The Personal Income Tax: Average and Marginal Rates in the Post-War Period

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PRÉCIS

L'impôt sur le revenu des particuliers (IRP) augmenta rapidement comme part du produit intérieur brut durant la Seconde Guerre mondiale et après. En 1946, 16% de la population produisait des déclarations d'impôt pour le IRP; en 1992 le chiffre était passé à 69% : 19,4 millions de particuliers produisaient des déclarations d'impôt sur une population totale de 28,4 millions. Entre 1946 et 1971, les taux d'impôt appliqués aux revenus nominaux ne changèrent pas considérablement, mais l'inflation et la croissance économique, une augmentation de 70% dans l'indice des prix à la consommation et une augmentation de 84% du PIB réel per capita au cours de cette période ont eu pour effet d'augmenter le taux marginal d'imposition des particuliers. Les impôts directs, qui représentaient 7% du revenu des particuliers en 1946, passèrent à 17% en 1971. En d'autres termes, même s'il y avait eu très peu de changement dans la structure du barème, le Canadien moyen était soumis à des taux moyens et marginaux *beaucoup* plus élevés en 1971 qu'en 1946.

Les réformes fiscales de 1972, 1981 et 1987 abaissèrent les taux d'IRP et élargirent les tranches d'imposition de ce même impôt. Cependant, suite à la croissance continue des revenus réels, l'élargissement de l'assiette fiscale, une indexation que partielle et la croissance des cotisations sociales, les impôts directs sur les individus continuèrent à augmenter pour passer à 22% du revenu des particuliers en 1993. Quoique le taux marginal maximum fut abaissé trois fois entre 1972 et 1987 pour les contribuables aux revenus les plus élevés, les taux *moyens* d'IRP augmentèrent de façon significative pour la plupart des contribuables à revenu moyen ou dépassant la moyenne.

Les réductions dans les taux marginaux supérieurs et dans les écarts de la structure des taux depuis 1971 ont soulevé des questions quant au rôle de l'IRP, le seul impôt réellement progressif au Canada, comme facteur contribuant à la réduction des inégalités de revenus. Les paiements de transfert aux individus, y compris les crédits remboursables de la TPS et les prestations fiscales pour enfants ont augmenté rapidement

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depuis 1971 et favorisé l'égalité dans les revenus. Bien que les données révèlent une plus grande inégalité des revenus avant IRP et paiements de transferts depuis 1971, les revenus après l'IRP et les transferts étaient répartis *plus* également en 1993 qu'en 1971. Étant donné l'importance de l'IRP comme source de revenu au Canada et le débat actuel sur le «taux uniforme» à la fois au Canada et aux États-Unis, il semble peu probable que cet impôt serve à réduire de façon significative les inégalités de revenus à l'avenir. De toute manière, si une plus grande égalité dans la répartition des revenus demeure un objectif, les politiques gouvernementales en matière de dépenses seront probablement plus efficaces que les politiques fiscales comme instrument pour l'atteindre.

ABSTRACT

The personal income tax (PIT) grew rapidly as a share of GDP during World War II and thereafter. In 1946, 16 percent of the population filed PIT returns; by 1992, the figure had risen to 69 percent—19.4 million individual returns from a population of 28.4 million. Between 1946 and 1971, the rates applied to nominal incomes did not change significantly, but inflation and economic growth—a 70 percent rise in the CPI and an 84 percent increase in real per capita GDP over the period—moved individuals up the rate schedule. Direct taxes on persons rose from 7 percent of personal income in 1946 to 17 percent in 1971. In other words, even though there had been little change in the rate structure, the average Canadian was subject to *much* higher average and marginal rates in 1971 than he or she had been subject to in 1946.

The tax reforms of 1972, 1981, and 1987 flattened PIT rates and broadened the PIT brackets. Nevertheless, owing to further growth in real incomes, base broadening, only partial indexing, and payroll tax growth, direct taxes on persons continued to increase, rising to 22 percent of personal income by 1993. Although the maximum marginal rate was reduced three times between 1972 and 1987 for those with the highest incomes, *average* PIT rates rose significantly for most taxpayers with average or above-average incomes.

The decreases in top marginal rates and the flattening of the rate structure since 1971 have raised concerns about the contribution of the PIT, Canada's only significantly progressive tax, to income distribution goals. Transfer payments to individuals, including refundable GST credits and child tax benefits, have grown rapidly since 1971 and have contributed to income equality. There is evidence that although income before the PIT and transfers has become *less* equally distributed since 1971, income after the PIT and transfers was *more* equally distributed in 1993 than in 1971. In view of the current heavy reliance on the PIT in Canada and the "flat tax" debate in both Canada and the United States, it seems unlikely that the PIT will contribute significantly to any increase in income equality in the future. In any case, if greater equality in income distribution is a goal, expenditure policies are likely to be more effective than tax policies as a means of achieving it.

Discussion of the possible advantages of substituting a flat personal income tax (PIT) rate for the existing schedule of graduated rates is heating up in both Canada and the United States. Given that support among tax professionals for a flat-rate tax is limited, the recent "hype" for such a tax is of interest. Leading figures in the US Congress are currently promoting a radical change of this kind in the rate structure of the US personal income tax, and leaders of the Reform and Progressive Conservative parties in Canada are doing the same.[1] Reform of the PIT is again a major topic for discussion.

By the end of World War II, the PIT was a firmly established, and important, part of Canada's revenue system. Even at that time, however, a large majority of Canadians were not yet subject to it. Table 1 shows that the share of the total population filing income tax returns rose from 26 percent in 1946 to 68.4 percent in 1992. In 1992, when the labour force in Canada totalled about 13.8 million, some 19.4 million individuals filed income tax returns. Taxable income has increased as a share of reported income, and PIT revenue increased from 8 percent of reported income in 1955 to 17 percent in 1992.

The PIT has been more buoyant than most other revenue sources, and direct taxes on persons have grown more rapidly than have total government revenues. Thus, for every 1 percent increase in GDP between 1945 and 1993, "direct taxes from persons" increased by 2.9 percent, whereas total revenues and indirect taxes increased by 1.6 percent and 1.3 percent, respectively. This buoyancy has been the consequence of a progressive rate structure in a context of economic growth and inflation, which have moved people into higher income tax brackets. Revenues grew rapidly from 1945 to 1971 without changes in statutory rates.

In 1945, as table 2 shows, direct taxes from persons accounted for 7 percent of GDP and 28 percent of government revenues; in 1993, the figures were 20 percent and 46 percent. Figures 1 and 2 give graphic form to the dramatic change over this period. As reliance on the PIT grew, the tax's potential as a means of redistributing income grew as well.

In 1949, as table 3 shows, PIT rates ranged from 15 to 84 percent and there were 17 brackets. In 1994, the range was 26.35 to 46.4 percent and there were 3 brackets. The top marginal rates of the PIT were lowered in each of the major tax reforms of 1971, 1981, and 1987. These nominal rate reductions suggest that progressivity has declined over the period.

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[1] See Louis S. Richman, "The Flat Tax," *Fortune*, June 12, 1995, or Peter Passell, "The Tax Code Heads into the Operating Room: Long on Theory, Short on Proof, the Would-Be Surgeons Line Up," *The New York Times*, September 3, 1995, for a summary of the current discussion in the United States. A possible major obstacle to base-broadening in the United States is the question whether mortgage interest should continue to be deductible. Canada does not face this problem, and this is one reason why a move to a flat rate may prove easier in Canada than in the United States. John Geddes, in "Floating the Flat-Tax Balloon over a Tax-Weary Canada," *The Financial Post*, July 1-3, 1995, provides a status report on flat-tax discussions in Canada.

