

SEDAP

A PROGRAM FOR RESEARCH ON

SOCIAL AND ECONOMIC DIMENSIONS OF AN AGING POPULATION

**Health Care Expenditures, Public Administration and
the Business Cycle**

**François Béland
Co-director, Solidage**

SEDAP Research Paper No. 297

For further information about SEDAP and other papers in this series, see our web site:
<http://socserv.mcmaster.ca/sedap>

Requests for further information may be addressed to:
Secretary, SEDAP Research Program
Kenneth Taylor Hall, Room 426
McMaster University
Hamilton, Ontario, Canada, L8S 4M4
FAX: 905 521 8232 e-mail: sedap@mcmaster.ca

**Health Care Expenditures, Public Administration and
the Business Cycle**

**François Béland
Co-director, Solidage**

SEDAP Research Paper No. 297

May 2012

The Program for Research on Social and Economic Dimensions of an Aging Population (SEDAP) is an interdisciplinary research program centred at McMaster University with co-investigators at seventeen other universities in Canada and abroad. The SEDAP Research Paper series provides a vehicle for distributing the results of studies undertaken by those associated with the program. Authors take full responsibility for all expressions of opinion. SEDAP has been supported by the Social Sciences and Humanities Research Council since 1999, under the terms of its Major Collaborative Research Initiatives Program. Additional financial or other support is provided by the Canadian Institute for Health Information, the Canadian Institute of Actuaries, Citizenship and Immigration Canada, Indian and Northern Affairs Canada, ICES: Institute for Clinical Evaluative Sciences, IZA: Forschungsinstitut zur Zukunft der Arbeit GmbH (Institute for the Study of Labour), SFI: The Danish National Institute of Social Research, Social Development Canada, Statistics Canada, and participating universities in Canada (McMaster, Calgary, Carleton, Memorial, Montréal, New Brunswick, Queen's, Regina, Toronto, UBC, Victoria, Waterloo, Western, and York) and abroad (Copenhagen, New South Wales, University College London).

Health Care Expenditures, Public Administration and the Business Cycle

François Béland, PhD
Professeur titulaire
Administration de la santé
Faculté de médecine
Université de Montréal

Co-director, Solidage
Université de Montréal/McGill University Research
Group on Frailty and Aging
Institut Lady Davis
Jewish General Hospital

Abrégé

La pérennité financière du régime d'assurance santé au Canada est mise en doute et la récession de 2008-09 n'a fait qu'amplifier le mouvement. Une question lancinante est soulevée : « Comment les administrations publiques canadiennes parviendront-elles à assumer les dépenses de santé dans les années à venir, étant donné les pressions qu'exercent le remboursement de leur dette et le nouveau transfert fédéral pour la santé? ». Cet enjeu sera examiné en comparant, de 1989 à 2009, les variations d'un numérateur, c'est-à-dire, les dépenses de santé (DS) des administrations publiques à celles de dénominateurs, c'est-à-dire le PIB, les revenus des administrations publiques, leurs dépenses pour d'autres activités que la santé, les paiements de transferts fédéraux pour la santé et le service de la dette. Depuis l'an 2000, les administrations publiques ont accru leurs DS dans un contexte défini par : 1) une diminution de la part annuelle des revenus et des dépenses des administrations publiques dans la richesse nationale; 2) une part constante (70%) des dépenses pour activités hors santé sur l'ensemble de leurs dépenses; 3) une évolution parallèle, avec un délai de trois ans, du PIB et de leurs DS; 4) une part constante de leurs DS par rapport à leurs revenus de 2003 à 2007; 5) un apport relatif constant des transferts fédéraux aux dépenses de santé et dépenses pour les médecins et les hospitalisations; et 6) une évolution inverse des DS et du service de la dette. Étant donné ce contexte, la rhétorique apocalyptique sur le fardeau que représenteraient les DS des administrations publiques se voit gonfler, tandis que ce sont les facteurs du dénominateur qui tendent à l'expliquer, plutôt que ceux du numérateur.

Abstract

Claims of the unsustainability of Medicare abound and have been fuelled by the consequences of the 2008-09 economic recession. The looming question for Canadian public health care services is "How will public administrations in Canada sustain their health care expenditures during the next few years, given the pressure from debt recovery and the new federal payment transfer for health care?" To examine these issues, variations from 1989 to 2009 in Canadian public administration health care expenditures (HCE) are compared with variations in GDP, in public administration revenue, their expenditures on items other than health care, transfer payments for health from the federal government to provinces, and debt charges. Since the turn of the millennium, Canadian public administrations have increased HCE in constant dollars in context of: 1) decreasing share of public revenue and expenditures in terms of GDP; 2) constant share (70%), since 1996, of expenditures for items other than health care on total expenditures ; 3) parallel trends, with a 3 year lag, for GDP and expenditures for services covered by Medicare; 4) constant share of total HCE in terms of public administration total revenues from 2003 to 2007; 5) constant share of federal transfers for health on provincial public administration expenditures for total health care and for Medicare; and 6) reverse trends for share of HCE and debt charges. Given this context, the rhetoric of apocalyptic share of HCE on public administration budget is having a boost, while increases in this share has more to do with the factors included in the denominator rather than with those in the numerator.

Keywords: Healthcare expenditures, public administration, sustainability, federal transfers, debt charges

JEL Classification: I13, I18, H51, H75, H83

Claims of the unsustainability of Medicare abound (AMC, 2010; Montmarquette et al, 2005; Castonguay et al 2006; Ménard et al 2005; Rovere & Skinner 2009; Stuart & Adams 2007). The status quo does not seem to be an option anymore (Di Matteo & Di Matteo 2011; McCarthy 2006; Weatherill, 2004), whatever is meant by “the status quo”. Privatization is usually proposed as one way out from under this financial, management, and clinical mess, with policies favourable to private insurance, private delivery, and implementation of user fees (AMC, 2007:4; 2010:39; Castonguay et al 2008; Prémont 2008; Rovere & Skinner 2010). The rhetoric describes the US coming out from under an inefficient system driven by market forces, moving toward a mixed private-public system; Canada is seen as taking the same route, but from the opposite direction. Canada is described as moving toward a mixed public-private system from an inefficient public single-payer system (National Post 2010).

The unsustainability debate is fuelled by the consequences of the 2008-09 economic recession, given that patterns in governmental spending on health care are associated with trends in gross domestic product (GDP) and direct federal transfer payments to the provinces, as well as trends in public administration debt charges (Béland 2008). Compared with 2008, the 2009 real GDP declined by 2.8 percent in Canada. Growth has been surprisingly strong in 2010 at 3.1% (Statistics Canada 2011a). However, annual GDP growth is predicted to hover at 2.4% in the five-year period 2012-2016 (DFC, 2012). Public administrations in Canada played their role in the 2008-09 recession. As in the 1989-1991 recession, they spent on infrastructure, but their spending on health care was only slightly affected (Béland 2008). Debt charges are due to an increase in absolute and relative terms in post-recession years, and public spending on health care has been shown to be sensitive to debt charges (Ariste & Carr 2003; Gerdtham & Jönsson 2000; Di Matteo & Di Matteo 2009; Di Matteo 2010). Thus, expenditures on infrastructure financed through deficit, and debt charges, may crowd out health care. Finally, the 2013-14 escalator clause – 6% a year – of the 2003 federal-provincial agreement on health care transfer payments has been extended to 2016-17. Thereafter, transfer will grow at the GNP annual growth rate, with a floor set at 3%.

The looming question for Canadian public health care services is "How will public administrations in Canada sustain their health care expenditures during the next few years, given the pressure from debt recovery and the new federal payment transfer for health care?" This paper is concerned with the financial resources jointly devoted to health care by federal and provincial governments in Canada. Thus, the questions raised in this paper address the ability of public administration in Canada to cope with this responsibility. However, we will not be concerned with the constitutional, political and policy making interplay between governmental levels.

This paper examines how Canadian public administrations have reacted in the past to economic and fiscal challenges in financing health care. In the '90s, Canada was hit by an economic recession, and recovery was slow. Federal and provincial governments increased program expenditures, ran major deficits and their budgets were crippled by high debt charges in the aftermath of the 1990-92 recession. Federal transfer payments to the provinces were cut, and real expenditures on health care declined. Are we in for a remake of the same story? Karl Marx wrote that history repeats itself as a farce. (Marx 1852[2005]). But Canadians may find few reasons to laugh in the next few years. To review these issues, four questions are examined in this paper:

1. Are public administration health care expenditures (HCE), and more specifically medical and hospital care expenditures (MHCE), sensitive to trends in GDP?
2. What was the extent of variation in public administration revenue and expenditures with decline and growth in GDP? How are HCE related to public administration revenue?
3. In times of recession, public administrations increase their expenditures on items other than health care. How did debt charges and program expenditures on items other than health care evolve in the 1989-2008 period, and more specifically in the 1990-92 recession compared to HEC?
4. Direct transfer payments for Medicare from the federal to provincial public administrations are meant to sustain the latter's HCE earmarked for medical and hospital services. How did transfer payments for Medicare vary in real terms from 1989 to 2008? Are these variations associated with provincial public administration HCE?

Methods

Two Universes: CIHI and Statistics Canada Financial Management System

Public administrations are composed of all government sector entities included in public accounts, plus agencies and funds performing governmental functions (Statistics Canada 2009:7). They include ministries, departments, autonomous and non-autonomous funds, non-autonomous pension funds, and public organizations for educational and health and social services. The Canada/Québec Pension Plan (C/QPP), and government business enterprises, are excluded as “they operate in the market place, often in competition with privately owned organizations” (Statistics Canada 2009:14). Statistics Canada gives figures for two entities: first, “Federal/Provincial Government”; and second “General Federal/Provincial Government”. “General Government” excludes non-autonomous pension funds and education and health and social services public organization autonomous sources of income and associated spending¹.

Statistics Canada Financial Management System (FMS) provides financial data, from 1988-89 to 2008-09 fiscal years, on consolidated federal, provincial, territorial and local public administration revenue and expenditures, debt charges, health care, and on other items (Statistics Canada 2009b, table 385-0001). Data are also available at the levels of federal, provincial and territorial and municipal public administrations. The FMS does not consolidate federal and provincial financial data².

The Canadian Institute for Health Information (CIHI) has produced estimates of total and itemized HCE at the levels of municipal, provincial and territorial, and federal governments, of social security funds and the consolidated public sector for the 1975-2011 period (CIHI 2011:74). CIHI also uses Statistics Canada estimates on GDP, government explicit price indexes, and demographic figures on the Canadian population. Up until 2010, CIHI used Statistics Canada figures on provincial “General Governments” total and program spending.

¹ Items included in Statistics Canada financial figures for “Provincial and Federal Government” and “General Government” are not coterminous with figures from provincial government budgetary documents (Statistics Canada 2009:7). Also, the Canadian Institute on Health Information (CIHI) is using Statistics Canada figures from “General Government” as estimates of provincial total and program expenditures.

² Statistics Canada is adopting the International Monetary Fund accounting standard for government, called Government Finance Statistics. Data for 2008-09 will not be available until the end of 2012.

HCE in Canada are generally classified according to the OECD's *System for Health Account* categories (CIHI 2010a:82-83). CIHI and Statistics Canada HCE figures are not comparable (CIHI 2010a: 74, note xxi). Also, FMS and CIHI classifications of health care services for personal or institutional care are not compatible. For example, expenditures on physicians and hospitals show large discrepancies. Hospital care in the FMS includes acute, chronic, convalescent, and mental hospitals, while medical care includes not only care from physicians, but also expenditures for drug programs, dental care and visiting-nurse services (Statistics Canada 2009:43). CIHI estimates best represent public administration medical and hospital care expenditures. CIHI and Statistics Canada figures on health care spending will be compatible starting 2012 with Statistics Canada adopting the Government Finance Statistics standards of the International Monetary Fund.

Public HCE vs. Governmental HCE

Health care provided by public administration agencies, programs, and policies are financed through fiscal and non fiscal sources: 1) tax revenue; 2) direct transfers from the federal to the provincial governments; 3) direct user charges; 4) health insurance premiums; 5) co-insurance and co-payments; 6) social security contributions; and 7) tax subsidies. CIHI figures on public and governmental HCE include only those financed through tax revenue, federal transfers and contributions to social security funds (CIHI 2010a:73-75). CIHI figures estimate publicly funded HCE, not total expenditures on health care provided by public administrations. CIHI classifies public HCE into four sources of funds: provincial and territorial governments, federal government, social security funds, and municipalities (CIHI 2010a: 74). Social security funds include Workers' Compensation Boards (WCB) expenditures on health, and health insurance premiums (HIP) collected for Pharmacare in Québec. So called HIP that are not specifically tied to a health program are considered as income taxes by both CIHI and the FMS.

