Payroll taxes—recent trends

Zhengxi Lin

anada's payroll taxes have historically been among the lowest in the industrialized world. This is true whether they are expressed as a proportion of gross domestic product (GDP) or of total tax revenues. Despite one of the highest growth rates in recent years, payroll taxes remain much lower in Canada than in many countries.

Canada currently has nine payroll taxes: two nationwide administered by the federal government, one nationwide by all provincial/territorial governments, and six by five provincial/territorial governments. The three national payroll taxes are the Employment Insurance premiums levied on employees and employers; the Canada and Quebec Pension Plan contributions required of employees, employers and the self-employed; and the workers' compensation premiums levied on employers only. The six provincial/territorial payroll taxes are Quebec's health services fund contributions (levied mostly on employers); employer contributions to vocational training also charged by Quebec; Manitoba's health and postsecondary education tax (imposed exclusively on employers); Ontario's employer health tax; Newfoundland's health and postsecondary education tax (levied on employers); and the Northwest Territories' payroll tax (levied on employees).

This article complements a review of the structure and statutory parameters of the Canadian payroll tax system (Lin, 2000). It reports trends for the country as a whole and for each province from 1980 to 1997 (see *Data sources and limitations*). It also compares Canadian payroll taxes with those of other developed countries.

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Average payroll taxes highest in Quebec

Total payroll taxes collected from employees and employers in the 10 provinces amounted to over \$48 billion in 1997, averaging \$4,200 per wage and salary worker (Chart A). This represents an increase of approximately 30% from 1990 (at \$3,200) and over 150% from 1980 (at \$1,700).⁴

These taxes varied widely in level and growth across the provinces. Quebec had the highest level, with average total payroll taxes amounting to over \$5,000 per employee—nearly 20% higher than the 1997 national average. Businesses and their employees in Ontario paid the second highest average at \$4,400 per employee—about 3% higher than the national average. The lowest average taxes were in Prince Edward Island, New Brunswick and Saskatchewan, equivalent to about three-quarters of the national average.

Between 1980 and 1997, Newfoundland, Ontario and Manitoba experienced relatively high increases in average payroll taxes (ranging from 182% to 202%), as all three introduced their levies for health care and/or postsecondary education after 1980. Lower increases took place in Alberta and British Columbia (104% and 115%, respectively). The growth pattern differed substantially with each decade. During the 1980s, payroll taxes in Ontario and Manitoba increased 136% and 119%, compared with around 50% to 60% in British Columbia and Saskatchewan. In the 1990s, Newfoundland and British Columbia saw higher growth than Ontario and Alberta (53% and 46% versus slightly below 26%). Elsewhere, growth in payroll taxes was below average in the 1980s but above average in the 1990s.

The supplementary labour income (SLI) database, compiled and maintained by the Income and Expenditure Accounts Division, provides data on employer-paid Employment Insurance (EI) premiums and Canada and Quebec Pension Plan (C/QPP) contributions. From these sources, EI and C/QPP payroll taxes are calculated according to fixed ratios;1 the SLI also provides data on workers' compensation (WC) premiums. The provincial accounts of Quebec, Manitoba, Ontario and Newfoundland provide data on five of the six provincial payroll taxes.

Payroll taxes are only those collected from employees and employers in the 10 provinces; those raised in the 3 territories or outside the country are excluded. The main advantage of the SLI dataset is its consistency over a

Data sources and limitations

long period. The source has a number of limitations, however. First, it is possible that employee contributions to EI and C/QPP exceed the annual maximums in cases of multiple jobholding; these overcontributions are refunded through the personal income tax system. Because total taxes derived here do not make adjustments for employee overcontributions, the source overestimates total taxes. Although the degree of these overcontributions is unknown, it is not believed to be significant.²

Second, the EI system has allowed premium reductions to employers (for example, reductions for hiring young workers and reductions to small businesses at various times) but not to their employees. Deriving employee premiums based on employer taxes thus underestimates total employee taxes, though probably not substantially.

Third, since employee C/QPP contributions are derived from employer taxes, these data underestimate total contributions because they exclude those of self-employed workers. The latter workers contribute to the C/QPP at the combined employer-employee rate based on their net earnings.) This does not affect the analysis here because the focus is on payroll taxes of *employees* (self-employed individuals do not pay EI or WC premiums either).

The following secondary data are formed from primary data plus relevant figures from Statistics Canada's CANSIM database: average payroll taxes per employee, payroll taxes as a proportion of gross domestic product, payroll taxes as a share of total federal and provincial government revenues, and effective payroll tax rates (payroll taxes as a proportion of total wages and salaries).