Table 1 Personal Income Tax Statistics, Selected Years, 1946 to 1992

Year	a) Population	b) Number of returns	c) Total taxes	d) Total income (all returns)	b/a	c/d
	thousands		*$ millions*		*percent*	
1946	12,292	3,162	648	5,316	15.7	12.2
1955	15,698	4,923	5,343	66,040	31.4	8.1
1965	19,644	7,163	11,204	116,922	36.5	9.6
1975	23,209	12,002	35,225	250,461	51.7	14.2
1985	25,942	15,864	50,090	320,366	61.2	15.6
1992	28,436	19,437	65,491	382,911	68.4	17.1

Source: Revenue Canada, *Taxation Statistics: 1994 Edition* (Ottawa: Supply and Services, 1994), 337, and Department of National Revenue, Taxation Division, *Taxation Statistics, 1948* (Ottawa: King's Printer, 1948), 115.

This impression may be misleading, since in Canada, as elsewhere, the PIT has been part of a complex system of public finance. Transfer payments and other public sector spending have grown rapidly relative to the economy as a whole, and the PIT base and other taxes have changed dramatically. Income tax rates, in terms of both level and progressivity, need to be considered, inter alia, in the context of other taxes, changes in the PIT base, the effects of inflation, government transfer payments, and goods and services provided by the public sector.

GOVERNMENT REVENUE GROWTH AND COMPOSITION

Government revenue equalled 26.7 percent of GDP in 1945, nearly double its pre-depression level in 1930 (table 2). By 1993, this proportion had grown to 42.6 percent. Table 4 offers some comparisons with other countries in the Organisation for Economic Co-operation and Development (OECD) from 1955 onward. Relative to the growth of government spending in European countries, particularly Scandinavia, the growth of the government sector in Canada has not been particularly rapid. It has been rapid, however, relative to such growth in other OECD countries. In 1955, the ratio of tax revenues to GDP was smaller in Canada than it was in the United Kingdom, the United States, Australia, or New Zealand. By 1992, the reverse was true, and the ratio was much higher in Canada (36.5 percent) than the United States (29.4 percent) or Australia (28.5 percent). Over the past four decades, Canada has passed several OECD countries in these sweepstakes, but none have passed Canada.

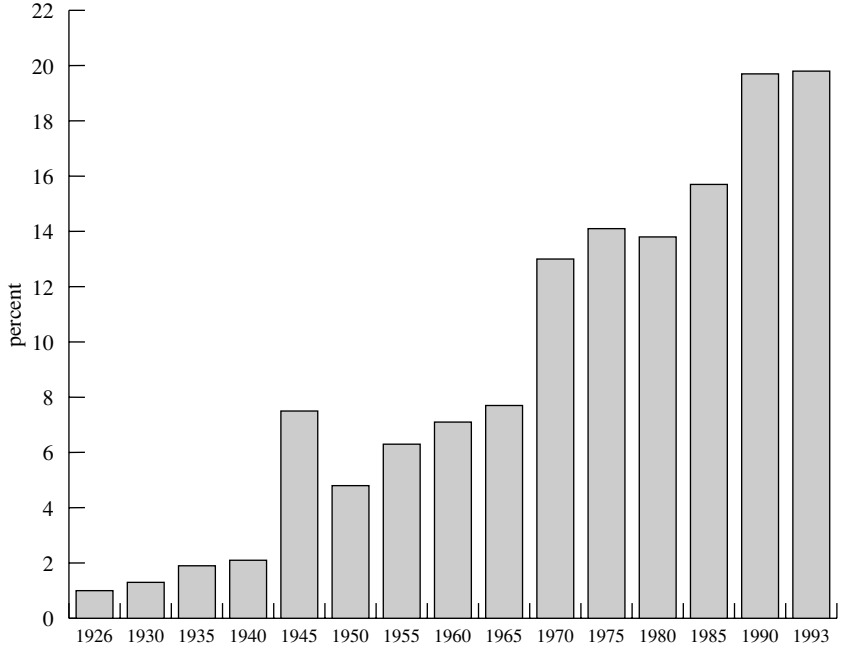
Of perhaps greater relevance to this paper is the increased reliance in Canada, relative to other countries, on taxes on income and profits as the means for financing public sector growth. Taxes on income and profits in Canada grew from 8.5 percent of GDP in 1955 to 16.4 percent in 1992. In the United States, the figure *decreased* from 12.6 to 12.2 percent. In the United Kingdom, it increased from 11.2 to 12.7 percent, in New Zealand, it increased from 9.2 to 15 percent; and in Australia it increased from 10.6 to 15.8 percent. Taxes on *personal* income in Canada grew from 5.9 percent of GDP in 1965 to 15.2 percent in 1991. In the United States, the figure increased from 7.9 to 10.4 percent, and in the United Kingdom it

Table 2 Direct Taxes, Indirect Taxes, and Total Taxes as a Share of GDP and Personal Income, Selected Years, 1926 to 1993

	Percentage of GDP				Percentage of total revenue— direct taxes from persons	Percentage of personal income			
Year	Total revenues	Direct taxes	Indirect taxes	Direct taxes from persons		Direct taxes from persons	Federal direct taxes from persons	Provincial direct taxes from persons	Federal and provincial direct taxes plus local indirect taxes
1926	15.1	1.6	11.7	1.0	6.7	1.3	0.5	0.7	7.3
1930	13.5	2.0	10.4	1.3	10.0	1.8	0.7	1.0	8.3
1935	18.8	3.5	13.8	1.9	10.1	2.5	1.1	1.3	10.4
1940	21.9	7.0	13.1	2.1	9.7	3.0	1.5	1.3	8.5
1945	26.7	12.7	11.2	7.5	28.2	9.8	8.9	0.8	13.0
1950	23.2	10.3	11.1	4.8	20.6	6.4	5.6	0.7	9.8
1955	24.4	11.0	11.6	6.3	26.0	8.7	7.7	1.0	12.9
1960	26.0	11.3	12.4	7.1	27.3	9.3	8.4	1.0	14.7
1965	27.7	11.8	13.3	7.7	27.8	10.5	7.9	2.6	15.7
1970	34.3	16.7	13.4	13.0	37.7	16.9	10.9	4.5	20.7
1975	36.0	18.7	12.4	14.1	39.1	17.4	11.0	5.1	20.2
1980	36.1	18.0	11.5	13.8	38.3	17.2	9.4	6.4	19.9
1985	38.5	19.2	12.3	15.7	40.8	18.8	10.7	6.7	21.2
1990	41.9	22.5	13.1	19.7	47.1	22.5	12.5	8.3	24.9
1993	42.6	22.1	14.1	19.8	46.4	22.2	12.6	7.7	24.9

Source: Statistics Canada, *Canadian Economic Observer: Historical Statistical Supplement 1993/94*, catalogue no. 11-210, 8-21.

Figure 1 Direct Taxes from Persons as a Percentage of GDP, Selected Years, 1926 to 1993



Source: See table 2.

