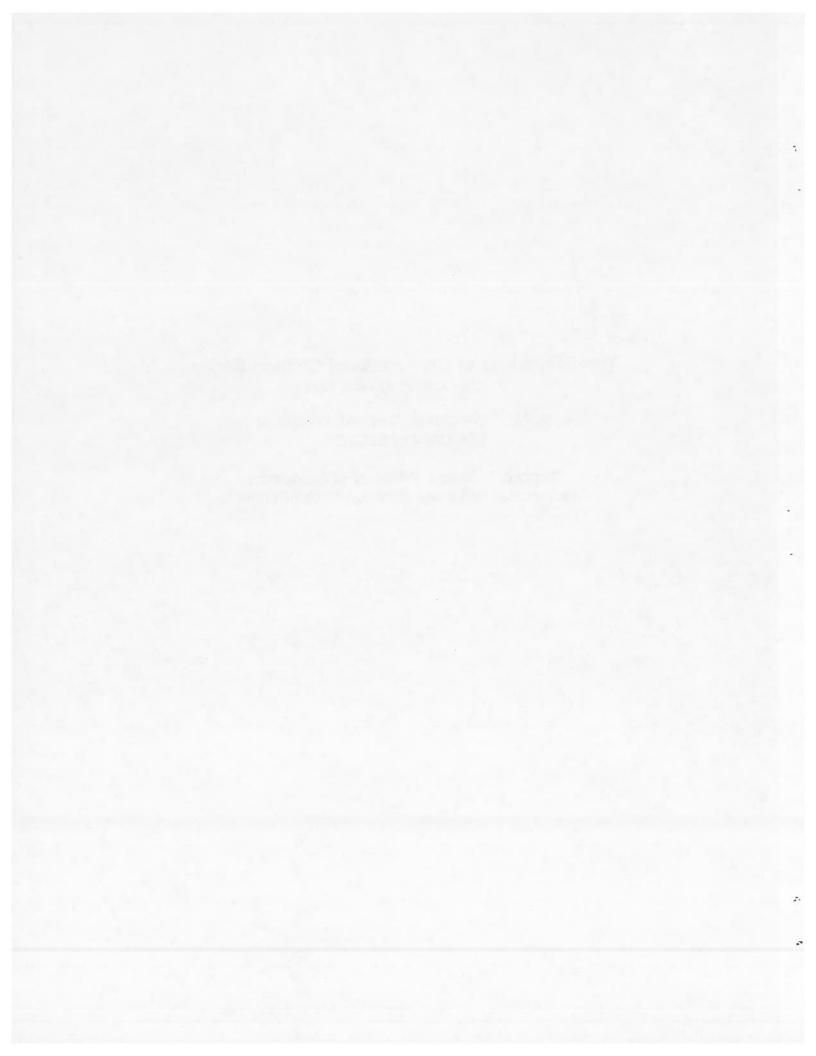
# The Economics of Constitutional Change Series

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THE IMPACT OF QUEBEC SEPARATION ON THE EDUCATION SECTOR

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## The Impact of Quebec Separation on the Education Sector

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#### The Impact of Separation on the Education Sector: Not Much to Choose

With Quebec separation a real possibility, I have been asked to assess some of the consequences for the region currently known as the "Rest of Canada" from the perspective of programs of education. After some preliminary remarks about the implications of the causes of separation, I have considered the possible benefits or losses associated with a change in educational funding — should Quebec depart — by examining the kinds of resources that are currently spent on education at the federal level. On the basis of various easily measured criteria associated with education, Quebec is not so significantly different from the rest of the provinces that it makes much difference one way or another from a funding standpoint.

#### Some Preliminaries: Who's Leaving Whom?

If and when Quebec separates from the rest of Canada, there will be a lengthy post mortem over the why's. To anticipate this discussion let me suggest that two of the (grossly oversimplified) motives that will be advanced have very different implications for the structure of post-Quebec Canada and even a Canada with Quebec remaining.

One view of Quebec's move to separate is that Quebecers are now wealthy enough to rebel against the yoke of neocolonial tyranny. The historical dominance of English Canada has caused too many compromises within Quebec for Quebecois, and only sovereignty will reestablish language, culture and traditions that are worth whatever economic costs are entailed by separation (Whitaker, 1981). If this is the vision, then it is consistent with the outcome that when Quebec slips from the fold, the rest of Canada remains much as it is today. The "problem" such as it is lies with Quebec, and Quebec's separation will have no particular implication for the institutional arrangements in the rest of Canada -- net of course of the disruptions associated with the divorce itself.

