

**A COMPARATIVE ANALYSIS
OF THE BALANCE BETWEEN
COLLEGE AND UNIVERSITY ENROLLMENT
IN THE UNITED STATES AND ONTARIO**

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9 December 2003



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The Work of the Task Force on Competitiveness, Productivity and Economic Progress

The Task Force on Competitiveness, Productivity and Economic Progress and its research arm, the Institute for Competitiveness and Prosperity, were established by the Government of Ontario in 2001 to “measure and monitor Ontario’s productivity, competitiveness and economic progress compared to other provinces and the U.S. states and to report to the public on a regular basis.” The Task Force has issued two annual reports, *Closing the Prosperity Gap* (November 2002) and *Investing for Prosperity* (November 2003), and the Institute four working papers: *A View of Ontario: Ontario’s Clusters of Innovations* (April 2002), *Measuring Ontario’s Prosperity: Developing an Economic Indicator System* (August 2002), *Missing Opportunities: Ontario’s Urban Prosperity Gap* (June 2003), and *Striking Similarities: Attitudes and Ontario’s Prosperity Gap* (September 2003).

The principal focus of the work of the Institute has been to determine the dimensions of Ontario’s prosperity relative to sixteen North American jurisdictions (14 states and two provinces whose populations exceed six million) and to examine the factors which contribute to differences in the prosperity and standards of living afforded to individuals who reside within those jurisdictions.

In its first annual report, *Closing the Prosperity Gap*, the Task Force devoted significant attention to the role of education, and particularly post-secondary education, in driving Ontario’s economic growth and prosperity. In its own words, the position of the Task Force might be summarized as follows:

- For the individual, the returns from education are well documented – the best single predictor of personal income is level of education. And since personal income and productivity are closely correlated, education drives productivity.
- For businesses, the availability of skilled workers, researchers, and managers is a critical benefit of post-secondary education.
- At the college level of post-secondary education, the data ... suggest that Ontario invests competitively in the college system.
- At the university level, the pattern begins to change, and investment per student dips dramatically below US levels. While Ontario leads slightly in the number of bachelor’s degrees conferred per 1000 population, the US leads dramatically at the master’s level. Our US peer group continues the investment farther along the higher education spectrum than does Ontario.
- Another major difference in the post-secondary educational strategy of Ontario and its peer group is in the composition of the subject areas studied by the students. The single most striking difference is the level of investment in business degrees.

- The gap in investment by Ontarians versus the peer group appears, in part, to be a function of the historic educational strategy of the Ontario government, a key feature of which was to run a purely public system in post-secondary education.
- Quite apart from public expenditures on post-secondary education and research, the startling difference between Canada and the United States is the much larger investment of individuals – students, their families, alumni, and friends – and foundations and corporations in the US and the diversity and quality of institutions the investment has spawned.

In its second working paper, *Measuring Ontario's Prosperity: Developing an Economic Indicator System*, the Institute reiterates the economic importance which attaches to post-secondary education, though noting however, “that there is no direct evidence that increased spending on university education leads to economy-wide productivity growth.” Nonetheless, the Institute makes reference to the impact of post-secondary institutions on their regional economies, the role of the university in the generation of new knowledge, and the importance of the linkages which exist between universities and industries. The links between the colleges and their regional economies are not addressed.

In its third working paper, *Missing Opportunities: Ontario's Urban Prosperity Gap*, the Institute notes that “economists point to the increase in earnings associated with higher levels of education as key evidence for the positive impact of education on productivity.” Because Working Paper 3 focuses on urbanization, some emphasis is given to the higher income in urban areas of those individuals with higher educational attainment. Paul Davenport is cited with respect to particular advantages of university vs. college graduates relative to life time earnings.

The Institute observes that “Ontarians are less likely to have university degrees than people in the peer group of states” and they calculate that our lower educational attainment generates a deficit of \$1,480 in GDP per capita among urban dwellers. While noting the overall lower educational attainment of our population, the Institute also notes that Ontario has achieved recent success in the rate at which its Grade 9 students graduate from high school and subsequently pursue post-secondary studies. In particular, however, the Institute notes the relatively high proportion of high school graduates who enrol in colleges rather than universities. “We are more successful than our peer group states in graduating our high school students and encouraging them to attain some post-secondary education. But we are slightly less successful in encouraging these graduates to pursue a university degree.” Notwithstanding the recent financial history of the college sector in Ontario,¹ the Institute attributes the differences it has observed to “provincial government policy and strategy over the past few decades to build a first rate system of colleges of applied arts and technology.”