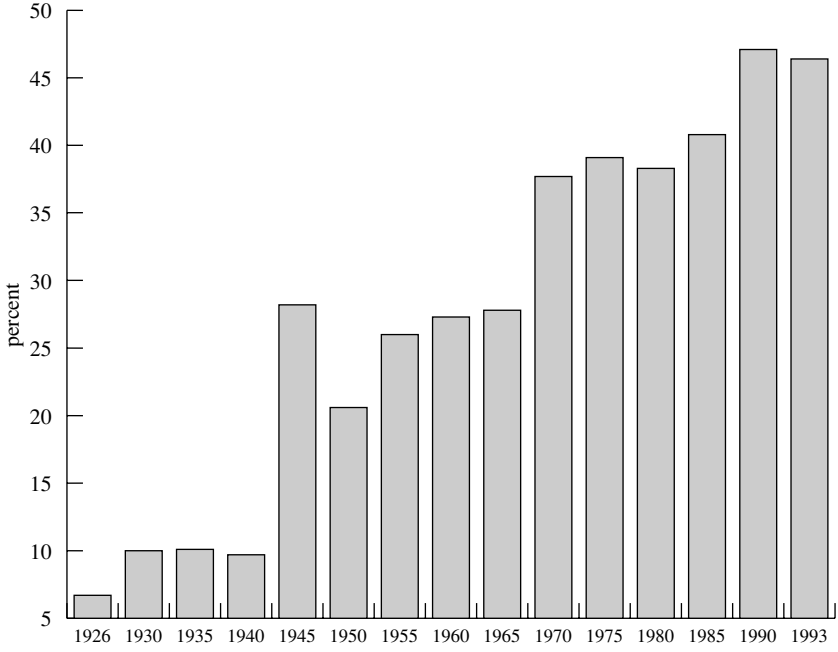
increased from 9.1 to 10.3 percent. In sum, rapid growth of the government sector in Canada has been accompanied by particularly rapid growth of taxes on income and profits in general and of the PIT in particular.

Between 1945 and 1993, Canada's direct taxes on persons rose from 7.5 percent of GDP to 19.8 percent, and the share of total government revenues accounted for by these taxes rose from 28 to 46 percent. Indirect taxes, meanwhile, rose from 11.2 percent of GDP to 14.1 percent. In 1993, the ratio of direct taxes to indirect taxes stood at 1.57, up sharply from 1.13 in 1945 and 0.89 in 1965. These changes too reflect the growing importance of the PIT in the post-war period, particularly after 1965.[2]

Table 5 shows how the composition of taxes in Canada, the United States, and European Economic Community (EEC) countries changed between 1955 and 1992. In 1955, the PIT accounted for a much larger share of GDP in the United States than it did in Canada, but by the mid-1970s

[2] The ratio of total direct taxes to indirect taxes, as defined in the national income accounts, has been as follows: 1945: 1.13; 1955: 0.95; 1965: 0.89; 1975: 1.51; 1985: 1.56; 1994: 1.57. These ratios are calculated from the data on direct and indirect taxes in Statistics Canada, *Canadian Economic Observer: Historical Statistical Supplement 1993/94*, catalogue no. 11-210, 14.

Figure 2 Direct Taxes from Persons as a Percentage of Total Revenues, Selected Years, 1926 to 1993



Source: See table 2.

this situation had been reversed. Although social security contributions, another form of direct taxes on persons, increased rapidly in Canada as a share of GDP throughout the period, in the early 1990s the United States and the EEC continued to rely more heavily on this revenue source than Canada did. In Canada, the share of personal income taken by direct taxes on persons grew from 1.2 percent in 1926 to 9.7 percent in 1945 and 20.3 percent in 1993 (see table 2).

Twenty-five years ago, Richard Bird predicted that Canada's tax system would become more like Norway's—there would be an increase in the ratio of total tax and income tax to GDP, increased use of benefit taxes, and a shift to indirect taxes.[3] Most of this has happened, although any major shift toward greater reliance on indirect taxes is unlikely to occur unless the goods and services tax (GST) becomes a much more effective revenue generator than it has been so far.

The changes that occur over the next 25 years are likely to differ substantially from those of the past 25. Tax revenues are not likely to increase greatly as a share of GDP. Continuing pressure on taxes from

[3] Richard M. Bird, "The Tax Kaleidoscope: Perspectives on Tax Reform in Canada" (1970), vol. 18, no. 5 *Canadian Tax Journal* 444-73.

Table 3 Combined Federal and Provincial[a] Marginal Income Tax Rates for Selected Years and Selected Nominal Income Levels, 1949 to 1994

Taxable income	1949	1971	1972	1986	1987	1994[b]
dollars				*percent*		
1	15	0.00	21.68	8.82	9.00	26.35
1,001	17	21.76	24.23	8.82	9.00	26.35
3,001	19	25.00	26.78	24.99	25.50	26.35
5,001	22	28.00	29.33	26.46	25.50	26.35
7,001	26	26.00	31.88	26.46	27.00	26.35
9,001	30	30.00	34.43	27.93	28.50	26.35
11,001	35	35.00	39.53	27.93	28.50	26.35
15,001	45	45.00	44.63	45.60	30.00	26.35
25,001	50	50.00	49.73	53.38	37.50	26.35
40,001	59	55.00	54.83	53.38	45.00	40.30
60,001	64	60.00	59.93	53.38	51.00	46.40
90,001	69	65.00	59.93	53.38	51.00	46.40
125,001	74	70.00	59.93	53.38	51.00	46.40
225,001	79	75.00	59.93	53.38	51.00	46.40
400,001	84	80.00	59.93	53.38	51.08	46.40

Source: *The National Finances, 1985-86* (Toronto: Canadian Tax Foundation, 1986), 101, and *The National Finances, 1994* (Toronto: Canadian Tax Foundation, 1994), 7:7.

[a] The provincial rates are assumed to be 30.5 of the basic federal tax in 1972, 47 percent in 1986 and 1987, and 52 percent in 1994. [b] Owing to the refundable goods and service tax credits and child tax benefits, the 1994 rates for the lower income levels are not comparable to those of earlier years.

deficits and health and social expenditures will be offset by pressures to control the size of the public sector.[4] Further increases in the PIT as a share of GDP may well be small or non-existent. Relative to the United States, Canada has increased its reliance on the PIT dramatically over the past 25 years. In contrast, social security contributions, even after large increases in recent years, lag behind those in other countries and will likely increase as a share of GDP, particularly given the challenges of financing health care and public pensions. Indirect taxes may grow somewhat as a share of GDP, in part because the provinces will probably harmonize their sales taxes with the GST and in part because the desire to favour saving and stabilize PIT rates limits the PIT as a revenue source. But the growth of indirect tax revenues will be constrained by the continuing lack of a federal general sales tax in the United States.

MARGINAL AND AVERAGE PIT RATES IN CANADA SINCE THE 1940S

From 1949 to 1993, real per capita GDP (in 1986 dollars) increased from $7,200 to $20,000, or nearly threefold. In the same period, the consumer price index (CPI) increased more than sevenfold. Because rates and brackets

[4] David Perry recently found that "[s]ome evidence exists that we may have passed, at least temporarily, the peak of tax burdens in Canada." See David B. Perry, "Provincial Tax Burdens," Fiscal Figures feature (1995), vol. 43, no. 2 *Canadian Tax Journal* 527-37, at 527.

Table 4 Total Tax Revenues and Taxes on Income and Profits as a Share of GDP in OECD Countries, 1955 and 1992

	Total tax revenues		Income and profits taxes	
Country	1955	1992	1955	1992
Canada	21.4	36.5	8.4	16.4
Sweden	25.5	50.0	17.1	19.2
Denmark	23.4	49.3	11.1	29.3
Norway	28.3	46.6	13.2	15.0
Netherlands	26.3	46.9	10.4	14.7
Belgium	24.0	45.4	7.5	16.3
Austria	30.0	43.5	7.1	11.7
Italy	30.5	42.2	3.9	16.6
New Zealand	27.0	35.9	9.2	15.0
Finland	26.8	47.0	11.5	20.1
Germany	30.8	39.6	8.9	12.7
Ireland	22.5	36.6	5.3	14.2
United Kingdom	29.8	35.2	12.1	12.7
Portugal	15.4	33.0	4.3	9.5
Switzerland	19.2	32.0	6.7	13.1
Japan	17.1	29.4	7.3	12.5
Australia	21.6	28.5	10.6	15.8
United States	23.6	29.4	12.6	12.2
Turkey	11.9	23.1	4.2	7.5

Source: Organisation for Economic Co-operation and Development, *Revenue Statistics of OECD Member Countries, 1965-1993*, (Paris: OECD, 1994), and *Revenue Statistics of OECD Member Countries, 1965-1992* (Paris: OECD, 1993).

remained largely unchanged from 1949 through 1971, the bracket creep associated with an 84 percent rise over the period in real per capita GDP and a 70 percent increase in the CPI produced a rapid increase in revenues. Although the tax reform of 1972 reduced the top marginal rates substantially, from 80 percent to less than 60 percent, brackets and the basic exemptions were not indexed until 1974. For some high-income individuals, base-broadening, including the taxation of half of capital gains for the first time in 1972, more than offset the rate reduction. Table 3 shows that the trend to lower top marginal rates, which began with the 1972 reform, continued with the base-broadening and rate simplification that occurred under the tax reforms of 1981 and 1987.