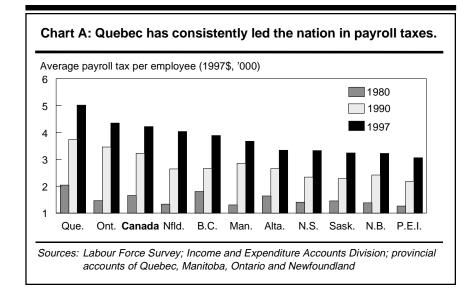
Payroll tax share of GDP stable after 1992

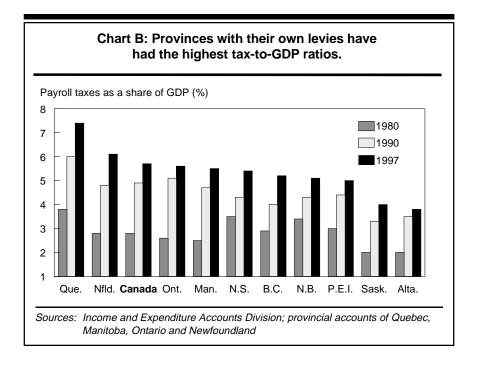
Total payroll taxes paid by Canadian employees and employers stabilized at 5.7% of GDP (at

market prices) after 1992, up from 4.9% in 1990 and 2.8% in 1980 (Chart B). Provincial levels and growth varied, however. Not surprisingly, the highest proportions were in the four provinces

with their own levies. In 1997, revenues raised through payroll taxes amounted to 7.4% of GDP in Quebec, 6.1% in Newfoundland, 5.6% in Ontario, and 5.5% in Manitoba. Figures were lower in Alberta and Saskatchewan (3.8% and 4.0%).

From 1980 to 1997, payroll taxes grew most in Newfoundland, Ontario and Manitoba (ranging from 113% to 122%); in contrast, Nova Scotia and New Brunswick experienced less growth (about 50%). This twodecade trend differs significantly from that of the 1990s. While taxes in Newfoundland still expanded substantially, the largest increases were in Nova Scotia, Quebec, Saskatchewan and British Columbia; Ontario and Alberta had the least growth in taxes.

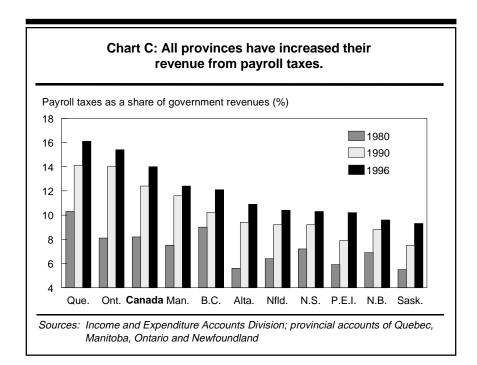




Payroll taxes growing in importance

For the country as a whole, revenues generated through payroll taxes accounted for 14% of all federal and provincial government

revenues in 1996, up 13% from 1990 (12.4%) and by over 71% from 1980 (8.2%) (Chart C). Payroll taxes represent a more important source of government funds in some provinces than in others. In 1996, payroll tax rev-



enues amounted to 16.1% of all federal and provincial government monies raised in Quebec and 15.4% in Ontario, compared with only 9.3% in Saskatchewan and 9.6% in New Brunswick. In the remaining provinces, the share of all federal and provincial government revenues accounted for by payroll taxes ranged from 10% to 12%.

Substantial differences in growth also exist across provinces. In the 1980s, payroll taxes raised in Ontario, Alberta and Manitoba expanded as a source of government revenues (55% to 73%). In the 1990s, Prince Edward Island, Saskatchewan and British Columbia experienced large payroll tax expansion (28%, 24% and 18%, respectively).

Effective payroll tax rate less than statutory rate

Employment Insurance (EI) and Canada and Quebec Pension Plan (C/QPP) taxes are based on, but not proportional to, employee earnings. Prior to 1997, EI had a minimum earnings coverage requirement (tax floor) and a ceiling. The floor was removed in 1997, although the ceiling is still in force. The C/QPP has in place both a floor and a ceiling. For both federal taxes, the statutory rates apply only to the eligible range; earnings below the floor or above the ceiling are exempt. From the point of view of employers, amounts of EI and C/QPP contributions can be affected not only by individual employees' earnings but also by the overall earnings mix. So tax liability can vary significantly across different businesses with similar payrolls.