¹ According to the Council of Ontario Universities, expenditure per FTE student in the college sector declined by 12.5% between 1987-88 and 2000-01 while expenditure per FTE student in the university sector increased by 8.3%.

The Institute notes the differences may also be a reflection of the nature of demand for post-secondary education in Ontario. “The college system is seen by many to be more responsive to skills needs in Ontario – a very important element of our competitiveness and prosperity.” This view would appear to be misguided since university graduation leads to high lifetime earnings and an increase in the number of graduates with higher earnings will increase the gross level of personal income in the province. This in turn will cause GDP to grow, and enhance GDP per capita. Hence Ontarians need to “focus on the respective roles of colleges and universities in raising the competitiveness and prosperity of Ontarians. We may be under-investing in the latter relative to the former.”

In its fourth working paper, *Striking Similarities: Attitudes and Ontario’s Prosperity Gap*, the Institute establishes that general attitudes towards choice of educational level to achieve vary significantly between Ontario and its peer group, with one in three Ontarians likely to advise a young person to get a college education and only one in ten Americans likely to do the same. Notwithstanding, Americans are just as likely to choose college over university education (see below) and people in both jurisdictions appear equally satisfied with their own level of educational attainment. The Institute concludes, however, that “Ontarians’ attitudes towards post-secondary may be a hindrance.”

To demonstrate its conclusions in this regard, the Task Force examines in its second annual report, *Investing in Prosperity*, the transition rates between high school and post-secondary education. It states that it “is concerned about whether post-secondary student’s aspirations are competitive with those of peer states’ students, since a smaller percentage of our high school graduates are university bound.” It also examines the transition between Grade 9 and post-secondary learning and notes that “28 percent of Ontario Grade 9 students were enrolled in university five years later vs. 33 percent for the median of the 14 states.” As we will demonstrate in further analysis below, the data on which the Task Force based its conclusions are incorrect.

Finally, the Task Force focuses on the differences between Ontario and the U.S. members of its peer group with regard to expenditure per capita and per student at the elementary and secondary level, in colleges, and in universities. It concludes that Ontario under invests “relative to our peer group and that this under investment is more pronounced as we move through the educational system.” In particular, the Task Force notes that on a per student basis Ontario spends about 74% of U.S. levels in the college sector and 59% in the university sector. The new college level data for Ontario represent a significant change from previously published data which indicated that Ontario was investing more in its colleges than were its peer group jurisdictions.

Commentary and Analysis

It is clear that the Task Force and its research arm, the Institute, have taken the position from the very beginning of their work that there has been and remains an imbalance in Ontario’s investment in post-secondary education in favour of the college system in this province relative to its investment in the university system. The premise is based largely on perceived differences in the educational attainment of the population in Ontario and in

15 other peer jurisdictions (Quebec and 14 U.S. states), on the balance of enrolment between Ontario's colleges and universities, and on public and private investment in those sectors.

Table 1 (attached) displays the educational attainment of the populations 25 years of age and older in each of the peer group jurisdictions based on data from the 2000 U.S. census and the 2001 Canada census. The table sets out values for each U.S. jurisdiction, for all U.S. jurisdictions cited in total, for Ontario and Quebec, for all peer jurisdictions in total, and the average and median of the values of all sixteen jurisdictions. Most subsequent tables follow this same pattern of presentation.

Although both censuses address the issue of educational attainment on their long-form questionnaires, a somewhat different approach is taken on each which may have significant implications for the conclusions we can draw from these data. The most important of these differences, in our view, is the specific provision made on the Canadian census questionnaire for trade certificates or diplomas as distinct from non-university certificates or diplomas obtained at community colleges. The U.S. questionnaire makes no such provision and one can only speculate how individuals in the U.S. with such certificates or diplomas would have answered a question on highest level of schooling completed, since the only options afforded to them would be to report high school graduation (if indeed they had graduated) or college credit but not an associate degree. The answer would probably depend on where they had obtained their trade certificates or diplomas.

