--	--
	JOB3	--	--	--	--	--	--	--	--	--
Skill level D: Elemental	JOB1	--	--	--	--	--	--	--	--	--
	JOB2	--	--	--	--	--	--	--	--	--
	JOB3	--	--	--	--	--	--	--	--	--
Total	JOB1	20%*	21%*	12%*	--	12%*	--	--	--	100%
	JOB2	--	36%	19%*	9%*	--	--	--	--	100%
	JOB3	--	31%	19%*	10%*	10%*	--	--	--	100%

<sup>1</sup> In each cell, information is presented for the following:

JOB1: Graduates whose main activity in Canada during the six months before moving to the U.S. was working (population represented = 2,373).

JOB2: Graduates who had a job arranged to start upon arrival in the U.S. (population represented = 2,969).

JOB3: Graduates who were working in the U.S. in 1999 (population represented = 3,199).

<sup>2</sup> Occupational categories and skill levels based on the National Occupational Classification.

Note: Percentages may not add up to totals due to rounding.

Source: Survey of 1995 Graduates Who Moved to the United States

## The National Occupational Classification

The National Occupational Classification (NOC) is an arrangement of occupational groups developed by Human Resources Development Canada. Occupations are organized into major groups (two-digit code). Within each of these major groups there are minor groups with unique three-digit codes. Within each minor group there are unit groups, each with a unique four-digit code. There are 522 unit groups that embrace a total of 25,000 occupations. Each job reported by respondents to the *Survey of 1995 Graduates Who Moved to the United States* was assigned a four-digit NOC code.

*Skill Level* is defined generally as the amount and type of education and training required to enter and perform the duties of an occupation. Each minor and unit group is assigned to one of the skill levels. Management occupations are not assigned to a skill level category because factors other than education and training (e.g. previous experience, capital) are often more significant determinants for employment.

The classification describes the educational and training requirements for occupations. However, the education and experience of particular job incumbents may not correspond exactly to the levels described. Some people may be overqualified for their work or they may work in occupations for which the entry requirements have changed after they became employed.

The skill level categories and requirements are defined as follows:

### **Skill Level A: Professional**

- University degree (bachelor's, master's or post-graduate).

### **Skill Level B: Technical**

- Two to three years of post-secondary education at community college, institute of technology or CEGEP, or
- Two to four years of apprenticeship training, or
- Three to four years of secondary school and more than two years of on-the-job training, training courses or specific work experience.
- In addition to jobs with the education/training requirements noted above, occupations with supervisory responsibilities are also assigned to skill level B, as are occupations with significant health and safety responsibilities (e.g. fire fighters, police officers and registered nursing assistants).

### **Skill Level C: Intermediate**

- One to four years of secondary school education.
- Up to two years of on-the-job training, training courses or specific work experience.

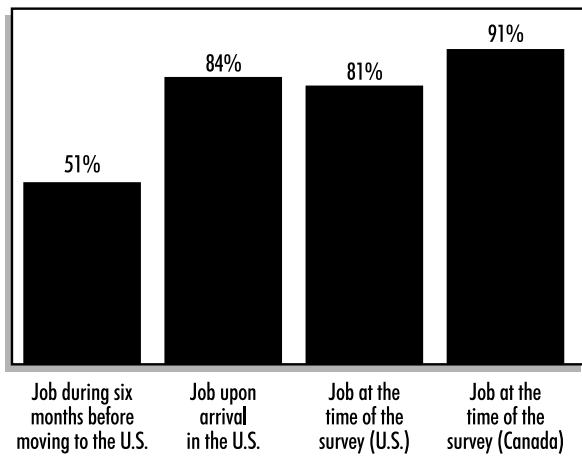
### **Skill Level D: Elemental**

- Up to two years of secondary school and short work demonstration or on-the-job training.

Figure 4-3

**Concentration of working graduates in professional/management jobs over the survey period**

Proportion of working graduates in professional (NOC skill level A) and management occupations combined



Source: Survey of 1995 Graduates Who Moved to the United States

It is difficult to determine the degree to which the success realized by graduates who moved south reflected the natural career tracks that one could expect recent graduates to follow, and to what extent this progress was a result of the opportunities available in the U.S. labour market. However, by comparing the job–education match, skill levels and salaries of graduates who relocated to the U.S. with those who remained in Canada, the analysis in Section 4.4 indicates that graduates who moved south were indeed taking advantage of opportunities that may not have been available to them in Canada. The tendency toward more favourable labour market outcomes among the movers was evident even after allowing for “quality” differences between graduates who moved to the U.S. and those who stayed in Canada.

