

Regional Development Patterns in Canada

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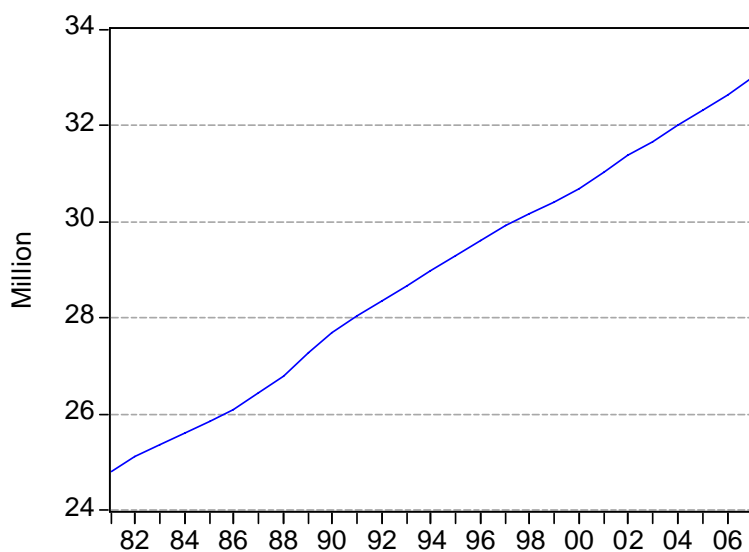
1. INTRODUCTION

We provide annual data over the sample period 1981-2007 for income and population dynamics in Canada and her provinces.

2. POPULATION PATTERNS

In 1981, Canada's population stood at nearly 25 million people. Since then, it has grown at an average rate of just over 1% per annum. As of 2007, the country's population is very close to 33 million people; see Figure 1.

Figure 1
Canadian Population



With the exception of Newfoundland, the populations of each province grew over the 1981-2007 sample period. However, as Table 1 reveals, the great majority of the increase in Canada's population is accounted for by just three provinces: British Columbia, Alberta, and Ontario.

BC	AB	SK	MA	ON	QC	NS	NB	NF	PE
1.64	1.55	0.08	0.50	1.39	0.60	0.33	0.22	-0.47	0.42

Figures 2A and 2B plot population shares for Canada's largest and smallest provinces, respectively. While Ontario and Quebec continue to be Canada's largest provinces by population, the two provinces exhibit very different secular trends, with Ontario gaining share and Quebec steadily losing share. Both British Columbia and Alberta have increased their shares over the sample period. British Columbia, in particular, displays rapid population growth over the period 1991-1996.

Figure 2A
Population Share of Largest Provinces

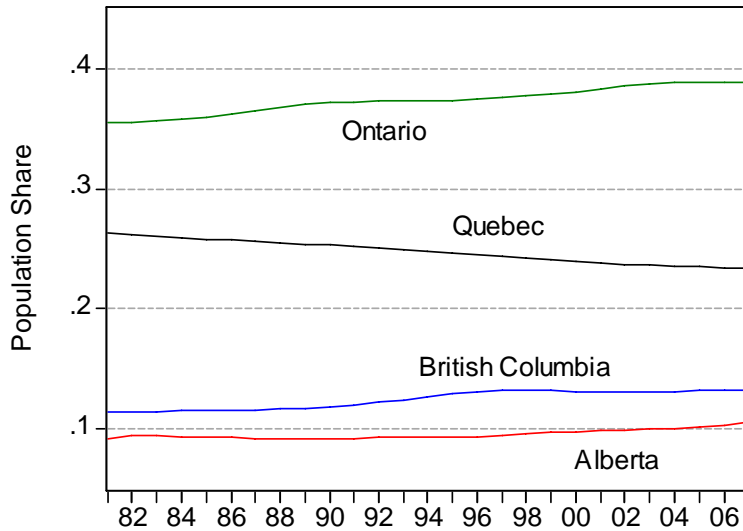


Figure 2B reveals that the population share for Canada's smallest provinces is in secular decline (with the population of Newfoundland declining in absolute terms).