The FMS estimates HCE financed through tax and nontax revenue sources that is raised by governments or by public sector institutions or agencies (Statistic Canada 2009: 21), such as user fees charged by hospitals or nursing homes. These charges are collected by institutions included in the governmental sector to finance public administration activities. In 2008, \$12 billion was collected by health care and social services public administration institutions. The portion of this sum that was applied to health care was classified by CIHI as private health care spending. Total HCE attributable to public policies include all of the above plus tax subsidies for health care. For example, Québec's Pharmacare premiums (Finance Québec 2010:48), totalling \$778 million in 2008-09 (Finance Québec 2010:48), are classified as a source of nontax revenue for public administration. However, Québec Pharmacare co-insurance and co-payments, amounting to \$679 million in 2008-09, are defined as private health care expenditures, even though they are regulated by the Québec government. Both CIHI and the FMS consider only premiums, classifying them as contributions to a social security program, in their estimates of public administration HCE in Québec. Public administrations in Canada have in the recent past reduced the share of tax revenue and increased the share of nontax revenue in their total revenue. Also, they have increased the share of user fees and other charges in the budgets of public administration health care institutions. In 1989, public administrations own sources of revenue for health care accounted for 8.3% of HCE, in 2008, 9.6%.

In this paper, data on federal transfers for health services are taken from Finance Canada (2011). From 1996-97 to 2004-2005, federal transfers for social, educational and health programs were clustered into the Canada Health and Social Transfer (CHST). Thus, federal transfers for health services in this period were interpolated, using the proportion of transfers for health compared with the transfers for health, education and social programs at the beginning of the period as the starting point, and using the same proportion in 2004-2005 at the end point.

As CIHI provides figures for publicly funded HCE only, the FMS figures for health care and social services public administration institutions own sources of revenue (Statistics Canada, 2009:31-38) can be added to CIHI's figures. However, figures on total HCE that are attributable to co-insurance and co-payments, and tax subsidies, are not available from CIHI or the FMS.

Public Administration Revenue and Expenditures

CIHI provides estimates of HCE share of provincial governments total and program expenditures (CIHI 2010b:Tables B.4.4.; B.4.5). They are obtained as ratios of provincial governments HCE to "General Governments" total and program expenditures – see above for definition of "General Governments". HCE funded through social security are excluded from CIHI estimates of governments HCE. However, FMS "General Governments" expenditures include WCB total expenditures and HIP from Nova Scotia, Alberta and British Columbia (Statistics Canada 2009:36,44,64; Statistics Canada 2011b:385-0002). Thus CIHI numerators exclude categories of HCE included in the FMS denominators. CIHI estimates of HCE share of provincial governments total and program expenditures are thus error prone.

Whether HIP and total WCB expenditures should be subtracted from FMS "General Governments" provincial total and program expenditures, or whether health care funded through social security should be added to CIHI estimates of governmental HCE, is an issue. Choosing the latter alternative would have added \$ 2.3 billion to provincial governments \$112 billion spending on health in 2008.

Breaks in Public Administration Revenue and Expenditures Time Series

Time series on "General Governments" and on "Provincial Governments" revenue and expenditures are available from 1988-89 to 2008-09 (Statistics Canada 2011b, tables 385-0001 to 385-0003; 385-0006 to 385-0009; 385-0022). Within this period, changes were introduced in the FMS methods and procedures (Statistics Canada 2009: Chapter 2 and Appendix B). Historical data on public administration revenue and spending are available from the FMS for the 1965-66 to 1991-92 period (Statistics Canada, 1992). Some autonomous and non-autonomous funds were not considered in these series, and they are not strictly comparable to the 1988-89 to 2008-09 "General Governments" series. Data for overlapping years show small differences between the 1965-66 to 1991-92 and the 1988-89 to 2008-09 FMS series.

CIHI provides time series, from 1974-75 to 2009-10, on provincial "General Governments" total and program expenditures (CIHI 2010:Appendix D). CIHI figures for the 1988-89 to 2008-2009 fiscal years correspond to those found in Statistics Canada table 385-0002. Figures for the 1974-75 to 1983-84 period are the same as those found in the Statistics Canada (1992) FMS historical

data set. We were not able to explain some of the small discrepancies between CIHI and FMS figures for years 1984-85 to 1987-88.

Previous studies of governmental HCE time series have used CIHI figures on provincial governments total or program expenditures. These studies have not usually been concerned with the changes introduced by FMS historical revisions. These changes are not a concern in our study either. Other studies on trends in HCE in Canada have used FMS data from 1999-2000 and onwards only, without explicit reference to FMS historical revisions to justify their choice of this starting year (for example see Skinner & Rovere 2009).

In our study, we are interested in estimating HCE financed through all sources of revenue, not only fiscal sources. We are interested in the issue of public administration – see above for a definition of “public administration” – financing of and spending on Medicare. Denominators for estimating HCE weight on public administration resources should include all sources of revenue and expenditures. Thus, we will use data on “Federal Government”, “Provincial and Territorial Government”, “Local Government” and “First Nations and other Aboriginal Government” from Statistic Canada (2011b) Table 385-0001. These figures include revenue and expenditures for all ministries, departments, autonomous and non-autonomous funds, as well as expenditures from WCB, non-autonomous pension plans, university and college plans, and health and social services institutions financed with their own sources of revenue (Statistic Canada, 2009:68).

Choosing a HCE Universe

In this paper, we are interested in the ability of public administrations in Canada to sustain Medicare and, more generally, in their activities in the health care sector. Public administration HCE are estimated using two sources, first CIHI public HCE (CIHI 2010b: Table C.3.1) to which are added FMS figures as a proxy for health care public institutions own sources of revenue and expenditures (Statistics Canada 2011b: 385-0008).

The FMS provides merged figures on both social services and health care institutions own sources of revenue (Statistic Canada Table 385-0008). A proxy for health care institutions own sources of revenue had to be obtained. Time series on health care institutions own sources of revenue were estimated by applying the proportions that health care institution expenditures represent over the expenditures for health and social care institutions. For example, health accounted for 88.7% of health and social services public administration institution expenditures in 2008-09.

Public HCE include medical and hospital care, care from other health professionals, nursing homes, drugs, home health care services, public health, research, administration and capital (CIHI 2010a). From this list, only medical and hospital care are covered by Medicare in Canada, and services are generally free from user charges and other forms of indirect payments from users. However, inpatients are paying out-of-pocket, or through private insurance, for amenities such as a private room. These payments will show up in hospitals own sources of revenue in the FMS. For example, in Québec, these payments amounted to \$63 million in 2009-10 (Finance Québec 2010:60). Direct payments, charges, or user fees for physician services pass through public institutions. To obtain public institutions own sources of revenue for Medicare, we have used estimates from Québec Health Accounts (Finance Québec 2010), and applied these data to

Canadian public administration total spending on hospital care. In 2008, public institutions own sources of revenue for Medicare were estimated at \$1.762 billion, or 18% of their own sources of revenue for health care³.

Consistent with CIHI (2010a:92), all dollar figures are reported at constant (1997) price levels. Also, CIHI has used the calendar year for most of its figures while the FMS used the fiscal year. FMS figures have been adapted to the calendar year, using the CIHI format (2010a:92).

Answers to Four Questions

1. Are public administration HCE, and more specifically medical and hospital care expenditures (MHCE), sensitive to trends in GDP?

With the 1990-92 recession (Cross 2001), real GDP plateaued between 1989 and 1990 and declined in 1991 (Figure 1). Only in 1993 did real GDP exceed the 1989 level. From 1993 on, Canada experienced a long period of economic growth. Starting with the 2001 economic slowdown (Cross 2005) until 2008, GDP increased at a lower rate than in the 1993-2000 period. Thus, there are two episodes in the GDP time series with potential decelerating effects on rates of growth of public administration HCE: the 1990-92 recession and the 2001 economic slowdown.

Public administration HCE increased by one full percentage point in terms of GDP in the 1990-92 recession. Expenditure on both physicians and hospitals (MHCE) and on other health care items increased by half a GDP percentage point in the same period (Figure 2). In real terms, HCE flattened after the recession, only to increase in one of the longest periods of economic growth in Canada (Figure 3). However, MHCE were penalized after the recession. Health services other than medical and hospital care experienced continuous growth over the 1989 to 2008 period. Only in 2000, did MHCE exceed their 1992 level (Figure 3). Thus, HCE were sensitive to the 1990-92 recession, reflecting a lag. There was no break in HCE rate of growth corresponding to the 2001 economic slowdown, rather HCE share of GDP increased from 2001 to 2003 (Figure 2).

To explore further the association of public administration HCE with GDP, we obtained a graphic illustration of the joint evolution of GDP and public administration HCE, projecting their cumulative rates of increase with a three-year lag applied to GDP over HCE (Figure 4). Public administration HCE are shown to have flattened from 1992 to 1996 until GDP reached its pre-recession level. Both were on an uptrend, though HCE growth rates were higher than GDP growth rates. However, from 2004 on, HCE growth rates continued their course, while those of GDP experienced a reduction three years earlier. Patterns of growth of MHCE on the one hand, and of other health care items on the other, show divergent paths (Figure 3). After the 1990-92 recession, MHCE growth rates are in same range as GDP growth rates until 2004. Expenditures on items other than physicians and hospitals, with rates of growth that are twice as fast GDP in some years, are the real public administration health care cost drivers.

³ Sustainability of public administration HCE is not the same as HCE fiscal sustainability. The latter is based on fiscal sources of revenue, such as income taxes. However, public administrations have multiple sources of income, including contributions from public services users. Thus, CIHI should provide data on public administration revenue and expenditures based on fiscal and non-fiscal sources.

2. *What was the extent of variation in public administration revenue and expenditures with decline and growth in GDP? How are HCE related to public administration revenue?*

Public administration expenditures accounted for 45.3% of GDP in 1989 and 37% in 2008, with a peak in 1992, to be expected in a time of recession (Figure 5). Public administrations entered the 1990-92 recession with a large deficit, as shown by the large difference between revenue and expenditure curves in Figures 5 and 6. It was not until 1999 that revenue exceeded expenditures. The deficit reached \$31 billion in 1989, increasing to \$65 billion in 1992. Deficits were experienced again in 2002 and 2003, following the 2001 economic slowdown (Figures 5 and 6). Starting in 1998, even though public administration revenue and expenditures increased in real terms, their share of GDP decreased from 42% to 37%.

In what follows, public administrations HCE are compared to their revenue, not to their program expenditures, nor to their revenue minus debt charges as in Skinner & Rovere (2010). Debt charges will be considered in question 3 below. In terms of their share of public administration revenue, HCE and MHCE experienced large swings (Figure 7). For example, increases from 2000 to 2004 were followed by years of flat growth. With the 2008 recession, HCE and MHCE shares in public administration revenue were increasing again in relative terms (Figure 7). From 1989 to 2008, expenditures on items other than physicians and hospitals did not experience reduction in their share of public administration revenue, while expenditures on Medicare swung from 10 to 13%, with some years without growth. Thus, expenditures on Medicare seem to be more sensitive to variations in public administration expenditures than expenditures on health care services not covered by Medicare.

3. *In times of recession, public administrations increase their expenditures on items other than health care. How did debt charges and program expenditures on items other than health care evolve in the 1989-2008 period, and more specifically in the 1990-92 recession, compared to HCE?*

In terms of their share of public administration revenue, program expenditures on items other than health showed the usual pattern in the 1990-92 recession, only to decrease and then flatten in time of economic growth (Figure 8). In effect, they increased by \$24 billion in the 1990-92 recession, and then decreased up until 1997 to a level somewhat higher than before the recession. The increase during the recession was “financed with borrowed money”: the public administration annual deficit increased by \$31 billion in 1992 compared to the 1989 level. In 2007, public administrations spent \$318 billion in program expenditures other than health, up from \$255 billion in 1997 (Figure 9). Thus, increases in real terms in program expenditures on items other than health occurred in conjunction with increases in real terms in HCE. However, program expenditures on items other than health care were a constant share of public administration revenue from 1997 on (Figure 8). Increases in real terms can occur with stability in relative terms.

Another public administration expenditures item that is said to crowd out all other expenditures is debt charges. Debt charges may also crowd out HCE. Interestingly, trends in real HCE and debt charges are showing exact reverse patterns starting in 1998 (Figure 9). Expenditures on debt charges in the 1998 to 2008 period went down by \$25 billion and HCE were up by \$34 billion (Figure 9). Also, the shares of debt charges and HCE on public administration revenue have

reversed their patterns, with increases in HCE being “compensated for” by decreases in debt charges mainly in the 1997 to 2008 period (Figure 8).