Table 6, which estimates average tax rates for given *nominal* levels of income between 1949 and 1994,[5] demonstrates how misleading estimates may be that do not adjust for inflation. From 1949 to 1971, marginal income tax rates were stable for nominal incomes in the entire $2,500 to $200,000 range. Yet, direct taxes on persons grew from 7 to 17 percent of personal income. And although the average rates in table 6 decline drastically between 1971 and 1994, in actuality direct taxes on persons increased further, to 20 percent of personal income. Growth in real

[5] These estimates are based on data found in *The National Finances, 1994* (Toronto: Canadian Tax Foundation, 1994), 7:24, table 7.17.

Table 5 Various Taxes as a Share of GDP in Canada, the United States, and the EEC, Selected Years, 1955 to 1992

	1955[a]	1965	1975	1985	1992
Taxes on income and profits					
Canada	8.4	10.0	15.3	14.6	16.4
United States	12.6	11.9	12.6	12.3	12.2
EEC	—	7.8	11.3	13.7	14.1
Taxes on personal income					
Canada	—	5.9	10.6	11.6	14.5
United States	—	7.9	9.5	10.2	10.1
EEC	—	6.1	9.6	11.0	11.1
Taxes on corporate income					
Canada	—	3.9	4.4	2.7	1.8
United States	—	4.1	3.1	2.0	2.1
EEC	—	2.0	2.3	3.1	2.8
Social security contributions					
Canada	0.9	1.4	3.3	4.5	6.0
United States	2.6	4.2	7.1	8.4	8.8
EEC		6.8	9.8	11.6	12.0
Taxes on payroll and workforce					
Canada[b]	—	—	—	—	—
United States[b]	—	—	—	—	—
EEC		0.2	0.2	0.3	0.2
Taxes on property					
Canada	2.4	3.7	3.1	3.1	4.0
United States	3.2	3.9	3.8	2.9	3.3
EEC		2.0	1.8	1.7	1.8
Taxes on goods and services					
Canada	9.5	10.5	10.4	10.5	9.5
United States	5.2	5.7	5.4	5.1	5.0
EEC		10.2	10.4	12.4	13.1
Total tax revenues					
Canada	21.4	25.9	32.4	33.1	36.5
United States	23.6	25.8	29.0	28.7	29.4
EEC		27.3	33.7	39.8	41.4

Source: Same as table 4.

[a] Data for 1955 are not available in the cited sources except as given. [b] Canada and the United States have no payroll taxes other than those reported as social security taxes.

incomes, base-broadening in each of the major tax reforms of 1971, 1981, and 1987, and less than complete inflationary indexing all contributed to this trend.

If one takes inflation into account, it becomes clear that for most taxpayers the PIT has risen over the years as a share of real income—that is, average tax rates have risen. Table 7 estimates the average tax rates for given levels of *real* family income in 1954, 1970, 1975, and 1994. This table reflects the failure to index rates and brackets before 1974, the effects of rate changes and indexing of brackets and rates between 1970 and 1975, and the effects of various changes between 1975 and 1994, including the move from exemptions and deductions to credits and the

Table 6 Average Personal Income Tax Rates (Married Taxpayer—Two Dependent Children under 16 Years of Age), 1949, 1971, 1987, and 1994

Income[a]	1949	1971[b]	1987	1994
dollars			*percent*	
2,500	1.2	0.0	−45.1	−114.4
5,000	9.1	8.2	−22.6	−59.2
7,500	12.9	14.0	−15.0	−42.1
10,000	15.8	17.2	−10.5	−33.6
12,500	18.6	19.6	−4.2	−26.8
15,000	21.6	22.2	0.7	−18.2
17,500	24.3	24.7	4.9	−12.0
20,000	26.9	27.2	8.0	−7.4
25,000	30.5	30.8	12.2	0.7
30,000	33.4	33.5	16.3	6.6
50,000	42.2	40.8	26.7	22.6
100,000	52.9	50.2	38.0	34.9
200,000	62.8	59.4	45.0	40.6
CPI (1986 = 100)	18.5	31.9	104.4	130.7

Source: The average rates are calculated from the figures in *The National Finances, 1994* (Toronto: Canadian Tax Foundation, 1994), 7:24, table 7.17.

[a] All income is assumed to be from employment. [b] These rates assume provincial tax rates of 28 percent of basic federal tax in 1971, 47 percent in 1987, and 52 percent in 1994. They are not adjusted for specific provincial tax rates, tax relief, or surtaxes.

move to the child tax benefit in 1993. Between 1954 and 1970, the failure to index substantially increased the average tax rates of families at given levels of real income. The increase was at least 25 percent for each of the income classes in table 7,[6] but it was greatest for the lower income classes.

The effects of the changes in statutory rates, the changes in exemptions and deductions, and the introduction of indexing are apparent in the changes in average real PIT rates between 1970 and 1975. The changes substantially enhanced the overall progressivity of the income tax over the range of incomes in table 7. Between 1970 and 1975, the average tax rates for a family of four with an income of $20,000 (in 1954 dollars) rose from 5.4 times the rate for a family income of $3,000 to 24.9 times the rate. The changes also led to somewhat higher rates for those with real incomes of $10,000 or more and lower rates for those with real incomes of $7,000 or less. The changes in average real rates between 1970 and 1975 appear to have been sufficient to restore some of the protection for the lowest income groups that had been in place in 1954. Even after these changes, however, increased reliance on the PIT as a revenue source meant that in 1975 incomes of $5,000 (in 1954 dollars) were subject to average tax rates that were 15 to 20 percent higher than they had been in 1954.

[6] George Vukelich, "The Effect of Inflation on Real Tax Rates" (1972), vol. 20, no. 4 *Canadian Tax Journal* 327-42.

Table 7 Average Rates of Personal Income Tax on Constant Real Family Income, Selected Years, 1954 to 1994

Real gross income		Family				
1954$	1994$	size	1954	1970	1975	1994
				percent		
3,000	18,200					
		2	5.1	9.4	4.4	3.4
		4	3.4	6.3	1.4	−10.2
		6	1.7	3.6	0.7	−24.5
5,000	30,400					
		2	11.0	16.1	14.0	15.1
		4	9.7	13.7	12.0	7.9
		6	8.5	11.4	10.2	−0.9
7,000	42,600					
		2	13.7	19.3	19.0	22.5
		4	12.7	17.7	17.5	19.2
		6	11.8	16.1	15.9	13.5
10,000	60,800					
		2	16.9	23.7	24.3	28.0
		4	16.2	22.1	23.0	27.1
		6	15.4	20.6	21.7	23.2
15,000	91,200					
		2	22.5	30.6	30.9	33.6
		4	21.7	29.3	29.9	33.6
		6	20.9	28.1	28.9	32.1
20,000	121,600					
		2	27.6	34.9	35.8	36.5
		4	27.0	33.8	34.9	36.5
		6	26.3	32.7	34.1	36.5

Source: George Vukelich, "The Effect of Inflation on Real Tax Rates" (1972), vol. 20, no. 4 *Canadian Tax Journal* 327-42; Gregory Jarvis and Roger S. Smith, "Real Income and Average Tax Rates: An Extension for the 1970-75 Period" (1977), vol. 25, no. 2 *Canadian Tax Journal* 206-15; and calculations based on 1994 income tax regulations. The percentages for each year reflect the adjustment of the family income figures for changes in the CPI.