Figure 2B
Population Share of Smallest Provinces

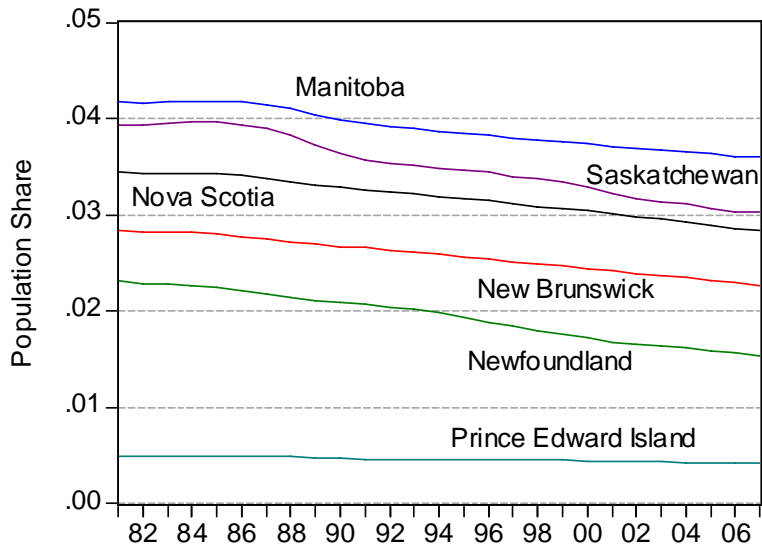
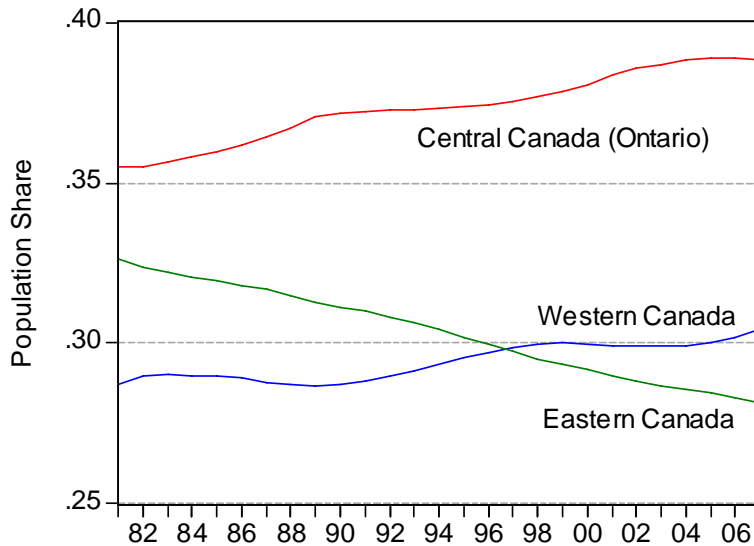


Figure 3 plots regional population shares. Western Canada includes British Columbia, Alberta, Saskatchewan and Manitoba, while Eastern Canada includes Quebec, Nova Scotia, New Brunswick, and Prince Edward Island. According to this figure, both Western and Central Canada are increasing their share of the population at the expense of Eastern Canada. Measured by population, Western Canada surpassed Eastern Canada sometime around 1996. These latter two trends show no sign of reversing.

Figure 3
Population Share by Region



3. GDP PATTERNS

3.1. Real per capita GDP

Figure 4 displays the real per capita GDP for Canada (Gross Domestic Product measured in constant 2002 dollars, divided by the total population). For the sake of brevity, we will refer to real per capita GDP as “average income” in what follows.

Average income in Canada grew from \$28,080 in 1981 to \$39,914 in 2007. This increase represents a growth rate of approximately 1.3% per annum, which is somewhat lower than the average growth rate experienced in the 20th century. The early part of the sample is characterized by the relatively short and sharp recession through 1981-82. In mid sample, Canada experienced a somewhat more moderate but prolonged recession through 1989-92. There was also a brief slowdown in the early 2000s that technically did not constitute a recession.

