Is There Convergence in Provincial Spending Priorities?

MICHAEL M. ATKINSON
Department of Political Studies
University of Saskatchewan
Saskatoon, Saskatchewan

GERALD BIERLING
Department of Political Science
McMaster University
Hamilton, Ontario

This article examines the question of whether the provinces are becoming increasingly similar in their total spending and in the level of spending devoted to particular functional areas. Using various measures of spending, we begin by briefly tracing the pattern of provincial spending between 1971 and 1994. We then show, using Dispersion Indexes, that in some areas there has been a persistent movement toward similar levels of spending and similar spending priorities, while in other areas a divergent or indeterminate pattern has been established. Of some importance is the fact that particular provinces are outliers or influential cases and as such have the capacity to influence significantly the degree of convergence observed. In addition, the 24-year period is not one unbroken pattern. In some cases the provinces reverse their initial convergent direction and become increasingly different from one another. We suggest some reasons for these patterns, including the role of federal-provincial fiscal relations and the impact of changing economic conditions.
INTRODUCTION

In the 1960s and 1970s a major theme in the study of industrial societies was their apparent, or alleged, convergence under the weight of forces unleashed by industrialism (Kerr 1983). These forces took many forms — urbanization and technological innovation being among the most important — but their product was said to be the same: the increasing convergence of advanced capitalist societies in terms of social structures, political processes, and public policies. These societies were said to be either converging on a common post-industrial condition (Bell 1973) or, in the Marxist variant, converging toward crisis.

For the most part, these broad, deterministic arguments have been either theoretically or empirically discredited. Assembling evidence for sweeping social processes has always been difficult, at least at the level of whole societies. However, interest remains in the question of policy convergence, specifically the idea that the problems faced by industrial states are being solved, or at least addressed, in similar ways. There are still dangers of determinism in this type of argument, but it is far easier to assess convergence empirically when it is limited to specific policies rather than entire societies. Easier, but not easy.

The concept of convergence implies “movement over time toward some identified common point” (Inkles 1981, pp. 13-14). Comparisons are simultaneously temporal and spatial. The question is, Are political units converging or diverging over time? The question of policy is a bit more complicated. Policy convergence, as Colin Bennett has pointed out, can mean convergence on policy goals, on content, instruments, outcomes, or even policy style (1991, p. 218). It is presumably possible to witness convergence on some of these dimensions and divergence on others. In addition, decisions regarding the presence of convergence (or divergence) depend heavily on the time frame chosen; different patterns can emerge in different time periods (Seelinger 1995, pp. 296-98; O’Connor 1988). To help reduce some of these complexities, recent studies of policy convergence focus on case studies, where nuances can be acknowledged and patterns more easily explained (Overbye 1994).

In this paper we return to an earlier tradition, that of studying policy convergence by employing a time series of public expenditure data (Wilensky 1975). These data can seldom reveal subtle differences among political units, but they are helpful in establishing broad patterns. Specifically, we will explore the degree to which the spending priorities of various governments of the Canadian provinces have converged toward one another in the last 24 years. In the course of doing so, and as a necessary preliminary to such an analysis, we will identify the priorities themselves and discuss alternative ways of measuring them.

It must be acknowledged at the outset that researchers outside Canada have frequently been disappointed in their search for evidence of policy convergence (Coleman 1994; Aguilar Fernández 1994; Hills 1989). While it is sometimes argued that similar conditions produce similar responses, with countries emulating one another or deliberately harmonizing their policies, local conditions often appear to stand in the way. In fact, it has been observed that countries that do emulate one another are sometimes not even at the same levels of economic development or experiencing the same social conditions (Collier and Messick 1975). Much depends, it seems, on the nature of the policy area. In some areas, where innovations are visible and their implications easily appreciated, demand for comparable policies may be irresistible. In other policy areas, politicians appear to have much more latitude in deciding when, how, and if policy convergence should occur.

