

# THE DEMOGRAPHIC FUTURE OF FISCAL FEDERALISM IN CANADA

**T**out laisse croire que les années 80 constitueront une période difficile pour le fédéralisme fiscal au Canada. Le gouvernement fédéral peut s'attendre à des pressions continues des dépenses sociales à cause du vieillissement de la population, puisque la constitution influence la structure des programmes de dépenses publiques et que le coût per capita de l'application des programmes sociaux est fonction de l'âge. Simultanément, les niveaux de gouvernement provinciaux et municipaux connaîtront vraisemblablement un inversement de la tendance à la baisse observée depuis vingt ans quand 'l'effet d'écho' de l'explosion de population caractéristique de l'après-guerre débouchera sur des pressions plus fortes des dépenses destinées aux jeunes. Sur un horizon temporel plus long, les calculs effectués dans cet article pourraient être interprétés comme plaidant en faveur d'une plus grande centralisation fiscale au Canada.

**T**he 1980s are likely to be a turbulent period for fiscal federalism in Canada. Because of the constitutionally influenced structure of public expenditure programs and the relative age-specific per capita costs of program delivery, the federal government can be expected to be under continuing expenditure pressures resulting from population aging. At the same time both the provincial and municipal levels of government are likely to experience a reversal in the downward trends of the past two decades as the Baby Boom echo effect results in increased expenditure pressure for the young. Over a longer time horizon the calculations presented in this paper might be interpreted to indicate greater pressure for fiscal centralization in Canadian government.

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## I Introduction

**T**he discussions and negotiations leading up to the federal-provincial fiscal arrangements for the 1982–87 period generated considerable debate not only among the participants but also in the academic and policy milieu. For the first time since the quinquennial reviews began in 1947, a Parliamentary Task Force provided a legislative forum for examining these arrangements and an opportunity for interested groups

to make submissions before negotiations among governments took place.<sup>1</sup> A subsequent federal budget paper analysed the provincial positions, the recommendations of the Task Force and outlined the federal position which became the basis for the subsequent negotiations (see Perry, 1983). At the same time the Economic Council of Canada was undertaking a study on the economic side of federalism. Its 1982 report outlined many of the issues, analysed many of the arguments and provided a series of detailed

recommendations for future fiscal arrangements. This work has been the subject of considerable subsequent interpretation and debate.<sup>2</sup>

The 1982–87 arrangements are not enshrined in a completely new Act of Parliament but, rather, as amendments to a number of important sections in the previous (1977) Act. A number of key issues primarily related to Established Programs Financing (EPF) remained largely unresolved (Perry, 1983). In particular, the introduction of legislation governing hospital insurance and medicare, and post-secondary education financing were delayed. These are areas where demographic change has been shown to have significant impacts,<sup>3</sup> yet the impacts of the changing composition of Canada's population on fiscal federalism appear to have been largely ignored.<sup>4</sup>

Perhaps this is not surprising given the longer-term nature of demographic change. Very little impact could be perceived over the five year duration that has characterized the post-war fiscal arrangements. Yet the release of the 1981 census data confirmed the increased aging of Canada's population, which is now widely acknowledged. It has been projected (Foot, 1982) that the Canadian population will age approximately as much over the final 20 years of the twentieth century as it did over the previous 80 years. This increasing pace of population aging has many important implications. As history has adequately demonstrated, fiscal federalism is not immune from the effects of such demographic developments, especially when viewed from a longer-term perspective than the traditional five-year horizon.<sup>5</sup>

What is in store for the 1980s and beyond? The analyses in the following two sections review the past and likely future of fiscal federalism in Canada when viewed from a demographic perspective.<sup>6</sup> These findings suggest that Canada may be gradually entering a new phase in fiscal federalism and that the acrimony that characterized the 1982–87 negotiations may well be a forerunner for future fiscal federalism negotiations between the federal and provincial governments. Moreover, similar feelings may also be characteristic of future provincial-local fiscal arrangements.<sup>7</sup>

## II Economic Dependency

One convenient way of capturing the economic impacts of the changing age composition of a population is via a dependency ratio measure (Ridler, 1979; Overbeek, 1980). In its general formulation, a dependency ratio requires the identification of 'non-producing' groups in a society which are, by definition, 'dependent' on the 'producing groups for their economic well-being. A high ratio of the former to the latter, therefore, implies a greater 'burden' on the economically active and vice versa. In most societies the pre-working age young and the post-working age elderly are identified as the 'dependents,' while those of working age are identified as the potential 'producers'. This has resulted in a dependency ratio measure which expresses the population of non-working age to those of working age as the most commonly used single indicator of a society's potential economic well-being from a demographic viewpoint.