Figure 5 plots average income for the ten Canadian provinces. As the figure reveals, there is a considerable disparity in income across provinces; but all provinces have generally shared in the pattern of secular growth over the sample period (some more than others).

There is some evidence to suggest that the disparity in income across provinces has declined somewhat. In 1981, the richest province (Alberta) had an income level that was roughly 2.2 times greater than the poorest province (Newfoundland). In 2007, the richest province (Alberta) now has an income level that is roughly 1.8 times greater than the poorest province (Prince Edward Island).

Figure 4
Canada
Real per capita GDP

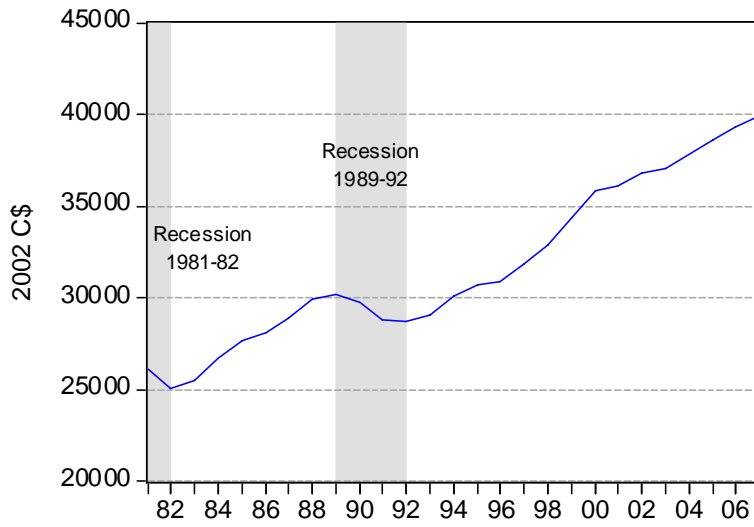
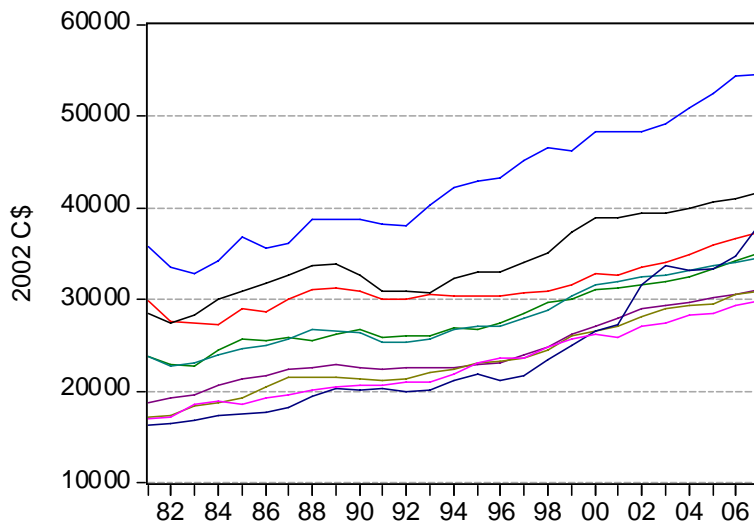