An alternative to this characterization of the causes of separation is that although it is Quebec that is the apparently active party in seeking separation, in fact it is the rest of Canada that has changed Confederation and not Quebec. It is the rest of Canada that is leaving Quebec, not Quebec that is leaving Canada. The vision that inspires this interpretation is one that sees the traditional model of two founding nations, each of which has equal voice in national affairs, as having been eroded. Quebec's efforts to maintain French Canada's political parity with English Canada is being resisted. This constitutes

<sup>&</sup>lt;sup>1</sup>Quebec does not have full parity with the rest of (English) Canada although clearly it is not just another province. From representation on the Supreme Court to language legislation and immigration, Quebec and by extension, Francophones occupy a special place in Canada not enjoyed by any other province or linguistic or ethnic minority. It is particularly irksome to Quebeckers that once the historical social, economic and political might of non-francophones is being reduced within the province, the full advantages of being French are being diminished by an insistence that all cultures within the mosaic must (now) be increasingly treated as equal.

(an implicit) rewriting of the terms of Confederation, and is not the kind of new country with which Quebecois wish to be associated.

The implications of this vision for the rest of Canada is that there is a process of change taking place in the rest of Canada. Even after Quebec's departure, the same issues and debates that we see now will continue to fulminate until the new structure of Confederation is resolved. The heart of the debate is between the centralists and the confederalists. The former are associated with a bigger and stronger central government which enforces a uniformity of regulation across the country including an ever more evenhanded acknowledgment of all ethnic minorities. The latter can be identified with a more decentralized state in which the provinces form the basis for political expression of regional diversity which may or may not choose to recognize particular local ethnic identities. To the extent that Quebec has insisted on devolved power, with the departure of this distinct society, the forces of centralization will remain unchanged, while the confederalists will have both their numbers and their political influence correspondingly reduced.

From this perspective, the last few weeks have been of particular interest to those in the education sector. The recent Throne Speech ostensibly setting government priorities has suggested that one way for Canada to achieve a competitive edge in world markets is for Canadians to become better educated. Michael Wilson, Finance Minister for the past seven years has raised the profile of this policy in being appointed Minister of Trade and Competitiveness. Within the field of education, concern about the state of Canadian education has waxed and waned over the last decade or so, and terms like illiteracy and the dropout rate are receiving national attention as our public school system is periodically perceived as inadequate (Easton, 1988). There is a push, too, for some kind of nation-wide testing although Ontario (at least has for the time being) opted-out of the process proposed by the Council of Ministers of Education. But when all is said and done, what is most important about recent events from a broader perspective is that they may foreshadow a change in the orientation of the federal government. Or to be more precise, they suggest a direction in which the current government may go toward a greater centralization of the education process. This stands in sharp contrast to the decentralization that has been taking place with respect to other governmental functions and is of some interest in consequence. Until the role of the federal government is better identified, however, we will have to wait to see whether this is just another straw in the wind, or a genuine effort to begin a process of centralization of responsibility for education in Canada.

### Federal Funding of Education

Since Confederation education in Canada has been a provincial responsibility. The role of the federal government is correspondling small. There is no central education authority, nor is there a federal department or ministry of education. This is not to say that the federal government does not make contributions to education. Although

sometimes direct<sup>2</sup>, Established Program Funding<sup>3</sup> and the Official Languages in Education, makes it difficult to decide how much the federal contribution really amounts to in any meaningful way.<sup>4</sup> In the event, the official statistics are indicative in some general sense as they chronicle the direction of federal expenditures or suggest the avenues left open for the provinces to fund with (potentially) a minimum level of resistence. There is no necessary connection, however, between what the federal government ostensibly funds through Established Program Funding and the amounts spent by the provinces. The kinds of federal funding are divided into three categories: elementary and secondary in which the federal government has a very minor role; post-secondary education in which the role is larger if somewhat difficult to quantify because of the method of identifying funding; and vocational in which the federal government plays a more substantial and direct role.