4. *Direct transfer payments for Medicare from the federal to provincial public administrations are meant to sustain the latter’s HCE earmarked for medical and hospital services. How did transfer payments for Medicare vary in real terms from 1989 to 2008? Are these variations associated with provincial public administration HCE?*

In the first year of the 1990-1992 recession, direct transfer payments for health from the federal government to provinces – Canadian Transfer for Health (CHT) – were reduced by \$1 billion (Figure 10). In 1990, they represented 18.9% of provincial public administration expenditures for Medicare, down from 21.9% in 1989. CHT were increased in 1992, only to be followed by a dramatic decrease for 5 years (Figure 10). In effect, in 1997 15.4% of provincial Medicare expenditures were financed with CHT. The \$2.7 billion decrease in CHT from 1992 to 1997 corresponds to the \$2.7 billion decrease in provincial public administration expenditures on Medicare in the same period. In terms of their share of total public administration health expenditures, CHT decreased from 14.9% in 1992 to 9.9% in 1997. In terms of their share of provincial administration revenue, CHT fell from 5% to 3% (Figure 11). Interestingly, provincial health care administration institutions own sources of revenue increased from 8.2% to 9.6% from 1993 to 1998.

CHT were increased in two sequences, first from 1997 to 2004, and then from 2005 up to 2008. The provincial public administration \$8 billion increase in expenditures for Medicare from 2000 to 2004 was financed with the \$8 billion increase in the estimated federal transfers for Medicare. The share of these transfers in provincial public administration expenditures for Medicare doubled from 2000 to 2004; this was an increase from 15.4% in 2000 to 30.2% in 2004. Subsequent increases served to maintain the share of CHT at the level of 30% of provincial public administration expenditures on Medicare (Figure 11).

Fiscal pressures on provincial public administrations were at their height in the ’90s with increasing debt charges and decreasing direct transfer payments for health (Figures 10, 12, 13). In those years, growth rates for expenditures on Medicare decreased in real terms and the trend for total HCE was flat (Figure 12). HCE were decreasing as a share of provincial public administration revenue from 1993 to 1995; for Medicare, this trend carried through to 1999. These trends were reversed from 1998 on with growth in total provincial administration revenue. But in 2001, income growth was negative and did not begin to increase until 2 years later, even though the growth rate of debt charges had been in the negative since 1996. However, both decreasing debt charges and increases in the CHT compensated somewhat for the decrease in revenue that had started in 2001.

Discussion

Trends in Canadian public administration expenditures for health care and Medicare in the 1989-2008 period were compared with trends in GDP, in public administration revenue, federal transfer payments for health care, debt charges, and expenditures for items other than health care.

First, from 1989 to 2003, trends in HCE were closely adjusted to GDP with a 3 year lag; from 2004 on, growth in GDP slowed down while HCE continued to grow linearly. However, MHCE followed GDP time trends more closely than other health care items.

Second, public administration revenue and expenditures have been a decreasing proportion of GDP since 1992. Consequently, HCE share of public administration revenue is higher in the 2003-2008 period than in the 1989-2002 period. Nonetheless, MHCE accounted for more or less the same proportion (12%) of Canadian public administration revenue in the 2000's as at the beginning of the 1990's. Also, MHCE were more sensitive to trends in public administration revenue than other health care items. HCE share of public administration revenue increased with the 2008-09 recession.

Third, Canadian public administration expenditures on items other than health care maintained a constant proportion of their revenue (70%), from 1996 on, while HCE increased from 16.5% to 20.6% in the 2000's. In the same period, debt charges share was cut by half. HCE and debt charges showed a reverse trend pattern.

Fourth, provincial administration expenditures on Medicare and federal transfer payments for health care were closely related, mainly in times of deep cuts (1992-1997) and increases (2000-2004). The share of federal health transfers in provincial administration MHCE and HCE doubled from the end of the 1990's to the end of the 2000's. In 2008, they accounted for 6% of their total revenue, compared with 3% in the 1990's.

The foregoing analysis shows that HCE share a common feature with other public program expenditures: they vary with business cycles, with debt charges, with transfer payments, and with provincial public administrations' ability and willingness to raise revenue from their own tax-base. For example, from 2000 to 2002, provincial public administration revenue was decreasing in real terms while their HCE expenditures were increasing. The gap was filled with decreasing debt charges and increasing federal transfer payments for health. Provincial administration revenue started to increase again in 2004, and debt charges continued on a negative trend, while rates of increase in federal transfers for health were lower starting in 2004, than in the 2000-2004 period, in spite of the 2004 federal-provincial agreement on the Canadian Health Transfer (CHT). Also, provincial public administrations increased the share of HCE accounted for by health care public administration institutions own sources of revenue. For example, these sources of revenue tended to increase in the aftermath of the 1989-92 recession, a time of shrinking public spending on health care and a reduction in federal transfer payments to provinces. These results correspond with Di Matteo's conclusions (2000) in regard to the alignment of the public-private split in HCE with long-term economic trends and with the increases and decreases in federal transfers.

What does this tell us about the future and the sustainability of Medicare and, more generally, of public administration HCE? Are there any lessons that could help design policies for sustaining public financing of health care?

Since the turn of the millennium, Canadian public administrations have increased HCE in constant dollars in context of: 1) decreasing share of public revenue and expenditures in terms of GDP since the beginning of the '90s; 2) constant share (70%), since 1996, of expenditures for items other than health care on total expenditures ; 3) parallel trends, with a 3 year lag, for GDP

and HCE covered by Medicare; 4) constant share of total HCE in terms of public administration total revenues from 2003 to 2007; and 5) constant share of CHT on provincial public administration expenditures for total health care and for Medicare. Considering the above contextual factors, and an expectation that economic growth in the next 5 years will reach the 2008 prerecession rates, the apocalyptic view on public financing of health care does not seem rational. Yet, it may be the irrational viewpoint that will drive federal and provincial governments in Canada to fundamentally alter their commitment toward Medicare in the next five years.

An apocalyptic view of public health care financing is seemingly sustained by consequences of the 2008-09 recession basic parameters: First, public administrations have financed increases in public spending during the recession with borrowed money; second, debt charges will increase; third, federal transfers for health are inversely related to debt charges; and fourth increasing debt charges and decreasing federal transfers for health are associated with decreasing public administration HCE. Though these four trends may be understood as making up the components of an “Iron law” of public financing of health care, they are accompanied by public policy choices that are not casted into an immutable mould. However, the following scenario may fit the ideological view of many of the federal and provincial governments in Canada. First, public administrations are not taking the 80’s route. In the 1981 recession, and in the following years, public administration total and program expenditures increased, including health care expenditures, resulting in annual deficits and debt charges. Second, federal and provincial government alike are promoting “less government” and a return to balanced budgets in the short to medium term. They are also targeting budget cuts to reduce expenditures. Third, the renewal of 2004 provincial-federal agreement on health care transfers ended with a reducing in their rate of increase. Fourth, federal and provincial governments are not likely to increase their revenue through taxes. And finally, some provincial governments are promoting user fees and other out-of-pocket contributions in order to raise revenues. Québec is a case in point (Montmarquette & al. 2008; Finance Québec 2010).

The increasing debt charges due to public administration borrowing in the 2008-09 recession, along reductions in federal health care transfers starting in 2017-18, may take Medicare back to the ’90s era. At that point, the federal government unilaterally reduced federal transfers and provincial governments cut their HCE as well as their total expenditures. HCE growth was adjusted to levels lower than growth in GDP. Hospitals were closed, the number of hospital beds was cut, and retirement packages were offered successfully to health care professionals. Are public administrations moving in this direction again? Will Medicare in 2017-2020 be able to sustain a repeat of the mid-90s shock? Will the public health care system show the same resilience as it did in the ’90s? In any case, since the late ’90s promoters of private financing and delivery of health care are better organized, and some provincial governments have proved willing to implement policies and adopt legislation favourable to the development of a two-tier medical and hospital care system (Prémont 2008).

The federal government argued and implemented a radical change in the CHT in view of its own budgetary and fiscal policies, its agenda on reducing the deficit, debt charges, and expenditures, its shrinking tax based revenue, and ideological choices. Thus, some provincial governments may be willing to introduce third-payer and user fee schemes to make up for the loss of income they would incur from a radically revised CHT. And a federal government lead by the Conservative party may be willing to let go provincial governments with “experimenting” with “new models”

of financing health care, as suggested by a Fraser Institute report (Skinner & Rovere 2010). Though unsuccessful, the government of Québec tried to push a political agenda favourable to a poll tax for health care and user fees for medical services at the Council of the Federation 2010 meeting (Tremblay 2010). However, in 2008, out-of-pocket and other contributions from users already accounted for nearly 10% of public administration HCE in Canada. Though no real solution for controlling HCE, planned increases in these contributions can be used to justify reduction in public financing of health care, combined with de-insurance of a selection of medical procedures, with the introduction of legislation favourable toward third-party private payers and insurers, and with the provincial public administrations political and fiscal responsibility for Medicare and of other health and social care in Canada.

References

AMC (2010), Appendice A – Le financement des soins de santé et le défi de la viabilité, pages 35-41, in *La transformation des soins de santé au Canada*, Ottawa, Association médicale canadienne.

Ariste R & Carr J (2003), *Health human resources: cost driver of the Canadian health care system*, Ottawa, Health Canada, Applied Research and Analysis Directorate, <<http://ssrn.com/abstract=1015803>> (15 mars 2007)

Castonguay, J., Castonguay C. et Montmarquette C. (2006), *La pérennité du système de santé : un enjeu de finances publiques*, Mémoire présenté à la Commission des Affaires sociales, Cirano, http://www.cirano.qc.ca/pdf/Perennite_sante.pdf, (22 avril 2008)

Castonguay, C., Marcotte, J. et Venne, M. (2008), *En avoir pour son argent*, Groupe de travail sur le financement du système de santé, Ministère des Finances du Québec, Québec, 11 février, <http://www.financementsante.gouv.qc.ca/fr/rapport/pdf/RapportFR_FinancementSante.pdf> (17 avril 2008).

CIHI (2010a), *Tendances des dépenses nationales de santé, 1975 à 2010*, Ottawa, Institut canadien d'information sur la santé.

CIHI (2010b), <<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1556&lang=en&media=0>> (27 mars 2011).

Cross P (2001), *Expenditure on GDP and business cycles*, Canadian Economic Observer, Statistics Canada.

Cross P (2005), *Long-run cycles in business investment*, Canadian Economic Observer, Statistics Canada.

Curry B, *Ottawa signals slowdown in provincial payouts*, The Globe and Mail, 26 Oct. <<http://m.theglobeandmail.com/news/politics/ottawa-signals-slowdown-in-provincial-payouts/article1754511/?service=mobile>> (30 mars 2011).

DFC (2012) *Résultats de l'enquête menée par le ministère de Finances auprès des prévisionnistes du secteur privé en mars 2012*, <<http://www.fin.gc.ca/pub/psf-ppsp/index-fra.asp>> (24 avril 2012).

Di Matteo L (2000) *The determinants of the public-private mix in Canadian health care expenditures: 1975-1996*, *Health Policy*, 52:87-112.

Di Matteo L (2010), *The sustainability of public health expenditures: evidence from the Canadian federation*, *European Journal of Health Economics*, Published online: 12 January 2010.

Di Matteo L & Di Matteo R (2009), The fiscal sustainability of Alberta's public health care system, The School of Public Policy SPP Research Papers, The Health Series, Vol2, Issue 2.

Di Matteo L & Di Matteo R (2012), Viabilité financière des systèmes publics de santé du Canada et politiques stratégiques quant au déséquilibre budgétaire, Ottawa, Série d'études de la FCRSS sur les modèles de financement : Document 5, FCRSS.

Evans RG (2005) Baneful legacy : Medicare and Mr. Trudeau, Healthcare Policy, 1:20-25.
<<http://www.longwoods.com/content/17562>> (30 mars 2005).

Finance Canada (2010), Update of Economic and Fiscal Projections, Ottawa,
<www.fin.gc.ca/ec2010/pdf/efp-pef-eng.pdf> (30 mars 2010).

Finance Canada (2011), Table 11. Major transfers to other levels of government,
<<http://www.fin.gc.ca/frt-trf/2010/frt-trf-1002-eng.asp#tbl11>> (27 mars 2011).