Figure 5
Canadian Provinces
Real per capita GDP

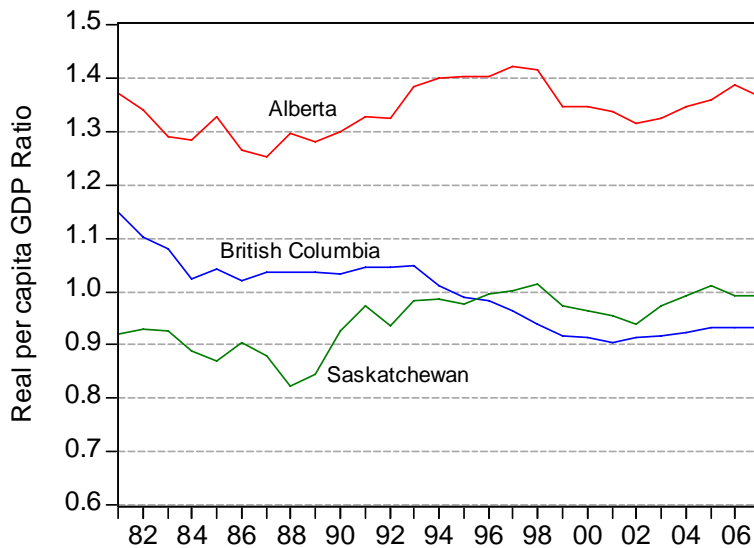


Despite the general upward trend in average incomes, relative growth patterns

have displayed some interesting patterns. Figures 6A-6C plot provincial average incomes relative to the Canadian average; with the data arranged roughly by geographic regions.

In Western Canada (Figure 6A), the most striking observation is with respect to the secular decline experienced by British Columbia in terms of relative income. The decline in the early part of the sample likely more a cyclical phenomenon associated with the sharp recession that hit the western provinces relatively hard. If this is so, then the secular decline appears to have begun in 1993; a trend that appears to have stabilized—and perhaps even slightly reversed itself—in 2001. Note that for the first time in living memory, average income in British Columbia fell below the national average in 1994-95.

Figure 6A
Western Canada



The other interesting pattern evident in Figure 6A is with respect to Saskatchewan, traditionally one of Canada’s so-called “have-not” provinces. This province appears to have experienced a remarkable turnaround circa 1988-90 and is now near the Canadian average—surpassing British Columbia in 1994-95.

In Central Canada (Figure 6B), we see that both Manitoba and Quebec have remained relatively stable at about 90% the Canadian average. Ontario, on the other hand, appears to be in secular decline, beginning in the late 1980s. The decline in the late 1980s can perhaps be explained by the recession at that time, which is known to have hit central Canada relatively hard. It appears, however, that Ontario never did recover from this episode. And while Ontario remains Canada’s second richest province, it appears in danger of falling below the Canadian average if current trends persist.

Figure 6B
Central Canada

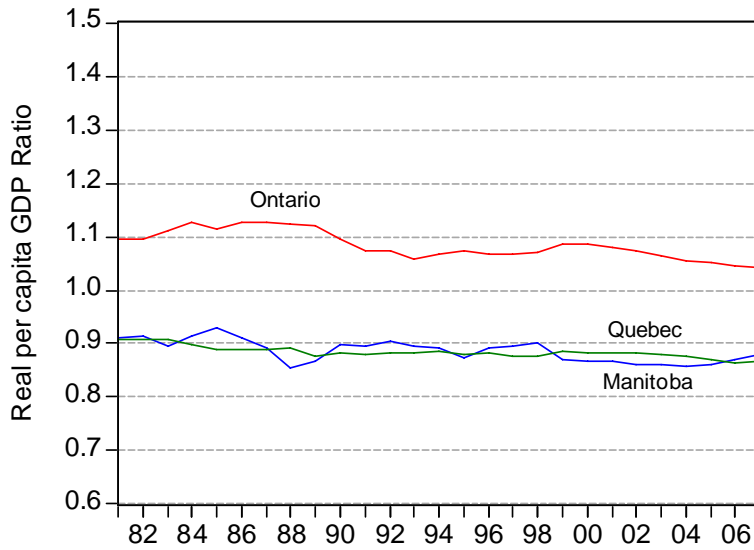
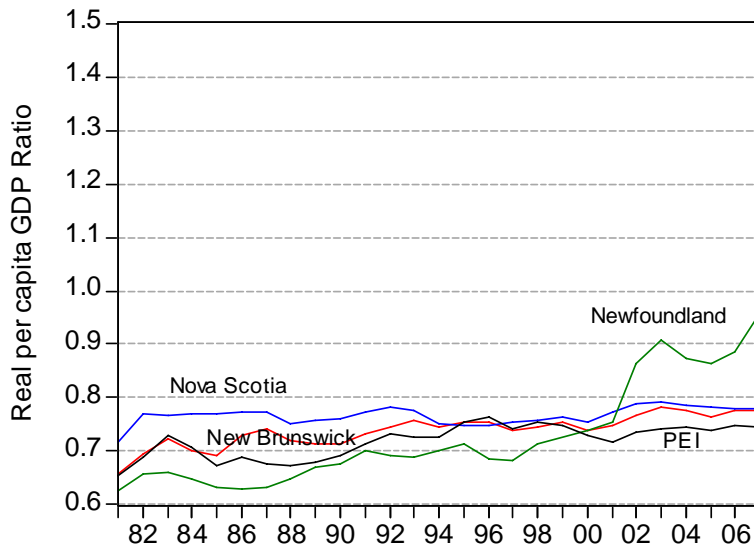