## The Federal Share of Elementary and Secondary School Funding

The last complete set of generally available national data pertain to the school year 1986-87. The total expenditure on elementary and secondary schooling across Canada was \$23.4 billion. Of that total 90% is from provincial and municipal governments and 2.8% is from federal sources. The federal government's share is for the education of Inuit and Native Peoples, children of military personnel, and inmates of federal penitentiaries. Other spending is on behalf of the Official Languages in Education Program which amounted to \$120 million in 1986-87. Table 1 displays the distribution of federal funding and expenditures across Canada. In Table 1, the first column indicates the source of revenue to elementary and secondary schools in Canada. As is apparent, provincial and municipal governments play by far the largest role in funding with federal expenditures

<sup>&</sup>lt;sup>2</sup>Direct federal funding is to such programs as vocational training known variously as the Canadian Jobs Strategy Program (the National Training Program of the past), university research, and federal schools.

<sup>&</sup>lt;sup>3</sup>The Federal Provincial Fiscal Arrangements and Federal Post-Secondary Education and Health Contribution Act (1977) is the basis for established programs financing (to use the older term for it. Until 1966 universities and colleges received direct grants from the federal government based on the provincial population. In 1967 transfers were made to the provinces (with some exceptions) with various eligibility limitations. In 1977 post-secondary education and health care funding was placed on a formula in whihe the federal government paid cash and vacated tax points. The details may be found in Statistics Canada, 1990a, p.16.

<sup>&</sup>lt;sup>4</sup>Statistics Canada reports that, "Due to the fact that Statistics Canada has no information on the proportion of these funds actually spent on education, these transfers cannot be eliminated when consolidating all sources of funds; they are indirectly included with provincial or territorial government expenditures rather than federal expenditures" (Statistics Canada, 1990a, pp.14-15).

amounting to 2.8% of the total. This is less than school fees and miscellaneous revenues. The third and fourth columns record the location of public expenditure. The difference between the amounts spent by federal schools and the total contributed reflects expenditures made on offical languages programs in education.

Table 1

Funding and Expenditure: Elementary and Secondary Schooling (1986-87)

Sources of Revenue = \$23.4 billion = Expenditures

REVENUE	Percent	EXPENDITURE	Percent
Provincial	67.3	Public Schools	93.8
Municipal	25.5	Federal Schools	1.7
Federal	2.8	Independent Schools	3.9
Fees, etc.	4.4	Special Schools	0.6

Reference: Financial Statistics of Education: 1986-87 (1990), Chart 5.

If we are seeking the effect of Quebec's potential withdrawal from Canada on the effective funding available in a new environment, we need some reference points go given a sense of the relationships among the provinces. The average level of expenditure per pupil in Quebec has been above the Canadian average historically -- 17% above average (in nominal dollars -- undeflated for regional price differences) in 1983-84 to 10% in 1986-87. Over the same period Ontario has increased from 3% below the mean to 4.7% above the national average; Alberta has fallen from 3% above the average to the mean; and British Columbia has moved from the mean to 13% below the mean. The Canadian average in nominal terms was \$4,864 in 1986-87 and has amounted to real growth of 1.9% per year in real terms since 1983 -- a decline in the rates of growth since the 4.5% per year real growth of the preceeding decade. Although Quebec has been on the high side of expenditures, it appears to be well within the range of variation over time displayed by other large provinces.

On a province by province basis there is some variation in federal expenditures, but the absolute amounts are not very great compared with the overall level of expenditures. Table 2 records the absolute amount of the expenditures and the share they constitute of each provincial total.

Table 2

The Amounts of Federal Expenditure
on Elementary and Secondary Schooling in the Provinces
(1986-87)

Province	Amount (\$ 000)	% of Total E&S Expend	Per Capita
Newfoundland	44	-	-
Prince Edward Island	1,726	1.9	13.7
Nova Scotia	15,887	2.2	18.2
New Brunswick	11,599	1.9	16.4
Quebec	80,656	1.3	12.3
Ontario	124,220	1.4	13.6
Manitoba	119,320	11.3	112.2
Saskatchewan	99,364	10.4	98.5
Alberta	93,361	4.1	39.5
British Columbia	73,701	3.5	25.6
Canada	655,781	2.8	25.7

Source: Ibid. Table 7.

In Table 2 the absolute amounts spent on each province is recorded in the second column. The percentage this constitutes of all elementary and secondary education expenditures in the province is in column three. Finally, column four records the level of expenditures by the federal government in each province on a per capita basis. Were Quebec to separate, given whatever revenue is raised in Quebec, the net amount to be reallocated is trivial.

<sup>\*</sup> Includes the Yukon and N.W.T. in addition to the provinces.