The workers' compensation (WC) tax is based on total payrolls of the employer, but the applicable tax rate (for the same level of payroll) can differ from one administration to another and from one industry to another, because of experience rating. Tax liability, therefore, depends upon not only the level of payrolls but also a business's past use of the system, its location and the industrial mix of its activities.

Quebec's Health Services Fund was a flat-rated levy on the entire payroll without exemptions until 1999, when a series of rate reductions was introduced to provide tax relief to small and medium-sized businesses (total payrolls under \$5 million). The province's Employer Contribution to Vocational Training levy, also flat-rated, provides some relief to small and medium-sized businesses: employers with total payrolls below the threshold are exempted from the tax.

Since 1984, Manitoba's Health and Post Secondary Education Tax Levy has been "notch-rated," which lightens the tax burden of small and medium-sized employers. Payrolls under the exemption are not taxed; payrolls under the "notch maximum" are assessed for only the "notch range" (the portion of payrolls in excess of the exemption) at the "notch rate." Only when payrolls exceed the "notch maximum" is the full payroll assessed at the full rate.

Ontario's health tax used to cover the entire payroll with a series of graduated tax rates: employers with different levels of payrolls were assessed at different contribution rates. Since 1999, the health tax has been a fully flat-rated system with an exemption.

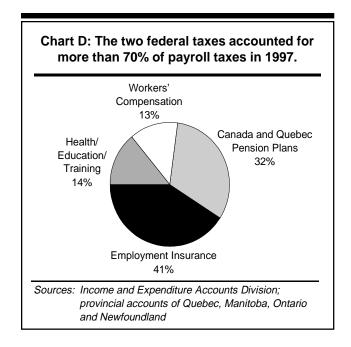
Newfoundland's Health and Post-Secondary Education Tax not only allows an exemption but also assesses employers in the renewable resources sector (fishing, farming and forestry) at a reduced rate.

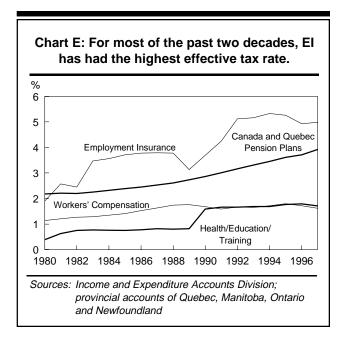
Owing to all these differences, along with a varied number of applicable taxes among provinces (Quebec has five; Manitoba, Ontario and Newfoundland, four each; the rest, three each), legislated tax rates are not comparable over time or across provinces. To overcome the difficulty associated with these differences, this analysis calculates and compares effective payroll tax rates—total payroll tax revenues collected in each jurisdiction expressed as a proportion of total wages and salaries. Thus, the same base is used for the calculation of the tax rate across all components, in all provinces, and for all years.

For the country as a whole, the total effective payroll tax rate amounted to \$12.23 per \$100 of wages and salaries in 1997. This was up by 25% from \$9.82 in 1990 and by nearly 120% from \$5.61 in 1980. This growth trend reflects the introduction of four of the five provincial health/education/training (H/E/T) taxes in the 1980s and 1990s, and increases in existing taxes. Both the level and growth of effective payroll tax rates vary considerably across components and provinces.

EI and C/QPP dominant components

The EI tax was the largest component for most of the period studied. Total premiums collected from employees and employers amounted to \$19.7 billion in 1997, accounting for 41% of total payroll tax revenues raised in the country that year (Chart D). From 1980 to 1997, the effective EI tax rate expanded by over 160%, from \$1.90 per \$100 of wages and salaries to \$4.98 (Chart E). The rate experienced two periods of rapid growth: following the 1981-82 recession and during the 1990-92 recession.⁵ It also edged up slightly during the 1980s recovery and expansion. The biggest decrease occurred in 1989, when the effective tax rate came down by \$0.65 per \$100 of wages and salaries. (The statutory employee premium rate dropped from \$2.35 per \$100 of insurable earnings in 1989 to \$1.95 in 1990.) The rate decreased slightly in 1995 and 1996, but edged up again in 1997 despite the drop in the statutory premium





rate—probably as a result of the abolishment of the minimum earnings coverage requirement (tax floor) that year.

Except for 1980, the C/QPP tax was the second largest component throughout the period, accounting for 32% of total payroll tax revenues in 1997. The effective C/QPP tax rate rose from \$2.18 per \$100 of wages and salaries in 1980, to \$2.39 in 1985 and \$2.86 in 1990, further to \$3.61 in 1995 and \$3.92 in 1997.

