

# A recession for whom?

*Patrick Adams and Adib Farhat*

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**R**ecession! Sales are falling, profits are down. Time to slash the payroll? Well, that depends. While employment in the goods-producing industries tends to fluctuate closely with the overall economy, service industries appear to be less affected. But, splitting the service industries into commercial and non-commercial components shows that the apparent lack of cyclical sensitivity stems from the more stable non-commercial services.

The response of industries to fluctuating economic conditions is reflected by changes in their total labour costs. Labour costs in turn can be approximated by total payrolls. [①](#) Payrolls also provide an avenue to study changes in employment and earnings, since they are made up of these two components.

Patterns of changes in the payrolls of commercial and non-commercial services during the recent recession raise a number of questions. Why did the non-commercial services not suffer a downturn? Do changes in earnings in these industries reflect economic conditions at all?

## Goods-producing industries

Prior to the onset of the recent recession, which began officially in the second quarter of 1990, payrolls in the goods-producing industries plunged, whereas in the service-producing industries payroll growth continued, but at a slower rate. Between the third quarter of 1989 and the third quarter of 1991, the annual rate of change in payrolls in the goods-producing industries fell from 9.4% to -7.9%, and then moved to a rate of -1.2% by the end of 1992. Over the same period, payroll growth in the service-producing industries declined from 10.0% to 0.7%, before reaching 2.4% by the end of 1992 ([Chart A](#)).



Table **Employment and weekly payrolls, 1992 (annual averages)\*.**

Source: *Survey of Employment, Payrolls and Hours*

\* *Payrolls include total wages and salaries.*

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## Chart A **Payrolls in the goods industries declined sharply during the recent recession.**

Source: *Survey of Employment, Payrolls and Hours*

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Within the goods-producing sector, some industries tend to respond more quickly than others to economic cycles. The primary industries of mining and forestry are often the last to decline in a recession, given that raw materials prices tend to rise late in an economic expansion ([Bloskie](#), 1991).

## Service industries

The lack of cyclical sensitivity in the service-producing industries largely reflects the composition of the group. The non-commercial services give this sector its characteristic smoothness. Commercial services are almost as cyclically sensitive as the goods-producing industries.

Non-commercial services show minimal sensitivity to economic fluctuations and even some counter-cyclical movements. From the third quarter of 1989 to the fourth quarter of 1992, payroll growth in non-commercial services accelerated to a high of 10.1% in the fourth quarter of 1990 before falling to 3.9% by the end of 1992. The less cyclical movements of non-commercial services offset the cyclical movements of commercial services, resulting in a service sector that appears less affected by economic fluctuations ([Chart B](#)).



## Chart B **The recession had less effect on non-commercial payrolls.\***

Source: *Survey of Employment, Payrolls and Hours*

\* *See Table for the composition of commercial and non-commercial services.*

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# Non-commercial services

Why do the non-commercial services contract in a recession? The most obvious reason is that the demand for their output remains constant or even increases in a recession. Education and related services, for example, react to demographic forces but scarcely notice economic changes. Because of counter-cyclical stabilization policies that link unemployment and government-sponsored social programs, social services actually grow more rapidly during a recession. Then, as the economy recovers, growth in the non-commercial services would be expected to slow. Payroll growth patterns in non-commercial services generally conform to the above expectations. Total payrolls in health and welfare services, for example, exhibited modest growth from the first quarter of 1990, reflecting the onset of the most recent recession. Accounting for 40% of the employment in non-commercial services, the health and welfare industry contributed substantially to the payroll growth in the non-commercial services between 1990 to 1992 ([Chart C](#)).



## Chart C Payrolls in public administration were affected more than those in health and welfare.

Source: *Survey of Employment, Payrolls and Hours*

Payrolls in public administration showed a general upward trend from the second quarter of 1987 to the fourth quarter of 1990. As the recession deepened, payrolls in public administration (federal and provincial) were more affected than payrolls in health and welfare.

Although payrolls in some non-commercial services grew more rapidly during the recession, the question remains whether this resulted from increased employment or higher average weekly earnings. Using shift share analysis, the net change in payrolls between two or more periods was decomposed into its earnings and employment components (see [Shift-share technique](#)). The results show that the bulk (74%) of the payroll growth in non-commercial services between 1990 and 1991 came from increased average weekly earnings. The contribution of employment to the net change in payrolls, on the other hand, was more in line with the business cycle.