In Canada we witness a similarly confusing mix of evidence and argument for convergence among the provinces. On the one hand, researchers point to provincial disparities in revenue generating
capacity (which are themselves a product of differences in such factors as unemployment rates and economic diversification) as a constraint on possible convergence (Courchene 1994; Ip 1991; Maslove et al. 1986, pp. 123-65). These arguments suggest that governments with unequal revenue-generating capacities cannot exhibit similar spending patterns. Different political traditions, evident most obviously in the case of the Province of Quebec, might also account for different levels of convergence, although the argumentation is typically less precise (Chandler and Chandler 1979, pp. 38-69; Dyck 1996).

On the other hand, one can point to demand-side explanations of government growth for arguments favouring convergence. To the extent that provinces increasingly resemble one another in terms of education and income (Helliwell 1996), citizen expectations of the state may begin to coincide and provinces may offer increasingly similar levels of government services (Maslove et al. 1986; Kornberg et al. 1982). Added to this is the role that the federal government has played in both minimizing revenue disparities through equalization, and in influencing provincial spending priorities with shared-cost programs. Of course, this process can work in reverse. As the federal government increasingly promotes the disentanglement of its own spending decisions from those of the provinces, there is reason to expect less, not more, convergence among the latter.

In short, there are reasons for being both convergence enthusiasts and convergence sceptics. This mixed argumentation should alert us to the possibility of mixed results. Specifically, if convergence is dependent on demand, on visibility, and on the presence of federal government incentives, then it is unlikely to be felt evenly across all policy fields. In what follows, we will show that during the past quarter century the Canadian provinces have exhibited both increased similarity and divergence in their spending patterns. The evidence indicates that expenditure convergence (or divergence) is dependent upon the policy area examined, the inclusion or exclusion of influential provinces, the time frame chosen, and the manner in which spending is operationalized.

**Spending in the Provinces: The Last Twenty-Five Years**

Assessing the degree of convergence experienced in the provinces requires a preliminary appreciation of provincial spending, expressed in aggregate terms. In what follows we outline the level of provincial spending relative to the size of provincial economies from 1971 to 1994. And, because it is crucial to disaggregate spending, we examine several different functional areas — health, social services, education, transportation and communications, industrial development and resource conservation, and debt charges. These are the six largest expenditure areas, and comprise upwards of 80 percent of total government spending. Expenditures in each of these areas are considered, first in per capita terms (deflated to 1986 dollars), then as a percentage of total expenditures. These data figure prominently in our subsequent consideration of convergence.

**Spending and the Size of the Economy**

Table 1 compares provincial expenditure trends by examining total spending as a percentage of provincial gross domestic product. As the table shows, between 1972 and 1994, all provinces except Newfoundland and Prince Edward Island witnessed a general increase in expenditures relative to the size of their economies. In some provinces, such as Alberta, the overall increase since 1972 has been small (from 27.4 to 29.2 percent); in others, for example British Columbia, total spending increased by 8.1 percentage points.

The total spending of provincial governments, relative to the size of their economies, became increasingly similar during this time period. As the last column in Table 1 indicates, bigger spenders (Newfoundland, for example) typically reached their peak spending levels earlier in the series, while provinces that spent less at the outset (British Columbia
is a case in point) arrived at their apex at, or very near, the end of the period. Regardless of when the provinces reached their peak, the range and the standard deviation declined throughout the period, providing a preliminary indication of convergence.

A more satisfactory way of measuring convergence is to calculate a Dispersion Index by dividing the standard deviation by the mean and multiplying by 100. This index neutralizes variation in the size of expenditures at a given time or in a given functional area, thus providing a comparable measure. Plotting the Dispersion Index over time (and regressing the Index on Year) provides, in Figure 1, an indication of the degree to which the provinces have come to resemble one another in terms of their presence in provincial economies. Of course, significant differences remain. For example, Newfoundland and Prince Edward Island still spend more as a percentage of GDP than Ontario, Alberta, and British Columbia, although the spread between them has diminished. Some of the remaining differences probably reflect the fact that smaller provinces have to overcome economies of scale problems that are less pressing in provinces like Quebec, Ontario, and British Columbia.

### Table 1

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Source: CANSIM, Statistics Canada.