The replacement of family allowances by disappearing child tax credits in 1980, the introduction of refundable sales tax credits in 1986 (in anticipation of the 1987 tax reform), and the replacement of exemptions for children by declining child tax benefits further enhanced the progressivity of the tax system. Above a certain income level, under the system as it now stands, the tax payable is the same whether a couple has many children or none. Sizable net payments, effectively a negative income tax, are made to families at lower income levels. In general, the changes introduced between 1975 and 1994 have significantly reduced average tax rates for the lowest income classes. It is equally clear that average tax rates for many middle- and upper-income Canadian families rose signficantly between 1975 and 1994, as might have been expected given the continuing growth of the personal income tax as a share of GDP from 10.6 percent in 1975 to 14.5 percent in 1992. This increase in average rates started, however, at a point somewhat below the mean family income level (about $40,000 in 1994).

Table 8 presents Statistics Canada estimates of average PIT rates by income quintile since 1971.[7] It shows that between 1971 and 1981 average income tax rates increased slightly for the three middle quintiles and dropped slightly for both the lowest quintile and the highest. Overall, the average rate rose from 15.2 to 15.3 percent. Between 1981 and 1991, however, the overall average rate increased substantially, from 15.3 to 19.5 percent. The largest proportionate average rate increase was for the lowest quintile—an increase of 61 percent, from 1.8 to 2.9 percent. For each of the four highest quintiles, the average rate increased by between 20 and 30 percent.

The fact that average rates rose for all quintiles does not tell us whether the progressivity of the income tax increased over the 22 years between 1971 and 1993. According to one measure, the ratio of the effective rate payable by the top quintile to that payable by the bottom quintile, progressivity increased between 1971 (a ratio of 9.3) and 1983 (a ratio of 13.7) and returned to the 1971 level in the early 1990s.[8] By this measure, the increase in progressivity attributable to the reforms of 1972 and 1981 appears to have been relatively short-lived.

Vermaeten et al. provide estimates of average rates of the PIT in 1988 over a range of incomes.[9] Their results (for the combined federal and provincial rates) show that average rates started at less than 1 percent for "broad" income up to $10,000, rose to 16.2 percent for incomes of $150,000 to $300,000, and fell again to 14.5 percent for incomes over $300,000.

Table 9 shows the marginal rates that applied to the taxable income of representative taxpayers in various years between 1950 and 1993, inclusive.[10] The table estimates the marginal rates, at three different levels of income, for a single unattached individual and for a family with one earner and two children between 12 and 16. These estimates make it clear that marginal tax rates increased substantially for nearly all taxpayers between 1950 and 1970, and for many taxpayers up to 1980. As the table also shows, the tax reform of 1987 brought about a substantial decrease in the marginal tax rates for many taxpayers.

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[7] Statistics Canada, *Income After Tax, Distributions by Size in Canada, 1993*, catalogue no. 13-210, 38.

[8] Richard A. Musgrave, "Progressive Taxation, Equity, and Tax Design," in Joel Slemrod, ed., *Tax Progressivity and Income Inequality* (New York: Cambridge University Press, 1994), 341-56.

[9] Frank Vermaeten, W. Irwin Gillespie, and Arndt Vermaeten, "Tax Incidence in Canada" (1994), vol. 42, no. 2 *Canadian Tax Journal* 348-416, and G.C. Ruggeri, D. Van Wart, and R. Howard, "The Redistributional Impact of Taxation in Canada" (1994), vol. 42, no. 2 *Canadian Tax Journal* 417-58. Ruggeri et al. found that "the overall tax system is progressive and produces significant redistribution of income in favour of lower income classes" (ibid., at 417).

[10] For a more complete discussion see David B. Perry, "Marginal Tax Rates for Representative Taxpayers," Fiscal Figures feature (1980), vol. 28, no. 3 *Canadian Tax Journal* 365-70.

Table 8 The Effective Average Rate of Transfer Payments and Income Tax by Quintiles Ordered by Total Money Income, Selected Years, 1971 to 1993

Year	Quintile						Ratio of top quintile to bottom quintile
	Lowest	Second	Third	Fourth	Highest	Total	
Transfer payments							
1971	53.4	18.2	5.7	3.4	2.0	6.6	26.7
1976	57.8	24.0	8.4	5.1	2.7	8.7	21.4
1981	56.5	22.0	8.7	5.1	2.7	8.9	20.9
1986	59.5	31.2	13.0	6.9	3.3	11.3	18.0
1991	63.4	36.9	16.3	8.9	4.0	13.4	15.9
1993	67.8	40.4	18.0	9.7	4.2	14.5	16.1
Income tax							
1971	2.1	7.5	12.1	14.8	19.7	15.2	9.4
1976	1.6	6.8	12.2	15.2	20.1	15.4	12.6
1981	1.8	7.9	13.0	15.9	19.3	15.3	10.7
1986	2.5	8.7	14.4	17.6	21.8	17.2	8.7
1991	2.9	9.5	15.7	19.7	24.9	19.5	8.6
1993	2.6	8.4	15.0	19.2	24.4	18.9	9.4
Transfer payments minus income tax							
1971	51.3	10.7	−6.4	−11.4	−17.7	−8.6	
1976	56.2	17.2	−3.8	−10.1	−17.4	−6.7	
1981	54.7	14.1	−4.3	−10.8	−16.6	−6.4	
1986	57.0	22.5	−1.4	−10.7	−18.5	−5.9	
1991	60.5	27.4	0.6	−10.8	−20.9	−6.1	
1993	65.2	32.0	3.0	−9.5	−20.2	−4.4	

Note: Government transfer payments include all social welfare payments from the federal government, the provinces, and municipal governments, such as family allowances, old age security, guaranteed income supplements, spouse's allowance, pensions under the CPP and QPP, unemployment insurance benefits, workers' compensation, training allowances, veterans' pensions and allowances, social assistance, and pensions to the blind and disabled.

Source: Statistics Canada, *Income After Tax, Distributions by Size in Canada, 1993*, catalogue no. 13-210, 38.

EVIDENCE IN SUPPORT OF GRADUATED RATES

> The progressive income tax is the center ring in the redistributive arena, as it has been for generations. In their ten-point radical program of the Communist Manifesto, Marx and Engles put it in second place—behind only the abolition of private land ownership.[11]

There is evidence to indicate that the personal income tax is the only significantly progressive tax in the tax system, and that the heavy reliance of the federal government and the provinces on personal income taxes does little more than offset the regressivity of Canada's other forms of taxation.[12] If this is true, then any move to lessen the progressivity of

[11] Arthur M. Okun, *Equality and Efficiency: The Big Tradeoff* (Washington, DC: Brookings Institution, 1975), 101.

[12] Vermaeten et al., supra footnote 9.