## Commercial services

The commercial services responded more to the recession than did the non-commercial services. Although the goods-producing industries are generally the hardest hit in a recession, commercial services are also affected by changes in consumer demand.

Employment in the goods-producing industries is the most highly cyclical ([Picot and Baldwin](#), 1990). This stems at least partially from the relatively higher rates of temporary layoff that occur in these industries during a recession. Commercial services tend to be less cyclical. Since services are consumed at the point of production and not accumulated in inventories, production is not cut back as much or as abruptly as in the goods-producing industries. However, the recent increase in the contracting out of services by manufacturers and other goods producers, has increased the sensitivity of the commercial services to economic cycles ([Bloskie](#), 1991).

Some commercial services are more affected than others by economic fluctuations. Industries that depend heavily on consumer demand, such as trade, and accommodation, food and beverage services, showed large declines with the onset of the 1990-92 recession. Transportation, storage and communication was one of the most stable of the commercial service groups. Although payroll growth dipped slightly in 1991, it never fell below zero, perhaps because industries such as telecommunications provide essential services to all sectors of the economy.

## Conclusion

Service-producing industries have traditionally been viewed as rather insensitive to economic cycles, but this apparent stability comes from the less cyclical movements of the non-commercial services that tend to moderate the cyclical movements of the commercial services. The insulated nature of non-commercial services stems in part from the kinds of services (largely public) they provide. Whether the recent wage policies of the federal and provincial governments have an effect on this trend may be reflected in future payrolls data. The analysis of payrolls could also help answer many questions, such as: Do non-commercial services to some extent take up the employment slack during a recession? Is the continued employment growth in commercial and non-commercial services matched by output growth? Future studies could also determine the extent to which patterns in the growth of payrolls are echoed across provinces.

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## Shift-share technique

The shift-share technique decomposes net change in total payrolls into three components:

$$\text{NET CHANGE} = \text{EMPLOYMENT CONTRIBUTION} + \text{AWE CONTRIBUTION} + \text{INTERACTION TERM}$$

$$Y = [(E_2 - E_1) * AWE_1] + [(AWE_2 - AWE_1) * E_1] + [(E_2 - E_1) * (AWE_2 - AWE_1)]$$

Where

Y represents the net change in total payrolls.

$E_1$  is employment in period 1.

$E_2$  is employment in period 2.

$AWE_1$  is average weekly earnings in period 1.

$AWE_2$  is average weekly earnings in period 2.

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## Note

### *Note 1*

Payrolls including paid absences account for about 90% of labour cost.

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## References

- Bloskie, C. "Industry output in recessions." *Canadian economic observer* (Statistics Canada Catalogue 11-010) 4, no.4, (April 1991):3.1-3.15.
- Picot, G. and J. Baldwin. "Patterns of quits and layoffs in the Canadian economy." *Canadian economic observer* (Statistics Canada Catalogue 11-010)3, no.10 (October 1990): 4.1-4.28.
- Statistics Canada. *Employment, earnings and hours*. Catalogue 72-002, Ottawa, various issues from 1983 to 1992.

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# Source

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 HIGHLIGHTS

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**Employment and weekly payrolls, 1992 (annual averages)\***

	Employment	Payrolls
	'000	\$millions
<b>Goods industries</b>	<b>2,327</b>	<b>1,590.9</b>
Forestry	55	38.6
Mining	129	120.2
Construction	419	267.8
Manufacturing	1,587	1,040.9
Utilities	137	123.3
<b>Service industries</b>	<b>7,626</b>	<b>3,880.9</b>
Commercial	4,870	2,205.7
Transportation, storage and communication	679	452.4
Trade	1,866	749.9
Finance, insurance and real estate	656	389.3
Business services	491	287.0
Accommodation, food and beverages	670	142.4
Miscellaneous services**	508	184.7
Non-commercial	2,756	1,675.2
Health and welfare	1,129	549.3
Education services	911	608.4
Public administration	716	517.5