Notes:
1. To make Quebec figures comparable we have excluded Quebec Pension Plan expenditures. Excluding QPP spending reduces Quebec percentages by as little as .21 percentage points in 1971 to as much as 2.67 percentage points in 1994.
2. These data include local government expenditures. The inclusion of local spending increases provincial spending by between 4 and 10 percent depending on the province. There is little variation over time.
3. Provincial averages and standard deviations are unweighted.
The picture changes once we turn to the average level of spending devoted to citizens in each province. As the last column of Table 2 indicates, some of the big spenders from Table 1 are not particularly generous in per capita terms. For instance, relative to the size of its economy, Newfoundland spent roughly 25 percent more than Ontario in 1994, but almost 14 percent less than Ontario on a per capita basis. In Table 2 Alberta emerges as the most generous province, spending on average just over $6,400 per person, whereas in 1994 Alberta had the smallest public sector relative to its economy.

**Spending by Area**

Still examining the per capita expenditures found in Table 2, we note differences in the amount provinces spend across different functional areas. In every province, per capita expenditures have been highest in the areas of health and education, while transportation and industrial development receive much less attention. Social services expenditures typically fall between these extremes. However, provinces differ, sometimes considerably, in the amounts they spend in each area. In the field of health, a number of provinces spent on average more

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**Figure 1**

than $900 per capita annually during this period, while Newfoundland and Prince Edward Island spent $764 and $708 respectively. British Columbia averaged over $1200 per person on education, while New Brunswick spent $833 per capita. This pattern of differing expenditure levels is sustained, more or less dramatically, in each of the other areas. As a preliminary indication of priorities, per capita spending by area reveals significant provincial differences.

Of course, these summaries mask considerable changes in each of the policy areas during the 24-year period. Health expenditures increased substantially
between 1971 and 1994 (by 136 percent), while social services expenditures grew even faster (232 percent), flattening out somewhat toward the end of the period. Education grew by about 55 percent, while transportation remained quite stable, growing by only 13 percent. The largest increase was in debt charges, which grew from $212 per capita in 1971 to $917 per capita in 1994, a 331 percent increase. Industrial development expenditures almost tripled, but as we will see the real story here is the degree of provincial variation and year-over-year changes.

These increases all reflect growing provincial budgets, but how do these areas fare relative to one another, that is, as percentages of total spending? In terms of their share of the budgetary pie, education and transportation have been the big losers, falling 39 percent (9.3 percentage points) and 93 percent (5.7 percentage points) respectively. Health spending, as a proportion of provincial budgets, has increased modestly (by 9.3 percent), whereas social services and industrial spending have increased 52 percent (4.4 percentage points) and 17.5 percent (.7 percentage points) respectively. The spending area that exhibits the largest increase over time is debt charges, which went from 7.3 percent of total spending in 1971 to 14.4 percent of the total budget in 1994, an increase of roughly 97 percent.

In what follows we will consider provincial spending priorities using both of the measures profiled above: per capita spending in each of the functional areas, and spending in each area as a proportion of the total provincial budget. These two indicators of priority do track one another, often very closely, but in some cases they diverge, particularly in periods when expanding provincial budgets allow per capita spending in one area to increase without impinging too heavily on the dollars devoted to other areas. Proportionate spending focuses on priorities relative to other functional areas and relative to debt charges. Making room for debt charges has meant that even as per capita spending increases, in some cases the relative importance of the area decreases in proportionate terms.

CONVERGENCE OR DIVERGENCE?

No one can gainsay the fact that provincial spending priorities have changed during the last 25 years. But are the provinces changing their priorities in concert, remaining as distinctive in 1995 as they were in 1971, are they becoming increasingly divergent, or are Canadian provinces converging on a similar spending regime?

In analyzing provincial expenditures over the period 1956 to 1974 Simeon and Miller (1980) found a growing similarity in per capita spending, both overall and in the areas of health, education, and social welfare. Differences among the provinces remained relatively constant in the area of transportation and communications, while in the areas of trade and industry, and natural resources, dispersion actually increased. Simeon and Miller hypothesized that the effect of increased federal government involvement in the fields of health, social services, and education, through equalization and shared-cost programs, helped to reduce diversity among the provinces, at least in terms of expenditures. Convergence in these fields contrasted with areas of increasing dispersion, such as transportation and natural resources, where the federal government has had a relatively small role.