Finance Québec (2010), For a More Efficient and Better Funded Health-Care System, Québec, Gouvernement du Québec.

FMC <http://www.fin.gc.ca/frt-trf/2009/frt0902-eng.asp#tbl11>

Gerdtham U-G & Jönsson B (2000), Expenditure: Theory, data and econometric analysis, pages 12-45, in Culyer AJ & Newhouse JP, *Handbook of Health Economics*, Vol I, Elsevier Science.

Public finance historical data, 1965/66-1991/92 / Statistics Canada, Public Institutions Division, System of National Accounts Branch = Finances publiques, données historiques, 1965/66-1991/92 / Statistique Canada, Division des institutions publiques, Direction du système de la comptabilité nationale.

Marx K (1852[2005]) The Eighteenth Brumaire of Louis Napoleon,
<http://www.marxists.org/archive/marx/works/1852/18th-brumaire/ch01.htm> (1 of 11)6/17/2005 7:24:40 AM

McCarthy M (2006), Brian Day: CMA's next president support private health care, The Lancet, 368:1321. <[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(06\)69542-1/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)69542-1/fulltext)> (30 mars 2011).

Ménard, J.-P. *et al.* (2005), *Pour sortir de l'impasse : la solidarité entre nos générations*, Rapport du Comité de travail sur la pérennité du système de santé et de services sociaux du Québec, Ministère de la Santé et des Services sociaux, Québec,
<<http://publications.msss.gouv.qc.ca/acrobat/f/documentation/2005/Rapportmenard.pdf>> (17 avril 2008).

Montmarquette C, Giroux V, Castonguay J, (2005) *Pour un financement durable de la santé au Québec*, Montréal, Rapport Bourgogne, CIRANO.

Montmarquette C, Facal J, Lachapelle L (2008), Mieux tarifer pour mieux vivre ensemble, Groupe de travail sur la tarification des services publics, Ministère des finances, Québec.

National Post (2010), National Post editorial board: America's health, and our own, March 23, <<http://network.nationalpost.com/NP/blogs/fullcomment/archive/2010/03/23/national-post-editorial-board-america-s-health-and-our-own.aspx>> (29 mars 2011).

Prémont MC (2008), Clearing the path for private health markets in post-Chaoulli Quebec, HeinONLINE, <<http://heinonline.org/HOL/LandingPage?collection=journals&handle=hein.journals/hthlj99&div=14&id=&page=>> (26 mars 2011).

Rovere M & Skinner BJ (2010), Value for Money from Health Insurance Systems in Canada and the OECD, Vancouver, Fraser Institute. <<http://www.fraserinstitute.org/research-news/news/display.aspx?id=16956>> (26 mars 2011).

Skinner BJ & Rovere M (2009), Paying More, Getting Less: Measuring the Sustainability of Government Health Spending in Canada, Vancouver, Fraser Institute.

Skinner BJ & Rovere M (2010), Value for Money from Health Insurance Systems in Canada and the OECD, Fraser Alert, Fraser Institute, October 2010, <<http://www.fraserinstitute.org/research-news/display.aspx?id=16774>> (5 mai 2011)

Statistics Canada (1992) Recettes et dépenses des administrations fédéral, provinciales et territoriales, Tableaux H1/H2/H3/H4/H7/H8/H9/H10.

Statistics Canada (2009), Système de gestion financière(SGF), N° 68F0023X, Ottawa.

Statistics Canada (2011a) Tableau 1 Produit intérieur brut réel, <<http://www.statcan.gc.ca/daily-quotidien/110228/t110228a1-fra.htm>> (29 mars 2011)

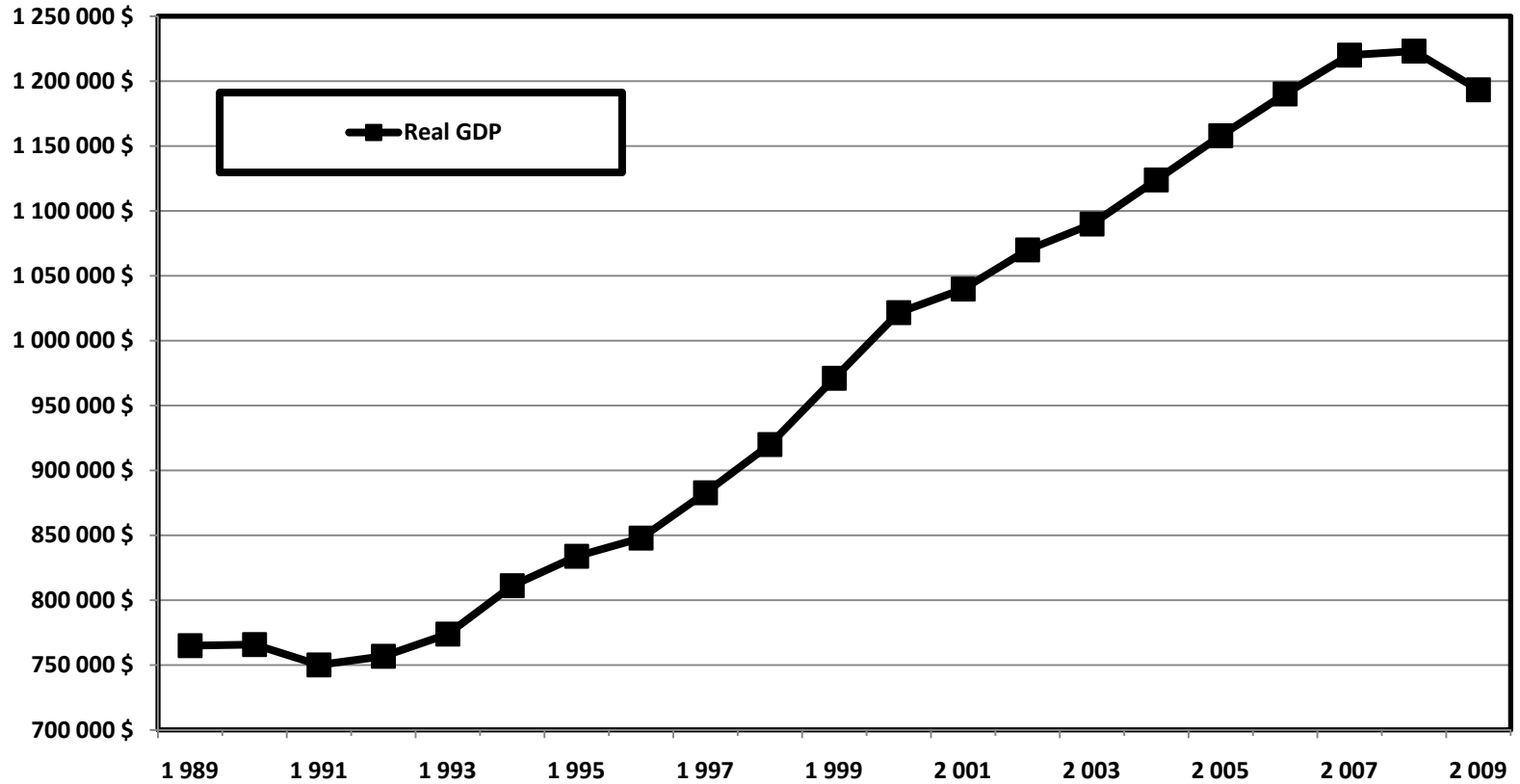
Statistics Canada (2011b), <http://estat2.statcan.gc.ca/cgi-win/cnsmcgi.pgm?LANG=F&CIITables=3766&ResultTemplate=ESTAT\CII_FLST&ROOTDIR=ESTAT/&LangFldr=Francais/&C2DB=> (27 mars 2011)

Stuart N & Adams J (2007), The sustainability of Canada's healthcare system: A framework for advancing the debate, *Healthcare Quarterly*, 10(2): 96-102

Tremblay G (2010), Conseil de la fédération – Les premiers ministres ne s'entendent pas sur la santé, *Le Devoir*, 7 août, <<http://www.ledevoir.com/politique/canada/293974/conseil-de-la-federation-les-premiers-ministres-ne-s-entendent-pas-sur-la-sante>> (30 mars 2011).

Weatherill S (2004) Public/Private Pragmatism, *HealthcarePapers*, 4(4):74-79.

Figure 1. Real GDP
1997 \$ [X 1,000,000], 1989 to 2009



**Figure 2. HCE and Expenditures on Medicare as Proportion of GDP
All Public Administrations, 1989 to 2008**

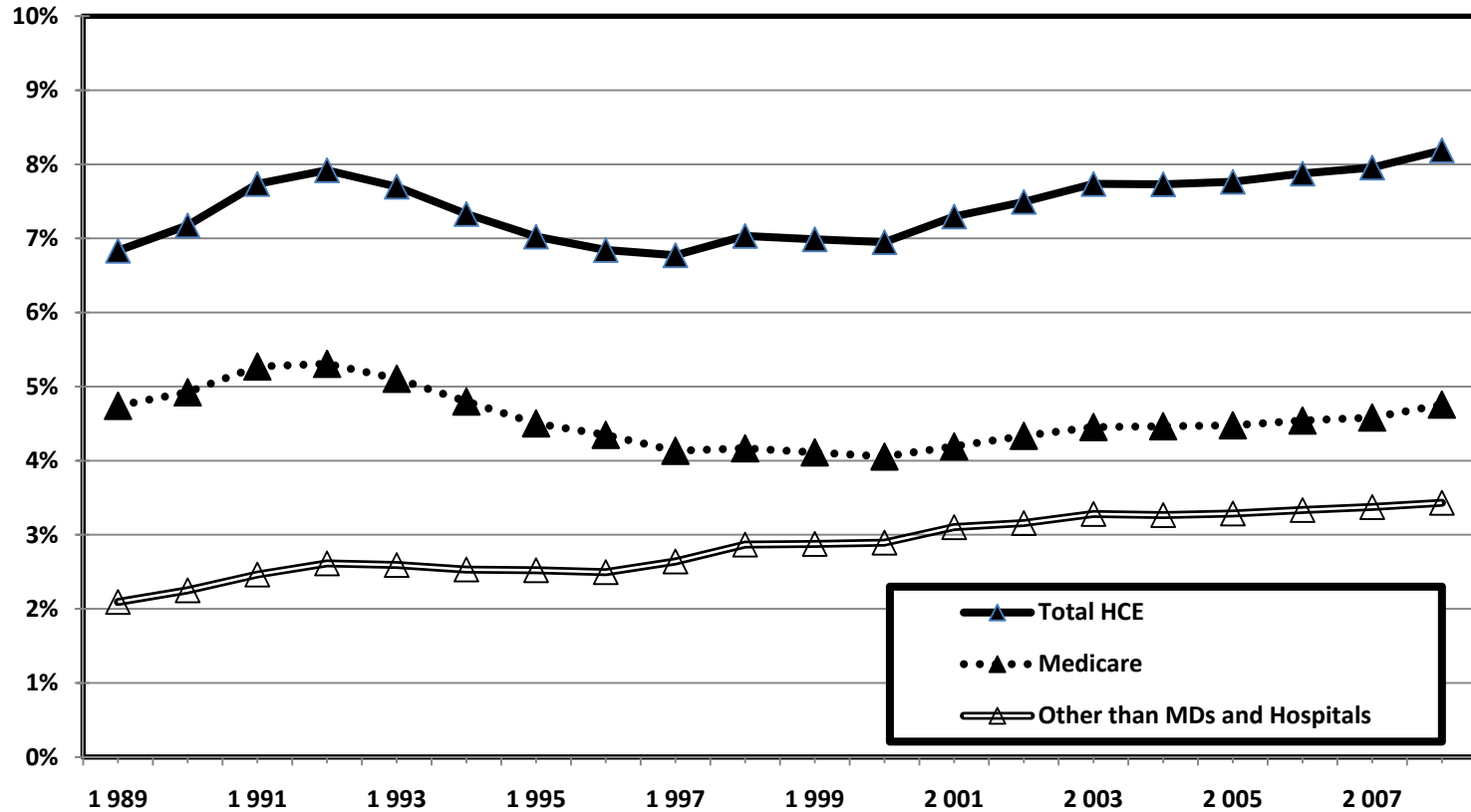
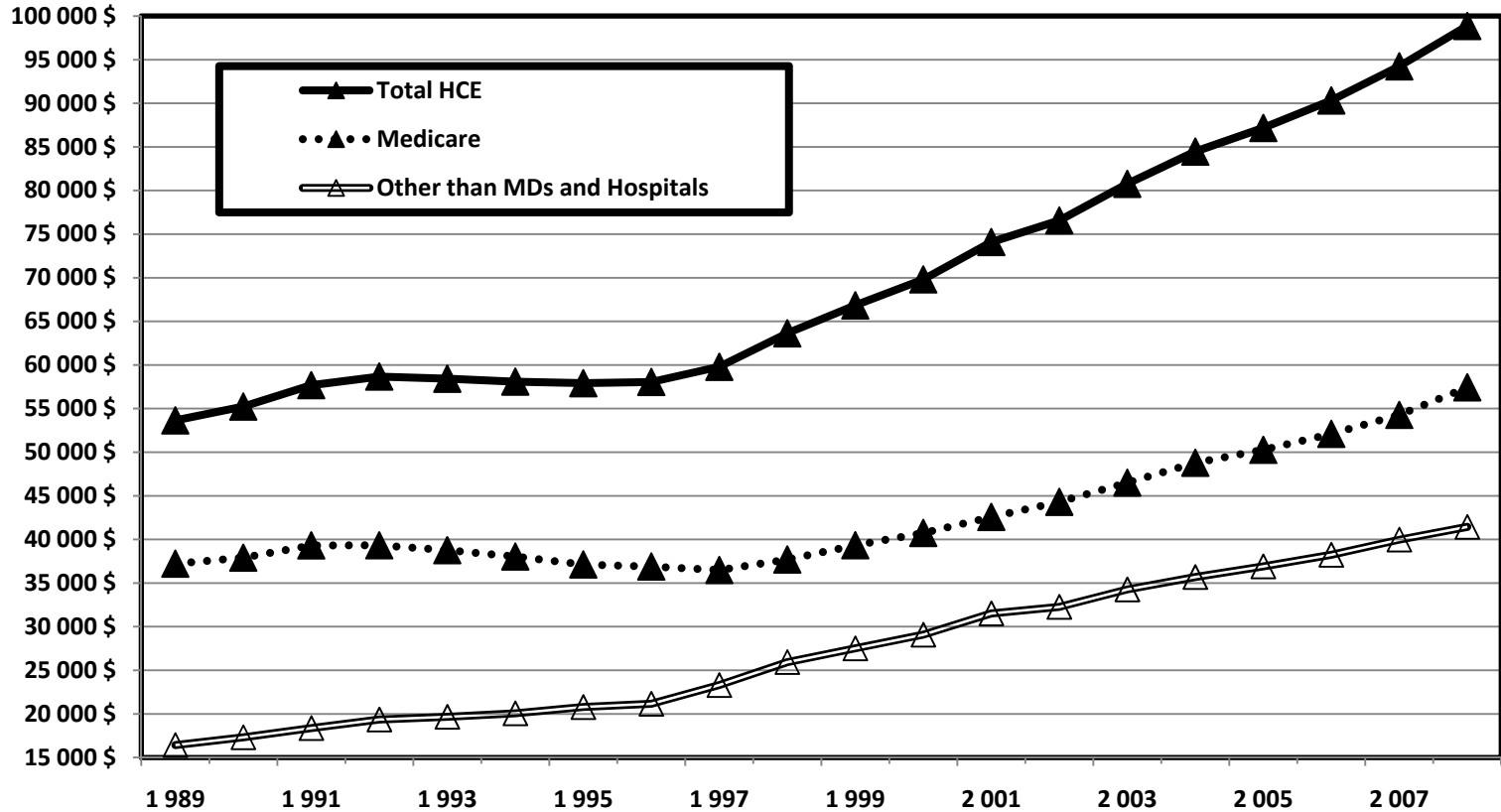