Historically, such ratios have been on a long-term decline in Canada (see Overbeek, 1980:141) in spite of the temporary increase introduced by the Baby Boom of the 1950s and early 1960s. This has occurred because the proportion of young in the Canadian population has been decreasing faster than the proportion of elderly has been increasing. By the time of the 1981 Census, the ratio had fallen to 0.475,<sup>8</sup> which implies that there were 2.1 economically active persons for every dependent in the Canadian population. This historically *low* burden has been projected to continue into the twenty-first century (Foot, 1982) until the Baby Boom generation reaches retirement age. Consequently, Canada would appear to have an economically 'advantageous' population profile for at least the next 30 years or so.

Recent research has begun to expose some methodological limitations of using these traditional dependency ratios as measures of the economic consequences of an aging population. Besides implicitly assuming that resource transfers between the dependent groups are possible and actually take place (that is, from the young to the elderly in an aging population), empirical evidence has been accumulating (see Clark,

Kreps and Spengler (1978) for the US and Foot (1982) for Canada) which suggests that the per capita costs of supporting the elderly are considerably higher than those of supporting the young, *especially* with regard to public programs. This reflects, in part, society's chosen allocation of responsibilities between the private and public sectors; namely, the support of the young in Canada and elsewhere has been primarily the responsibility of the private sector while the support of the elderly has increasingly become the responsibility of the public sector. This means, however, that traditional dependency ratio measures may provide an inadequate measure of the demographic pressures on government spending in an aging population.

The necessary introduction of program cost considerations into measures of economic dependency for the public sector is potentially fraught with difficulty since information is required on the average per capita cost requirements for each population age group in the dependency calculation for every government expenditure program.<sup>9</sup> Such information is rarely available. Fragmentary evidence (see McDonald, 1977) suggests that for current government programs in Canada, it costs approximately two and one-half times more to support an elderly person than a young person.<sup>10</sup> Under these conditions, population aging *alone* will lead to greater pressures on government spending than is indicated by the traditional dependency ratio measure. Foot (1982:142) has calculated the year of minimum demographic pressure on government expenditures for Canada as 1982. In subsequent years the aging of the Canadian population can be expected to exert upward pressures on government spending as the increased contribution of the relatively more costly elderly is projected to more than offset the decreased contribution of the relatively less costly young. However, within the next 30 to 40 years these pressures are projected to be generally lower than the pressures exerted on public programs by the emergence of the Baby Boom generation over the 1950s and early 1960s.

Because of the constitutionally influenced allocation of expenditure responsibilities, past demographic pressures, primarily experienced

in health and education programs, have initiated significant fiscal transfers between levels of government in Canada. Under those conditions it was widely acknowledged that a fiscal imbalance existed, with the sub-national levels of government having greater responsibilities for the provision of the services required by the young generation. But, as noted above, the future, which is characterized by increased population aging, portends relatively less need for public programs and services oriented to the relatively less costly young and relatively more need for programs and services oriented towards the relatively more costly elderly. Hence, the level of government which provides these latter services can be expected to experience relatively greater expenditure responsibilities in the years ahead — an impact which undoubtedly will be reflected in future fiscal federalism in Canada.

### III Economic Dependency and Fiscal Federalism

The impact of demographic change on fiscal federalism can be explored by examining the recipient age groups of the expenditure programs of the different levels of government. As outlined above, this requires the allocation of public expenditures to relevant recipient age groups. McDonald (1977) investigated the costs (in \$1976) of identifiable age-specific public programs provided by the federal, provincial and municipal governments in Canada. These programs included all education and training, health care, income security and social assistance (including family allowance, guaranteed income supplement, spouse's allowance, old age security, Canada Assistance Plan and unemployment insurance payments) and justice programs.<sup>11</sup> They cover approximately 40 per cent of federal and municipal government expenditures and 60 per cent of provincial government expenditures.