The period since the mid-1970s has been one of significant change in federal-provincial fiscal relations. Much of the change has come at the hands of the federal government, which has recast the basis on which fiscal transfers are made from federal to provincial coffers. In the interests of limiting its own financial commitments the federal government, in 1977, began the process of substituting tax points for cash in several of its established transfer programs and the provinces have been increasingly obliged to use their own resources to finance health care, education, and social policy (Leslie et al. 1993). On the other side of the equation, the federal government has found it increasingly difficult to insist on performance standards since the financial leverage of shared-cost programs has eroded
significantly during this period. The introduction of the Canada Health and Social Transfer (CHST) in 1996 continued the process of disentangling federal commitments from provincial programs, particularly in the social welfare area where to receive their CHST funds the provinces need satisfy only one condition, namely not to impose a residency requirement (Maslove 1996, p. 290). If Simeon and Miller were right, that a “potential force for convergence is the activity of the federal government” (1980, p. 275), the impact of federalism on convergence has been significantly reduced in recent years. The provinces are almost entirely free to allocate funds as they wish across spending categories.

Of course, the provinces may still converge for other reasons. As we will show, in some areas the level of convergence, as measured by Dispersion Indexes, indicates a persistent movement toward similar levels of spending and similar spending priorities. In other areas, a divergent or indeterminate pattern has been established (Seelinger 1995, p. 294). Of some importance is the fact that particular provinces are outliers or influential cases and as such have the capacity to influence significantly the degree of convergence observed. In addition, the 24-year period is not one unbroken pattern. In some cases the provinces reverse their initial direction and become increasingly different from one another in the face of deteriorating economic conditions.

**Convergent Patterns (with Complications): Health and Education**

We begin with two areas in which convergence appears strongest. These are also the areas that consume the largest proportion of provincial spending throughout the period studied. In these cases, and in those that follow, the higher the dispersion scores, the greater the degree to which the provinces chart an independent course when it comes to per capita spending and budgetary priorities. The lower the scores, the more convergence.

Turning first to health, as a percent of total spending health care dispersion scores were relatively low to begin with in this area, and have been on a generally declining path since 1978. Of course, the provinces differ in the types of care provided and the ways in which it is delivered, differences that may increase with the advent of the CHST. But the provinces have become increasingly alike in terms of the relative importance of health care in the formation of provincial budgets (Figure 2A). The same does not apply to the dollars devoted to health on a per capita basis. Dispersion scores begin the period at a relatively high level, and end the period almost 10 points lower, but the pattern is one of convergence, followed by divergence, followed by convergence. No clear direction can be inferred in terms of per capita spending.

One of the sources for this discrepancy is the capacity of some provinces to increase per capita spending without increasing the relative importance of health vis-à-vis other spending areas. In this case, Alberta is something of an outlier. Alberta’s overall budget increased rapidly from 1980, when the province was spending $1069 per person on health, to 1987 when the figure reaches $1746, an increase of 63 percent. During the same period, the other provinces increased their per capita spending by an average of 45 percent. As shown in Figure 2B, with Alberta removed, the trend toward convergence in health care spending in the remaining provinces becomes more obvious. Notwithstanding the movement toward greater similarity in health care spending, the period we are examining does contain moments of significant reversal, particularly in the late 1970s when the provinces suddenly, and briefly, depart from one another in terms of both per capita commitments and proportionate spending. Convergence is not always a smooth process.

To establish the extent to which these processes are, in fact, a function of the tendency of provinces to converge requires that some attention be paid to the presence of serial correlation in the data. Our concern is with first-order autocorrelation, the tendency of each value in a time series to be a linear function of the preceding value or values. Government
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expenditure data, assembled in a time series, are likely to include some serial correlation given the relatively limited ability of governments to drastically change their spending from one year to the next. In addition to plotting the data, as we have done in our figures, it is necessary to estimate the degree to which spending decisions are simply a product of the past. In the context of Dispersion Scores, we regress these scores on time (Year) and estimate an autoregressive parameter (AR1) to determine if dispersion scores at time \( t \) are the product of dispersion scores at \( t-1 \). Controlling for autocorrelation yields a more reliable estimate of the independent effect of time (Year) on dispersion. \(^5\)

In the case of health spending as a proportion of the provincial budget, the coefficient for Year is statistically significant both with and without Alberta. In the case of per capita spending, it is only when Alberta is removed that the level of convergence attained is statistically significant. Thus while it appears that the provinces are converging in their health care spending, Alberta is an exception, underlining the potential for particular provinces to chart a separate course depending on changes in fiscal and political circumstances.