Notwithstanding these differences and their potentially significant implications, the data available to us reveal that while Ontario's population over 24 includes a significant percentage of individuals with less than high school graduation (26.8% vs. 21.1% for all peer jurisdictions), the Province also enjoys the highest level of post-secondary attainment of any in the group (59.2% vs. 52.1%). This high level of attainment draws largely from the achievements of the college sector in Ontario, in particular from its ability to graduate a significantly higher proportion of those enrolled than would appear to be the case in the U.S. This will be addressed in greater detail later in this paper. It is noted, however, that almost 50% of those reported in Ontario as "Some Post-Secondary" in fact hold trade certificates and diplomas. Were these individuals to be reclassified as "High School Graduates", the Province's percentage of high school graduates would increase to 24.6% and those reported as "Some Post-Secondary" would decrease to 11.5%. This would alter the percentage of those with some post-secondary experience through to the diploma level to 28.8% in Ontario vs. 27.9% in the U.S. This outcome, while uncertain, is more consistent with other data on college enrolment which we will examine later.

Notwithstanding these difficulties with respect to college level attainment, the data do indicate, with respect to the population 25 years of age and older, that a smaller proportion of Ontarians hold university degrees (particularly graduate degrees) than do their American counterparts.

	Ontario	Total of 14 U.S. Jurisdictions	Total of 16 Peer Jurisdictions	Average of 16 Observations	Median of 16 Observations
Less than HS Graduation	26.8%	20.3%	21.1%	20.6%	19.4%
High School Graduate	14.0%	28.0%	26.8%	27.7%	28.1%
More than High School	59.2%	51.7%	52.1%	51.7%	51.3%
Some Post-Secondary	22.2%	20.4%	20.6%	20.2%	20.4%
College Diploma	17.3%	6.4%	7.3%	7.4%	6.4%
Bachelors Degree	12.9%	15.7%	15.4%	15.2%	15.4%
Professional Degree	2.4%	2.1%	2.1%	2.0%	2.0%
Master's Degree	3.8%	6.1%	5.9%	5.9%	5.5%
Doctoral Degree	2.8%	4.9%	4.5%	4.6%	4.3%

It is suggested, however, that as an economic indicator that attempts to explain productivity differences in Ontario and its peer jurisdictions, the data should more appropriately measure the educational attainment of the population aged 25 to 64 rather than the total population 25 years of age and over. Unfortunately, the U.S. data are not easily available for this more limited age grouping, with the exception of those who hold a university degree. The first two columns of Table 2, which looks at educational attainment solely from that perspective, show that Ontario sits somewhat more closely to its peers than is the case with the larger age grouping. This is summarized below.

	Percentage of Population with University Degree	
	25 and Over	25 to 64
Ontario	21.8%	22.4%
Total of 14 U.S.		

Jurisdictions	28.8%	27.1%
Total of 16 Peer Jurisdictions	27.9%	26.5%
Average of 16 Observations	27.7%	26.4%
Median of 16 Observations	26.2%	25.1%

As can be seen, the gap between the percentage of Ontarians holding university degrees and the total for all 16 jurisdictions drops from 6.1% to 4.1%.

Educational attainment data for large populations is a reflection of the historical evolution of educational investment in the jurisdictions concerned and may also reflect the pattern of net migration (and the educational attainment of migrants) into and out of those jurisdictions. With respect to the data on the percentage of particular populations with university degrees, it is worth noting that Ontario approached what has been termed the *massification* of higher education somewhat later than did most U.S. jurisdictions. The results of this can be seen in more detail in the last four columns of Table 2 where the percentage of the population with a university degree is examined by narrower age groups, specifically ages 25 to 34, 35 to 44, 45 to 64 and 65 and over. The data in Table 2 are summarized below.

	Percentage of Population with a University Degree in Selected Age Groups			
	25 to 34	35 to 44	45 to 64	65 and Over
Ontario	28.7%	22.1%	18.9%	8.1%
Total of 14 U.S. Jurisdictions	28.2%	26.6%	26.8%	15.7%
Total of 16 Peer Jurisdictions	28.1%	25.9%	25.8%	14.9%
Average of 16				

Observations	28.7%	25.9%	25.4%	14.1%
Median of 16 Observations	27.0%	24.6%	24.7%	14.4%

From a policy perspective these data are quite significant. They indicate that while the university degree attainment of Ontario is lower in total than in the U.S., in the youngest age group, *i.e.* that closest to where the university systems in the various jurisdictions actually operate, Ontario has achieved the same level of *massification* as its U.S. counterparts. This should be reflected in actual university enrolment, a matter which will be examined later in this paper. These data demonstrate that while the educational attainment of the larger population may provide some indication of why there are differences in productivity between Ontario and its peer U.S. jurisdictions, they do not, in this case, provide the basis for a policy change with respect to the number of undergraduate university places available in Ontario.