## 4.2 JOB STATUS AND HOURS OF WORK

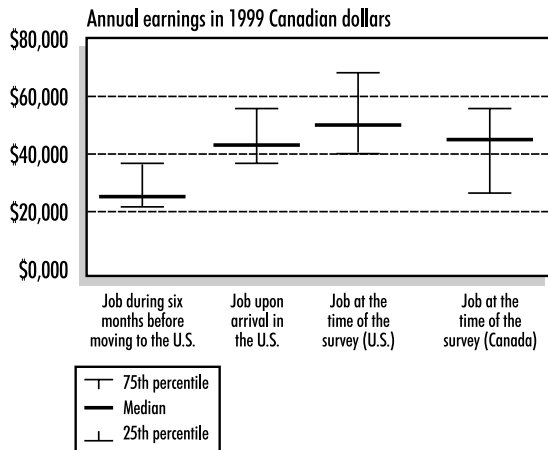
Extremely small proportions of working graduates were self-employed over the period covered by the survey. The majority of graduates were paid workers and were asked about their job status: whether the jobs they held were permanent (with no set termination date), temporary (with a definite end date) or seasonal. Not surprisingly, holding a permanent position was least common during the six months before moving to the U.S. (64%). By the time of arrival in the U.S., however, this proportion had increased to 78 percent. By the time of the March 1999 survey, the proportion of paid workers holding permanent positions had increased to 83 percent for those still in the U.S. and 80 percent for those back in Canada.

Graduates working in the U.S. tended to work slightly longer hours than they did before leaving Canada, and in comparison to their counterparts who had returned to Canada by the time of the survey. These differences were small, however, and there was no indication that graduates who moved to the U.S. had to adapt to any significant change in the length of the work week.

### 4.3 SALARIES OVER THE SURVEY PERIOD<sup>18,19</sup>

As expected, the salaries of working graduates took a significant jump between the job worked during the six months before moving to the U.S. and the job held upon arrival in the U.S. After taking inflation and purchasing power parity into account, the median annual earnings of working graduates upon arrival in the U.S. was \$42,900, up considerably from \$25,600 among those who were working in Canada prior to moving to the U.S. (See Figure 4-4.)

**Figure 4-4**  
**Earnings distributions of working graduates over the survey period**

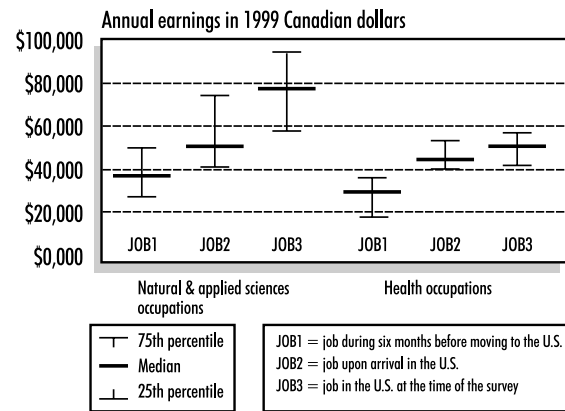


Source: Survey of 1995 Graduates Who Moved to the United States

Salaries among graduates working in the U.S. continued to increase up until the time of the survey. By March 1999, the median salary had reached \$50,000. (See Figure 4-4.) The median salary of graduates who had returned and were working in Canada in 1999 (\$44,200) was about nine tenths of that earned by graduates who were still working in the U.S.

Graduates working in the U.S. at the time of the survey in natural and applied sciences occupations had the highest salaries. Made up largely of scientists, engineers, computer systems analysts and programmers, this group was earning a median annual salary of \$76,300 by March 1999. (See Figure 4-5.) Comparisons with salaries of those who returned to Canada are not possible due to the small numbers involved.

**Figure 4-5**  
**Earnings distributions for graduates working in selected occupational categories over the survey period**



Source: Survey of 1995 Graduates Who Moved to the United States

<sup>18</sup> See the box entitled About the Earnings Data, in Section 3.1.

