



The Daily

Statistics Canada

Wednesday, March 1, 2000

For release at 8:30 a.m.

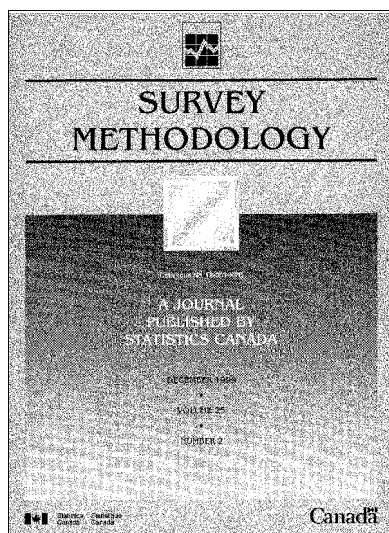
MAJOR RELEASES

- **Labour productivity in foreign and domestically controlled manufacturing plants, 1973 to 1993**

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The gap in labour productivity between foreign and domestically controlled plants has widened over the two decades from 1973 to 1993, according to a new research paper. Part of the gap is the result of an increasing concentration of domestic firms in smaller plant size classes, which traditionally have a lower labour productivity.

(continued on following page)



Survey methodology celebrates 25 years

The December 1999 issue of *Survey methodology* is a special edition marking the publication's 25th anniversary.

This issue features articles from prominent survey statisticians on a number of evolving developments in methodology. Due to the overwhelming response from contributors, the next issue for June 2000 will continue this theme.

Survey methodology, which is published bi-annually and is a refereed journal, publishes articles about aspects of statistical research relevant to a statistical agency. The publication offers general articles as well as special sections that examine in detail new techniques and experiences for selected topics. Submissions on aspects of statistical research and applications in surveys are welcome.

The December 1999 issue of *Survey methodology* (12-001-XPB, \$47) is now available. See *How to order publications*.

For more information, contact the publication's editor, M.P. Singh (613-951-9894; singhmp@statcan.ca), Household Survey Methods Division.



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MAJOR RELEASES

Labour productivity in foreign and domestically controlled manufacturing plants

1973 to 1993

The share of the manufacturing market controlled by foreign-owned plants waned in the 1970s but has since increased. In 1973, foreign-controlled plants accounted for 55% of the output in manufacturing, a proportion that declined to 49% by 1983 during the era of the Foreign Investment Review Agency. Ten years later in 1993, following the introduction of a new regulatory agency (Investment Canada) and the implementation of the Free Trade Agreement, foreign-controlled plants again accounted for 55% of output.

Most sectors showed this pattern of decline in output share followed by growth in output share. Sectors that were labour-intensive (clothing, textiles, leather), natural-resource oriented (wood, smelting, glass), product-differentiated (appliances) and that exhibited substantial economies of scale (steel, automobiles) all experienced the same pattern.

The one exception was the science-based sector (electrical, aircraft, pharmaceuticals), which saw a steady decline in the foreign-controlled sector, from 69% in 1973 to 62% of total shipments by 1993. In food and beverages, the growth in foreign-controlled shipments during the latter part of the study period was particularly rapid, increasing by about a third from 28% of total shipments in 1984-1988 to 37% by 1993.

In contrast to the share of foreign-controlled plants in output markets, the contribution of foreign-controlled plants to total employment declined steadily over the entire period — from 42% in 1973 to 35% in 1993.

This difference in the employment and output performance of foreign-controlled plants resulted in a substantial increase in their labour productivity relative to domestically controlled plants. (For the purpose of this study, labour productivity is measured in terms of shipments per worker and value added per worker.)

Foreign-controlled plants already had a higher labour productivity than their domestically controlled counterparts in 1973. In 1973, the shipments per worker of foreign plants was 80% higher than for domestic plants; value added per worker was 66% higher.

The differences between the productivity of foreign and domestic plants arises from different sources: different technologies, more capital, different plant sizes, and variations in industry of location.

This study investigates the extent to which size and industry differences serve to explain the overall

Note to readers

This release is based on a research paper available today titled "Labour productivity differences between domestic and foreign-controlled establishments in the Canadian manufacturing sector".