Education spending is similarly complicated (see Figure 3), but this time the data indicate that the provinces have become increasingly similar in terms of per capita spending, while there has been virtually no change with respect to the proportion of the budget devoted to education. In the latter case, the variation among the provinces remains roughly the same as time goes on, but education becomes less important as an element in the budget. The same standard deviation, combined with a smaller mean yields a higher dispersion score. Thus the provinces are, if anything, slightly less similar at the end of the period than they were at the beginning, at least in terms of the relative importance of education in their budgets.
In terms of per capita spending, however, all of the provinces have increased their levels of spending without increasing their dispersion. The result is lower dispersion scores. Once again, however, individual provinces make a difference. In this case, Alberta is an influential province largely because it begins the series spending much more per capita than other provinces. In 1971, Alberta was spending $1456 per capita on education, whereas the average of the remaining provinces was $1024. By the end of the time frame, the other provinces had caught up to Alberta, producing the increasing convergence. Leaving Alberta aside (Figure 3B), the coefficient for Year does not attain statistical significance in either case; hence there is no evidence of convergence among the rest of the provinces.

Each of these two areas provides some indication of convergence, although these trends are fragile and, with respect to the different dispersion measures, somewhat inconsistent. In the case of health spending, convergence is strongest in terms of the proportion of the provincial budget it commands; in the case of education, convergence occurs in terms of per capita spending. Both areas are subject to what might be called entitlement pressures. Canadians, no matter where they live, have come to expect a high level of service in both areas. The provinces, although they have had to rely increasingly on their own fiscal resources, have responded by continuing to give health and education priority status within their budgets.

**Divergent and Indeterminate Patterns: Industrial and Transportation Spending**

The first point to notice about industrial spending is the relatively high level of dispersion that characterizes the area throughout the time frame. Whereas the average dispersion score in per capita spending on health is 19.6, in the case of industrial spending it is 64.4. The provinces begin the period relatively dissimilar in both their per capita spending
and their budgetary emphasis, and they end the period in roughly the same position. In the case of budgetary proportions, for example, the provincial dispersion score in 1971 was 38.9; by 1994 it had increased to 47.9. Along the way the dispersion score reached a high of 75.2 in 1979 and never descended below 33.1.

Figure 4A shows that when all of the provinces are taken together, there is a slight tendency toward dispersion in these data, at least in terms of per capita spending (p<.05). Much of this dispersion, however, is traceable to the spending waves initiated by a handful of provinces. Industrial spending, unlike health and education, makes up a relatively small proportion of provincial budgets and is open to much more discretion. When resource economies demand significant investments in mega-projects, for example, then provinces with the means have found it difficult to resist. Alberta provides an illustration of this phenomenon. Its spending on industrial projects increased from an average of $276 per capita in the 1970s to $965 in the 1980s, and then decreased again to $668 in the early 1990s.

Alberta is not alone in its propensity to shift resources into and out of this area. Saskatchewan, Prince Edward Island, and Newfoundland, all exhibit short periods of high spending followed by rapid retreats. Figure 4B shows that when Alberta and Saskatchewan are removed from consideration virtually all of the divergence trend goes with them. In short, industrial spending has experienced little convergence during this period, but little divergence either.

While industrial spending trends are indeterminate, transportation is clearly a case of increasing divergence. Like industrial spending, transportation spending is a relatively small part of most provincial budgets, accounting for an average of less than 9 percent for all the provinces during this time period. Thus while changes in spending levels from
year to year may be significant in absolute terms, their overall impact on provincial budgets is relatively small. In addition, transportation expenditures are normally disaggregated into a variety of projects and susceptible to fluctuations depending on fiscal need and political pressures.