Table 9 Marginal Income Tax Rates Applicable to Seven Representative Taxpayers, Selected Years, 1950 to 1993

Year	Representative taxpayers						
	A-1	A-2	A-3	A-4	B-1	B-2	B-3
1950	0.00	19.00	26.00	15.00	17.00	19.00	26.00
1960	17.00	22.00	30.00	20.00	20.00	26.00	35.00
1970	25.57	30.90	46.36	28.66	28.66	36.05	46.35
1980	29.36	46.98	46.08	37.24	33.05	46.08	46.08
1990	26.69	40.82	46.40	26.69	26.69	40.82	46.40
1993	26.35	40.30	46.40	26.69	26.35	40.30	46.40

Note: Taxpayers A-1 through A-4 are assumed to be married individuals with a non-earning spouse and two children between 12 and 16. Taxpayers B-1 through B-3 are single with no dependants. The incomes of A-1 and B-1 are the annual equivalent of average weekly wages for an industrial composite. The incomes of A-2 and B-2 are twice the annual equivalent, and the incomes of A-3 and B-3 are three times the annual equivalent. The income of taxpayer A-4 is the average family income as determined by surveys of family income, but it is assumed here that the primary earner earns all of the income, as in the cases of taxpayers A-1 and B-1. The average family income was about $45,000 in 1990 and $46,500 in 1993.

Source: David B. Perry, "Marginal Tax Rates for Representative Taxpayers," Fiscal Figures feature (1980), vol. 28, no. 3 *Canadian Tax Journal* 365-70, and calculated for 1993 and 1990 from data on industrial wages in Statistics Canada, *Canadian Economic Observer: Historical Statistical Supplement 1994/95*, catalogue no. 11-210, 34, and data on mean income (A-4) from Statistics Canada, *Historical Facilities by Income and Other Characteristics*, catalogue no. 13-218.

the personal income tax, if carried very far, would result in a regressive tax system. How much should we worry about this possibility?

One's answer to this question will depend on one's values, on one's view of the importance of the tax system in the redistributional process, and on one's views on the incidence of other taxes and the likely effects of taxes on taxpayer behaviour. The flat-raters may be right in concluding that a move to a single rate tax would mean a large gain in efficiency at the cost of a small loss in equity. Peter Drucker, taking a broad view of nations over the past century, concludes that

> [i]ncome distribution is determined by only two things—the culture of the society and the productivity within the economy. . . . [T]he advocates of the fiscal state based their case in large measure on the assertion that taxation could effectively and permanently change income distribution. All our experience of the last forty years disproves this claim.[13]

Many will, undoubtedly, disagree with Drucker's conclusions. Never theless, the redistributional effect of massive and complex tax systems is far from clear. Given the importance of "perceptions" of fairness and tendencies to focus on short-run effects, policy actions based on Drucker's view may be slow in coming.

The incidence of other taxes may also be important in determining what degree of progressivity is appropriate for the PIT. For example, the corporate

[13] Peter F. Drucker, *Post-Capitalist Society* (New York: HarperCollins, 1993), 131.

income tax is relatively unimportant in terms of revenues, but if it falls largely on owners of capital it may add a significant degree of progressivity at the highest income levels. Many economists share Jane Gravelle's conclusion that the tax does fall largely on capital and that "the evidence . . . generally supports some role for the corporate tax in maintaining the progressivity of the tax system."[14] Vermaeten et al. appear to support this conclusion: they find that in 1988 corporate income taxes increased from 0.3 and 0.5 percent of "broad" income for the two lowest income classes to 12.3 percent for those with incomes over $300,000.[15] On the other hand, a recent survey found that 75 percent of tax professionals, including economists, believe that corporate income taxes are borne largely by consumers and workers.[16] If the tax professionals are correct, then the tax has a regressive incidence. Moreover, the share of the corporate tax that rests on capital may be smaller in an open economy such as Canada's than it is elsewhere, and consequently the need for progressivity in the PIT may be greater in Canada. Yet capital may be less mobile than many models assume it is, and on balance it seems likely that the corporate income tax does add progressivity to the Canadian system.[17]

The effect of taxes on income distribution also depends to some extent on their effect on labour supply. Feldstein[18] notes that estimates of this effect normally overlook the impact of taxes on willingness to accept new appointments, to assume risk and responsibility, to relocate, to travel, to accept pay in taxable rather than non-taxable forms, and to acquire new skills. Hence, high marginal tax rates have a more adverse effect on work effort and therefore contribute less to tax revenues than many studies show. To the extent that high marginal tax rates result in lower *before-tax* incomes for members of the high-income group than they would otherwise receive, these rates may contribute to greater equality of incomes. This gain in equality, however, is achieved at the cost of a substantial reduction in output and overall social welfare.

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[14] Jane G. Gravelle, "The Corporate Income Tax: Economic Issues and Policy Options" (June 1995), 48 *National Tax Journal* 267-77, at 275.

[15] Vermaeten et al., supra footnote 9, at 414, table A.4.

[16] See Joel Slemrod, "Professional Opinions About Tax Policy: 1994 and 1934" (March 1995), 48 *National Tax Journal* 121-47, at 131. The survey form was sent to 1,309 individual members of the National Tax Association—521 academics, 406 employees of government or international organizations, and 382 members from the private sector. The response rates for these three groups were 45, 32, and 28 percent, respectively (p.121).

[17] See Martin Feldstein, *Tax Policy and International Capital Flows*, NBER Working Paper no. 4851 (Cambridge, Mass.: National Bureau of Economic Research, September 1994), for a discussion of factors that may inhibit capital mobility.

[18] Martin Feldstein, "The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act" (June 1995), 103 *Journal of Political Economy* 551-72. Feldstein estimates that 1993 tax rate changes that would yield $25 billion if there were no behavioural response are likely to increase revenue by, at most, $1.6 billion (ibid., at 570). Also see Martin Feldstein, "Behavioral Responses to Tax Rates: Evidence from the Tax Reform Act of 1986" (May 1995), 85 *The American Economic Review* 170-74.

The adverse effect of high marginal tax rates on saving and investment decisions has also received much attention during the past 25 years. This problem could be overcome by a move to a personal consumption tax, which would ensure that returns on personal savings were taxed only at time of consumption. The Meade report in the United Kingdom, *Blueprints* and recent tax reform discussions in the United States, and discussions in Canada have all stressed the significant efficiency gains to be realized by a adopting a personal tax that exempts returns on capital.[19] Yet although many economists are convinced of the benefits of moving to a graduated tax on personal consumption, this point of view is far from universal. For example, the survey mentioned earlier found that only 12 percent of tax professionals favoured the exemption of capital income from taxation.[20] Given this climate of opinion, it appears to be unlikely that the tax rate applied to income from capital will fall significantly in the foreseeable future.[21] Consequently, high marginal tax rates will continue to distort savings and investment decisions.

The question of the magnitude, and even the direction, of the impact of high marginal tax rates on the behaviour of individuals continues to be controversial. To what extent are the "flat-raters" right about the benefits of avoiding a more complex progressive structure? Evidence developed over the past two or three decades has weakened the case for high marginal tax rates by making it clear that they discourage the efficient use of resources and hence reduce output. Whether the increased concern for efficiency relative to equity is a permanent or a temporary phenomenon is less clear. The tradeoffs that society is willing to make will depend on its values, and values change over time.

GOVERNMENT PROGRESSIVITY VERSUS PIT PROGRESSIVITY

It is of limited value to discuss tax incidence without taking into account government transfer payments and expenditures on goods and services. This fact has been inadequately appreciated by economists, policy makers, and the public at large. The inclusion of transfer payments in the

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[19] Institute for Fiscal Studies, *The Structure and Reform of Direct Taxation: Report of a Committee Chaired by Professor J.E. Meade* (London: Allen & Unwin, 1978); United States, Department of the Treasury, *Blueprints for Basic Tax Reform* (Washington, DC: US Government Printing Office, January 17, 1977); Economic Council of Canada, *Road Map for Tax Reform: The Taxation of Savings and Investment* (Ottawa: Supply and Services, 1987); and James B. Davies and France St-Hilaire, *Reforming Capital Income Taxation in Canada* (Ottawa: Supply and Services, 1987).