The WC tax was the third largest component until 1990, when the provincial H/E/T tax jumped to virtually the same rate. In terms of growth, the effective WC tax rate rose slowly (usually detectable only in the second decimal point) until 1989, and then fluctuated between 1.6% and 1.7%.

The effective provincial H/E/T tax rate amounted to \$1.71 per \$100 of wages and salaries in 1997. The largest hike happened in 1990, when Ontario and Newfoundland enacted their levies: the rate nearly doubled between 1989 and 1990, from 0.82% to 1.59%. Another big increase took place in 1981, when Quebec doubled its contribution rate (the only provincial tax at the time): the overall effective provincial H/E/T tax rate jumped from 0.39% in 1980 to 0.63% in 1981. It rose further to 0.75% in 1982, when Manitoba introduced the tax. The rate levelled off for the rest of the period (around 0.8% in the 1980s and 1.7% in the 1990s).

Provincial rates vary substantially

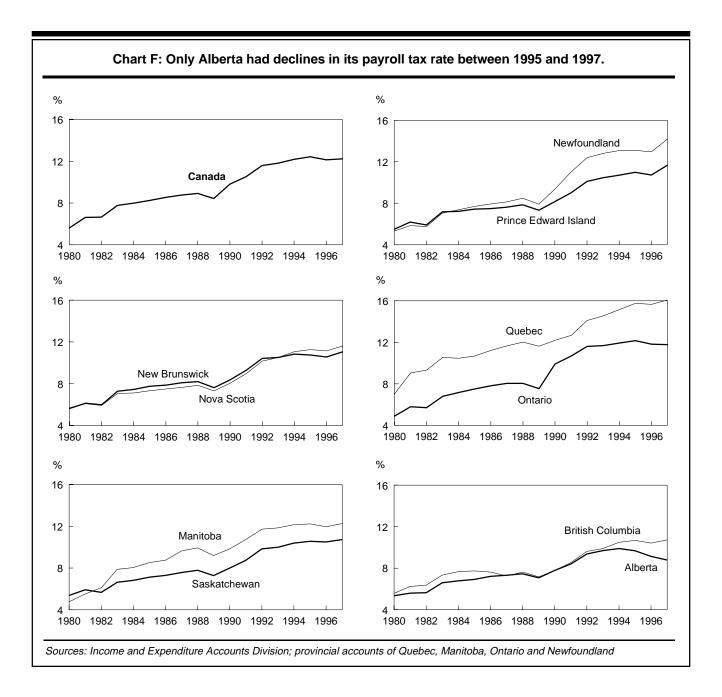
Quebec had the highest effective payroll tax rate in the country throughout the 1980s and 1990s. For every \$100 of wages and salaries, employees and employers in Quebec paid \$16.08 in 1997 payroll taxes to the federal and provincial governments combined to help fund EI, QPP, WC, health care, and training (Chart F). The second highest tax rate was observed in Newfoundland, at \$14.17 per \$100 of wages and salaries, followed by Manitoba (\$12.25) and Ontario (\$11.78). This is not surprising, since these are the four provinces with provincial taxes. Quebec has two, while the other three have one each. Alberta had the lowest effective tax rate at \$8.78 per \$100 of wages and salaries, equivalent to a little over 70% of the national rate or just over half of the rate in Quebec. Employees and employers in British Columbia and Saskatchewan also contributed at lower rates (around \$10.70 for every \$100 of wages and salaries).

In terms of growth, Newfoundland and Manitoba led the country with rates rising by around 160% between 1980 and 1997, followed by Quebec and Ontario (140% and 130%). Alberta experienced the lowest growth (64%). For the remaining five provinces, effective payroll tax growth rates ranged from 92% in British Columbia to 113% in Prince Edward Island.

Tax rates and roles have changed

For the country as a whole, the total effective payroll tax rate more than doubled between 1980 and 1997 (rising from \$5.61 per \$100 of wages and salaries to \$12.23). Of this growth, almost half was due to rising EI premiums; one-quarter to increasing C/QPP contributions; one-fifth to increases in established or new provincial payroll taxes for health care, postsecondary education or training; and the remainder to increasing WC premiums (Table 1).

EI premiums were responsible for 42% of the rate hike in the 1980s and 54% in the 1990s. The role of rising C/QPP contributions was relatively small in the 1980s (16%) but considerable in the 1990s (44%). On the other hand, the effects of provincial taxes were substantial in the 1980s (29%) but inconsequential in the 1990s (5%). WC premiums dropped slightly in the 1990s but accounted for 13% of the overall rate increase in the 1980s.