Figure 6C
Eastern Canada



Eastern Canada (Figure 6C) has historically been the poorest region in Canada,

with average incomes in the neighbourhood of 75% of the Canadian average. With the exception of Nova Scotia, all of these provinces appear to have made at least moderate gains relative to the rest of Canada. The most striking pattern evident in this region is with respect to the recent performance of Newfoundland. Beginning in the late 1990s, this province has shown a remarkable turnaround and is now Canada's third richest province (having recently surpassed British Columbia).

3.2. Real GDP

In describing changes in the relative prosperity of regions, per capita measures can sometimes be misleading. This is especially the case for a federation like Canada, where the population is generally free to migrate to more prosperous regions and where immigrants have some choice as to where they wish to settle. This would not pose a problem for per capita measures if people moving across regions (or into and out of the country) were in some sense average. But of course, there is no reason to believe *a priori* why this should be the case.

Figure 7A plots the GDP share for Canada's four largest provinces. By this measure, British Columbia is currently the fourth largest economy in Canada. The two most western provinces together are now bigger than the economy of Quebec.

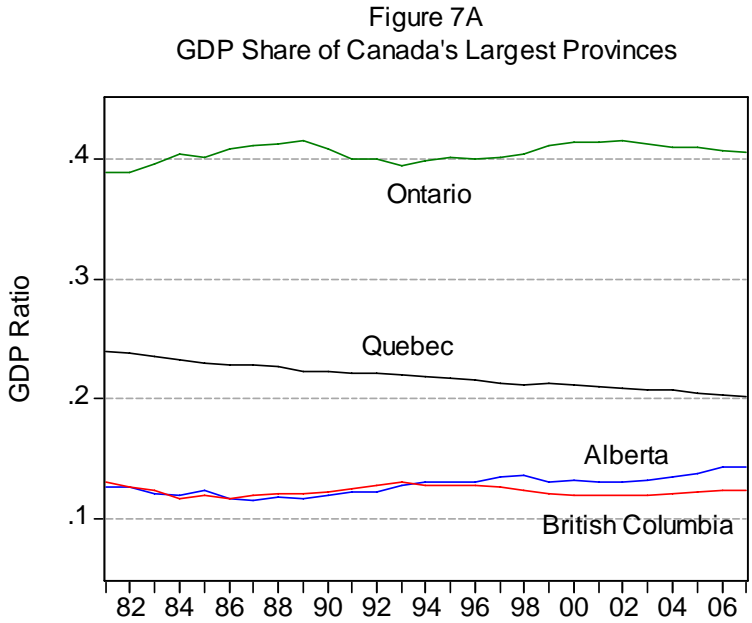
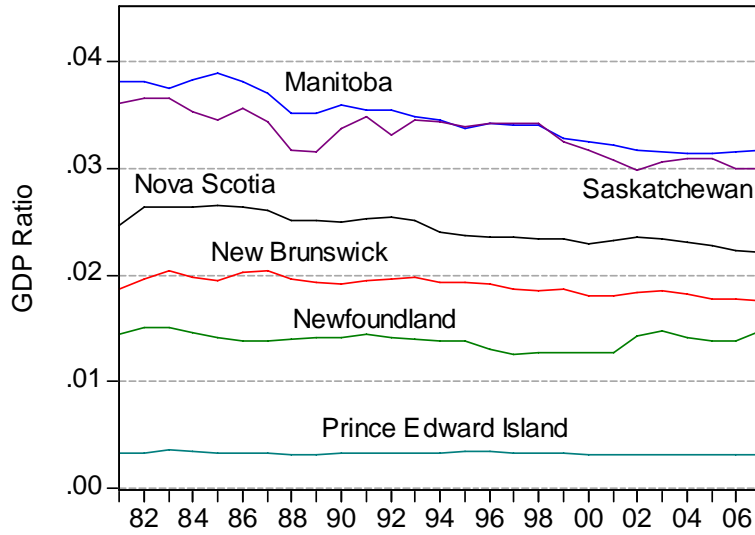