[20] See Slemrod, supra footnote 16, at 132.

[21] Although there was little support for exempting capital income from the personal income tax, the survey, ibid., at 126, found that whereas 66 percent of the tax professionals surveyed in 1934 favored the application of higher income tax rates to capital income, by 1994 this figure had dropped to 7 percent (ibid., at 126). Does this trend suggest the exemption of capital income within another 60 years? Given the progress of selling this idea over the past 20 years, it may be only another 20 years before the widespread exemption of income from capital occurs.

income measure before calculating the tax rate does not compensate for this shortcoming. The combined effects of the transfer and the tax in benefiting lower income groups relative to higher income groups is not evident if tax incidence is considered in the absence of expenditure incidence. As Musgrave notes,

> what matters is how the budget operation affects the state of distribution; it is unimportant in the end whether the impact comes from the expenditure or the tax side of the budget.[22]

In fact, transfer payments play a much more important role in redistribution than does the PIT. Direct expenditures by government on goods and services also have a major distributional impact.

Table 8 and figure 3 provide a partial picture of the redistribution among income quintiles that occurred between 1971 and 1993 owing to the combined effects of transfer payments and income taxes. In general, a growing share of before-tax income was removed from the top quintile and net transfers to the bottom quintile accounted for an increasing share of its after-tax income. This result does not take into account other forms of taxation or the benefits to lower income groups from other forms of government expenditure.[23] The redistributional effects of the income tax alone are modest relative to the combined effects of income taxes and government transfers.[24] According to Statistics Canada,

> [f]amilies with incomes in the lowest quintile received an average pre-transfer income of $4,573 in 1993. After the receipt of transfers and the payment of taxes, their after-tax income averaged $16,583. On the other hand, the top quintile of families received an average $103,396 before transfers, but after transfers and taxes, this was reduced to $80,315. As a result, the income ratio between the groups decreased from about 23-to-1 on a pre-transfer basis to about 5-to-1 on an after-tax basis.[25]

The foregoing picture is incomplete. One must factor other taxes and government expenditures on goods and services into table 8 to gain a complete picture of the "progressivity" of the government sector. Other taxes are generally more regressive, or less progressive, than the PIT, and expenditures on public goods and services are less likely than many transfer

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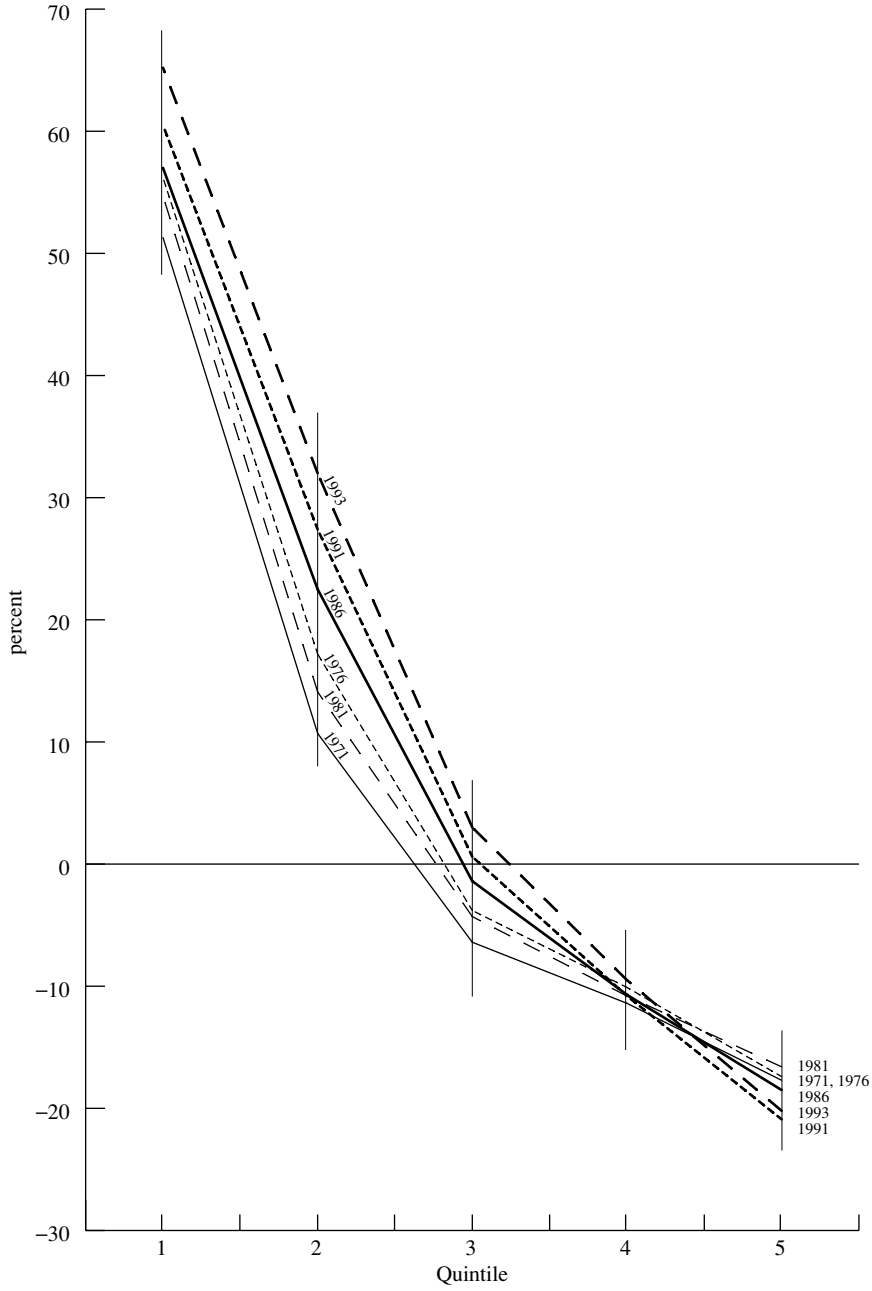
[22] Musgrave, supra footnote 8, at 354.

[23] Total income includes money income from wages and salaries, net income from self-employment, investment income, government transfer payments, pensions, and miscellaneous income. Government transfer payments include all social welfare payments from federal, provincial, and municipal governments, such as family allowances, old age security, guaranteed income supplements, spouses allowance, pensions under the CPP and QPP, unemployment insurance benefits, workers' compensation, training allowances, veteran's penions and allowances, social assistance, and pensions to the blind and disabled.

[24] Statistics Canada has calculated the Gini coefficient for the distribution of income before transfer payments (0.498 in 1993), income after transfer payments (0.388 in 1993), and income after transfer payments and income taxes (0.351 in 1988). Taxes combined with transfers led to more equal after-tax distribution in 1981 than in 1971—the Gini coefficient fell from 0.373 to 0.351. It did not fall further, however, between 1981 and 1993, when it was still at 0.351. See *Income After Tax*, supra footnote 7, at 42.

[25] Ibid., at 18.