The role of each component in the growth of total effective payroll tax rates varies appreciably from one province to another. For the four provinces with H/E/T taxes, the share of the total rate increase attributable to rising EI premiums ranged from 35% to 44% in the 1980s; and from 41% to 65% in the 1990s. For Quebec, increases in Health Services Fund contributions and/or the introduction of the training levy contributed the most to its total rate hike in the 1980s (37%) and were the third largest source in the

1990s (24%). For Ontario and Manitoba, the contribution of provincial payroll taxes was similar to that of EI premiums in the 1980s (around 34%). In the 1990s, both provinces' effective provincial tax rates dropped slightly. For Newfoundland, the enactment of its Health and Post-Secondary Education Tax accounted for 13% of its total rate increase between 1980 and 1990, and 20% in the 1990s. The rising C/QPP contributions were responsible for around 15% in the 1980s in all four provinces, but around

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1980 to 1997											
%-point rate change % contribution	6.6	8.8	6.2	5.9	5.4	9.1	6.9	7.5	5.4	3.4	5.
El	46.5	42.1	56.8	57.2	62.1	38.7	42.8	45.0	58.7	70.6	60.5
C/QPP	26.3	24.3	33.7	31.4	33.9	22.8	24.3	25.2	31.5	34.2	35.1
WC	7.3	16.7	9.5	11.4	3.9	7.2	9.0	8.5	9.8	-4.8	4.4
H/E/T	20.0	16.9				31.3	23.9	21.2			
1980 to 1990											
%-point rate change % contribution	4.2	4.0	2.7	2.4	2.7	5.2	5.0	5.1	2.6	2.4	2.2
EI	42.4	44.0	68.1	72.8	63.9	36.8	34.5	38.4	72.0	70.0	80.8
C/QPP	16.2	14.5	23.3	22.8	20.3	14.9	13.7	14.8	25.6	21.5	31.3
WC	13.0	28.6	8.6	4.4	15.7	11.4	17.8	14.0	2.4	8.5	-12.1
H/E/T	28.5	12.9				37.0	34.0	32.9			
1990 to 1997											
%-point rate change % contribution	2.4	4.8	3.5	3.6	2.7	3.9	1.9	2.4	2.7	1.0	2.9
EI	53.6	40.5	48.2	46.8	60.3	41.2	65.3	59.0	46.0	72.0	45.2
C/QPP	43.9	32.5	41.7	37.1	47.9	33.3	52.7	47.3	37.1	65.2	37.9
WC	-2.7	6.8	10.2	16.1	-8.2	1.7	-14.8	-2.9	17.0	-37.2	16.9
H/E/T	5.2	20.2				23.8	-3.2	-3.4			

Sources: Income and Expenditure Accounts Division; provincial accounts of Quebec, Manitoba, Ontario and Newfoundland

33% for Newfoundland and Quebec, 47% for Manitoba and 53% for Ontario in the 1990s. The role of WC premiums was generally minor in the 1980s and often a non-issue in the 1990s.

For the six provinces without provincial taxes (other than WC), the contribution of growing EI premiums ranged from 64% to 81% in the 1980s, and from 45% to 72% in the 1990s. The share of rising C/PP contributions was 20% to 31% in the 1980s, increasing to the 37%-to-48% range in the 1990s; in particular, it reached 65% in Alberta. The effects of WC premiums were again relatively insignificant in the 1980s and often non-existent in the 1990s: the effective WC tax rate dropped a seventh in Ontario (from 1.83% in 1990 to 1.55% in 1997) and more than a quarter in Alberta (from 1.32% to 0.95%).

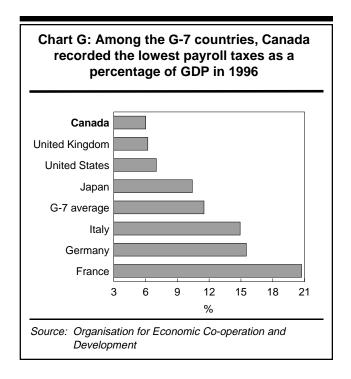
International perspective

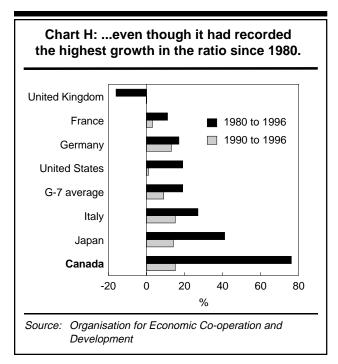
Governments raise tax revenues through many different forms, ⁶ and some rely on certain ones more than others. Payroll tax revenues expressed as a proportion of GDP can give an indication of a country's payroll tax burden; the share of total tax revenues

accounted for by payroll taxes reveals its degree of reliance on payroll taxes (relative to other forms of taxation). By both measures, how do Canadian payroll taxes compare with those of other countries? While extensive comparisons are found in Kesselman (1997), this article updates the use of payroll taxation among member countries of the Organisation for Economic Co-operation and Development (OECD) to 1996, the most recent year for which comparable data are available.