In spite of these characteristics, it is still somewhat surprising that the provinces have actually become increasingly dissimilar in both their per capita spending and the emphasis on transportation within their budgets (Figure 5A). This is a statistically significant trend in the case of budget proportions, and in the case of per capita spending the impact of Year becomes statistically significant once Alberta is removed (Figure 5B). Alberta has a distinctive pattern of transportation spending on a per capita basis, easily outspending other provinces in almost all of the years examined. Between 1971 and 1994, Alberta’s average per capita expenditure on transportation was $574; for the remaining provinces the average was $386. This outlier status generates large error terms for Alberta in each year, so that removing the province from the regression results in a lower level of dispersion and a better fit of the least squares line. Of course, the reasons for Alberta’s generosity in transportation is another question. Suffice it to say that during the period from 1971 to 1994, the provinces diverge in matters of transportation, and their divergence is easier to appreciate when Alberta is not considered.

Unlike health and education, provincial spending on industry and transportation seems to be subject to considerable latitude. Perhaps Canadians do not view either one as an entitlement and so provincial governments can make spending decisions with somewhat more freedom. As Spafford (1981) points out, there is some evidence of electorally induced spending on transportation, which would suggest that provincial governments have greater latitude in this area. In addition, neither of these areas

*Coefficient significant at .05 level; ** Coefficient significant at .01 level.
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The desire to attract business and build an infrastructure is common to all, but not every province can afford a similar or consistent level of commitment.

Convergent Patterns Reversed:
Social Spending and Total Spending

We noted at the outset that convergence was likely to be reversible at one or another stage or in one or another area. Social spending is a case in point. As Figure 6A indicates, the provinces begin the 1970s looking rather different from one another in terms of the amount they spent on social services and the relative prominence of this item in their budgets. In 1971 the least generous province, New Brunswick, spent $177 per capita on social services while British Columbia, at the other end of the spectrum, spent $403, a difference of $226. During the next ten years, even though all the provinces were spending more per capita, this gap closed considerably, so that by 1982 the difference between the most generous province, Ontario (at $515 per capita), and the least generous province, Newfoundland (at $350 per capita), was $165. Moreover, all of the provinces had increased their per capita spending to roughly the same levels and the dispersion index had decreased from 27.5 in 1971 to 12.3 in 1982. A similar, if less dramatic, pattern developed in terms of proportionate spending, with the provinces converging on increasingly similar proportions of their budgets devoted to social spending.

The period from 1982 to 1986 was one of consistent, but modest (approximately $20 per year) increases in average per capita social spending. The rate of convergence levelled off so that as per capita spending increased, standard deviations increased proportionately. All of this was reversed in 1987. Per capita spending continued to rise on average, but some provinces — New Brunswick, Nova Scotia, and Alberta — increased their spending much more.

*Coefficient significant at .05 level; ** Coefficient significant at .01 level.

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**Figure 6**
Dispersion in Social Services Expenditures, 1971-1994

**Figure 6A: All Provinces**

**Figure 6B: All Provinces Except Ontario**

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seem particularly likely to be influenced by demonstration effects or the need to harmonize policies. 
than others, with the result that the standard deviation increased from $66 in 1986 to $81 in 1987. The following year two more provinces — Prince Edward Island and Ontario — increased their per capita allotments. From this point on, Ontario increased its spending at a rate that far outstripped the others. By 1992 Ontario was spending $1243 per capita, far in excess of the next highest spender, Nova Scotia, at $901. Average spending among all of the provinces increased as did the standard deviation. The result is captured in Figure 6A: the propensity of the provinces to resemble one another in this spending area was reversed in the late 1980s and by the end of the period the dispersion scores resemble those observed in the early 1970s.

Figure 6B shows that this reversal is almost entirely the result of Ontario’s shift in spending priorities. Once Ontario is removed from the equation, the convergence observed before 1987 is once again apparent, and statistically significant, in both per capita and proportionate terms. The levels of dispersion are higher in the 1990s than in most of the preceding decade, but they remain far lower than they were in the 1970s. There are several possible explanations for the unique direction charted by Ontario: a serious recession, structural changes occasioned by the free trade agreement and, starting in 1990, a New Democratic government. However, for our purposes, the point to note is that the patterns established in a single province can dramatically affect aggregate results. Underneath the observed reversal, is actually a persistence of the convergence pattern in nine of the ten provinces.