Figure 3. Real HCE and Expenditures on MDs and Hospitals
1997 \$ [X 1,000,000], 1989 to 2008



**Figure 4. Cumulative Rates of Increase: HCE and 3 Year Lag GDP
All Public Administrations, 1989 to 2008**

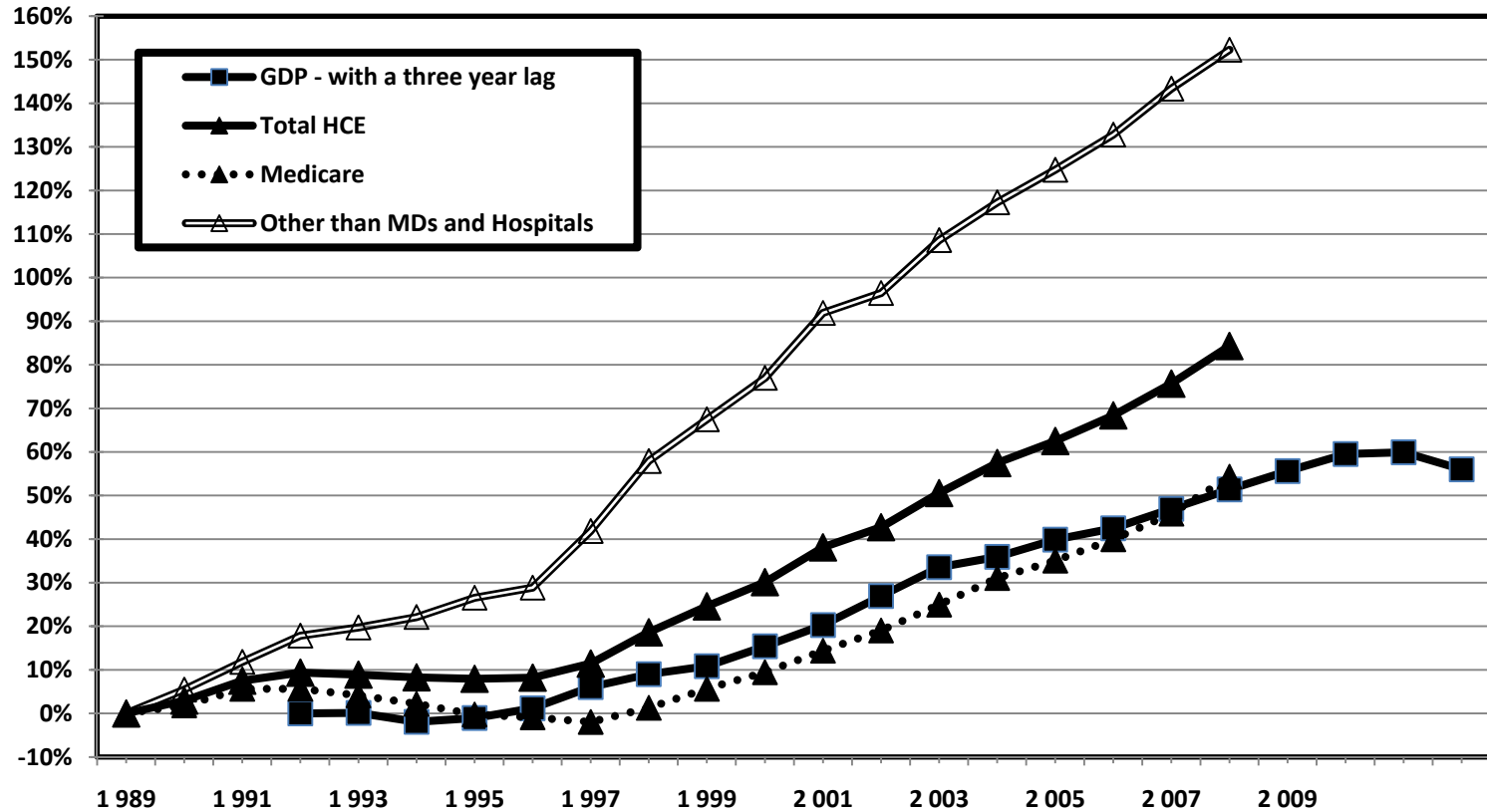


Figure 5. Revenue and Expenditures
% of GDP, All Public Administrations, 1989 to 2008

