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MAJOR RELEASE

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MAJOR RELEASE

Productivity, hourly compensation and unit labour cost

1993 (revised)

Exchange rate devaluation and declining wage inflation both contributed to reducing the cost of doing business in Canada relative to the United States, its major trading partner. Canadian unit labour cost expressed in U.S. dollars declined 6.6% in 1993 for the business sector, whereas the U.S. measure increased 2.0%.

The overall movement resulted from a 6.3% decline in the Canadian dollar relative to the U.S. dollar and from a slight 0.7% increase in hourly compensation for Canadian workers compared with a 3.8% increase for American workers. These changes more than offset a 0.9% faster growth rate in real GDP per hour in favour of the United States.

Canadian unit labour cost (measured in Canadian dollars) declined 0.3% in 1993, its first drop since 1962. This decline stemmed from the increase in real GDP per hour, which slightly outperformed hourly compensation.

The drop in unit labour cost and the strong U.S. economic recovery positively impacted Canada's trade with the United States. Canadian merchandise exports to the United States as a share of nominal GDP increased from 15.7% in 1991 to 20.4% in 1993. This performance is in sharp contrast to the preceding period from 1985 to 1991, when exports to the United States decreased from 19.6% to 15.7% of nominal GDP. The severity of the latest recession in Canada may also have contributed to the superior cost performance of Canadian businesses. American businesses suffered a relatively smaller decline in their level of production in 1991, which was followed by a much stronger recovery in 1992 and 1993.

Definitions

Multifactor productivity: *a measure of the technical efficiency of production. Its growth rate is calculated residually as the difference between the growth of the quantity of output produced (real gross domestic product or GDP) and the growth of the quantity of all inputs used.*

Labour productivity or real GDP per hour worked: *production per hour worked or hourly production. It is the ratio between output and labour input (hours worked). Economic performance as measured by labour productivity must be interpreted carefully, however, since these estimates reflect change in the capital to labour ratio and growth in productive efficiency. When the relative contribution of capital to output growth increases (i.e., when the capital to labour ratio increases), labour productivity grows faster than multifactor productivity, and vice versa.*

Unit labour cost: *the labour cost per unit of output. It is calculated as the ratio of labour compensation and real GDP. It is also equal to the ratio of hourly compensation and labour productivity.*

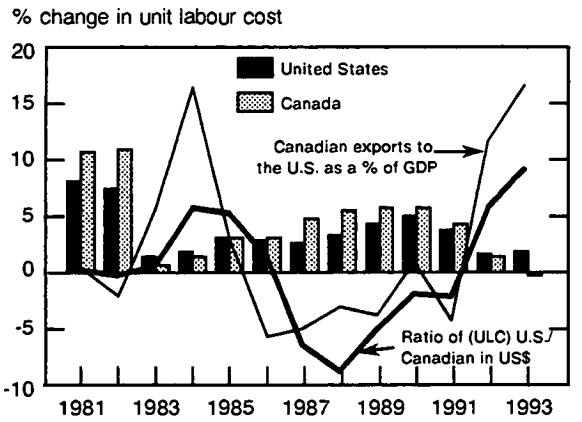
Labour compensation: *a measure of the value of labour services engaged in a production process. It includes all payments in cash or in kind by domestic producers to persons at work as remuneration for work, including salaries and supplementary labour income of paid workers, plus an imputed labour income for self-employed workers.*

Multifactor productivity increases slowly

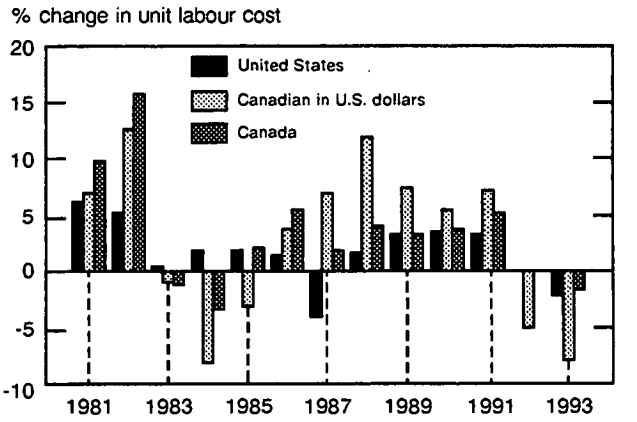
For a second consecutive year, multifactor productivity of Canadian businesses increased. However, compared with the recovery after the 1982 recession, the present productivity growth appears quite anaemic: multifactor productivity increased 0.1% in 1992 and 0.9% in 1993, considerably below the growth rates seen after the previous recession.