<sup>19</sup> A separate analysis of salaries was conducted to take into account the mix of part-time workers and students: only those working 30 hours or more per week were included. The analysis produced median salaries that were marginally higher than those presented here (slightly more so for the job before moving to the U.S.). However, the overall pattern of salaries across jobs over the survey period was similar.

## 4.4 JOB COMPARISONS WITH GRADUATES WHO REMAINED IN CANADA

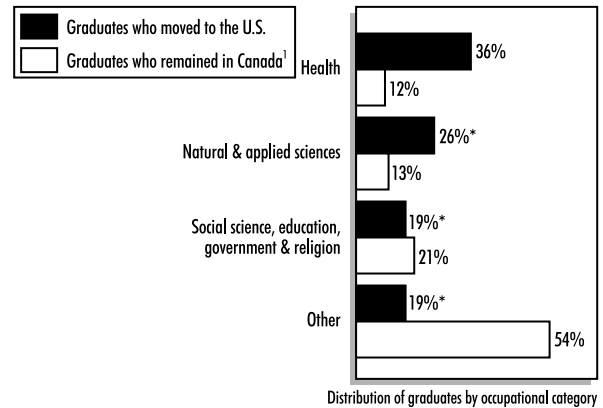
The *National Survey of 1995 Graduates* (NGS) was conducted in the summer of 1997. It collected information on work activities at the time of the survey among graduates who remained in Canada and thus allows for comparisons to be made with graduates from the class of '95 who moved to the U.S.<sup>20</sup> The comparisons are not perfect, however, as the graduates who moved to the U.S. did so at various times between graduation and the summer of 1997. As a result, there is a potential time difference between information collected on the job held upon arrival in the U.S. (JOB2) and that collected through the NGS for graduates who stayed in Canada. Those who remained in Canada, therefore, tended to have had more time to progress through their school-work transitions.

Largely reflecting the differences in field of study between the graduates who moved to the U.S. and those who stayed in Canada, the occupational mix was quite different between the two groups. Graduates who relocated to the U.S. were more likely to have been working in health occupations (36%) and in natural and applied sciences jobs (26%\*) than were the members of the class of '95 who remained in Canada (12% and 13%, respectively). (See Figure 4-6 and Table 2.)

The different distributions of graduates across occupations were due not only to differences in field of study, but also to an apparently better job-education match among graduates working in the U.S. Examining graduates from specific fields of study, those who moved to the U.S. were more likely than those still in Canada to be working in a related occupation. For example, 91 percent of health

Figure 4-6

Occupations upon arrival in the U.S. varied from those held by graduates who remained in Canada



<sup>1</sup> Excludes trade/vocational graduates

Sources: *Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates*

graduates who moved south were working in health occupations upon arrival in the U.S. In comparison, this was the case for only 75 percent of health graduates who remained in Canada. A similar pattern was evident for those who graduated in engineering and applied sciences. (See Figure 4-7.)

Attitudinal evidence reinforces the finding that graduates who moved to the U.S. were more likely than their counterparts who remained in Canada to have secured work that better matched their education. Both surveys asked identical questions about how related to their studies graduates felt their jobs were. Using engineering and applied sciences graduates as an example, 85 percent of those in the U.S.

<sup>20</sup> Comparisons between these groups must be made with caution as the confidence intervals of estimates may overlap (indicating the possibility that no real difference between the groups exists). The differences specifically mentioned in this section, however, are statistically significant.

**Table 2**  
**Employed graduates in the U.S. and Canada<sup>1</sup> by occupational category and skill level<sup>2</sup>**

	Business, finance & administration	Natural & applied sciences	Health	Social science, education, government & religion	Art, culture, recreation & sport	Sales & service	Trades, transport & equipment operation	Primary industry occupations	Processing, manufacturing & utilities	Total
	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS	JOB2 NGS
Management occupations	-- 2%	-- --	-- 1%	-- --	-- --	-- 3%	-- --	-- --	-- --	10%
Skill level A: Professional	-- 6%	24%* 8%	35% 7%	19%* 18%	-- 2%	-- --	-- --	-- --	-- --	82% 41%
Skill level B: Technical	4%	-- 4%	-- 2%	3%	-- 2%	-- 4%	-- 2%	-- --	-- --	14%* 22%
Skill level C: Intermediate	-- 7%		-- 1%			-- 11%	-- --	-- --	-- --	-- 22%
Skill level D: Elemental						3%	-- --	-- --	-- --	4%
Total	-- 20%	26%* 13%	36% 12%	19%* 21%	9%* 5%	-- 21%	-- 4%	-- 1%	3%	100% 100%

<sup>1</sup> In each cell, information is presented for the following:

JOB2: Graduates who had a job arranged to start upon arrival in the U.S. (population represented = 2,969).