Figure 7B plots the GDP share for Canada's smallest provinces.

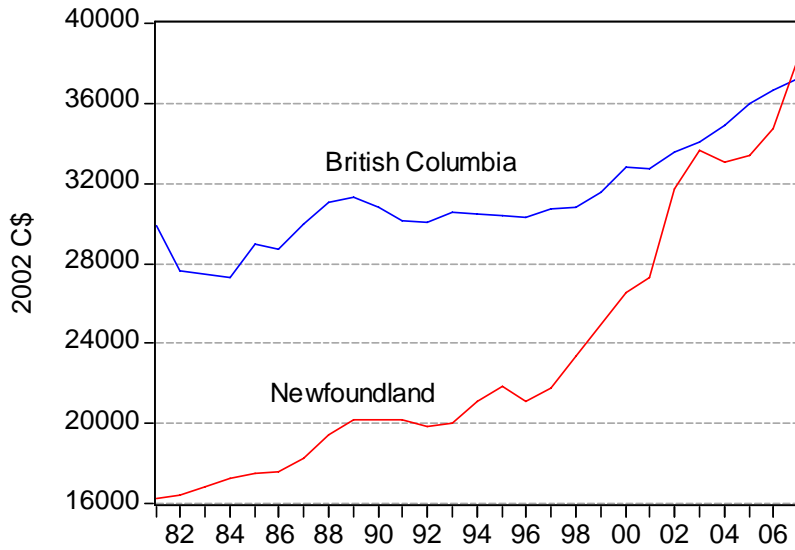
Figure 7B
GDP Share of Canada's Smallest Provinces



4. A TALE OF TWO PROVINCES

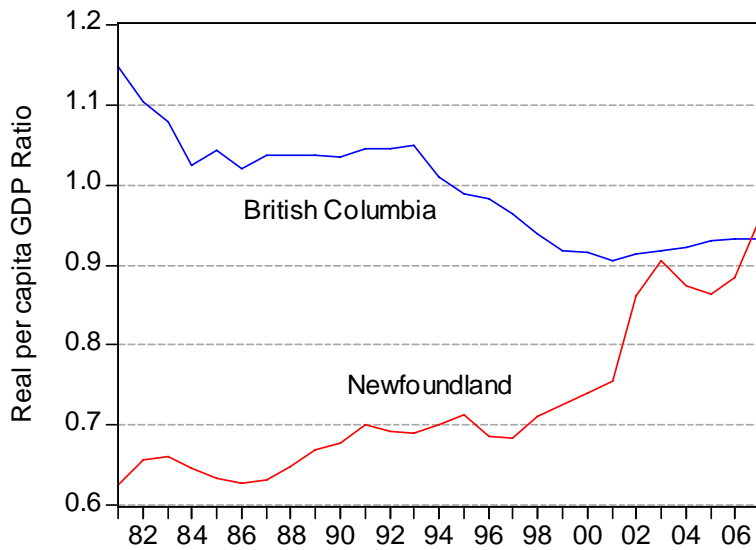
In this section, we contrast the development patterns of Canada's most western and most eastern provinces, British Columbia and Newfoundland. In terms of real per capita GDP—a broad measure of average material living standards—these two provinces have displayed very different growth patterns over the sample period; see Figure 8.