It studies changes in the market share of foreign-controlled and domestically controlled manufacturing plants as well as differences in labour productivity gains across these plants between 1973 and 1993. It also examines the extent to which differences in labour productivity exist between small and large plants, across various industry sectors, and across plants that have been growing or downsizing.

Labour productivity is a measure of output per worker. Differences in labour productivity across firms can arise because of differences in their capital intensity, the nature of technologies used, and in their efficiency. This paper does not try to explain which of these causes explains differences in labour productivity. It focuses only the size and trends of these differences.

The data used in this analysis are taken from the micro-economic records on establishments collected by the Canadian Census of Manufacturers.

differences in productivity that are observed between foreign and domestic plants. Foreign plants are larger than domestic plants and larger plants are generally more capital intensive and therefore have a higher labour productivity. Foreign plants are also more concentrated in certain sectors (scale-based) that are more capital intensive and, as a result, have higher labour productivity.

When consideration is taken of size and industry differences between foreign-controlled and domestically controlled plants, the gap in labour productivity between the two was reduced but not eliminated. As a result, shipments per worker were 73% higher in foreign-controlled plants than in domestically controlled plants and value added per worker was 57% higher.

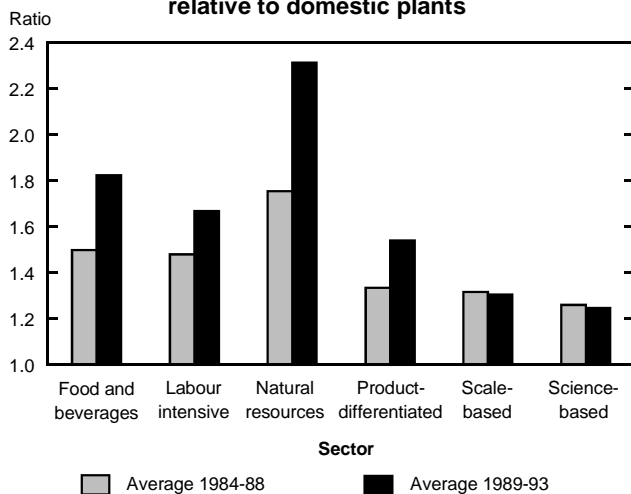
The overall gap between the two groups widened substantially from 1973 to 1993. Using shipments per worker, labour productivity in foreign-controlled plants increased from 80% to 126% higher than domestic plants. Using value added per worker, labour productivity increases from 66% to 107% higher than domestic plants.

Part of the difference in labour productivity growth between foreign and domestic plants arises from changes in plant size and industry composition. Domestic plants have shifted towards plant size classes and industries that have lower labour productivity, whereas foreign plants have become more concentrated in size classes and sectors that have higher labour productivity.

After accounting for changes in size and industry composition, the labour productivity of foreign controlled plants still increases relative to domestically controlled plants. Shipments per worker in foreign plants also increased from a level 73% higher than in domestic plants in 1973 to 96% higher in 1993. The increase is from 57% to 80% when value added per worker is used as a criterion. About half of the increase in the overall differences between the two groups is due to shifts in composition.

The increase in relative labour productivity occurred in several different industrial sectors. The largest increases were in food and beverages and in the natural resource sector that includes industries such as wood and non-metallic minerals (glass). But foreign-controlled plants also outdistanced their domestically controlled counterparts in the labour-intensive and product-differentiated sectors.

Labour productivity in foreign relative to domestic plants



Earlier research (reported in *The Daily*, October 3, 1996) described how the labour productivity of smaller plants has fallen behind that of larger plants. In particular, this may be where domestic plants did poorly relative to foreign-controlled plants.

The current study examined differences in labour productivity growth between domestic- and foreign-controlled plants in each of three size classes — small, medium and large plants (defined as 1 to 100, 101 to 250 and 250+ employees). The productivity gap between foreign-controlled and domestically controlled plants has grown over time in most size classes. For example, within large plants in the food and beverages sector, labour productivity

grew by 18% on average every five years, whereas in domestically controlled plants it grew by only 12%. Similar differences were noted for both medium and small plants.