NGS: Graduates with a job in Canada in 1997 (excludes Trade/Vocational graduates; population represented = 197,231).

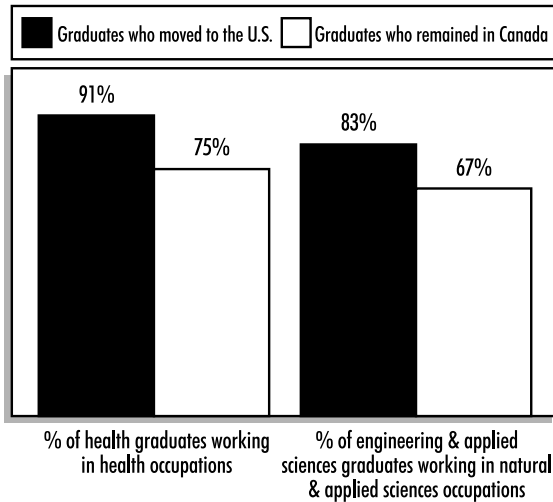
<sup>2</sup> Occupational categories and skill levels based on the National Occupational Classification.

Note: Percentages may not add up to totals due to rounding.

Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

Figure 4-7

**Graduates who moved to the U.S. more likely than those in Canada to have been working in their field of study**



Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

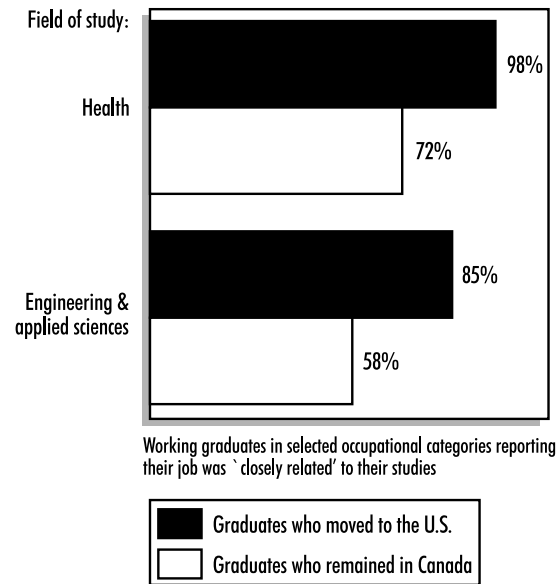
reported their work to be “closely related” to their studies, compared with 58 percent of graduates working in Canada. (See Figure 4-8.)

These findings are consistent with the work-related factors graduates offered as having attracted them to the U.S. Recall that a substantial proportion (44%) of graduates who moved for work-related reasons stated that greater availability of jobs in a particular field drew them south of the border. This factor was cited more often than any other. In addition, 35 percent\* mentioned greater availability of jobs in the U.S. in general.<sup>21</sup>

The better job–education match found among graduates who moved south was also evident in the skill levels required to perform the jobs they occupied upon arrival in the U.S. (See Table 2.) Focusing further on bachelor’s graduates, four in five (81%) of those who relocated to the U.S. were in professional or management occupations, compared with three out of five (61%) of their counterparts in Canada.

Figure 4-8

**Graduates who moved to the U.S. more likely than those in Canada to report that their job was closely related to their studies**



Working graduates in selected occupational categories reporting their job was ‘closely related’ to their studies

Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

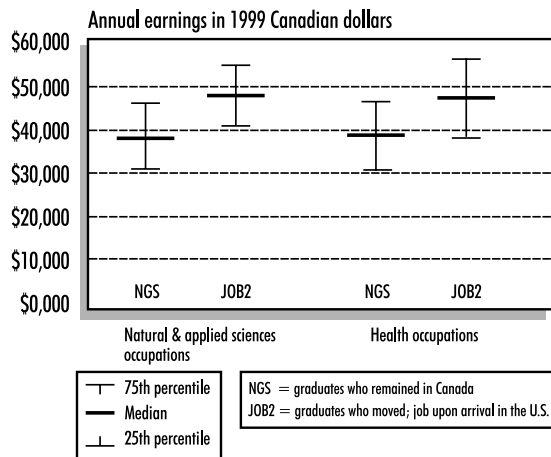
Salaries were also higher for graduates who relocated, compared with those who remained in Canada. This difference was greatest among college graduates. The median annual salary of college graduates upon arrival in the U.S. was \$42,600, significantly higher than the \$24,200 median for those who remained in Canada. At the bachelor’s level, the median salary was \$43,400 for those who moved and \$30,500 for those who remained in Canada.