The relatively weak multifactor productivity increase was caused primarily by noticeable growth in labour input, which coincided with the relatively poor overall economic recovery in 1993. A 2.2% increase in the number of hours worked and a reduced growth rate of output per hour (from 1.7% to 0.9%) tend to confirm this.

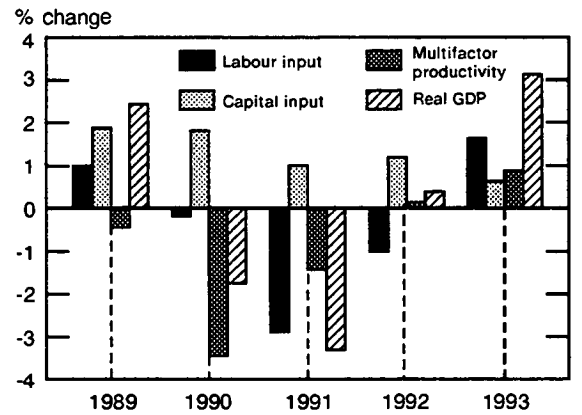
Canadian exports to the U.S. increase as relative Canadian labour costs (ULC) decrease



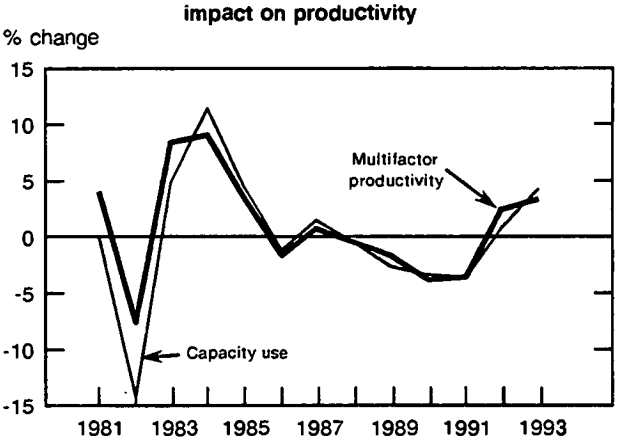
The devaluation of the dollar boosts the competitiveness of Canadian manufacturers



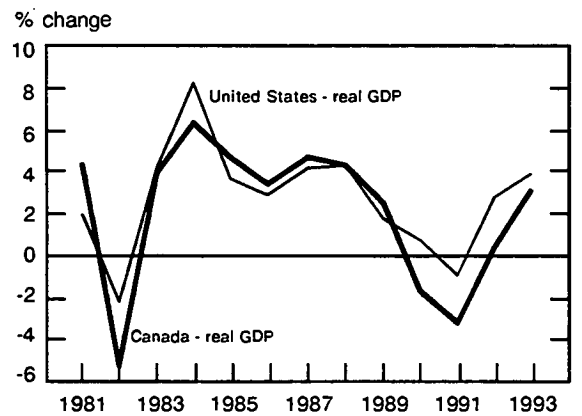
Labour input represents the largest share of output growth in 1993



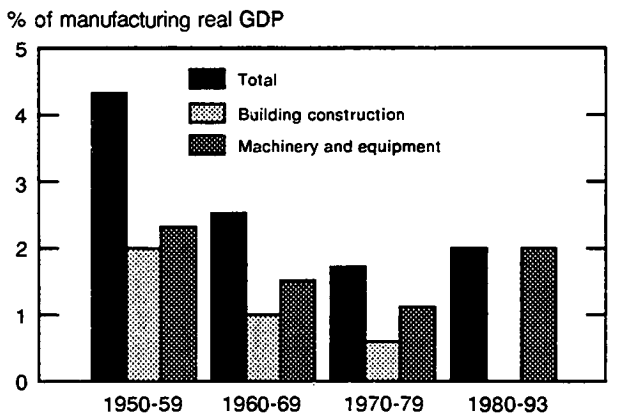
Underuse of manufacturing capacity has a negative impact on productivity



The recession was more severe in the Canadian business sector



Canadian manufacturers' net investment in machinery are at the highest level since the 1950s



Despite the positive productivity gains of the latest two years, the index in 1993 was still 4.2% lower than in 1988. This decline had an impact on the Canadian standard of living measured by real GDP per capita, which decreased 3.5% over the same period.