Table 3 displays the distribution of post-secondary enrolment in the sixteen peer group jurisdictions in Fall 1998, the latest year for which U.S. and Canadian enrolment are available on a comparable basis. The data are drawn from the *Digest of Educational Statistics 2001*, published by the National Center for Educational Statistics in the United States, and *Education in Canada 2000*, published by Statistics Canada. Because of the significant differences in the structure of post-secondary education in Quebec, its data have been adjusted to include only CEGEP career programs at the college level and a portion (45%) of CEGEP university transfer enrolment at the bachelor's level. The Ontario data for 1998 probably also merit some adjustment to reflect the unique character of Grade 13 in the Province and the fact that some students here graduate from university after three years of study as a result. Undoubtedly university enrolment here would be higher were Ontario to have then been following the more traditional pattern of Grade 12 plus four years of undergraduate study but no attempt has been made to work through the statistical implications of this difference. The data from Table 3 are summarized below.

	Percentage of Total Post-Secondary Enrolment			
	College	Bachelor's	Professional	Graduate
Ontario	33.5%	56.2%	1.8%	8.5%
Total of 14 U.S. Jurisdictions	39.9%	45.4%	2.2%	12.5%
Total of 16 Peer Jurisdictions	39.1%	46.5%	2.2%	12.3%

Average of 16 Observations	34.4%	50.9%	2.2%	12.5%
Median of 16 Observations	34.6%	52.3%	2.0%	12.5%

These data indicate that Ontario has a smaller proportion (33.5%) of its post-secondary enrolment at the college level than does the totality of its peer group (39.1%), a higher proportion of university undergraduates (56.2% vs. 46.5%) and a lower proportion of graduate students (8.5% vs. 12.3%). With respect to undergraduate students only, the split between college and university is 37/63 for Ontario vs. 46/54 for the peer group as a whole.

Table 5 examines undergraduate participation rates in the peer group jurisdictions using 1998 post-secondary enrolment and U.S. and Statistics Canada Census data for population by single years of age. As can be seen in the data summarized below, Ontario has a significantly lower college participation rate than the peer group as a whole.

	Percentage of Population 18 to 21		
	College Participation	University Participation	Total Undergraduate
Ontario	25.6%	43.0%	68.5%
Total of 14 U.S. Jurisdictions	36.1%	41.1%	77.2%
Total of 16 Peer Jurisdictions	35.1%	41.7%	76.8%
Average of 16 Observations	30.7%	45.0%	75.7%
Median of 16 Observations	29.2%	43.4%	75.7%

As we have noted above, the Task Force, particularly in its second annual report has examined in some detail, the transition between high school and post-secondary learning, in particular between Grade 9 and college and university four (and in the case of Ontario, five) years later. Their analysis is limited to students entering college and university directly from high school.

Unfortunately, the data they have used for the U.S. and Ontario are not comparable including in the case of the former both full and part time secondary school entrants and in the case of the latter full time entrants only. Table 6 attached sets out the rates of

transition from Grade 9 to college and university 1) as originally calculated,² 2) with U.S. data amended to incorporate estimates of full time entrants only, and 3) with Ontario data amended to reflect an estimate of full and part time entrants. The data to generate comparability have had to be estimated because actual data on a comparable basis are not available. In the case of the U.S. jurisdictions, data on total first time freshmen are available by time status but not by institutional type. In creating a revised data set, we have had to assume that the balance between full and part time students was the same for both all and recently graduated freshmen, in both colleges and universities. In the case of Ontario, a revised data set was generated by assuming that the actual pattern of full and part time enrolment for all college and undergraduate university students could be applied to first year entrants. It is acknowledged that neither of these amended data sets is entirely satisfactory but it is posited that either is better than a data set that compares full time enrolment to the sum of full and part time enrolment. The results of this analysis are summarized below.