Table 1 summarizes the age distribution of these government expenditures by level of government. Of the age-specific programs identified, 42.5 per cent of expenditures were provided by the federal government, 47.7 per cent by the provincial governments and 9.8 per cent by municipal governments in Canada. Of those

**Table 1**

Government expenditures by level of government and age of recipient (per cent)

Level of government	Age of recipients (years)			All
	0 to 14	15 to 64	65 & over	
Federal	6.4	17.9	18.2	42.5
Provincial	17.0	24.6	6.1	47.7
Municipal	6.1	2.8	0.9	9.8
Total	29.5	45.3	25.2	100.0

SOURCE: Calculations by the author based on McDonald (1977).

expenditures oriented towards the dependent young (which accounted for 29.5 per cent of the total), a majority (57.7 per cent) were provided by provincial governments, with the federal and municipal governments approximately participating equally in the remaining share. However, of those expenditures oriented towards the dependent elderly (25.2 per cent of the total) a high 72.3 per cent were provided by the federal government with a relatively minor amount being provided by municipal governments. In fact, these data suggest that most age-specific federal expenditures are oriented to the elderly with slightly less being oriented to those of working age, most age-specific provincial expenditures are oriented to those of working age and most age-specific municipal expenditures are oriented towards the young. Moreover, the young obtain the least amount of federal expenditures, whereas the elderly obtain the least amount of both provincial and municipal expenditures.

Given these conditions, it is hardly surprising that the arrival of the Baby Boom generation in the 1950s and early 1960s placed considerable expenditure responsibilities on the sub-national levels of government in Canada, thus necessitating considerable fiscal transfers from the federal to the provincial (and the provincial to the municipal) level of government. Moreover, as demonstrated below, the coming of working age of the Baby Boom generation over the late 1960s and, especially, over the 1970s, spread the associated expenditure responsibilities more evenly between the provincial and federal governments and significantly reduced the pressure on the municipal level of government.<sup>12</sup>

Perhaps a more illuminating presentation of these findings can be provided by expressing the expenditure data underlying Table 1 in relative per capita terms. These are presented in Table 2, where all per capita figures are expressed as a ratio to the national average. First, note that these data confirm that for *all* levels

**Table 2**

Per capita government expenditures by level of government and age of recipient (national average = 1.0)

Level of government	Age of recipients (years)			65 & over 0 to 14
	0 to 14	15 to 64	65 & over	
Federal	0.25	0.27	2.11	8.4
Provincial	0.67	0.37	0.71	1.1
Municipal	0.24	0.04	0.10	0.4
All	1.16	0.69	2.92	2.5

SOURCE: Calculations by the author based on McDonald (1977).

of government in Canada, it costs 2.5 times as much to maintain an elderly person on public programs as a young person. However, this figure is markedly different between the three levels of government. The comparable figure for municipal governments is only 0.4; for provincial governments it is only slightly more expensive at 1.1; whereas for the federal government it costs 8.4 times as much. Consequently, under these conditions it would appear that the federal government experiences the expenditure pains of population aging while municipal governments reap the expenditure gains!

Moreover, as indicated in Table 2, although the traditionally dependent age groups are the most important recipients of age-specific government expenditures at all three levels of government in Canada, they are by no means the only recipients. In fact, at the federal level of government per capita expenditures to those of working age (such as unemployment insurance, etc.) actually slightly exceed those to the dependent young. Consequently, as the Baby Boom generation moved out of the dependent young into the working-age group over the late 1960s and, especially over the 1970s, the per capita expenditure responsibilities of the provincial and, especially the municipal governments were reduced considerably, but those of the federal government were increased marginally. Therefore, unlike the 1960s and unlike the other levels of government over the 1970s, it

appears that federal expenditures have been doubly squeezed by the recent demographic events — both the entry of the Baby Boom generation into the working age population and the increasing proportion of elderly exerted upward pressures on federal expenditures.

These relative per capita expenditures can be used to examine the probable longer-term demographic impacts of current age-specific programs on government expenditures in Canada and, hence, to provide an insight into likely future developments. Such an analysis is accomplished by holding the per capita expenditure weights constant over time so that the effects of population growth and population aging on government expenditures can be isolated. Of course, there are other factors contributing to the actual growth of government expenditures, but they are not considered in this paper.

These calculations are summarized in Table 3 for the historical post-war period (1941–1981) and for a comparable future period (1981–2021). They suggest that if the programs of the mid-1970s had been in effect, the pre-Baby Boom period of the 1940s would have seen all demographically-induced government expenditures growing by a similar amount. The arrival of the Baby Boom generation in the 1950s would have resulted in above-average growth in demographically-induced municipal expenditures, approximately average growth in comparable provincial expenditures and

**Table 3**

Population growth and the demographically induced growth in real government expenditures by level of government (per cent)