Canadian manufacturers benefit from a depreciating dollar and an expanding U.S. economy

For a second year in a row, a depreciating Canadian dollar gave Canadian manufacturers a chance to improve their unit labour cost relative to the United States. Measured in U.S. dollars, Canadian unit labour costs fell by close to eight percentage points. This favourable development in relative costs was due to the depreciation of the exchange rate, since unit labour cost in domestic currencies decreased less in Canada (-1.7%) than in the United States (-2.2%).

The larger decline in unit labour costs in the United States resulted from their better productivity performance, which outweighed the mild Canadian manufacturing wage increase in 1993. Labour productivity increased 2.3% in Canada and 5.1% in the United States, while hourly labour compensation increased 0.5% in Canada and 2.8% in the United States.

Canadian manufacturers have improved their multifactor productivity

As with the business sector, multifactor productivity of Canadian manufacturing industries increased for a second consecutive year. In 1993 manufacturers' multifactor productivity increased 3.2% — the primary source of the 4.8% growth in real GDP. The number of hours worked increased 1.8%, and the capital stock remained virtually unchanged in 1993.

Data revisions

Multifactor productivity, labour productivity and related data now incorporate revisions because the 1990 final and 1991 preliminary input-output benchmark tables have been completed and because 1992-93 labour compensation and real GDP data have been revised.

Labour productivity and related data from the United States used in this release were published on November 9, 1994 by the Bureau of Labor Statistics.

Even though Canadian manufacturers reduced their labour input more than their output during the latest recession, the need to remain internationally competitive encouraged them to modernize their equipment. Over the last decade, manufacturers' net real investment was entirely concentrated in machinery and equipment. This was the first time since the 1950s that investment spending in machinery and equipment represented such a large share of real GDP.

A modernization effort such as this will typically result in excess manufacturing capacity that, in turn, impacts negatively on measured productivity. In 1993 the capacity use rate of manufacturers stood at 78.3%, slightly below the historical average and 5.8% below the peak in 1987.

Available in CANSIM: matrices 7896-7903 and 7916-7938.

These data and related information will be available in the 1993 issue of *Aggregate productivity measures* (15-204E, $40).

For further information on this release, contact Jean-Pierre Maynard (613-951-3654, fax: 613-951-0489), Input-Output Division.