#### The Federal Share of Post-Secondary School Funding of Education

Unlike the funding associated with elementary and secondary schooling, the federal government makes a substantial contribution to post-secondary education -- some 12.1% in 1986-87, or \$1.25 billion. This contribution has been increasing since 1982-83 (10.5%) and arises primarily from increased sponsored research. In addition to the military colleges and student aid programs, the federal government is also a source of potential post-secondary education funds through the Federal-Provincial Fiscal Arrangements and other statues and agreements. Table 3 details the federal contribution by province.

Table 3

The Amounts of Federal Expenditure on University and non-University Education (1986-87)

Province	Amount (\$ 000)	% of Post Second- ary Expend.
Newfoundland	25,082	14.3
Prince Edward Island	6,527	16.3
Nova Scotia	49,672	13.7
New Brunswick	28,838	12.4
Quebec	262,884	8.9
Ontario	415,945	11.8
Manitoba	53,462	14.7
Saskatchewan	48,262	13.3
Alberta	116,032	9.7
British Columbia	143,930	16.3
CANADA	1,253,972	12.1

Source: Ibid. Table 15

<sup>&</sup>lt;sup>5</sup>This is distinct from vocational training which is treated below.

The second column reports the absolute magnitude of the federal expenditure.<sup>6</sup> The third column indicates the share of total provincial expenditures on post-secondary education constituted by the federal contribution. From Table 3 it is clear that among the different provinces, the federal contribution to post-secondary (non-vocational) education is a relatively smaller share of Quebec's costs than in other provinces. Although amounting to 21% of all federal expenditures in this area, Quebec receives slightly less than its share relative to population (25%).

Table 4
The Amounts of Federal Expenditures
on Sponsored Research

Province	Amount (\$ 000)	% of Total Spon- sored Research	
•			
Newfoundland	10,759	77.0	
Prince Edward Island	669	87.3	
Nova Scotia	25,643	86.2	
New Brunswick	9,883	87.3	
Quebec	130,485	54.8	
Ontario	206,473	57.1	
Manitoba	23,276	61.2	
Saskatchewan	18,332	53.8	
Alberta	43,791	41.9	
British Columbia	57,843	74.0	
CANADA	527,154	57.9	

Source: Ibid. Table 22.

<sup>&</sup>lt;sup>6</sup>Recall again, that this includes both the potential federal contribution through EPF and actual expenditures through sponsored research.

In addition to federal spending on post secondary education generally, it is also useful to examine federal spending by province on various kinds of sponsored research including monies allocated through the SSHRC, Health and Welfare, NSERC, the Medical Research Council, and other grants. Table 4 displays the expenditures by the federal government and the proportion of federal funding relative to total funding by both the provinces and other non-governmental grants and the like.

In terms of total sponsored research, governments contributed roughly 85-90% in all but B.C., Ontario and Manitoba where it was 10% less (about 75%) and in Quebec where the fraction was 80%. Federally sponsored research in Quebec is roughly 25% of the total sponsored research funds provided by the federal government. This is the same as the Quebec population is to the total population. Thus the differences in the share of sponsored research suggests that it is the non-federal component that varies among provinces. Were Quebec to separate, there would be little benefit or loss to the other provinces.

#### **Vocational Training**

There are also funds that are spent throughout Canada for vocational training. In comparison with the amounts spent by the federal government for total education, the amounts spent on vocational training are quite substantial. These are displayed in Table 5. In the second column of the Table are the absolute amounts spent on vocational training. In the third column are the fraction that this constitutes of each province's share of total expenditures on vocational training. As is apparent there is a wide range of shares indicating that the federal contribution is supplemented to a greater or lesser extent in each of the provinces. As a share of all federal vocational expenditures, Quebec constitutes some 23%, slightly less than in proportion to population. Again, any redistribution to provinces on the basis of Quebec's departure will be of little moment.

#### The State of Education in Canada

The question of Quebec's separation will have some impact on the educational system even thought it is a provincial responsibility. For example, French Immersion programs will undoubtedly decline in popularity although their role is complex. They represent an effort by parents both to participate in the process of nation building, and to select out of the usual classrooms. Other devices will have to be devised to perform this latter function. But in addition to this kind of substantive adjustment, if Quebec were to separate, we might wish to ask how it is that it differs from the rest of the provinces, and what possible impact that might have on the rest of Canada. Table 6 illustrates a number of traditional educational measures that may help characterize each of the provinces.