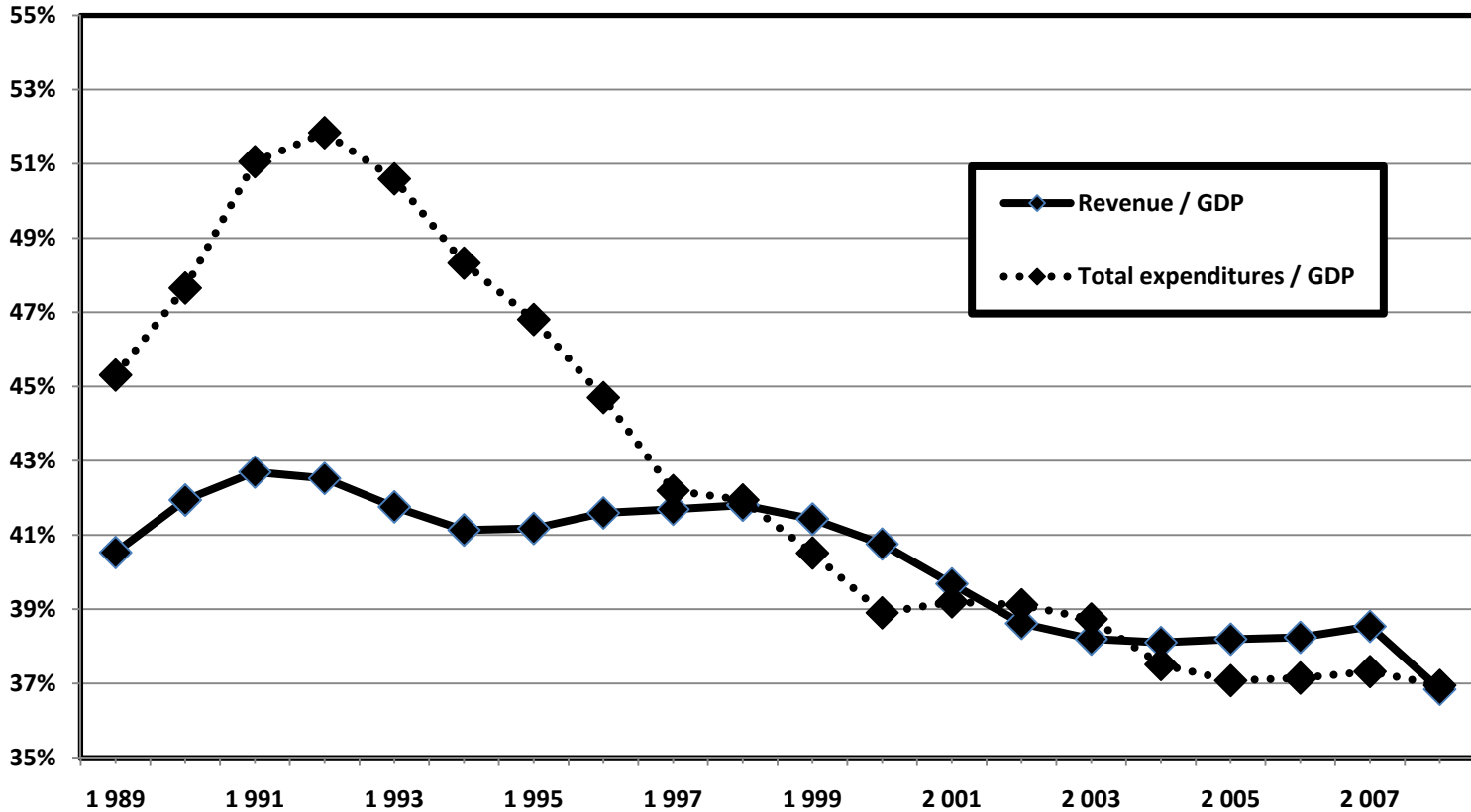
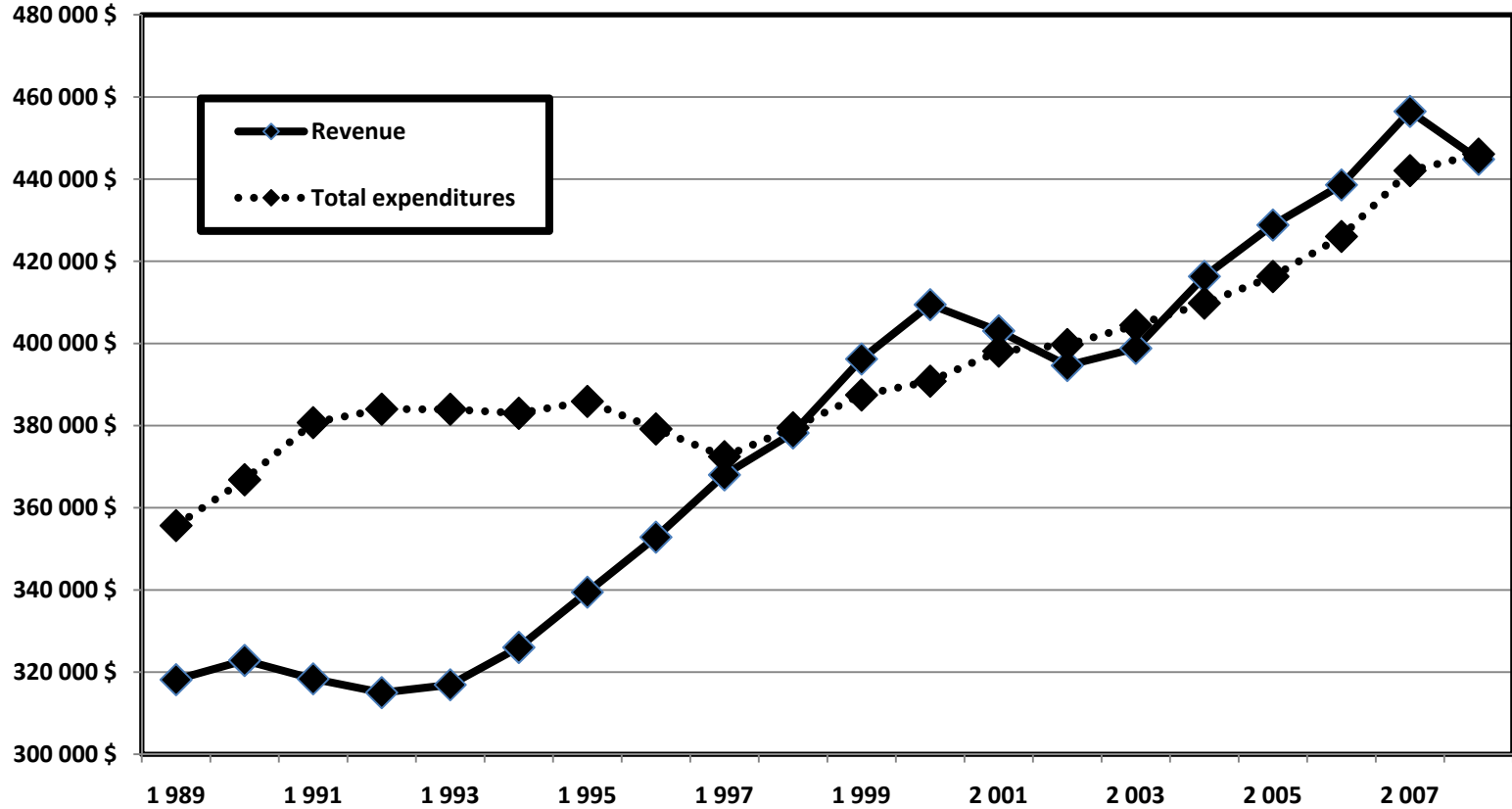
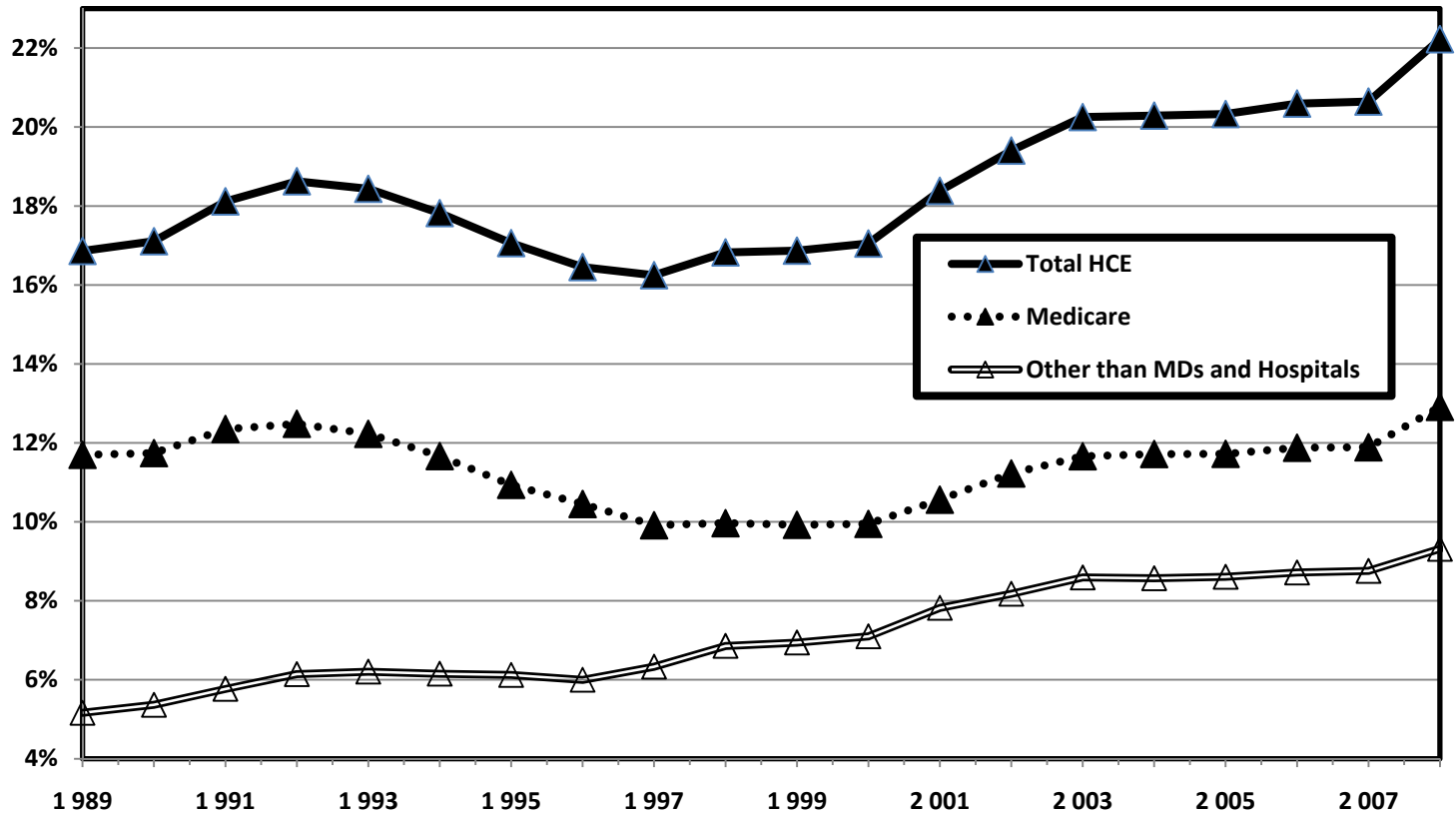


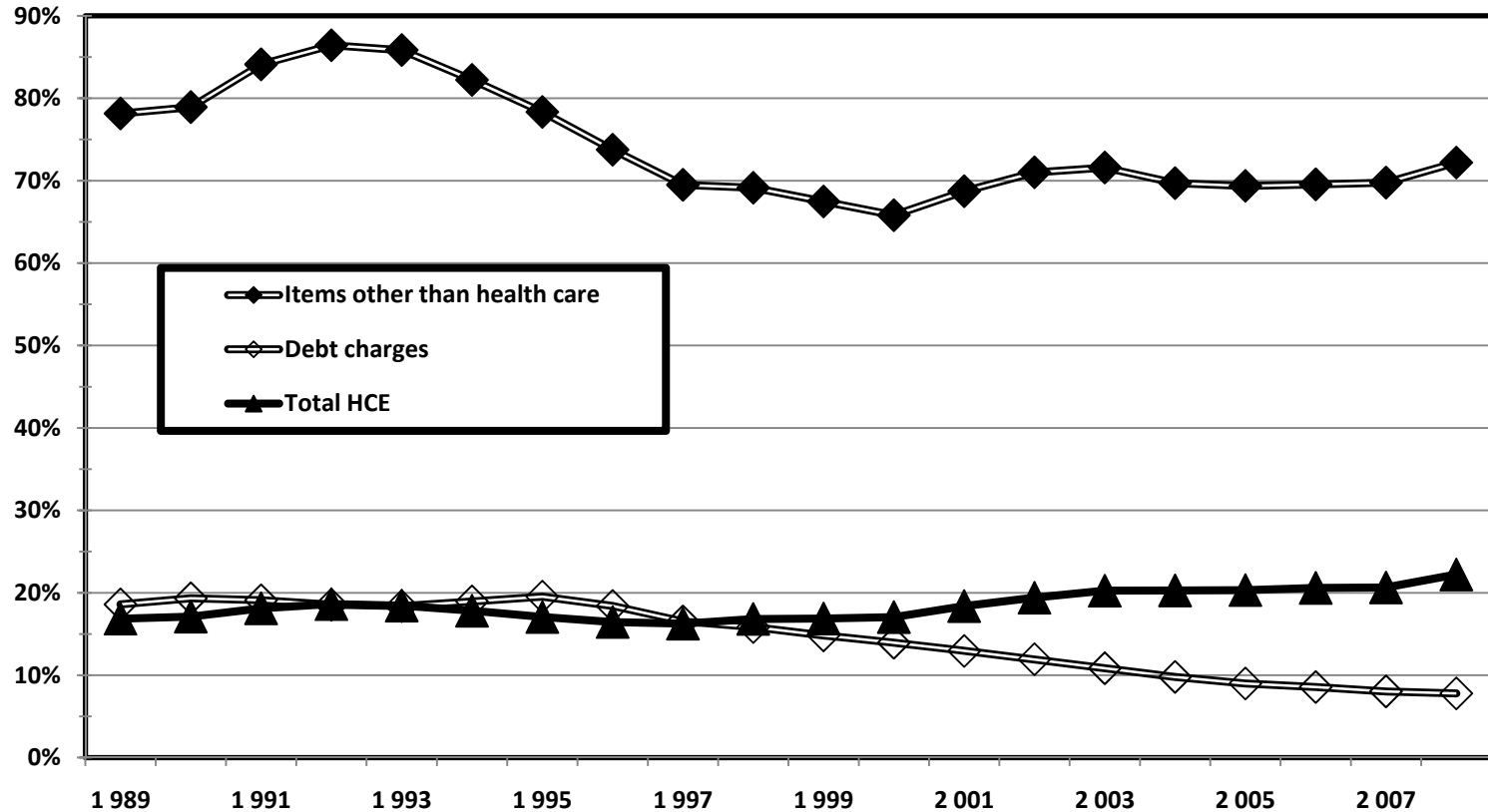
Figure 6. Revenue and Expenditures
1997 \$ [X 1,000,000], All Public Administrations, 1989 to 2008



**Figure 7. Expenditures on Healthcare, MDs and Hospitals
% of Revenue, All Public Administrations, 1989 to 2008**



**Figure 8. HCE, Debt Charges and Expenditures Other Than HC
% of Revenue, All Public Administrations, 1989 to 2008**



**Figure 9. HCE, Debt Charges and Expenditures Other Than HC
1997 \$ [X 1,000,000], All Public Administrations, 1989 to 2008**