Total spending reveals a similar pattern, this time in reverse (Figure 7A). The provinces do not differ markedly from one another in their total spending

*Coefficient significant at .05 level; ** Coefficient significant at .01 level.
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during the early 1970s, but they become increasingly dissimilar as the 1970s end and the 1980s begin. At its apex, in 1983, the dispersion score for total per capita spending was 21.9, 8.1 points above its starting point in 1971, and 12.4 points above the dispersion score in 1994, the high-water mark of convergence.

Once again, however, this observed divergence is the product of patterns established in two provinces, Saskatchewan and Alberta, particularly the latter. Spending in the Province of Alberta was truly unique between the late 1970s and the late 1980s. During the ten years between 1978 and 1988, average per capita spending in the province was $7146; for the rest of the provinces the average was $4792. No province came close to Alberta during this period; the next highest spender was Saskatchewan at $5487 per person. Behind this largesse lie oil and gas revenues of dramatic proportions. Between 1973 and 1983, Alberta’s revenues per capita were almost 50 percent higher than the average.

It is not surprising, then, that in aggregate terms very little convergence occurs between 1971 and 1994 in terms of total per capita provincial spending. Alberta, in particular, and Saskatchewan plot their own course, outspending all others. Once these provinces are removed from the analysis (Figure 7B), it is clear that for the remaining provinces per capita spending became increasingly similar during the 24 years examined here. Convergence occurs, but once again, it does not occur for everyone.

CONCLUSION

Our purpose in this paper has been to establish whether the Canadian provinces have been converging in their spending priorities in the last 24 years. The pattern is mixed. Some of the features of convergence that Simeon and Miller observed in the decades before the 1970s persist in later years, but our analysis shows that the convergence phenomenon is highly nuanced and dependent on the spending measures chosen, the policy areas and the time frame considered, and the inclusion or exclusion of influential provinces.

In this analysis we have employed two measures of spending priorities, and the results have not always been consistent. Proportionate measures, as spending ratios, are constrained by growth or contraction in other areas. In recent years growing levels of debt servicing have provided additional constraints. Thus, while it is possible to spend more in absolute terms in particular functional areas, these increases may be neutralized in proportionate terms. The tendency towards convergence has been generally less pronounced when using proportionate measures.

The characteristics of each functional area clearly matter for the level of convergence achievable. We have confirmed Simeon and Miller’s conclusion that health and education are the areas of greatest convergence. This contrasts most notably with industrial and transportation spending, which are marked by increasing divergence coupled with rapid fluctuations. Clearly explanations for convergence (or divergence) will have to take account of differences in spending area. As noted at the outset, where innovations are visible and implications easily appreciated, the demand for comparable policies may be irresistible. This may explain why, even in the face of reduced federal transfers, and transfers that come with fewer conditions attached, provinces nevertheless spend increasingly similar amounts on education and health. It seems likely that health and education spending are regarded by Canadians as entitlement allocations which, once begun, are influenced by demands for a “minimum” service, regardless of fiscal pressures that might otherwise induce divergence.

By contrast, expenditure patterns in transportation and industry suggest that in these areas the provinces have much more independence. Here spending can be adjusted periodically to meet local needs and opportunities, including, perhaps, the electoral
cycle. Finally, spending in the social services arena shows that convergence is by no means irreversible. In contrast to the Simeon and Miller findings, spending in this arena in the last several years has been responsive to provincial economic conditions and, it appears, the ideological predilections of governing parties. In short, no conclusions about convergence in spending priorities are complete without a careful consideration of specific spending areas.

Our results also show that patterns of convergence are not invariably linear, nor completely inclusive. Convergence may be the overall pattern, but cyclical variation and periodic reversals occur. While we have not tested explanations for these variations and reversals, they seem to occur most particularly in periods of significant economic stress or prosperity. In this regard, because provinces do not experience stress or prosperity at the same time, or to the same degree, our analysis has emphasized the need to identify those provinces that are able to plot rather different paths than their counterparts. While the identification of these outlier provinces is itself dependent on the spending area, Alberta consistently shows up as unique, especially during periods of sustained expenditure growth. Alberta’s persistently idiosyncratic behaviour, most notably during periods of expanding resource revenues, lends support to supply-side explanations of government expenditure, which suggest that the revenue-generating capacity of governments influences their spending levels. Conversely, Ontario, hit hard by recession in the early 1990s, appears as an outlier in the area of social services spending, suggesting that in some spending areas demand-side explanations, with their focus on responsiveness, are at the root of non-conforming expenditure decisions.