<sup>21</sup> Health graduates whose main reason for moving was work-related were even more likely to have cited factors involving job availability. For more information, see the box entitled Focus on Health Graduates, in Section 3.

More specific comparisons can be made by examining bachelor's graduates in the two largest occupational groups among those who relocated. The median annual earnings of bachelor's graduates working in applied and natural sciences jobs in the U.S. was \$47,400, considerably higher than the \$38,400 median among their counterparts in Canada. The gap in salaries between bachelor's graduates in health occupations upon arrival in the U.S. and those who remained in Canada was similar. (See Figure 4-9.)

**Figure 4-9**

**Salary distributions: bachelor's graduates who remained in Canada and those who moved to the U.S., by selected occupational category**



Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates

The differences in salary, skill levels and job–education match were evident despite the time differential noted at the beginning of this section. Job information for graduates who remained in Canada pertains to the summer of 1997, while that for those who moved relates to their time of arrival in the U.S. between graduation and the summer of 1997.<sup>22</sup>

As outlined in Section 2, those who moved to the U.S. reported above-average grades. One might reasonably suggest that this difference in “quality” could account for the differences between these groups of graduates described in this section. In an attempt to control for this potential “quality factor,” a separate set of analyses was conducted using only those graduates who remained in Canada (excluding trade/vocational graduates) who had received scholarships or other awards based on their academic achievements.<sup>23</sup>

These graduates were then compared with *all* those who moved to the U.S. (only 36% of whom had received academic awards) in terms of job–education match, skill levels and salaries. The overall patterns and findings, however, remained unchanged from those reported above. This supports the notion that differences in “quality” do not account for the better labour market outcomes enjoyed by the graduates who relocated to the U.S.

<sup>22</sup> Two-thirds had moved within a year of graduation. See Section 3.2.

<sup>23</sup> This was the only indicator of “quality” available from both the NGS and the SGMUS.



## 5. SUMMARY AND CONCLUSION

This report examined specifically 1995 graduates who moved to the U.S. The movements of graduates to other countries, or of foreign students and graduates into Canada, were beyond the scope of the survey.

Just over 4,600 post-secondary graduates from the class of '95 moved to the U.S. between graduation and the summer of 1997. As a proportion of the entire 1995 graduating class, the number of graduates who moved was quite small (1.5%). Within this group, however, master's and PhD graduates were over-represented, as were health, engineering and applied sciences graduates.

A substantial proportion of the graduates who relocated to the U.S. ranked themselves near the top of their graduating class. Moreover, even after taking level of study into account, those who moved to the U.S. were more likely than their counterparts who remained in Canada to have received scholarships or other academic awards. It would appear that those who relocated did tend to be above-average graduates.

More than one half of the graduates who relocated to the U.S. moved for work-related reasons. Still, education, marriage or relationships, and other family-related reasons were the motivating force for significant proportions of the graduates who moved. In addition to economic forces, therefore, social factors can play a compelling role in motivating some people to move.

Among graduates who moved primarily for work, the factors most often cited involved *opportunity*: many graduates were drawn to the U.S. by greater availability of jobs, either in a particular field or in general. The other major drawing card related to *compensation*: nearly four in ten of the graduates who relocated mainly for work cited higher salaries as a factor that attracted them to the U.S. Notably, few graduates explicitly stated that lower taxes in the U.S. were among the work-related factors that drew them there.

For graduates who moved for education purposes, availability of specific programs and factors related to academic excellence were most often stated as having attracted them to study at an American institution.

About 3,000 graduates had a job prearranged and most of them got their jobs through their own initiative: responding to advertisements, using personal contacts or sending out résumés on their own. Relatively few were hired through on-campus recruitment programs or job postings. Very few were contacted directly by an employer or head-hunter. This suggests that only a modest number of graduates from the class of '95 had been directly recruited by U.S. employers and that traditional job search methods were the norm for these graduates who had prearranged jobs in the U.S.