These findings show that the labour productivity differences between domestically controlled and foreign-controlled plants are large and pervasive and that the tendency of domestically owned plants to fall behind is not confined to just one plant size class or one industry.

The causes of these differences have not been investigated in this study. Labour productivity differences can arise from differences in capital intensity, the use of different types of technologies, or differences in efficiency. Future research will study the causes of these differences in more detail; in particular, whether wage differences tend to offset the labour productivity differences and the differences in capital intensity of foreign- and domestically controlled plants.

Foreign-controlled plants expanded output with relatively small rise in employment

This study also examined the response of employment to output changes in both domestically controlled and foreign-controlled plants. Based on year-to-year changes in output and employment, foreign-controlled plants expanded output with a relatively small increase in employment. Among small plants, those with fewer than 100 employees, foreign-controlled plants hired roughly 50% fewer employees than domestically controlled plants for a given increase in output.

Among medium and large plants, the difference between foreign-controlled and domestically controlled plants was even more pronounced. Foreign-controlled plants hired at least 80% fewer employees than did domestically controlled plants.

The effect of foreign control was much less among plants that were downsizing. For the manufacturing sector as a whole, foreign-controlled plants eliminated about 20% fewer jobs for a given contraction in output. Food and beverages were the only industries in which foreign-controlled plants laid off more workers than their domestically controlled counterparts for a given decline in output.

In response to output changes, the foreign-controlled plants in general created and eliminated fewer jobs than their Canadian counterparts. This finding implies that labour markets in which foreign-controlled plants operate are less volatile.

The research paper "Labour productivity differences between domestic and foreign-controlled

establishments in the Canadian manufacturing sector" (11F0019MPE, no. 118) is now available. To order, contact Nicole Richer (613-951-3700) or access Statistics Canada's Web site (www.statcan.ca) under *Products and services* then *Downloadable research papers (free)*.

For more information, or to enquire about the concepts, methods or data quality of this release, contact John Baldwin (613-951-8588; baldjoh@statcan.ca), Micro-economic Analysis Division. ■

OTHER RELEASES

Pulpwood and wood residue statistics

December 1999

Pulpwood receipts in December totalled 3 448 788 cubic metres, down 4.8% from 3 623 007 cubic metres in December 1998. (All 1998 data were revised.) Wood residue receipts rose 3.4%, from 6 231 619 cubic metres in December 1998 to 6 442 873 cubic metres in December 1999. Consumption of pulpwood and wood residue totalled 9 739 378 cubic metres, up 7.0% from 9 100 594 cubic metres in December 1998.

The closing inventory of pulpwood and wood residue decreased 1.7% to 13 937 206 cubic metres, down from 14 174 492 cubic metres in December 1998. From January to December 1999, consumption of pulpwood and wood residue (112 404 722 cubic metres) increased 8.9% from 103 212 868 cubic metres a year earlier.

Available on CANSIM: matrix 54.

The December 1999 issue of *Pulpwood and wood residue statistics* (25-001-XIB, \$6/\$55) is now available. See *How to order publications*.

For more information, or to enquire about the concepts, methods, and data quality of this release, contact Gilles Simard (613-951-3516; simales@statcan.ca), Manufacturing, Construction and Energy Division. ■

Asphalt roofing

January 2000

In January, production of asphalt shingles totalled 3 246 850 metric bundles, a 17.7% increase from 2 757 740 metric bundles produced in January 1999.

Available on CANSIM: matrices 32 and 122 (series 27).

The January 2000 issue of *Asphalt roofing* (45-001-XIB, \$5/\$47) is now available. See *How to order publications*.

For more information, or to enquire about the concepts, methods and data quality of this release, contact Gilles Simard (613-951-3516; simales@statcan.ca), Manufacturing, Construction and Energy Division. ■

Domestic air travel

Second and third quarter 1998 (preliminary)

Data on air passenger origin and destination are now available for the second and third quarters of 1998. The data represent passengers who traveled within Canada on scheduled flights provided by major air carriers.