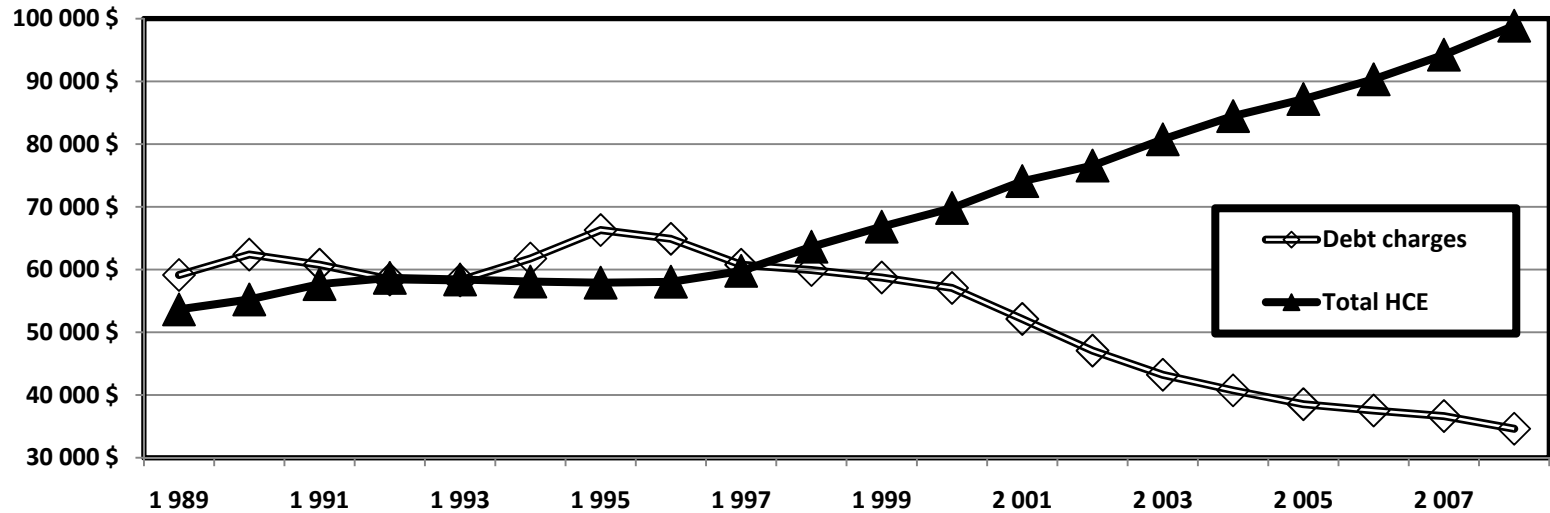
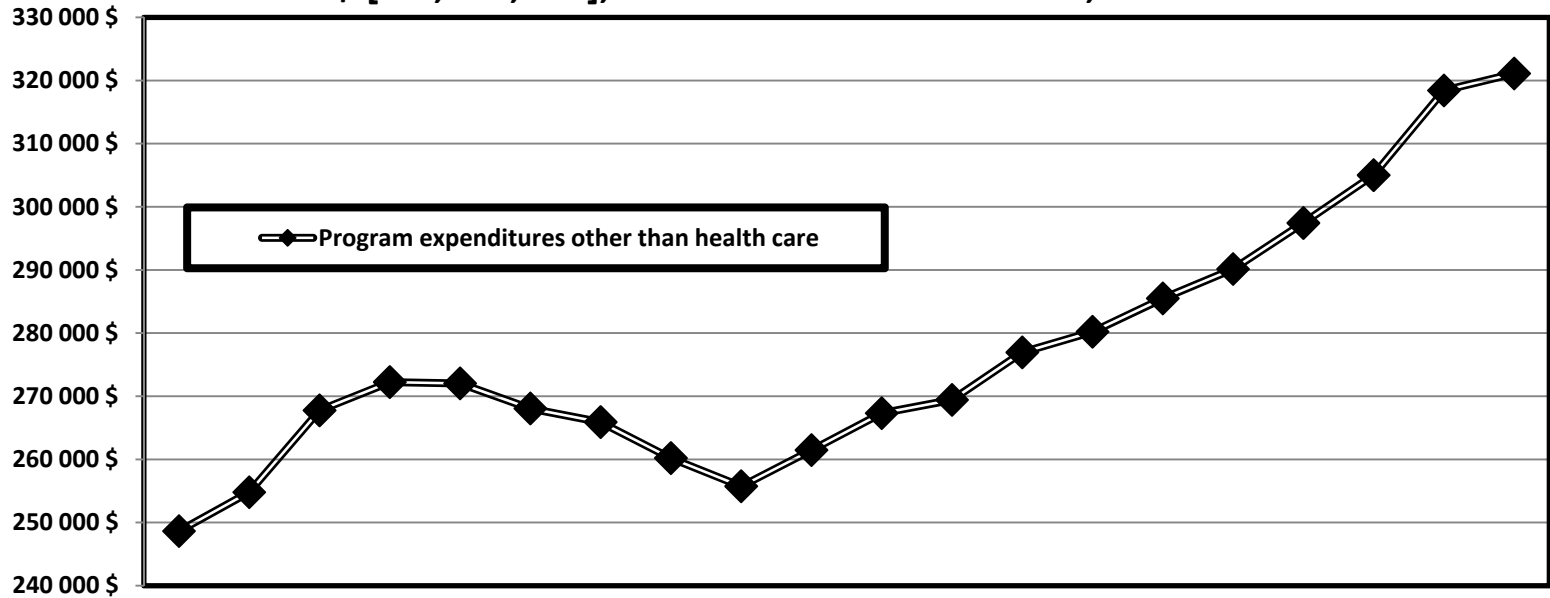
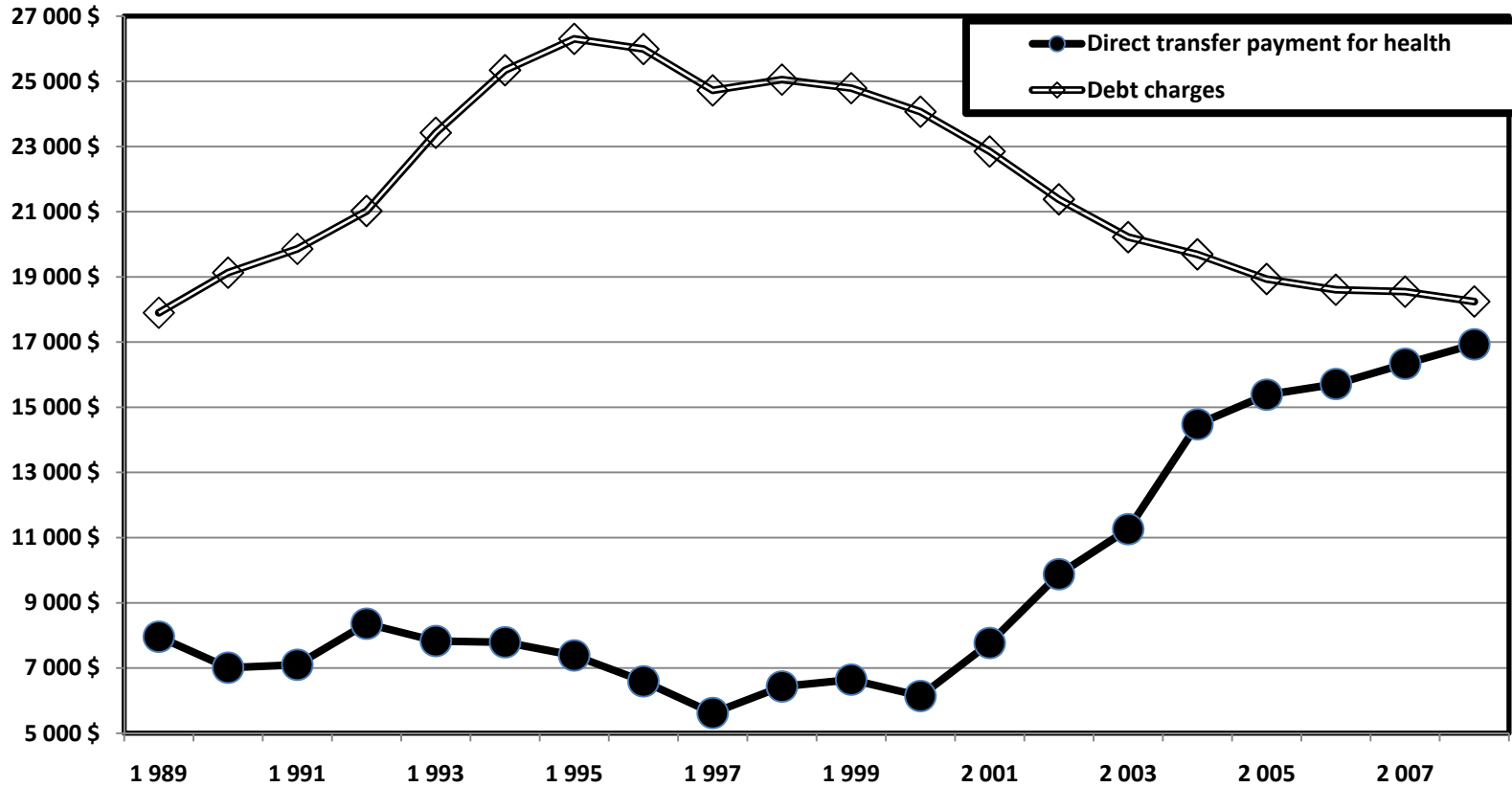
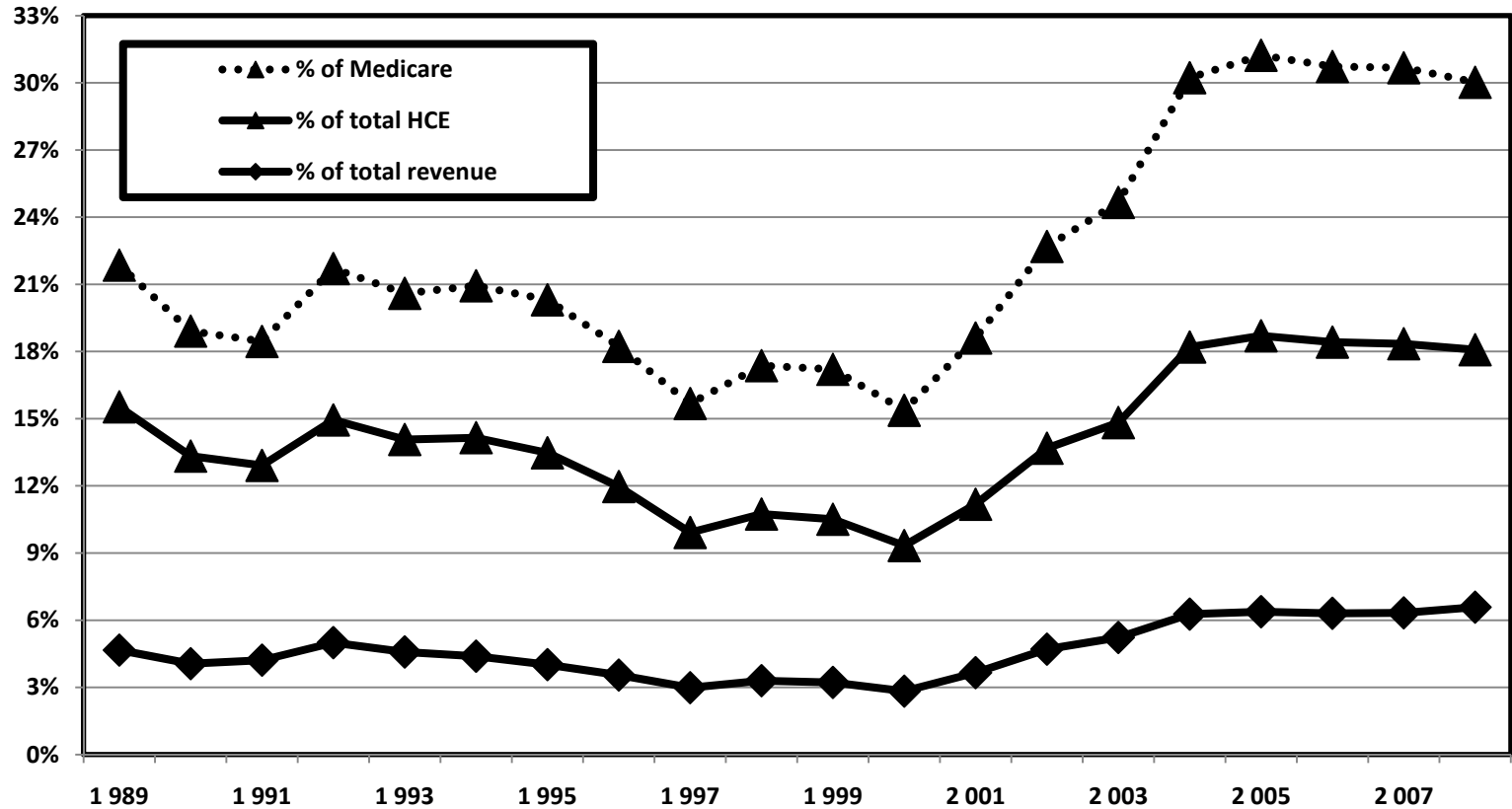