This report analysed in detail the work experiences of the graduates who moved to the U.S. and indicated that they realized a high degree of success in the U.S. labour market. They were able to secure work that was closely related to their studies: largely in health, natural and applied sciences occupations, and in social science and related jobs. In addition, they were working in occupations that required high skill levels and that paid high salaries: more so than their counterparts who remained in Canada.

To a large extent, the better job–education match among graduates who moved to the U.S. was to be expected: these tended to be high-quality graduates with promising opportunities to pursue. The regulations associated with international migration also act as a filter, helping to ensure (or even to require) that incoming workers have a job arranged and possess demonstrated credentials that qualify them to fill that job. The results presented in this report serve to document and quantify the degree to which graduates from the class of '95 were able to find challenging and rewarding work in their fields of study in the U.S.

For some, the opportunities and economic benefits of moving to the U.S. may have been simply too great to ignore. There seems little doubt that the graduates who relocated tended to secure more lucrative work pertinent to their education than those who stayed in Canada, even after allowing for “quality” differences. In other cases (e.g. among nurses), limited opportunities and unsatisfactory working conditions in Canada may have made looking south for career-related work much more attractive. Also, in some specialized fields, opportunities for highly skilled personnel may be far greater (or even exist exclusively) in the much larger U.S. labour market.

Profound changes were taking place in Canada's health sector during the very period that the class of '95 was entering the labour market. Were it not for these circumstances, the size and composition of the outflow of graduates to the U.S. may have been quite different from that documented in this report: the overall numbers may have been lower and the field of study and occupational profiles of movers may have been less concentrated in the health sector.

By March 1999, about 830 or 18 percent\* of the graduates had returned to Canada: one half of them returned for work-related reasons. Among the graduates still in the U.S., about four in ten planned to return to Canada to live. Three in ten did not plan to come back and about the same proportion did not know whether they would return. It remains to be seen, however, whether and when these graduates actually return to Canada to live.

In conclusion, the survey findings indicate that the movement of 1995 graduates to the U.S. was relatively small. Those who did relocate, however, tended to be high-quality people in certain key fields. Also, these results represent only a snapshot of a very specific group. The factors that have focused attention on the outflow of recent graduates to the U.S. are still at play: demand for skilled personnel remains high, compensation for many jobs south of the border is attractive, and the U.S. labour market is quite accessible to a variety of skilled workers. Efforts to monitor the mobility and labour market outcomes of recent graduates should continue.

Results from the *Survey of 1995 Graduates Who Moved to the United States* fill a major information gap that has inhibited informed debate over the movement of talented young Canadians to the U.S. In so doing, this report contributes to a better understanding of the numbers, characteristics, motivations and activities of post-secondary graduates who moved.

# APPENDIX A: SUPPLEMENTARY TABLES

Supplementary Table A-1

**Graduates from the Class of '95 Who Remained in Canada and Who Moved to the U.S.,  
by Level of Study**

Level of study	(A) Graduates who remained in Canada	%	(B) Graduates who moved to the U.S.	%	(B:A) Ratio of graduates who moved to the U.S. to those who remained in Canada	[B/(A+B)] Graduates who moved to the U.S. as a proportion of total
Trade/ Vocational	58,919	19.8%	--	--	--	--
College	82,026	27.5%	1,162	25.1%	1:71	1.4%
Bachelor's	134,044	45.0%	2,376	51.3%	1:56	1.7%
Master's	20,539	6.9%	683	14.7%	1:30	3.2%
PhD	2,626	0.9%	359	7.7%	1:7	12.0%
Total	298,154	100%	4,636	100%	1:64	1.5%

*Sources: Survey of 1995 Graduates Who Moved to the United States and 1997 National Survey of 1995 Graduates*