Total payroll tax revenues⁷ in Canada amounted to 6.0% of GDP in 1996 (Chart G)—slightly lower than the rate in the United Kingdom, 14% lower than in the United States, and 42% lower than in Japan. The rate was equivalent to about 40% of that in Italy and Germany and 29% of that in France (OECD, 1998).

When the comparison is extended to all 29 OECD member states, Canada's payroll tax burden also stands out as one of the lowest. It was about 60% of the OECD average (10.1% of GDP) in 1996 and ranked the ninth lowest, higher only than those of New Zealand, Denmark, Australia, Korea, Mexico, Iceland, Turkey and Ireland (Table 2).





However, growth patterns of the tax burden tell a different story. As a proportion of GDP, Canada's payroll taxes expanded by 77% between 1980 and 1996 (Chart H; Table 2). That was four times the average growth of 19% experienced by the G-7 member countries and nearly four times the average 20% growth experienced by the 25 OECD member nations for which such taxes have been applicable and data available since 1980.8 In fact, Canada's growth rate was the third highest among these 25 countries, being surpassed only by those of Korea and Denmark. Growth since 1990 shows a similar picture. Canada's expansion of its payroll tax-to-GDP ratio was the most marked among the G-7 members and the fifth highest among 26 OECD members, trailing only that of Finland, Switzerland, Iceland and Korea.

The contribution of payroll taxes to Canada's total taxation is one of the lowest among the world's leading industrialized countries. Total payroll tax revenues in Canada accounted for 16.3% of total taxation in 1996 (Table 3). That share was the lowest among G-7 countries and amounted to only slightly over half the average (30.7% of total taxation). For example, the

United States collected nearly one-quarter of its total tax revenues through payroll taxes. France had the highest degree of reliance on payroll taxes (45.4% of total tax revenues). Canada's share was the ninth lowest among OECD nations and equivalent to under two-thirds the average (25.8% of total taxation).

As a proportion of total taxation, Canada's payroll taxes expanded by 55% between 1980 and 1996. That growth was by far the highest among the G-7 countries—over seven times the average growth of 7.4%. The importance of payroll taxes as a source of tax revenues declined in the United Kingdom (17%) and Italy (11%) during this period. Among 25 OECD member countries, Canada showed the third highest growth in the ratio, lower only than that of Denmark and Korea. After 1990, Canada's reliance on payroll taxes grew by 14%—the second highest growth among the G-7—equivalent to 54% of Japan's (at 26%). Among the 26 comparable OECD countries, Canada's growth in the ratio ranked sixth highest surpassed by that of Switzerland, Finland, Japan, Iceland and Korea. ("Taxes internationally" in this issue shows Canada's relative standing for other taxes.)