	As Originally Calculated		Converting U.S. Data to Full Time Only		Converting Ontario Data to Full and Part Time	
	Transition to College	Transition to University	Transition to College	Transition to University	Transition to College	Transition to University
Ontario	21.9%	28.4%	21.9%	28.4%	23.4%	34.5%
Total of 14 U.S. States	12.9%	28.9%	9.8%	22.9%	12.9%	28.9%
Total of US and Ontario	13.4%	28.9%	10.5%	23.2%	13.5%	29.3%
Average of US and Ont	12.9%	32.3%	10.4%	26.5%	13.0%	32.7%
Median of US and Ont	13.7%	32.8%	10.4%	28.4%	13.7%	33.7%

Bearing in mind the caution with which they should be used, these data indicate that while Ontario undoubtedly has, by any measure, a high rate of transition directly from high school to college – in the range of 22-23% vs. 10-13% for the peer group as a whole

² Some minor adjustment has been made to college and university entrant data for Ontario based on data provided by the Council of Ontario Universities and the Association of Colleges of Applied Arts and Technology.

- this rate of enrolment does not appear to have been to the disadvantage of the university sector. The revised data here show a range of Grade 9 to university transition rates for Ontario from 28-34% vs. a range of 23-29% for the peer group as a whole. Although purely speculative on our part, we suspect that Ontario's significantly higher transition rate from Grade 9 to secondary school graduation (78.2% vs. 66.7% for the peer group as a whole) may provide a substantially larger pool of high school graduates for whom college is an attractive and viable option and who may not otherwise be qualified for university entrance.

Nevertheless, the data for colleges are a bit puzzling given what we know about the balance between college and undergraduate university enrolment generally and about college and university participation rates. Again, one can only speculate that U.S. colleges attract more enrolment from other than recently graduated high school students than is the case in Ontario. Unfortunately, the data for college entrants that would be required to test this out are not available. By way of proxy, we did examine freshman intake coming directly from secondary school as a percentage of total enrolment. In the U.S. peer jurisdictions, full and part time recently graduated secondary school entrants represented 8.8% of total full and part time enrolment; in Ontario, full time recently graduated secondary school entrants represented 24.1% of total full time enrolment.

Finally, given Ontario's relatively low college participation rate (identified above), how is it that the educational attainment data we have examined show this province with a substantially higher proportion of its population 25 years of age and over with college graduation than other jurisdictions in the peer group? Table 7 displays diplomas and degrees granted as a percentage of total enrolment in 1998 using data from the N.C.E.S. *Digest of Educational Statistics 2001* and Statistics Canada's *Education in Canada 2000*. Although not a very sophisticated representation of institutional throughput, the analysis can be taken as a rough approximation of differences in college success rates by jurisdiction. As can be seen in Table 6 and in the summary data displayed below, Ontario's colleges appear to achieve a significantly higher rate of college completion than do colleges in other peer group jurisdictions.

	Diplomas and Degrees Awarded as a % of Total Enrolment			
	College	Bachelor's	Professional	Graduate
Ontario	29.3%	20.1%	30.1%	27.0%
Total of 14 U.S. Jurisdictions	9.9%	17.7%	25.9%	27.4%

Total of 16 Peer Jurisdictions	10.4%	17.6%	26.1%	27.0%
Average of 16 Observations	11.1%	17.3%	25.9%	28.0%
Median of 16 Observations	11.3%	17.6%	26.3%	27.6%

Conclusion

As we have seen above, the Task Force on Competitiveness, Productivity and Economic Progress and its research arm, the Institute for Competitiveness and Prosperity have identified a population’s educational attainment as a principal driver of a jurisdiction’s economic achievement. In Ontario’s case, they believe that educational attainment has had “a negative impact on GDP per capita of \$965 per capita.” They argue for a greater investment in post-secondary education and, given what they regard as an imbalance of student choice between college and university, they believe that much of this investment should be directed at the university sector.

In this paper, we have set out to demonstrate that the imbalance perceived by the Task Force does not actually exist.

1. While acknowledging an overall gap between Ontario and its peers on educational attainment, we establish that in the younger age ranges this gap no longer exists.
2. We demonstrate that Ontario has a lower proportion of its post-secondary enrolment at the college level than do its peers.
3. We show that Ontario college enrolment as a percentage of the population 18 to 21 is significantly lower here than elsewhere
4. We demonstrate that the data the Task Force presents on the transition from Grade 9 to post-secondary learning are erroneous and that while a higher proportion of recently graduated secondary school students enter college than do so elsewhere, the same is probably also true for university bound students.
5. Finally, we show that the record of Ontario’s colleges in assisting students to the completion of their program is significantly better here than elsewhere.