## Supplementary Table A-2

### Characteristics of the 1995 Graduates Who Moved to the U.S.

<b>1. Number of graduates</b>	4,636	<b>3.3 Destination state (%)</b>	
<b>2. Characteristics of graduates</b>		Texas	16*
<b>2.1 Gender distribution (%)</b>		California	11*
Men	51	New York	10*
Women	49	Florida	8*
<b>2.2 Level of study (%)</b>		Other	55
Trade/Vocational	--	<b>3.4 Main reason for moving to the U.S. (%)</b>	
College	25	Work-related reasons	57
Bachelor's	51	Schooling/education reasons	23
Master's	15*	Marriage or relationship	17*
PhD	8*	<b>3.5 Work-related factors<sup>1,2</sup> for moving to U.S. (%)</b>	
<b>2.3 Field of study – university level (%)</b>		Availability of jobs in a particular field	44
Health professions	20*	Higher salaries in the U.S.	39
Engineering and applied sciences	13*	Availability of jobs in general	35
Social sciences	13*	Chance to gain or develop skills	21*
Mathematics and physical sciences	11*	Better career advancement opportunities	16*
Agricultural and biological sciences	10*	Other reasons not related to work	13*
Humanities	10*	Better employment benefits/perks	11*
Education	10*	<b>3.6 Basis of admission: temporary residents (%)</b>	
Commerce	10*	TN visa (NAFTA)	57
Fine and applied arts	--	Student visa	19*
<b>2.4 Status in Canada before moving (%)</b>		Temporary worker visa	9*
Canadian citizen by birth	84	Other	15*
Canadian citizen by naturalization	11*	<b>3.7 Methods of finding first job in the U.S. (%)</b>	
Landed immigrant in Canada	--	Responded to newspaper/Internet/ads	28
Visa or foreign student in Canada	--	Personal connections	21*
<b>2.5 Scholarships (%)</b>		Sent out applications/résumés	20*
Received scholarships, awards or prizes	36	On-campus recruitment or job postings	12*
<b>2.6 Self-reported rank in class (%)</b>		Other methods	19*
In the top 10%	44	<b>4. Returning to Canada</b>	
Below the top 10% but in the top 25%	36	<b>4.1 Graduates who were back in Canada (%)</b>	
Below the top 25% but in the top half	19*	Proportion of graduates who came back	18*
Below the top half	--	<b>4.2 Plans for the future for those still in U.S. (%)</b>	
<b>3. Pathways to the United States</b>		Intend to return to Canada	43
<b>3.1 Main activity in Canada before moving (%)</b>		Do not intend to come back to Canada	29
Working	51	Don't know	27
Going to school	36	<b>4.3 When planning to come back (%)<sup>3</sup></b>	
Looking for work	10*	Within two years	19*
<b>3.2 Last province of residence (%)</b>		Three to five years	14*
Ontario	57	Six years or more	24*
Prairies	13*	Don't know	43
Quebec	11*		
Atlantic	10*		
British Columbia	9*		

<sup>1</sup> Applies only to the approximately 2,600 graduates (57% of those who moved) whose main reason for moving to the U.S. was work.

<sup>2</sup> Multiple responses were allowed.

<sup>3</sup> Applies only to those who intended to return to Canada to live.

Source: Survey of 1995 Graduates Who Moved to the United States

\* Indicates estimate with a relatively high sampling variability

-- Indicates estimate is not reliable enough to release

# APPENDIX B: METHODOLOGICAL OVERVIEW

## INTRODUCTION

The *Survey of 1995 Graduates Who Moved to the United States* (SGMUS) was commissioned by Human Resources Development Canada (HRDC) and conducted by Statistics Canada in March 1999. The survey interviewed graduates from the class of '95 who were living in the U.S. as of the summer of 1997.

This was possible because Statistics Canada, also in partnership with HRDC, conducted the *National Survey of 1995 Graduates* (NGS) in the summer of 1997. While conducting that survey, 1,060 graduates were found to be living in the U.S., were considered out of scope for the NGS and were not interviewed. This group formed the sample for the SGMUS.

### SURVEY OBJECTIVES

The objectives of the SGMUS were to:

- estimate the number of post-secondary graduates from the class of '95 who moved to the U.S. between graduation and the summer of 1997;
- collect information on the key characteristics of this population, including level and field of study;
- provide data on the reasons these graduates relocated to the U.S.;

- collect information on the basis of admission to the U.S., residence status of graduates and their plans for the future; and
- gather data on work experiences for three reference periods:
  - the six months prior to relocating to the U.S. (JOB1);
  - the time of arrival in the U.S. (JOB2); and
  - the time of the survey (March 1999), whether the graduates were still in the U.S. or back in Canada (JOB3).

### TARGET POPULATION

The SGMUS target population consisted of graduates of Canadian post-secondary institutions who:

- received their certificate, diploma or degree, or completed their requirements in 1995; and
- had moved to the U.S. by the summer of 1997.