Measures of labour productivity and unit labour costs

	Real GDP	Persons at work	Hours worked	Compensation per hour worked	Real GDP per hour worked	Unit labour cost
	indexes (1986 = 100)					
Business sector						
1946	17.2	47.7	62.2	4.3	27.7	15.6
1961	33.4	55.7	64.4	13.4	51.9	25.9
1975	69.3	80.2	84.6	41.8	81.9	51.0
1982	82.6	91.3	90.9	83.4	90.9	91.8
1986	100.0	100.0	100.0	100.0	100.0	100.0
1987	105.0	103.2	103.8	105.9	101.1	104.8
1988	110.1	107.2	108.1	112.6	101.9	110.5
1989	112.8	109.6	109.6	120.1	102.9	116.7
1990	111.1	109.9	109.7	125.1	101.3	123.5
1991	107.6	106.6	105.1	131.9	102.4	128.8
1992	107.9	105.4	103.6	136.0	104.1	130.7
1993	111.3	107.2	106.0	136.9	105.0	130.3
	annual rate of % change					
1946-1993	4.0	1.7	1.1	7.6	2.9	4.6
1961-1993	3.8	2.1	1.6	7.5	2.2	5.2
1961-1975	5.3	2.6	2.0	8.5	3.3	5.0
1975-1982	2.5	1.9	1.0	10.4	1.5	8.8
1982-1991	3.0	1.7	1.6	5.2	1.3	3.8
1987-1988	4.9	3.9	4.1	6.3	0.8	5.4
1988-1989	2.4	2.2	1.4	6.6	0.9	5.7
1989-1990	-1.5	0.3	0.1	4.1	-1.6	5.8
1990-1991	-3.2	-3.0	-4.2	5.4	1.1	4.3
1991-1992	0.3	-1.0	-1.4	3.2	1.7	1.5
1992-1993	3.2	1.6	2.2	0.7	0.9	-0.3
	indexes (1986 = 100)					
Manufacturing industries						
1946	18.2	61.9	69.9	4.7	26.1	18.1
1961	35.9	74.8	77.7	13.9	46.1	30.1
1975	75.1	97.5	98.3	38.9	76.5	50.9
1982	78.2	94.3	92.2	82.4	84.8	97.1
1986	100.0	100.0	100.0	100.0	100.0	100.0
1987	104.8	103.0	103.9	103.0	100.9	102.0
1988	110.2	107.5	108.7	107.5	101.4	106.1
1989	111.1	108.8	109.2	111.6	101.8	109.6
1990	107.0	103.2	103.4	117.8	103.5	113.8
1991	99.6	95.9	95.6	125.0	104.2	119.9
1992	100.3	91.6	92.4	130.3	108.6	120.0
1993	105.4	92.2	94.8	131.0	111.1	118.0
	annual rate of % change					
1946-1993	3.8	0.9	0.7	7.3	3.1	4.1
1961-1993	3.4	0.7	0.6	7.3	2.8	4.4
1961-1975	5.4	1.9	1.7	7.6	3.7	3.8
1975-1982	0.6	-0.5	-0.9	11.3	1.5	9.7
1982-1991	2.7	0.2	0.4	4.7	2.3	2.4
1987-1988	5.1	4.4	4.6	4.4	0.4	4.0
1988-1989	0.9	1.2	0.5	3.8	0.4	3.3
1989-1990	-3.7	-5.2	-5.3	5.6	1.7	3.9
1990-1991	-6.9	-7.1	-7.5	6.1	0.7	5.3
1991-1992	0.7	-4.4	-3.3	4.3	4.2	0.0
1992-1993	5.0	0.6	2.6	0.5	2.3	-1.7

Multifactor productivity, labour input, capital input and real GDP

	Business sector				Manufacturing sector			
	Multifactor productivity	Labour input	Capital input	Real GDP	Multifactor productivity	Labour input	Capital input	Real GDP
	Törnqvist indexes 1986 = 100							
1961	71.1	62.1	30.7	34.2	54.8	77.7	45.7	35.8
1971	88.5	75.4	51.7	58.3	74.1	94.2	71.6	64.0
1975	90.5	85.6	63.1	69.5	78.7	98.9	79.5	72.7
1981	94.9	96.7	85.7	87.9	90.7	102.6	91.4	89.8
1982	91.1	91.5	91.8	83.5	83.6	93.7	98.2	79.6
1983	94.6	90.8	93.3	86.8	90.5	92.5	99.6	85.8
1984	98.4	93.7	94.4	92.5	98.6	96.3	97.1	95.2
1985	99.2	98.2	96.5	96.8	101.8	98.4	97.0	99.7
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	100.9	103.9	103.6	104.7	100.6	103.4	105.6	104.8
1988	100.8	108.7	108.2	109.3	100.1	108.1	112.3	109.7
1989	100.4	110.3	114.2	112.1	98.3	108.5	119.5	110.6
1990	97.0	110.1	120.2	110.2	94.4	102.8	128.7	105.4
1991	95.6	105.3	124.0	106.7	91.0	95.5	133.4	98.2
1992	95.7	103.8	128.8	107.1	93.1	92.3	137.1	99.0
1993	96.6	106.3	131.1	110.5	96.1	94.7	135.9	103.8