Figure 8
Real per capita GDP



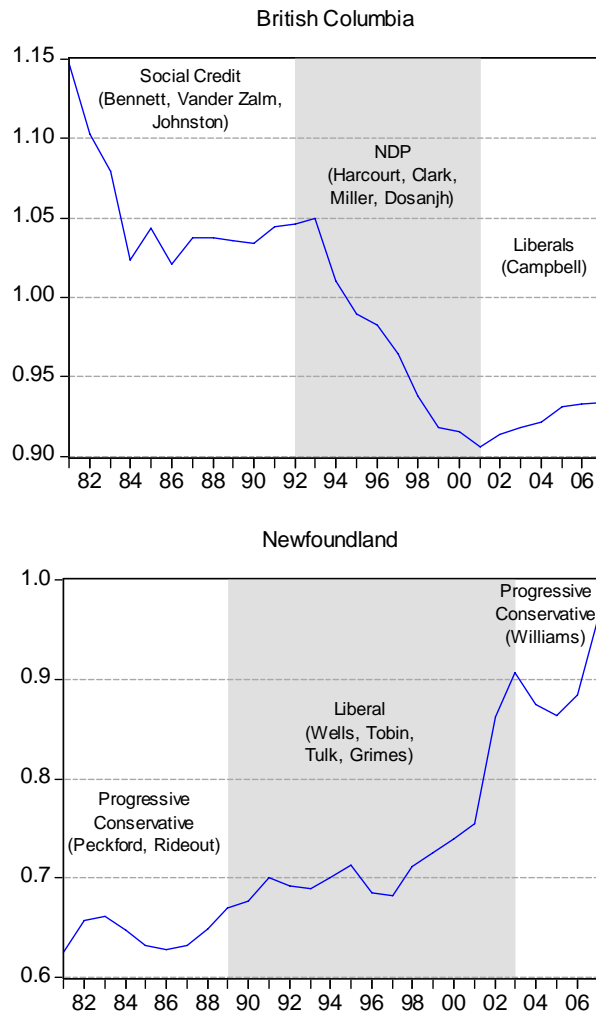
In terms of average real incomes relative to the Canadian average, these two provinces appear to be heading in opposite directions; see Figure 9.

Figure 9
Real per capita GDP Relative to Canadian Average



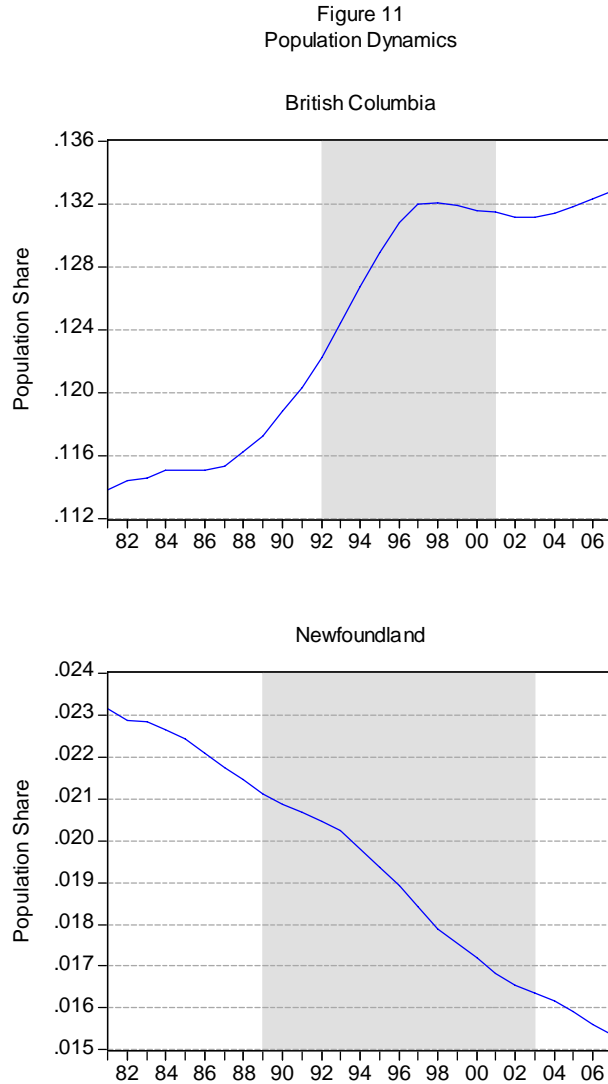
For British Columbia, the subperiod 1993-2001 constitutes an episode of remarkable relative decline. For Newfoundland, the subperiod 1997-2007 constitutes an episode of remarkable relative (and absolute) advance. It is tempting to see whether these episodes are in any way correlated with the various provincial governments in place over the sample period; see Figure 10.