Table 1

Education Attainment of Population over 25 Years of Age
Selected American and Canadian Jurisdictions
 U.S. Census 2000, Canada Census 2001

	Less than HS Graduate	High School Graduate	More than High School	Some Post- Secondary	Associate Degree	Bachelors Degree	Professional Degree	Masters Degree	Doctoral Degree
California	23.2%	20.1%	56.7%	22.9%	7.1%	17.1%	2.3%	6.0%	1.2%
Florida	20.1%	28.7%	51.1%	21.8%	7.0%	14.3%	2.3%	5.0%	4.0%
Georgia	21.4%	28.7%	49.9%	20.4%	5.2%	16.0%	1.9%	5.6%	4.0%
Illinois	18.6%	27.7%	53.7%	21.6%	6.1%	16.5%	2.1%	6.5%	4.9%
Indiana	17.9%	37.2%	44.9%	19.7%	5.8%	12.2%	1.4%	5.1%	4.2%
Massachusetts	15.2%	27.3%	57.5%	17.1%	7.2%	19.5%	2.6%	9.4%	11.3%
Michigan	16.6%	31.3%	52.1%	23.3%	7.0%	13.7%	1.6%	5.7%	4.7%
New Jersey	17.9%	29.4%	52.7%	17.7%	5.3%	18.8%	2.5%	7.3%	6.5%
New York	20.9%	27.8%	51.3%	16.8%	7.2%	15.6%	2.7%	8.0%	5.2%
N. Carolina	21.9%	28.4%	49.7%	20.5%	6.8%	15.3%	1.5%	4.8%	4.0%
Ohio	17.0%	36.1%	46.9%	19.9%	5.9%	13.7%	1.7%	5.0%	4.4%
Pennsylvania	18.1%	38.1%	43.8%	15.5%	5.9%	14.0%	2.0%	5.4%	5.3%
Texas	24.3%	24.8%	50.8%	22.4%	5.2%	15.6%	1.7%	5.2%	3.4%
Virginia	18.5%	26.0%	55.5%	20.4%	5.6%	17.9%	2.3%	8.0%	6.8%
US Total	20.3%	28.0%	51.7%	20.4%	6.4%	15.7%	2.1%	6.1%	4.9%
Ontario	26.8%	14.0%	59.2%	22.2%	17.3%	12.9%	2.4%	3.8%	2.8%
Quebec	31.2%	17.5%	51.2%	21.7%	13.8%	10.6%	1.6%	2.9%	1.8%
Grand Total	21.1%	26.8%	52.1%	20.6%	7.3%	15.4%	2.1%	5.9%	4.5%
Average	20.6%	27.7%	51.7%	20.2%	7.4%	15.2%	2.0%	5.9%	4.6%
Median	19.4%	28.1%	51.3%	20.4%	6.4%	15.4%	2.0%	5.5%	4.3%

Table 2

Education Attainment of Population over 25 Years of Age, University Only
Selected American and Canadian Jurisdictions
 U.S. Census 2000, Canada Census 2001

	Total University Degree 25 and Over	Total University Degree 25 to 64	Total University Degree			
			25 to 34	35 to 44	45 to 64	65+
California	26.6%	28.0%	26.3%	27.0%	30.1%	19.8%
Florida	25.5%	23.9%	23.3%	23.6%	24.5%	17.6%
Georgia	27.4%	26.1%	27.7%	26.3%	24.9%	14.1%
Illinois	30.0%	29.0%	32.3%	28.2%	27.3%	13.4%
Indiana	22.8%	21.4%	23.4%	21.0%	20.5%	11.0%
Massachusetts	42.8%	37.1%	41.4%	36.5%	34.8%	17.7%
Michigan	25.7%	23.9%	26.0%	22.7%	23.5%	12.6%
New Jersey	35.1%	33.2%	34.7%	33.6%	32.1%	15.7%
New York	31.5%	30.0%	33.3%	29.0%	28.7%	16.4%
N. Carolina	25.6%	24.2%	26.4%	24.4%	22.6%	14.7%
Ohio	24.8%	23.3%	25.9%	22.7%	22.1%	12.5%
Pennsylvania	26.7%	25.5%	29.1%	24.8%	24.0%	11.9%
Texas	25.8%	24.7%	23.7%	24.4%	25.7%	15.7%
Virginia	35.0%	31.8%	33.1%	31.2%	31.4%	18.0%
US Total	28.8%	27.1%	28.2%	26.6%	26.8%	15.7%
Ontario	21.8%	22.4%	28.7%	22.1%	18.9%	8.1%
Quebec	16.9%	17.8%	24.1%	17.7%	14.7%	6.2%
Grand Total	27.9%	26.5%	28.1%	25.9%	25.8%	14.9%
Average	27.7%	26.4%	28.7%	25.9%	25.4%	14.1%
Median	26.2%	25.1%	27.0%	24.6%	24.7%	14.4%