Some of these graduates had moved back to Canada by the time of the survey in March 1999; these people were also part of the target population.

The target population for the SGMUS excluded the following categories of graduates:

- those who were exclusively American citizens who had been studying in Canada and who had returned home to the U.S.;
- those who were not living in Canada or in the U.S. at the time of the survey; and

- graduates who may have moved to the U.S. but returned to Canada before the summer of 1997.

### *TRACING RESPONDENTS AND CONDUCTING THE INTERVIEWS*

The NGS and the SGMUS used contact information from the graduate's institution of study. In addition, more recent contact information for the individual or for a relative may also have been collected while conducting the NGS. Interviewers for the SGMUS also made extensive use of U.S. and Canadian telephone directories.

Using these different sources of information, attempts were made to contact each of the 1,060 individuals in the original sample. Of these, 639 were successfully contacted for a response rate of 60.3 percent. Not all of these people, however, were in scope for the SGMUS: 108 were contacted but found to be out of scope for purposes of the SGMUS. Categories of people who were out of scope included those who never actually moved to the U.S., Americans who had studied in Canada and then returned home, those not living in Canada or the U.S., those who never actually completed a post-secondary program in 1995 and anyone who was deceased. Eliminating these categories of people reduced the initial SGMUS sample to 952.

Fifteen-minute, computer-assisted telephone interviews were successfully completed with 531 in-scope respondents (including two partial interviews). Thus, the response rate excluding those known to have been out of scope was 55.8 percent (531/952).

### *WEIGHTING PROCEDURES*

The principle behind estimation in a probability sample such as the SGMUS is that each person in the sample "represents," besides himself or herself, several other people not in the sample. The weighting phase is a step that calculates, for each record, the number of individuals in the population represented by the record. This number is known as the weight and is used to derive meaningful estimates from the survey.

The SGMUS weight attached to each record was the product of two factors: a basic sampling weight derived from the NGS and an adjustment to account for non-response to the SGMUS. After applying these weighting procedures, the 531 respondents interviewed for the SGMUS represented 4,636 people who had graduated from a Canadian post-secondary institution in 1995 and who moved to the U.S. by the summer of 1997.

### *SAMPLING ERROR*

The SGMUS produces estimates based on information collected from and about a sample of individuals. In sample surveys, since inference is made about the entire population covered by the survey on the basis of data obtained from only a part (sample) of the population, the results are likely to be different from the "true" population values. The true population values in this context refer to the values that would have been obtained had the entire population been surveyed under the same conditions. The error arising from drawing inferences about the population on the basis of information from the sample is termed "sampling error."

As in any sample survey, some of the SGMUS estimates are subject to considerable sampling error or are based on too small a sample to be statistically

reliable. Guides to the potential size of sampling errors are provided by the estimated coefficients of variation (CVs). The quality of the estimate increases as the corresponding CV decreases.

In this publication, where the CV is 0 percent to 16.5 percent, the estimate is unqualified and there is no special notation in the text. In cases where the CV is from 16.6 percent to 33.3 percent, the estimate is qualified with an asterisk (\*) which indicates that higher sampling variability is associated with that estimate and it is less reliable than unmarked numbers. For CVs above 33.3 percent, the sampling variability is too high to release an estimate. Such estimates are deleted and replaced with dashes (--).

### *THE 1997 NATIONAL SURVEY OF 1995 GRADUATES*

In this report, the numbers of graduates who moved to the U.S. are sometimes reported in relation to all graduates from the class of '95. Comparisons are also made between graduates who moved to the U.S. and those who remained in Canada. The information used in this report about graduates who remained in Canada comes from the *1997 National Survey of 1995 Graduates* (NGS).

The main objective of the NGS was to obtain information on the labour market experiences of graduates from the class of '95, focusing on employment, occupations and relationship between jobs and education. The survey had a sample size of 61,759 and a response rate of 79.6 percent. Among respondents, 6,110 were found to be out of scope (including the SGMUS sample of 1,060), leaving 43,040 individuals in the domain of interest.

For more information, see *The Class of '95: Report of the 1997 National Survey of 1995 Graduates* (HRDC Catalogue Number SP-137-04-99;

Statistics Canada Catalogue Number 81-584-XPB). Detailed methodological information on the NGS can be found in the *1997 National Survey of 1995 Graduates (NGS97) Microdata Package*, available through Special Surveys Division, Statistics Canada.