	1996 rank**	Proportion of GDP					% change			
		1980	1985	1990	1995	1996	1980-1996	1980-1990	1990-1996	
				%				%		
New Zealand	1		0.2	0.7	0.4	0.3			-57.1	
Denmark	2	8.0	2.3	1.8	1.8	1.8	125.0	125.0	-	
Australia	3	1.4	1.4	1.9	2.1	2.1	50.0	35.7	10.5	
Korea	4	0.3	0.4	1.1	1.9	2.2	633.3	266.7	100.0	
Mexico	5	2.5	2.0	2.5	2.9	2.5	-	-	-	
Iceland	6	1.7	1.7	2.1	2.5	2.8	64.7	23.5	33.3	
Turkey	7	2.5	2.2	3.9	2.7	4.0	60.0	56.0	2.6	
Ireland	8	4.8	6.3	5.7	5.3	4.9	2.1	18.8	-14.0	
Canada	9	3.4	4.5	5.2	5.9	6.0	76.5	52.9	15.4	
United Kingdom	10	7.4	6.7	6.2	6.3	6.2	-16.2	-16.2	-	
United States	11	5.9	6.6	6.9	7.0	7.0	18.6	16.9	1.4	
Portugal	12	8.1	7.9	8.4	9.4	9.0	11.1	3.7	7.1	
Norway	13	9.0	9.0	11.0	9.7	9.6	6.7	22.2	-12.7	
OECD average [†]		8.4	8.7	8.9	10.1	10.1	19.9	6.2	12.9	
Japan	14	7.4	8.4	9.1	10.4	10.4	40.5	23.0	14.3	
G-7 average		9.7	10.4	10.6	11.2	11.5	19.2	9.6	8.8	
Luxembourg	15	12.5	12.6	11.8	11.8	11.9	-4.8	-5.6	0.8	
Spain	16	11.6	11.8	12.1	12.3	12.1	4.3	4.3		
Finland	17	7.3	7.3	9.9	12.7	12.4	69.9	35.6	25.3	
Greece	18	10.2	13.0	11.5	12.9	12.7	24.5	12.7	10.4	
Switzerland	19	9.0	9.9	10.0	12.4	13.0	44.4	11.1	30.0	
Poland	20				13.3	13.4				
Hungary	21				15.6	13.6				
Belgium	22	13.3	15.1	14.8	15.2	14.9	12.0	11.3	0.7	
Italy	23	11.7	12.2	13.0	13.2	14.9	27.4	11.1	14.6	
Germany	24	13.2	13.9	13.7	15.5	15.5	17.4	3.8	13.1	
Sweden	25	15.4	14.4	16.5	15.5	16.8	9.1	7.1	1.8	
Czech Republic	26				16.9	17.0				
Netherlands	27	17.2	19.5	16.7	18.3	17.1	-0.6	-2.9	2.4	
Austria	28	15.3	15.9	16.0	18.1	18.1	18.3	4.6	13.	
France	29	18.7	20.2	20.1	20.4	20.7	10.7	7.5	3.	

Source: Organisation for Economic Co-operation and Development

Summary

At present, a total of nine payroll taxes are administered in Canada: two by the federal government, one by all provincial/territorial governments, and six by five provincial/territorial governments.

Despite rapid growth, Canadian payroll taxes remain among the lowest in the world's major developed economies. According to data compiled by the OECD, total payroll tax revenues in Canada

amounted to around 6% of GDP-14% lower than that of the United States, the lowest in the G-7 nations, and the ninth lowest among all 29 OECD member states.

Sum of social security contributions and taxes on payrolls and workforce.

^{**} From low to high (1 to 29).

Excluding countries for which either the taxes are not applicable or the data are not available.

	1996 rank**	Share of total taxation					% change			
		1980	1985	1990	1995	1996	1980-1996	1980-1990	1990-1996	
				%				%		
New Zealand	1		0.7	1.8	0.9	1.0			-44.4	
Denmark	2	1.8	4.6	3.7	3.6	3.5	94.4	105.6	-5.4	
Australia	3	5.0	4.7	6.1	6.8	6.7	34.0	22.0	9.8	
Iceland	4	6.0	6.0	6.8	8.1	8.7	45.0	13.3	27.	
Korea	5	1.6	2.0	5.7	8.4	9.5	493.8	256.3	66.7	
Ireland	6	14.5	17.1	16.1	15.6	14.6	0.7	11.0	-9.3	
Mexico	7	15.1	12.1	14.8	17.2	15.6	3.3	-2.0	5.4	
Turkey	8	14.0	14.3	19.7	12.1	15.8	12.9	40.7	-19.8	
Canada	9	10.5	13.5	14.3	16.3	16.3	<i>55.2</i>	36.2	14.	
United Kingdom	10	20.9	17.8	17.1	17.6	17.3	-17.2	-18.2	1	
Norway	11	21.1	20.8	26.3	23.5	23.3	10.4	24.6	-11.	
United States	12	21.9	25.2	25.8	25.1	24.7	12.8	17.8	-4	
Portugal	13	32.1	28.4	27.2	27.0	25.7	-19.9	-15.3	-5.	
Finland	14	19.6	17.9	21.7	27.5	25.8	31.6	10.7	18.	
OECD average [†]		24.5	23.6	23.8	25.9	25.8	5.4	-3.0	8.	
Luxembourg	15	29.7	26.8	27.3	26.8	26.6	-10.4	-8.1	-2.	
G-7 average		28.6	29.1	29.0	30.3	30.7	7.4	1.2	6.	
Greece	16	34.7	37.1	30.9	31.8	31.4	-9.5	-11.0	1.0	
Poland	17				31.2	31.8				
Belgium	18	30.4	32.1	33.6	33.1	32.3	6.3	10.5	-3.	
Sweden	19	31.4	28.7	29.7	31.3	32.3	2.9	-5.4	8.	
Hungary	20				36.2	33.9				
Italy	21	38.6	35.3	33.2	32.0	34.4	-10.9	-14.0	3.	
Spain	22	48.6	41.3	35.4	36.2	35.9	-26.1	-27.2	1	
Japan	23	29.1	30.3	29.0	36.3	36.5	25.4	-0.3	25.	
Switzerland	24	30.9	32.0	32.3	37.0	37.4	21.0	4.5	15.	
Netherlands	25	38.1	44.3	37.4	41.8	39.6	3.9	-1.8	5.	
Germany	26	34.5	36.5	37.5	39.4	40.6	17.7	8.7	8.	
Austria	27	37.9	37.5	38.9	42.9	41.1	8.4	2.6	5.	
Czech Republic	28				40.8	41.9				
France	29	44.9	45.4	46.0	45.7	45.4	1.1	2.4	-1.	