Contribution of labour, capital and multifactor productivity to output growth

	Business sector				Manufacturing sector			
	Multifactor productivity	Labour contribution	Capital contribution	Real GDP	Multifactor productivity	Labour contribution	Capital contribution	Real GDP
	annual rate of % change							
1961-1993	1.0	1.1	1.7	3.7	1.8	0.4	1.2	3.4
1961-1975	1.7	1.5	2.0	5.2	2.6	1.1	1.3	5.2
1975-1982	0.0	0.6	2.0	2.7	0.9	-0.5	1.0	1.3
1982-1991	0.5	1.0	1.2	2.8	0.9	0.1	1.3	2.4
1981-1982	-4.0	-3.5	2.5	-5.0	-7.8	-6.1	2.3	-11.4
1982-1983	3.9	-0.5	0.6	4.0	8.2	-0.8	0.5	7.8
1983-1984	4.0	2.1	0.4	6.5	9.0	2.7	-0.8	11.0
1984-1985	0.8	3.0	0.8	4.7	3.2	1.5	-0.0	4.7
1985-1986	0.8	1.2	1.3	3.4	-1.7	1.1	1.0	0.3
1986-1987	0.9	2.4	1.3	4.7	0.6	2.1	2.0	4.8
1987-1988	-0.1	2.9	1.6	4.4	-0.5	2.9	2.3	4.7
1988-1989	-0.4	1.0	2.0	2.5	-1.7	0.2	2.4	0.8
1989-1990	-3.4	-0.2	1.9	-1.7	-4.0	-3.4	2.7	-4.7
1990-1991	-1.4	-2.9	1.1	-3.2	-3.6	-4.6	1.3	-6.8
1991-1992	0.1	-1.0	1.2	0.4	2.3	-2.3	0.9	0.8
1992-1993	0.9	1.6	0.6	3.1	3.2	1.8	-0.3	4.8

■

OTHER RELEASES

Oils and fats

October 1994

Production of all types of deodorized oils in October totalled 75 133 tonnes, up 1.0% from 74 403 tonnes in September 1994. At the end of October 1994, year-to-date production totalled 703 411 tonnes, a 5.2% increase from 668 601 tonnes a year earlier.

Manufacturers' packaged sales of shortening totalled 13 377 tonnes in October, up from 11 841 tonnes in September 1994. At the end of October 1994, year-to-date sales totalled 111 159 tonnes, compared with 104 174 tonnes a year earlier.

Sales of packaged salad oil totalled 6 092 tonnes in October 1994, down from 8 078 tonnes the previous month. Year-to-date sales at the end of October 1994 totalled 64 538 tonnes, compared with 56 086 tonnes a year earlier.

Available on CANSIM: matrix 184.

The October 1994 issue of *Oils and fats* (32-006, $6/$60) will be available shortly. See "How to order publications".

For further information on this release, contact Peter Zylstra (613-951-3511), Industry Division. ■

Egg production

October 1994

Egg production in October totalled 40.7 million dozen, a 2.1% increase October 1993. The average number of layers increased 2.8%; the number of eggs per 100 layers decreased from 2,240 to 2,224.

Available on CANSIM: matrices 1145, 1146 and 5689-5691.

To order *Production and stocks of eggs and poultry* ($115/year), contact Julie Gordon (613-951-5039).

For further information on this release, contact Conrad Ogrodnik (613-951-2860), Livestock and Animal Products Section, Agriculture Division. ■

PUBLICATIONS RELEASED

Coal and coke statistics, September 1994.
Catalogue number 45-002
(Canada: $11/$110; United States: US$14/US$132; other countries: US$16/US$154).

Building permits, October 1994.
Catalogue number 64-001
(Canada: $24/$240; United States: US$29/US$288; other countries: US$34/US$336).

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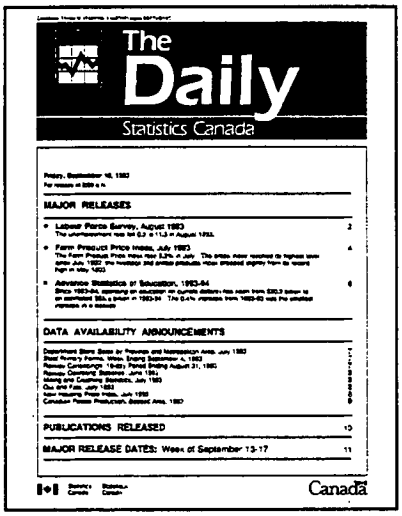
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