Table 3

Distribution of Fall 1998 Post-Secondary Enrolment

Selected U.S. and Canadian Jurisdictions

Sources: NCES and Statistics Canada

	<i>Percentage of Total Post-Secondary</i>				<i>Total Undergrad</i>	
	College	Bachelors	Profess'l	Graduate	College	Bachelors
California	59.1%	29.0%	1.6%	10.2%	67.0%	33.0%
Florida	49.6%	39.2%	1.6%	9.7%	55.9%	44.1%
Georgia	24.1%	60.2%	3.5%	12.2%	28.6%	71.4%
Illinois	47.5%	36.9%	2.3%	13.3%	56.2%	43.8%
Indiana	16.2%	70.4%	2.0%	11.5%	18.7%	81.3%
Massachus	19.9%	56.3%	3.4%	20.4%	26.1%	73.9%
Michigan	35.6%	49.5%	1.8%	13.1%	41.9%	58.1%
N. Carolina	40.3%	48.4%	2.0%	9.3%	45.4%	54.6%
New Jersey	39.1%	46.0%	1.6%	13.3%	46.0%	54.0%
New York	25.3%	55.1%	2.8%	16.8%	31.4%	68.6%
Ohio	29.0%	56.6%	2.3%	12.1%	33.9%	66.1%
Pennsylvan	22.2%	61.2%	2.8%	13.7%	26.6%	73.4%
Texas	45.5%	41.8%	2.0%	10.7%	52.2%	47.8%
Virginia	37.6%	47.2%	2.0%	13.2%	44.3%	55.7%
US Total	39.9%	45.4%	2.2%	12.5%	46.7%	53.3%
Ontario	33.5%	56.2%	1.8%	8.5%	37.3%	62.7%
Quebec	25.5%	60.1%	2.1%	12.3%	29.8%	70.2%
Grand Total	39.1%	46.5%	2.2%	12.3%	45.7%	54.3%
Median	34.6%	52.3%	2.0%	12.3%	39.6%	60.4%
Average	34.4%	50.9%	2.2%	12.5%	40.1%	59.9%

Table 4

Distribution of Fall 1998 University Enrolment

Selected U.S. and Canadian Jurisdictions

Sources: NCES and Statistics Canada

	<i>Total University</i>		
	Bachelors	Profess'l	Graduate
California	71.0%	4.0%	25.0%
Florida	77.7%	3.1%	19.2%
Georgia	79.3%	4.6%	16.1%
Illinois	70.3%	4.4%	25.3%
Indiana	84.0%	2.3%	13.7%
Massachusetts	70.3%	4.3%	25.5%
Michigan	76.8%	2.9%	20.3%
N. Carolina	81.1%	3.3%	15.6%
New Jersey	75.6%	2.6%	21.9%
New York	73.7%	3.7%	22.5%
Ohio	79.7%	3.3%	17.1%
Pennsylvania	78.7%	3.6%	17.7%
Texas	76.7%	3.7%	19.6%
Virginia	75.7%	3.3%	21.1%
US Total	75.6%	3.6%	20.8%
Ontario	84.5%	2.8%	12.7%
Quebec	80.7%	2.8%	16.6%
Grand Total	76.3%	3.5%	20.2%
Median	77.2%	3.3%	19.4%
Average	77.2%	3.4%	19.4%