Source: Organisation for Economic Co-operation and Development

Perspectives

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^{*} Sum of social security contributions and taxes on payrolls and workforce.

^{**} From low to high (1 to 29).

^{*} Excluding countries for which either the taxes are not applicable or the data are not available.

■ Notes

- 1 Employer EI premiums have been equal to 1.4 times employee premiums since 1972. Employers and employees contribute to C/QPP equally; self-employed workers pay both employee and employer portions.
- 2 Adjustments for these overcontributions can be made using the T1 files of the Canada Customs and Revenue Agency (CCRA). However, the time series would be much shorter and would lead to an underestimate. The most appropriate way to address this issue would be to use the job-based T4 files of the CCRA, through which employer taxes are derived from employee contributions before adjustments for overcontributions. Employee contributions could be adjusted using the annual maximums. Again, the time series would be shorter.
- 3 C/QPP contributions of the selfemployed are available from the T1 files.
- 4 All figures are in 1997 dollars. They are adjusted using the GDP implicit price index.
- 5 EI financing arrangements also changed in 1990: the federal government completely withdrew its contribution, and responsibility for the entire cost of funding benefits was shared by employees and employers (Lin, 2000 and 1998).

- 6 The OECD classification system divides total taxation into six main components: taxes on income, profits and capital gains; social security contributions; taxes on payrolls and workforce; taxes on property; taxes on goods and services; and other taxes.
- 7 Given that some countries have only social security contributions while others have taxes on payrolls and workforce as well, both classes are combined here as a single category, "payroll taxes," to improve international comparability. Most payroll-type taxes are placed among the OECD's social security contributions.
- 8 For the Czech Republic, Hungary, Poland and New Zealand, either the taxes have not been applicable or data have not been available for the entire period.

■ References

Kesselman, J.R. General Payroll Taxes: Economics, Politics, and Design. Canadian Tax Paper no. 101. Toronto: Canadian Tax Foundation, 1997.

Lin, Z. "Payroll taxes in Canada revisited: structure, statutory parameters, and recent trends." *Canadian Tax Journal*, forthcoming. A slightly different version, titled *Payroll Taxes in Canada Revisited: Structure, Policy Parameters and Recent Trends*, will soon be available as an analytical report issued by Statistics Canada. Catalogue no. 11F0019MPE, no. 149.

- ---. "Payroll taxes in Canada—structure and statutory parameters." *Perspectives on Labour and Income* (Statistics Canada, Catalogue no. 75-001-XPE) 12, no. 2 (Summer 2000): 19-27.
- ---. "Employment Insurance in Canada: Recent trends and policy changes." *Canadian Tax Journal* 46, no. 1 (April 1998): 58-76. Also available as an analytical report published by Statistics Canada (Catalogue no. 11F0019MPE, no. 125), Ottawa, 1998.
- Lin, Z., G. Picot and C. Beach. "What has happened to payroll taxes in Canada over the last three decades?" *Canadian Tax Journal* 44, no. 4 (October 1996): 1052-77. Also available as an analytical report published by Statistics Canada under the title *The Evolution of Payroll Taxes in Canada: 1961-1993* (Catalogue no. 11F0019MPE, no. 90), Ottawa, 1996.

Organisation for Economic Co-operation and Development. Revenue Statistics, 1965-1997. Paris: OECD, 1998.

Picot, G., Z. Lin and C. Beach. "Recent trends in employer payroll taxes." *Canadian Economic Observer* (Statistics Canada, Catalogue no. 11-010-XPB) 8, no. 9 (September 1995): 3.1-24.