Period	Population	Federal	Provincial	Municipal	All
History:					
1941–1951	21.7	27.8	24.6	28.5	26.3
1951–1961	30.2	29.2	32.9	38.7	32.0
1961–1971	18.3	21.0	15.6	9.6	17.1
1971–1981	12.9	21.3	9.3	–1.0	13.2
Projection:					
1981–1991	10.6	17.6	10.5	8.5	13.4
1991–2001	6.5	10.4	5.8	2.4	7.6
2001–2011	4.0	8.5	3.5	0.1	5.6
2011–2021	2.4	15.5	4.9	4.3	9.9

SOURCE: Calculations by the author based on Table 2 and Foot (1982), projection 1.

below-average growth in demographically-induced federal expenditures. This ranking would have been reversed over the 1960s as the Baby Boom generation gradually came of working age, and dramatically continued over the 1970s when demographically-induced federal expenditures maintained the growth of the 1960s while provincial and, especially, municipal expenditures declined noticeably. Also over the 1970s the increased pace of population aging placed more persons in the elderly category which had a relatively greater impact on federal expenditures. Consequently, the atmosphere surrounding the recent fiscal arrangements (see Dobell, 1982) would hardly appear surprising in the light of these longer-term demographic trends.

What does the future hold in store *if* current constitutionally influenced expenditure responsibilities remain unchanged? First, the effects of population aging can be expected to continue to have a greater impact on federal expenditures than on the expenditures of the two sub-national levels of government. The fact that combined federal programs to the aged cost, in per capita terms, substantially more than the combined federal programs oriented to the dependent young ensures this outcome. Over the 1980s the growth in demographically-induced federal expenditures can be expected to decline slightly but will remain close to the levels experienced over the previous two decades. A noticeable change occurs at the two sub-national levels of government where the growth in demographically-induced expenditures *increases* over the previous decade. This is a reflection of the Baby Boom echo effect where, in spite of historically low fertility rates, the sheer size of the Baby Boom generation now in their prime procreative years results in more children being born. This effect is apparent in the 1981 census where there were more one year olds than any other single age group up to nine years, and can be expected to be reflected in increased health care and education expenditures, especially over the 1980s. As demonstrated in Tables 2 and 3, this primarily impacts the expenditures of the municipal, and especially, the provincial level of government resulting in a *reversal* of the trends

of the previous two decades. Beyond the 1980s, slowing population growth results in slowing expenditure growth for all levels of government, but the impacts of population aging are especially noticeable at the federal and, to a lesser extent, the provincial levels of government. The eventual retirement of the Baby Boom generation (commencing over 2011–2021) reverses these trends.

These results can be shown to be relatively insensitive to alternative population futures and to rather substantial variations in relative per capita expenditures. For example, a reversal of fertility trends which gradually increases the total fertility rate by almost 30 per cent by 2001 would add 1 per cent to total population growth and 2 per cent to age-specific government expenditure growth over 1981–91, and would increase the growth rates of federal, provincial and municipal age-specific government expenditures by 1.5, 2.1 and 3.2 per cent respectively. A reduction of immigration by almost 30 per cent throughout the period would reduce total population growth by almost 2 per cent and age-specific government expenditure growth by 1 per cent over 1981–91, and would decrease the growth rates of federal, provincial and municipal age-specific government expenditures by 0.8, 1.2 and 1.3 per cent respectively. In both cases,<sup>13</sup> the relative positions remain unchanged and the above conclusions remain substantially unaltered. In addition, if the coefficient for federal per capita expenditure on the dependent elderly was reduced by 50 per cent (from 2.11 to 1.05), the resulting federal demographically-induced expenditure growth (of 14.2 per cent over 1981–1991) would still exceed comparable provincial growth; or, alternatively, a doubling of the comparable provincial coefficient (from 0.71 to 1.42) would result in a provincial growth (of 12.8 per cent over 1981–1991) that was below comparable federal growth. Consequently, so long as the structure of government programs remains broadly similar to those reflected in Table 2, these general conclusions remain applicable and alternative calculations are unlikely to yield substantially different conclusions.

## IV Implications

The above calculations suggest that the 1980s are likely to be a turbulent period for fiscal federalism in Canada. Because of the constitutionally influenced structure of expenditure programs and the relative age-structure per capita costs of program delivery, the federal government can be expected to be under continuing expenditure pressures resulting from population aging. At the same time, both the provincial and municipal levels of government are likely to experience a reversal in the downward trends of the past two decades as the Baby Boom echo effect results in increased expenditures on young dependents. Under these conditions it would appear unlikely that a cordial atmosphere will prevail in fiscal federalism. Of course, one possible outcome might be the reassignment of expenditure responsibilities between levels of government, but this would appear unlikely since *all* levels of government are likely to be claiming (each with some justification) that their expenditure responsibilities are leading them into a fiscal imbalance!