One demand-side variable of note is culture. If governments feel constrained to respond to the cultural particularities of their provinces, it is unreasonable to expect high levels of convergence. We have no direct evidence of the impact of culture, but it is worth noting that the Province of Quebec does not appear as an outlier in any of the spending areas we have examined. Quebec shows no special tendency to break from the overall patterns of convergence and divergence we have identified. The only possible exception is the area of education. In this area Quebec was the top per capita spender only from the late 1970s until the mid-1980s. After that a number of other provinces increased their spending levels to match those of Quebec. In all other areas, the Province of Quebec is very close to the middle of the pack.

In this paper we have focussed on describing patterns of convergence and divergence in provincial spending priorities. We have canvassed some of the more intriguing explanations for these patterns, but no rigorous tests have been applied. What we can safely conclude is that certain key policy areas have been subject to a significant convergence in spending levels, notwithstanding moves by the federal government to disentangle itself from provincial spending decisions. Looked at another way, there is little support for Simeon and Miller’s idea that the federal government is the driving force for convergence in health and education spending. The provinces have converged despite the federal government. If we are to understand provincial spending decisions, and resulting patterns of convergence and divergence, we will have to identify other variables. And, because we have found that convergence is by no means the overall, invariable pattern, it will be necessary to appreciate that the impact of these variables is likely to be contingent on the spending areas and the time periods chosen.

**Notes**

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1 Refer to the Appendix for a more complete description and for the data source for each expenditure area.
The data are expressed in 1986 dollars. The deflator used is described in the Appendix. Different deflators can produce different results, but the one we have chosen is highly correlated with other commonly deployed deflators.

The unweighted means and standard deviations are used in the calculation of the Dispersion Index. Lower values of the index indicate relatively low levels of dispersion among the provinces. While some refer to the index as the Coefficient of Variation (Palumbo 1969, p. 51; Helliwell 1996), in keeping with the work of Simeon and Miller we refer to it as the Dispersion Index.

Per capita figures, and data on spending as a proportion of the budget, include both local and provincial spending. In some policy areas, such as health, the impact of local spending is minimal, but in others, particularly education, local spending in certain provinces is substantial. The Pearson’s r correlation coefficient between provincial and provincial plus local spending is .94 for total spending over the entire period.

The line depicted in the graphs is the OLS line for a bivariate regression of Dispersion on Year. The coefficient for Year reported below each graph is generated by regressing Dispersion on Year, but including the AR1 term. This was done using the Autoregression procedure in SPSS for Windows, which estimates a linear regression with first-order autoregressive errors. The Exact Maximum-Likelihood estimation method was used for this procedure.

REFERENCES


Kornberg, A., W. Mishler and H.D. Clarke (1982), Representative Democracy in the Canadian Provinces (Scarborough: Prentice-Hall Canada).


APPENDIX
DATA DESCRIPTION AND SOURCE

Provincial and local government expenditure data come from Statistics Canada CANSIM database. They are organized using the Financial Management System (FMS) basis, in which expenditures are grouped as services provided. The rationale behind FMS is to make provincial government data comparable. Expenditure data for all series were deflated using the Implicit Price Index, Government Current Expenditures on Goods and Services, Final Domestic Demand, (1986=100) which is calculated separately for each province (Statistics Canada 1984).

Health: hospital and medical insurance programs, dental services, disease control, and peripheral services such as laboratories.

Social Services: spending on a variety of programs and services which are provided by the public sector that support the socio economic well-being of individuals and families.

Education: the provision of elementary, secondary, and postsecondary education, as well as skills retraining and upgrading.

Transportation and Communications: the provision of air, road, rail, and water transportation, as well as telecommunications systems and postal services.

Industrial Development and Resource Conservation: services related to agriculture, fish and game, forests, mines, oil and gas, water resources, as well as tourism, trade, and industry.

Debt Charges: the servicing of debt, including interest, but excluding administrative costs and retirement of principal.