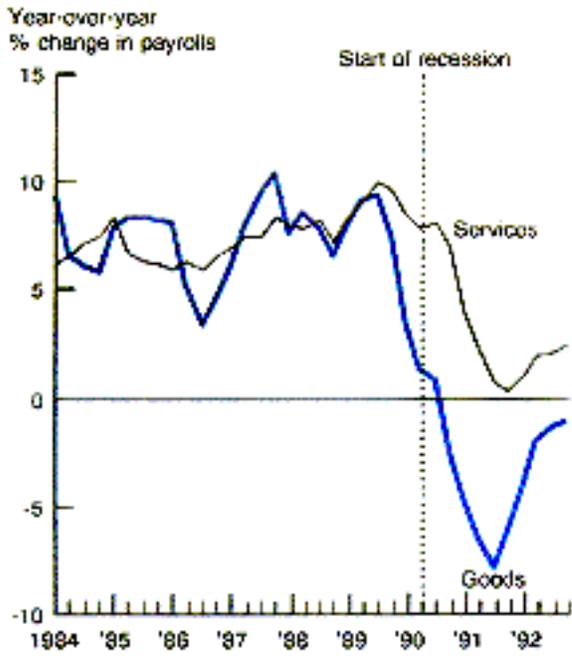
*Source: Survey of Employment, Payrolls and Hours*

*\* Payrolls include total wages and salaries.*

*\*\* Includes amusement and recreational services, personal and household services, membership organization industries and other services.*

### Chart A

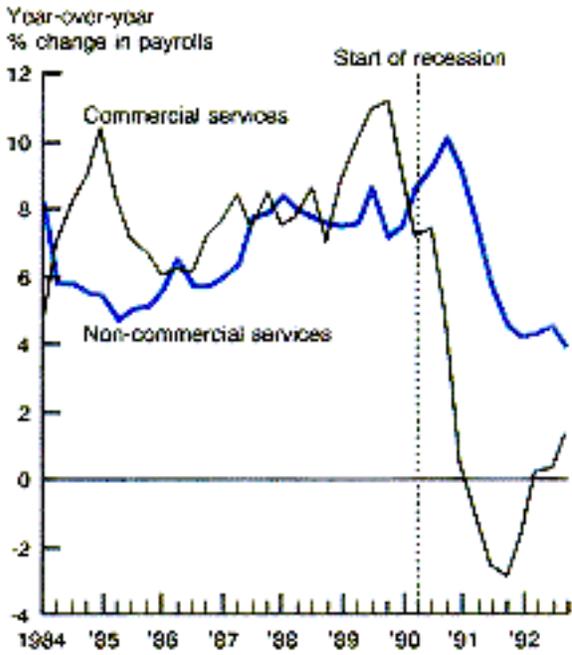
**Payrolls in the goods industries declined sharply during the recent recession.**



Source: *Survey of Employment, Payrolls and Hours*

### Chart B

## The recession had less effect on non-commercial payrolls. \*

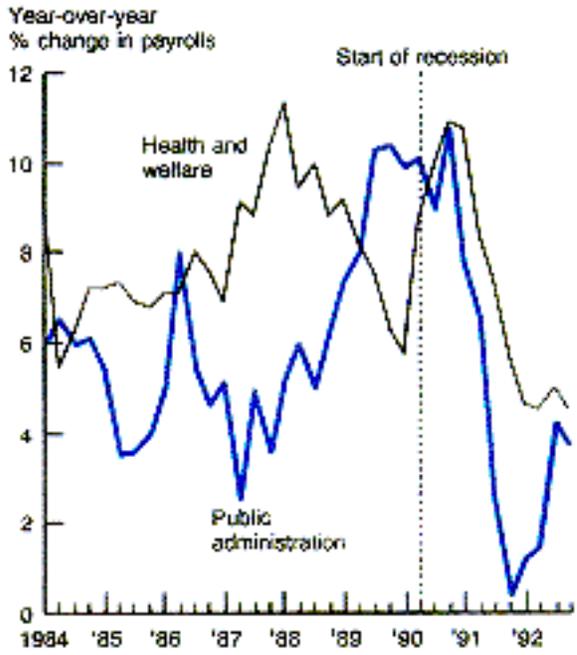


Source: Survey of Employment, Payrolls and Hours

\* See Table for the composition of commercial and non-commercial services.

Chart C

**Payrolls in public administration were affected more than those in health and welfare.**



Source: Survey of Employment, Payrolls and Hours