Over a longer time horizon these calculations might be interpreted to indicate greater pressure for fiscal centralization in Canadian government. Population aging and the current structure and per capita costs of government programs mean that the growth in demographically-induced government expenditures will be considerably higher at the federal level than at the sub-national levels of government. Without the reallocation of expenditure responsibilities, the federal government can be expected to require increasing revenues to support these responsibilities if an emerging fiscal imbalance is to be avoided. Given the current structure and costs of public programs in Canada, longer term demographic developments, in particular population aging, appear to be leading the government sector from a fiscal imbalance in favour of the national government (over the 1950s and 1960s) through relative balance (over the 1970s and 1980s?) into a gradually emerging imbalance in favour of the sub-national levels of government (over the 1990s and beyond).<sup>14</sup> This will undoubtedly impact on, and have implications for, future fiscal federalism in Canada.

Of course demographic change is but one of a myriad of determinants of government expenditures in Canada and elsewhere. It may not be the most important determinant, especially over the relatively short duration of the traditional five-year fiscal arrangements that have characterized Canada's post-war fiscal federalism. Yet history has shown that it should not be neglected and the Established Programs Financing of health and education attests to its continued importance. A careful appreciation of the historical and likely future demographic trends can provide useful insights into the longer-term influences on fiscal federalism in Canada.

## Notes

- \* The author wishes to thank his colleagues R. Bird and S. Dupré, J. Feinberg and D. Stevenson of the Government of Ontario, S. Borins and the anonymous referees for useful comments on an earlier version of this paper.
- 1 For a review of the contents of its report see Simeon (1982).
- 2 See, for example, *Canadian Public Policy — Analyse de Politiques*, VII:3 and 4.
- 3 See, for example, Boulet and Grenier (1978), Denton and Spencer (1975, 1983), Gross and Schwenger (1981) and Lefebvre, Zsigmond and Devereaux (1979) on health care expenditures and Clark, Devereaux and Zsigmond (1979), Foot (1981), Foot and Pervin (1983) and Statistics Canada (1979) on education enrolments and expenditures.
- 4 For further details on fiscal federalism in Canada see Bird (1980, 1984) and Oates (1972).
- 5 Over the 1950s and 1960s it was generally accepted that a fiscal imbalance existed between the levels of government in Canada. For example, the report of the Tax Structure Committee of First Ministers and Ministers of Finance (1966), updated on several later occasions, was widely interpreted to indicate that the provincial-local sector was structurally underfunded relative to the national government (Ontario, 1982:B13). This occurred primarily as a result of increasing health care and educational expenditures, both provincial responsibilities, which were associated in part with the emergence of the Baby Boom generation. Recent research by the Parliamentary Task Force (1981:33) and the Economic Council of Canada (1982:118) concluded that *currently* there is no evidence that a structural imbalance exists.
- 6 The analysis concentrates on expenditures which are presumed to be much more demographically sensitive than revenues. Also no attempt is made to explore the impact of tax expenditures which, presumably, could be analysed in the same manner.
- 7 In Canada, local governments are creations of the

- provinces so federal-local fiscal arrangements are unconstitutional.
- 8 There were 16.50 million persons aged 15 to 64 years, 5.48 million persons aged 0 to 14 years and 2.36 million persons aged 65 years and over.
  - 9 And even this ignores the possibilities of changing average per capita costs as the group size changes; that is, economies or diseconomies of scale in the provision of services.
  - 10 Clark, Kreps and Spengler (1978:922) report a figure close to three for the US.
  - 11 Therefore, excluded are programs associated with defence, external affairs, transportation and communications, development and industry (including agriculture and housing), environment, recreation and culture, and general government. Also excluded are debt charges and CPP/QPP pension payments. In all cases government transfer payments are attributed as an expenditure to the level of government making the payment; thus, for example, all EPF payments are attributed to the federal government and education expenditures by municipal governments cover only those funded by local taxation and not those funded by provincial government transfers which are designated a provincial government expenditure.
  - 12 Consequently, it is hardly surprising that an examination of *current* expenditure levels reveals no structural or fiscal imbalance between the levels of government in Canada (see note 5).
  - 13 These population projections are described in more detail in Foot (1982), chapter 3, projection numbers 4 and 5.
  - 14 Note that this conclusion is not necessarily inconsistent with recent findings, as outlined in note 5.

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