Table 5
Federal Expenditures
on
Vocational Training

Province	Amount (\$ 000)	% of Total Voca- tional Expend.	
Newfoundland	86,848	73.3	
Prince Edward Island	26,175	88.2	
Nova Scotia	88,362	72.1	
New Brunswick	65,754	63.1	
Quebec	469,840	68.3	
Ontario	551,228	67.9	
Manitoba	87,038	59.7	
Saskatchewan	90,926	57.0	
Alberta	163,816	36.4	
British Columbia	244,200	57.5	
CANADA	2,015,932	61.5	

Source: Ibid., Table 27

Table 6

Selected Educational
Characteristics of Canada and the Provinces

Province	Median Years of Educa- tion	Rate of Return on Higher Educa- tion	% with University Degree	% with Post Second- ary Diploma	Total % with P.S. Cert. & De-grees
Newfoundland (At- lantic)	10.9	12	6.2	14.2	20.2
Prince Edward Island (Atlantic)	11.6	12	7.3	10.4	17.7
Nova Scotia (Atlan- tic)	11.7	12	10.7	11.8	22.5
New Brunswick (At- lantic)	11.6	12	7.9	12.4	20.3
Quebec	11.8	13	10.9	12.5	23.4
Ontario	12.4	9	13.5	13.2	26.7
Manitoba(Prairies)	11.9	7	10.5	11.1	21.6
Saskatche- wan(Prairies)	12.0	7	8.9	12.4	21.3
Alberta(Prairies)	12.4	7	12.4	15.2	27.6
British Columbia	12.4	8	11.6	12.4	24.0
CANADA	12.2	•	11.7	12.9	24.6

Source: Column 1 (median years of population over the age of 15) **Education in Canada** (1990), Table 52; Columns 3-5 **Ibid.**, **Chart 28**; Column 2: Vaillancourt and Henriques (1986) p. 454.

Note: The rate of return in column 2 is calculated for the Atlantic provinces, Quebec, Ontario, the Prairies provinces, and British Columbia. All the other figures apply to each of the provinces separately.

In Table 6 column two refers to the median years of education of the population over the age of 15 in 1986. Column three reports the private rate of return to four years education based on data from the early 1980s, while the next two columns report the fraction of the 15 and over population with university degrees (column four) and the fraction of the 15 plus population with other post-secondary certificates or diplomas (column six). The final column sums the proportions of those with degrees and certificates. In each of the measures reported in Table 6, it is difficult to distinguish Quebec from the other provinces. It does not appear to be particularly distinct from the point of view of the aggregated educational statistics, however much it may be distinct culturally or linguisitically. Although the rate of return on higher education in Quebec is be marginally higher than elsewhere in Canada, it is a single percentage point above the Atlantic provinces. As a group, the distinction in educational rates of return seems to be between Ontario and the provinces to the west, and Quebec and the provinces to the east. As for the other measures, Quebec lies well within the variation among the other provinces of Canada.

#### **Economic Consequences of Separation Based on "Education Capital"**

In coming to this subject I had originially planned to illustrate the consequences of separation by calculating the effect of withdrawing the Quebecois stock of human capital from the pool of human capital available to those who were left in Canada after separation. This kind of effect would presume that the owners of human capital would retain their marginal products, and the loss to the rest of Canadians would be in proportion to the difference between the human capital-labour ratio of those who remained and those who left. The relationship in a very simple model would be proportional to the second derivative of the (linear homogeneous) production technology, and the difference between the capital labour ratios before and after separation:

$$dy(r) = [k-k(r)].f''(k).dk$$

where dy(r) is the change in per capita income of those who remain in Canada, k is the capital-labour ratio in Canada pre-separation, k(r) is the capital-labour ratio of those who remain in Canada, dk is the change in the capital-labour ratio as a consequence of separation, and f"(k) is the second derivative of the production function. The capital in this case refers to the human-capital to labour ratio, although the physical capital-labour ratio could also be incorporated into the calculation as an additive term (Easton and Heaney, 1978).

As this is a calculation of loss that depends upon the curvature of production technology, the losses are likely to be small. But given the observation above that Quebec is not very different than the Canadian average either in the stock of education

or its distribution, the differences on this basis are likely to be  $trivial^7$  — in the extreme, if the Quebecois are exactly like the rest of Canadians (k=k(r)), then there is no loss to the rest of Canadians on this basis. Now such a calculation does not incorporate any scale effects, nor does it take into account a myriad of other economic, social or cultural variates that effect full income, but it is suggestive as to the consequences of separation for production based on educational differences (or lack thereof) *per se*.