Figure 3 Effective Average Rate of Transfer Payments Less Income Tax Expressed as a Percentage of Total Money Income by Quintile, 1971 to 1993



Source: See table 8.

payments to be aimed at the lower income groups. Nonetheless, it is likely that the increase in public education and health expenditures over the past two decades has contributed to greater equality in the distribution of income and human capital. Over the past 25 years, government health expenditures in Canada have risen even more rapidly than have expenditures on social services, from 2.9 percent of GDP in 1965-66 to 6.4 percent in 1993-94. During the same period, social service expenditures by government increased from 5.4 of GDP to 11.4 percent. Taken together, social service and health expenditures amount to a larger proportion of GDP (17.8 percent in 1993-94) than do personal income taxes (14.5 percent in 1992-93) and play an important role in achieving greater equity in Canadian society.[26]

High levels of employment, rising productivity, and social values, as reflected in the maintenance of strong public education and health care, contribute much more to greater equality than would more progressive income taxes or increased transfer payments. Indeed, the PIT comes after transfer payments and direct expenditure programs in terms of its likely impact in achieving greater equality in income distribution in the long run.

THE FUTURE OF PERSONAL INCOME TAX RATES

What can be said about the desirable levels of progressivity in a personal income tax rate structure? Economists cannot claim to know what is fair. What is fair depends on the country or province, its culture, its other taxes and expenditure programs, and on societal values that change over time. Income disparities that are acceptable in a time of opportunity and rapid growth may become unacceptable in a time of limited opportunity and little change.

Nevertheless, economists and other tax professionals have opinions that may affect policy. The recent survey discussed earlier found that 80 percent of a sample of 1,300 US and Canadian tax professionals believed there should be a graduated personal income tax.[27] Only 28 percent supported a flat-rate tax, in spite of the fact that little may be lost in the way of existing progressivity if a single rate is combined with base broadening and adequate exemptions.[28]

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[26] These figures are calculated from data in Statistics Canada, *Public Sector Finances, 1994-1995*, catalogue no. 68-212, 166.

[27] Slemrod, supra footnote 16, at 125.

[28] Two previous papers by the author estimated the effects of moving from the existing rate structures in 1980 and 1984 to a single rate with a substantial zero-rate bracket and broadening of the tax base. Although a substantial zero-rate bracket can adequately protect the low-income group from the effects of base-broadening, even with a substantial broadening of the base the highest income groups would benefit from a single-rate tax; consequently, the middle income groups would have to pay higher taxes to compensate for the taxes no longer paid by the lower and higher income groups. See Roger S. Smith, "Base Broadening and Rate Changes: A Look at the Canadian Federal Income Tax" (1984), vol. 32, no. 2 *Canadian Tax Journal* 277-93 and "Rates of Personal Income Tax: The Carter Commission Revisited" (1987), vol. 35, no. 5 *Canadian Tax Journal* 1226-48.

In the short run, a single-rate tax is likely to adversely affect the majority of voters/taxpayers who are in the middle income group. Thus the support for such a tax must depend on a desire for increased simplicity and a belief in the benefits of growth that flow from such a tax.[29] Although the tax professionals favoured a graduated tax, only 13 percent of them favoured top marginal rates of 50 percent or higher,[30] a rate that is well below the top combined federal-provincial rates in all jurisdictions in Canada except Alberta and the territories.

In this case, the views of tax professionals may lag behind those of the public. At present, the forces that are pushing the PIT toward flatter rates appear to be stronger than those that are pushing it toward more progressive rates.

CONCLUSION

PIT rates on nominal income were relatively stable between 1945 and 1971. The past 25 years, in contrast, have seen a substantial flattening of PIT rates. The top marginal rates, which were still as high as 80 percent in 1971, fell to 60 percent in 1972, and the tax reforms of 1981 and 1987 reduced them further. The number of brackets also declined sharply, from 18 before 1972 to 13 in 1972, 10 in 1981, and 3 under the current legislation. Flattening of nominal rates does not, however, necessarily lead to a less progressive PIT.

Base-broadening accompanied the flatter rates and fewer brackets. The Carter commission pushed hard for a comprehensive tax base, and the tax expenditure concept introduced in the 1960s by Stanley Surrey stressed the extent to which tax preferences offset the redistributional effects that highly progressive tax rates would otherwise have.[31] It became more widely

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[29] As stated in the *Fortune* article, supra footnote 1, at 37, "the benefits that would flow from a more efficient, simpler, and pro-growth tax system could be *truly colossal*" (emphasis added). The article provides estimates that, following two years of decreased growth (largely because the tax would have an adverse impact on the housing industry), a flat tax would lead to a significant increase in economic growth. The non-deductibility of mortgage interest in Canada should permit Canada to avoid some of the negative effects of a move to a flat-rate tax. Although not quite so emphatic, Kesselman observes that "[a] pure flat rate tax would yield significant benefits in improved economic efficiency, horizontal equity, neutrality, and simplicity for tax administration and compliance." See Jonathan R. Kesselman, *Rate Structure and Personal Taxation: Flat Rate or Dual Rate?* (Wellington, NZ: Victoria University Press, 1990), 64.

George Break notes that only 3 percent of the tax professionals working for the federal government support the flat-tax initiatives and concludes that politicians have a lot of work to do before a flat tax moves forward in the legislative process. See George F. Break, "Professional Opinions About Tax Policy" (March 1995), 48 *National Tax Journal* 155-58.

[30] This result is consistent with the Carter commission's conclusion nearly 30 years ago that "[t]he maximum rate of tax on any form of income should be no greater than 50 per cent, to minimize disincentive effects." See Canada, *Report of the Royal Commission on Taxation*, vol. 3 (Ottawa: Queen's Printer, 1966), 154.

[31] See Stanley S. Surrey, *Pathways to Tax Reform: The Concept of Tax Expenditures* (Cambridge: Harvard University Press, 1973).

appreciated that a broader base and flatter rates in combination could *add* to the progressivity of the PIT. This same reasoning has led to the continuing push toward a flat rate tax with a further broadening of the tax base, such as the inclusion of 100 percent of any capital gains.

The progressivity of the Canadian PIT, particularly at the lower income levels but also at the upper levels, has been much enhanced by the use of non-refundable and refundable tax credits in place of exemptions and deductions. The 1981 and 1987 reforms, through base-broadening and the introduction of disappearing but refundable tax credits, have moved Canada toward a negative income tax system, and thus added to the progressivity of the overall tax/transfer system. One result has been an increase in the share of after-tax income that goes to the lowest quintile of families and unattached individuals. Since the early 1970s, however, any improvement in the equality of income distribution has been limited by the fact that increases in productivity, which contribute to greater income equality, have been small. Whether productivity growth has been slowed by the taxation of income from capital, income that is concentrated in the upper income classes, is a matter of continuing debate.

Transfer payments and government expenditures on goods and services, particularly in areas such as health and education, contribute far more to income equality than do progressive PIT rates. Tax reforms since the late 1970s have recognized this fact be eliminating some universal transfers, such as family allowances, and by increasing the use of transfers, in the form of refundable tax credits, targeted to those with low incomes. Changes of this kind improve income distribution even as income tax rates are flattened. From where we are now to a single flat rate is not a huge leap.

The most recent major tax reform, that of 1987, resulted in part from a perceived need to increase revenues from the corporate income tax and from sales taxes in order to lessen the pressure on the PIT. So far, there is evidence of only limited progress in this direction. The economic downturn and continued global competition for capital sharply limit any relief increased taxation of corporate income can give to the PIT. Canada's ability to increase its reliance on sales taxes is limited by the fact that sales tax rates are lower in the United States and hence by the extent to which Canadians can avoid taxes through cross-border shopping and smuggling.

In sum, although the PIT can reduce the after-tax income of middle- and high-income groups, substantial redistribution through the PIT is likely to come at a high cost in terms of lost efficiency. Societal norms and external competition from the United States and elsewhere will determine the level of marginal and average PIT rates for high-income groups. Although the present PIT, with its graduated rates, may continue to have a life, the major contribution to income redistribution will come in the future, as it has in the past, from transfer payments and direct expenditures by government.