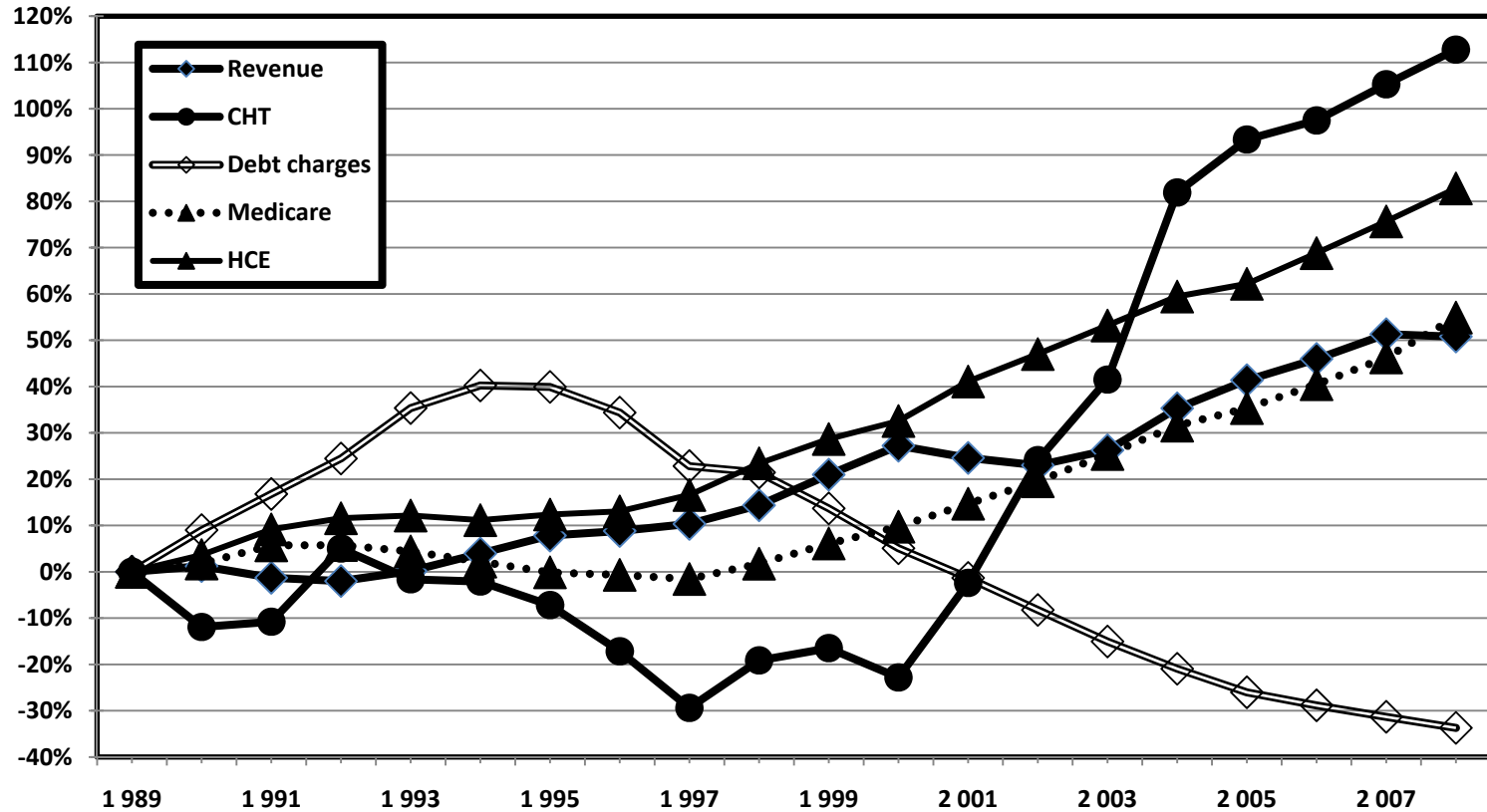
Figure 10. CHT and Debt Charges
1997 \$ [X 1,000,000], Provincial Administrations, 1989 to 2008



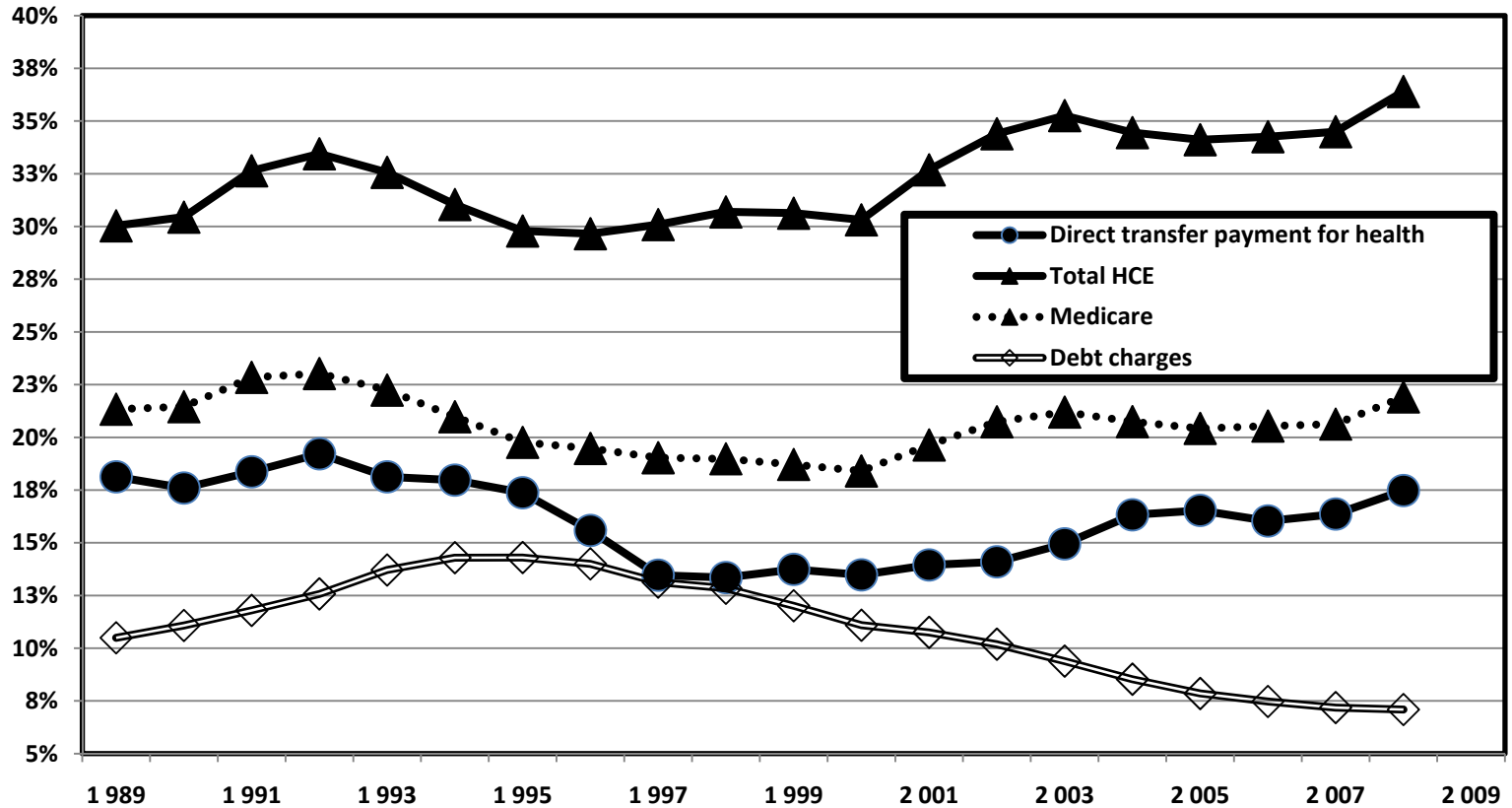
**Figure 11. CHT as % of Total Revenues, HCE, and MDHE
Provincial Administrations, 1988 to 2008**



**Figure 12. Cumulative Rates of Increase: HCE, CHT and Debt Charges
All Public Administrations, 1989 to 2008**



**Figure 13. Transfer payments, Expenditures on HC, MDs and Hospitals
% of Revenue, Provincial Administrations, 1988 to 2008**



SEDAP RESEARCH PAPERS: Recent Releases

Number	Title	Author(s)
(2010)		
No. 263:	Strengthening Fairness and Funding in the Canada Pension Plan: Is Raising the Retirement Age an Option?	M. Hering T.R. Klassen
No. 264:	Understanding the Outcomes of Older Job Losers	M. Brzozowski T.F. Crossley
No. 265:	Issues in the Issuance of Enhanced Annuities	R.L. Brown P. Scahill
No. 266:	Criteria for the Optimal Design of a Social Security Retirement System	R.L. Brown
No. 267:	Retirement 20/20: Innovation in Pension Design	R.L. Brown
No. 268:	Economic Security in an Aging Canadian Population	R.L. Brown
No. 269:	Body size and wages in Europe: A semi-parametric analysis	V.A. Hildebrand P. Van Kerm
No. 270:	Employer Pension Plan Inequality in Canada	M. Denton J. Plenderleith
No. 271:	Retirement Decisions of People with Disabilities: Voluntary or Involuntary	M. Denton J. Plenderleith J. Chowhan
No. 272:	Where Would You Turn for Help? Older Adults' Awareness of Community Support Services	M. Denton J. Ploeg J. Tindale B. Hutchison K. Brazil N. Akhtar-Danesh M. Quinlan J. Lillie J. Millen Plenderleith L. Boos
No. 273:	Older Adults' Awareness of Community Health and Support Services for Dementia Care	J. Ploeg M. Denton J. Tindale B. Hutchison K. Brazil N. Akhtar-Danesh J. Lillie J. Millen Plenderleith

SEDAP RESEARCH PAPERS: Recent Releases

Number	Title	Author(s)
No. 274:	Examining the Gender, Ethnicity, and Age Dimensions of the Healthy Immigrant Effect: Implications for Health Care Policy	K.M. Kobayashi S.G. Prus
No. 275:	Involuntary Retirement and the Resolution of the Retirement-Consumption Puzzle: Evidence from Australia	G.F. Barrett M. Brzozowski
No. 276:	Age of Pension Eligibility, Gains in Life Expectancy, and Social Policy	F.T. Denton B.G. Spencer
No. 277:	The Private Cost of Long-Term Care in Canada: Where You Live Matters	N. Fernandes B.G. Spencer
No. 278:	Is There an Age Pattern in the Treatment of AMI? Evidence from Ontario	M. Grignon B.G. Spencer L. Wang
No. 279:	Aging and Health: An Examination of Differences between Older Aboriginal and non-Aboriginal People	K. Wilson M.W. Rosenberg S. Abonyi R. Lovelace
No. 280:	Comparing Racial and Immigrant Health Status and Health Care Access in Later Life in Canada and the United States	S.G. Prus R. Tfaily Z. Lin
No. 281:	“It Looks at All of You”: Elders’ Understanding and Utilization of Traditional Medicines in a Canadian First Nation Community	R. Matthews T.J. Ibrahim A. Martin-Matthews
No. 282:	The determinants of the migration decisions of immigrant and non-immigrant physicians in Canada	J.T. McDonald C. Worswick
(2011)		
No. 283:	The Age Pattern of Retirement: A Comparison of Cohort Measures	F.T. Denton R. Finnie B.G. Spencer
No. 284:	The surprisingly large policy implications of changing retirement durations	P. Hicks
No. 285:	Economic Security in an Aging Canadian Population	R.L. Brown
No. 286:	The Canadian Elder Standard – Pricing the Cost of Basic Needs for the Canadian Elderly	B.-J. MacDonald D. Andrews R.L. Brown

SEDAP RESEARCH PAPERS: Recent Releases

Number	Title	Author(s)
No. 287:	The Recent Evolution of Retirement Patterns in Canada	P. Lefebvre P. Merrigan P.-C. Michaud
No. 288:	Modelling the Age Dynamics of Chronic Health Conditions: Life-Table-Consistent Transition Probabilities and their Application	F.T. Denton B.G. Spencer
No. 289:	Revue de la littérature sur l'évolution future de l'espérance de vie et de l'espérance de vie en santé	R. Bourbeau J. Légaré N. Ouellette
(2012)		
No. 290:	Thoughts from a user of results of Statistics Canada's LifePaths Microsimulation Model	J. Légaré
No. 291:	Retirement Lost?	L. McDonald P. Donahue
No. 292:	The Evolution of Retirement as Systematic Ageism	L. McDonald
No. 293:	Immigrant Selection Systems and Occupational Outcomes of International Medical Graduates in Canada and the United States	J.T. McDonald C. Warman C. Worswick
No. 294:	Real-Time Feedback and Residential Electricity Consumption: The Newfoundland and Labrador Pilot	D.C. Mountain
No. 295:	The Impact of Age Pension Eligibility Age on Retirement and Program Dependence: Evidence from an Australian Experiment.	K. Atalay G.F. Barrett
No. 296:	Changes in Subjective Well-being with Retirement: Assessing Savings Adequacy in Australia	G.F. Barrett M. Kecmanovic
No. 297:	Health Care Expenditures, Public Administration and the Business Cycle	F. Béland Co-director, Solidage