#### **Rates of Participation**

There are other dimensions along which we can measure Quebec's educational structure relative to that of the other provinces. One of these is the rate of participation in full-time education by age grouping. In Figure 1 the provinces are displayed according to their full-time education participation rates by age groups. In the figure, Y16 indicates the percentage of those students in full-time education relative to the number of sixteen year olds. This is the first group of ten bars on the left. Within each group of ten are the provinces. The first bar on the left (of each group) is Newfoundland (which is denoted as #2 since the Canada average, not shown to keep the figure as uncluttered as possible, is #1), and the last bar on the right of each group refers to British Columbia. The other provinces are indicated from East to West corresponding to left to right in the figure. There are symbols as occasional provincial identifiers above some of the bars. In each group the Y-index identifies the age group to which the ten bars apply except that Y20 refers to the students and age group 20-24.

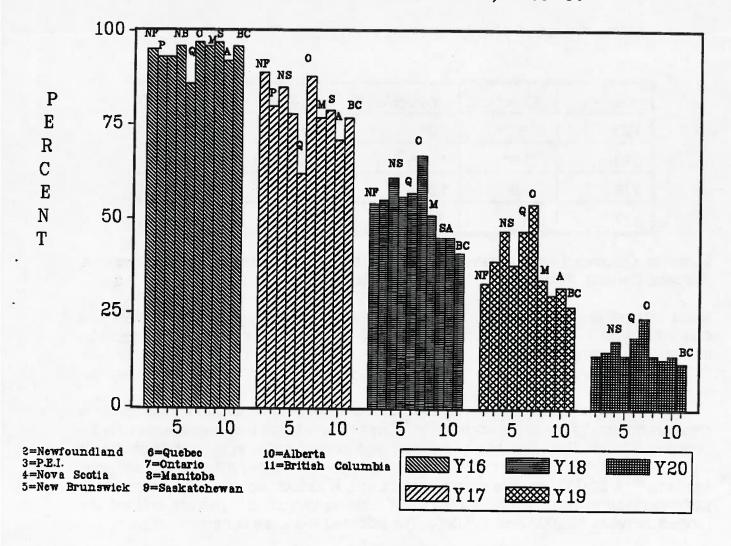
What is immediately apparent from the figure is that from a participation perspective, Ontario is the most distinctive society. At all age groups it records the largest proportion of population in full-time attendance in schools. At ages 16 and 17 Quebec's participation rate is relatively low compared to the other provinces. Above age 18, however, it rises to the second highest rate in Canada. Above age 17 British Columbia records the lowest rate of participation. Among the Atlantic provinces Nova Scotia displays the highest participation rate after age 17. All in all Quebec's participation rate is the most variable although on average it is roughly the same as the others. In terms of being a distinct society, perhaps one could identify the low to high participation pattern in that way, but on the basis of the first moment of the distribution, it is much as the rest of the country.<sup>8</sup>

<sup>&</sup>lt;sup>7</sup>If we take 1988 per capita GDP to be \$23,490, and the production technology to be Cobb-Douglas with labour's share at 0.70, and we assume that median years of schooling per capita is a representation of the relevant human capital that accounts for all income, then the effect of separation is to reduce the Canadian capital stock by 0.1 or 8/10 of one percent. This would yield a loss in income to the rest of Canada of \$85 or 0.36 of one percent of per capita income! As there are other forms of capital in addition to human capital, this is a massive overestimate.

<sup>&</sup>lt;sup>8</sup>Recall, too, that Quebec is the only province to have secondary school end at grade eleven. All the others go to grade twelve.

Figure 1

Percentage of Each Age Group in Full-time Study The Provinces from East to West, 1988-89



What accounts for these different patterms of educational participation? This is more difficult to identify. For the older age groups, it is relatively easy to model as the participation rate is strongly related to the previous age group's participation rate and per capita (provincial) GDP — at least in a cross-section. Table 7 identifies such a regression in row one of the results.