Table 5

Undergraduate Participation Rates based on 1998 Post-Secondary Enrolment

Selected U.S. and Canadian Jurisdictions

Sources: NCES and Statistics Canada and U.S. (2000) and Canadian (2001) Census

	Population 18 to 21		
	College	Bachelors	Total
California	59.2%	29.1%	88.3%
Florida	41.8%	33.0%	74.8%
Georgia	15.0%	37.4%	52.4%
Illinois	48.9%	38.1%	87.0%
Indiana	13.0%	56.3%	69.3%
Massachusetts	24.1%	68.2%	92.3%
Michigan	35.3%	49.0%	84.2%
N. Carolina	33.2%	39.9%	73.1%
New Jersey	32.9%	38.7%	71.6%
New York	24.9%	54.2%	79.1%
Ohio	24.6%	48.0%	72.6%
Pennsylvania	19.5%	54.0%	73.6%
Texas	34.6%	31.7%	66.3%
Virginia	34.9%	43.9%	78.8%
US Total	36.1%	41.1%	77.2%
Ontario	25.6%	43.0%	68.5%
Quebec	23.6%	55.6%	79.2%
Grand Total	35.1%	41.7%	76.8%
Median	29.2%	43.4%	74.2%
Average	30.7%	45.0%	75.7%

Table 6

Rates of Transition from Grade 9 to College and University Entrance

	As Originally Calculated		Converting U.S. Data to Full Time Only		Converting Ontario Data to Full and Part Time	
	Transition to College	Transition to University	Transition to College	Transition to University	Transition to College	Transition to University
California	16.0%	19.8%	11.3%	14.1%	16.0%	19.8%
Florida	14.9%	20.7%	10.9%	15.3%	14.9%	20.7%
Georgia	9.9%	25.1%	7.5%	19.0%	9.9%	25.1%
Illinois	16.1%	32.8%	11.6%	23.6%	16.1%	32.8%
Indiana	5.8%	38.5%	4.9%	32.8%	5.8%	38.5%
Massachusetts	14.0%	47.0%	12.1%	40.7%	14.0%	47.0%
Michigan	12.2%	32.2%	9.3%	24.4%	12.2%	32.2%
New Jersey	15.6%	47.4%	12.9%	39.2%	15.6%	47.4%
New York	9.6%	34.8%	8.5%	31.0%	9.6%	34.8%
North Carolina	13.8%	27.2%	10.8%	21.3%	13.8%	27.2%
Ohio	9.2%	34.5%	7.6%	28.4%	9.2%	34.5%
Pennsylvania	12.1%	41.3%	10.4%	35.5%	12.1%	41.3%
Texas	13.7%	20.3%	9.4%	14.0%	13.7%	20.3%
Virginia	8.6%	33.7%	7.5%	29.4%	8.6%	33.7%
U.S. Total	12.9%	28.9%	9.8%	22.9%	12.9%	28.9%
Ontario	21.9%	28.4%	21.9%	28.4%	23.4%	34.5%
Quebec						
Grand Total	13.4%	28.9%	10.5%	23.2%	13.5%	29.3%
Median	13.7%	32.8%	10.4%	28.4%	13.7%	33.7%
Average	12.9%	32.3%	10.4%	26.5%	13.0%	32.7%

Table 7

Degrees Awarded as a Percentage of Total Enrolment

Selected U.S. and Canadian Jurisdictions

Sources: NCES and Statistics Canada

	<i>Degrees Awarded</i>			
	Associate	Bachelors	Profess'l	Graduate
California	6.7%	20.6%	26.6%	24.1%
Florida	14.1%	19.1%	27.3%	29.8%
Georgia	11.3%	15.8%	22.8%	31.4%
Illinois	7.5%	19.7%	26.8%	29.4%
Indiana	21.7%	14.6%	25.2%	25.5%
Massachusetts	13.2%	17.6%	26.7%	31.0%
Michigan	11.0%	16.1%	24.0%	27.3%
New Jersey	9.6%	17.1%	30.1%	23.5%
New York	19.7%	16.5%	26.8%	29.3%
N. Carolina	8.3%	18.5%	24.9%	27.8%
Ohio	12.3%	16.2%	26.0%	28.6%
Pennsylvania	17.7%	17.5%	24.1%	28.2%
Texas	6.4%	18.0%	24.9%	24.9%
Virginia	8.6%	17.7%	25.8%	24.8%
US Total	9.9%	17.7%	25.9%	27.4%
Ontario	29.3%	20.1%	30.1%	27.0%
Quebec	NA	11.7%	27.4%	17.8%
Grand Total	10.4%	17.6%	26.1%	27.0%
Median	11.3%	17.6%	26.3%	27.6%
Average	11.1%	17.3%	25.9%	28.0%