Figure 10
Provincial Governments



But were things really as bad in British Columbia and things really as good in Newfoundland as the diagrams above appear to suggest? There is good reason to believe that when people are able, they vote with their feet. It would seem

informative to examine population dynamics; see Figure 11.

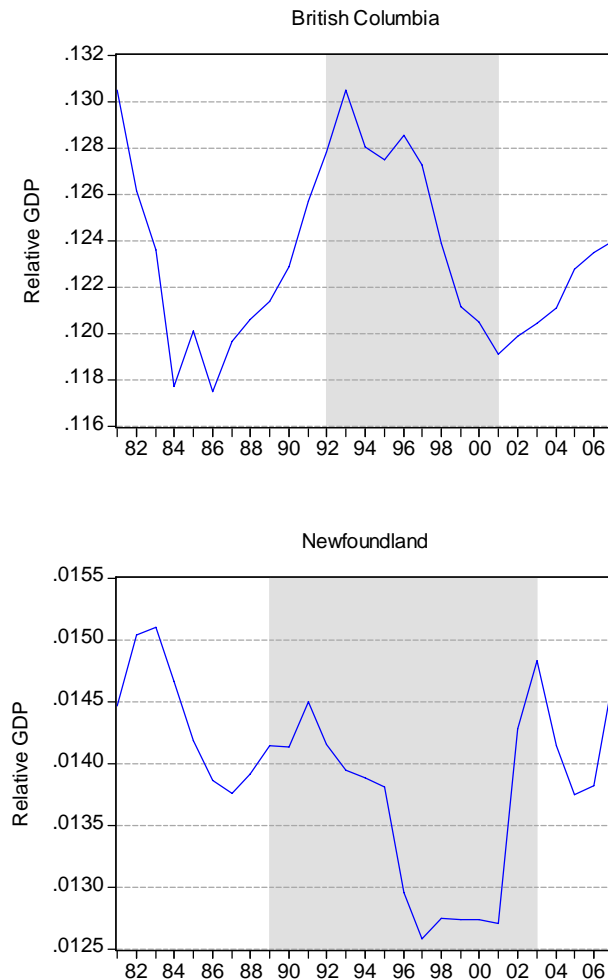


The figure above suggests quite a different story. In particular, the 1990s appear to have been years in which the (relative) economic prospects in British Columbia shone rather brightly for a great number of people who were attracted to the province. The converse appears to be true for Newfoundland, which actually saw its population decline in absolute terms over the entire sample period. Hence, the picture that emerges is one where British Columbia appears to have attracted a large number of relatively low-income migrants (depressing average incomes). If emigrants from Newfoundland typically have lower than average incomes, this would have served to increase the measured increase in average income in that

province. To what extent any of this is true, however, cannot be deduced from the data presented here.

Both real per capita GDP and population measures both provide information relevant to deducing the economic performance and economic attractiveness of a jurisdiction. For this reason, the dynamics of the GDP measure is probably more informative than either per capita GDP or population.

Figure 12
GDP Relative to Canadian Average



Compared to the picture painted by real per capita GDP dynamics, Figure 12 tempers the story somewhat. In particular, there is no evidence of secular dynamics across these two provinces in terms of the share of GDP they contribute to the

country. In the case of British Columbia, average real income is declining, but this is offset by population growth. The situation is reversed for Newfoundland, where average real income is rising, with a corresponding offset in population decline.