Table 7

The Education Participation Rate in Canada and the Provinces

DepVar	Constant	Y-Depvar(-1)	GDP	Q	R-2
Y20	-2.52	.39*	0.18*	64	.95
Y19	-24.6*	1.03*	0.42*	.42	.95
Y18	-32.6	1.04*	0.08	23.2	.30
Y17	6.2	.84	-0.37	-9.9	.41

Sources: Columns 1 and 3, Statistics Canada, Education in Canada, p. 130; column 4, Statistics Canada, Financial Statistics of Education, Table 4.

Notes: There are 10 observations, based on 1986-87 data. An astrisk, "\*", next to a number means that it is significant at the 5% level, but with a small sample it should be treated with appropriate caution.

From the table, the first regression explains the Y20 enrolment as a function of the previous cohort, Y19, and provincial GDP. The coefficients are both significant at the 5% confidence level. The effect of a one percentage point increase in the enrolment rate in a previous cohort implies that the 20-24 year old cohort will display a 0.4 percentage point increase. A \$1,000 increase in provincial income is associated with a 0.18 percentage point increase in enrolments. Participation rates averaged 15.7 percent and income ranged between \$25,000 and \$13,000. The adjusted R-square is relatively high.

<sup>&</sup>lt;sup>9</sup>The variable, **Q**, is a dummy for Quebec. It is discussed below.

<sup>&</sup>lt;sup>10</sup>The values on the 20-24 cohort are a four year average unlike the rest of the table which applies to single year cohorts. This is probably why the coefficients are differ from the rest although the published data do not lend themselves to additional exploration.

A similar pattern holds true for the Y19 cohort, with a proportional increase in age 19 participation associated with an increase in the cohort of Y18. Income, too, increased the rate of participation, and again the R-square is high. Such is not the case for the Y18 cohort. Although an increase in participation in the Y17 cohort shows a proportional increase in participation in the Y18's, income is not significantly related to participation. And this remains the case even if adjustments (not shown in the table) are made to the total years of secondary schooling to reflect Quebec's grade 11 completion. The R-square is relatively low suggesting that this is a particularly interesting cohort for further analysis. Younger ages, cohort Y17, show the strong effects again of the previous cohort, and again income is not significant. This is also the case for the younger groups as provincial per capita income remains irrelevant to participation — although these are not displayed in the table.

In sum, participation rates in Quebec are somewhat different from those in the rest of the country. But in the regressions, Quebec is simply one province among 10. In none of the above cases was the Quebec dummy variable, **Q**, significant at the 5% level. These coefficients are displayed in the fifth column of Table 7.

### **Concluding Notes**

Although education is a substantial sector involving (in 1986-87) some \$23.4 billion at the elementary and secondary level, \$10.3 billion at the post-secondary level, and \$3.3 billion of vocational training money, only a small fraction is associated with the federal government directly or indirectly. Summing across all three programs, the federal contribution is \$3.9 billion or 9.4 percent of total education expenditures. Although \$3.9 is not a trivial sum, for the purpose of assessing what will be available by way of net benefit or cost to the rest of the provinces upon Quebec's separation, there is little to be gained or lost as Quebec's participation is very much in proportion to it's size. To the extent that revenues are equally proportional, then there is not much to say, as the net effect must be small.

But some estimates place Quebec as a net taker from the flow of government expenditures plus government services less revenues collected. Horry and Walker (1991, Table 3.7) estimate that on a per capita basis, Quebecers net \$300 in benefits over a per capita tax liability of \$3,916. This net benefit over taxes of roughly 7.8 percent would come to roughly \$64 million when applied to Quebec's 21 percent of the education expenses allocated by the federal government. By any reasonable standard, this sum is negligible given the generous assumptions made in the process of calculation. It is in this sense that the fiscal transfers involved in the education sector to and from Quebec are a wash.

Perhaps of greater potential import is the argument that there are large economic losses to be made from Quebec separation in both Quebec and the rest of Canada due to the differences in human capital between Quebec and the rest of Canada. In denying

this there were two approaches. The first is a simple overestimate of the losses associated with a common technology due to the differences in the stock of human capital between the two regions. This turned out to be very small. The second approach recognizes that Quebec is really very similar in an educational flow sense to the rest of Canada. Although educational participation rates differed among the provinces, in a simple regression at least, Quebec was not distinguishable from the background variation of the other provinces in Canada. As a result, Quebec's separation from Canada would have little impact on the education industry in the rest of Canada or in Quebec itself in a fiscal sense. The impact on Canadian education and socialization in a broader sense would be profound. But what is taught, as distinct from how much it costs to teach, is not the mandate of this paper.

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