For more information, or to enquire about the concepts, methods or data quality for this release, contact Carol Gudz (613-951-0124), Aviation Statistics Centre, Transportation Division. ■

Statistical report on the health of Canadians

A revised version of the *Statistical report on the health of Canadians* (82-570-XIE, free) is available today. The report was originally released on September 17, 1999 and is available free on Statistics Canada's Web site (www.statcan.ca). under *Products and services*, then *Downloadable publications (free)*.

For more information, or to enquire about the concepts, methods or data quality for this release, contact Anne Gervais (613-951-1779; anne.gervais@statcan.ca), Health Statistics Division. ■

PUBLICATIONS RELEASED

Survey methodology, December 1999
Catalogue number 12-001-XPB
(Canada: \$47/\$; outside Canada: US\$47/US\$).

Asphalt roofing, January 2000
Catalogue number 45-001-XIB
(Canada: \$5/\$47).

National income and expenditure accounts, third quarter 1999
Catalogue number 13-001-XPB
(Canada: \$44/\$145; outside Canada: US\$44/US\$145).

All prices exclude sales tax.

Catalogue numbers with an -XIB or an -XIE extension are Internet versions; those with -XMB or -XME are microfiche; and -XPB or -XPE denote a paper version.

Pulpwood and wood residue statistics, December 1999
Catalogue number 25-001-XIB
(Canada: \$6/\$55).

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Catalogue 11-001E (P) English 11-001E/11-001E-001E-001E	
 The Daily Statistics Canada	
Thursday, June 5, 1997 For release at 8:30 a.m.	
MAJOR RELEASES	
<ul style="list-style-type: none"> • Urban transit, 1995 Despite the emphasis on taking urban transit, Canadians are getting it less and less. In 1995, about 10 million took an average of about 10 trips on some form of urban transit, the lowest level in the past 25 years. 	2
<ul style="list-style-type: none"> • Productivity, hourly compensation and unit labour cost, 1995 Growth in productivity among Canadian businesses was relatively weak again in 1995, accompanied by sluggish gains in employment and slow economic growth during the year. 	4
OTHER RELEASES	
<ul style="list-style-type: none"> • High-wind index May 1997 	3
<ul style="list-style-type: none"> • Short-term Expectations Survey 	8
<ul style="list-style-type: none"> • Steel primary forms, steel and May 31, 1997 	12
<ul style="list-style-type: none"> • Egg production, April 1997 	13
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Statistics Canada's official release bulletin

Catalogue 11-001E.

Published each working day by the Communications Division, Statistics Canada, 10-H, R.H. Coats Bldg., Tunney's Pasture, Ottawa, Ontario K1A 0T6.

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RELEASE DATES: MARCH 2000

(Release dates are subject to change.)

Release date	Title	Reference period
1	Labour productivity differences between domestic- and foreign-controlled establishments in the Canadian manufacturing sector	
6	The maturation of Canada's retirement income system: Income levels, income inequality and low income among the elderly	
7	Industrial capacity utilization rates	Oct.-Dec. 1999
8	Small business, a statistical portrait	1997
8	Help-wanted index	February 2000
9	Building permits	January 2000
10	Labour Force Survey	February 2000
10	New Housing Price Index	January 2000
15	Consumer Price Index	February 2000
16	Canadian social trends	Spring 2000
16	Monthly Survey of Manufacturing	January 2000
17	New motor vehicle sales	January 2000
17	Travel between Canada and other countries	January 2000
21	Canadian international merchandise trade	January 2000
21	Wholesale trade	January 2000
22	Composite Index	February 2000
23	Retail trade	January 2000
23	Canada's international transactions in securities	January 2000
28	National tourism indicators	Third quarter 1999
29	International investment position	1999
29	National balance sheet accounts	
29	Employment Insurance	January 2000
29	Employment, earnings and hours	January 2000
30	Industrial Product Price Index	February 2000
30	Raw Materials Price Index	February 2000
31	Real gross domestic product at factor cost by industry	January 2000
31	Health reports	Winter 1999
31	Adult criminal court statistics	1998/99