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Regional Industrial
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Expansion industrielle
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Canada

RATE OF CAPACITY UTILIZATION

Fourth Quarter, 1987

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RATE OF CAPACITY UTILIZATION

Fourth Quarter, 1987

Statistical Analysis
Policy and Evaluation
Department of Regional Industrial Expansion

April 1988

FOREWORD

The Rates of Capacity Utilization published by the Department of Regional Industrial Expansion (DRIE) are based on the Wharton School method of estimating capacity utilization, usually referred to as the "trend-through-peaks" method. Notes on the methodology used in computing these rates were included as a supplement to the First Quarter 1980 release.

Many conceptual and measurement problems surround the calculation of capacity utilization. Consequently, the utilization rates presented here should be treated as statistical estimates. These rates have greater utility when they are considered in conjunction with other data related to industrial performance.

It should be pointed out that this report uses the latest available data (from Statistics Canada) on industrial production.

RATE OF CAPACITY UTILIZATION - CANADA

FOURTH QUARTER 1987

The overall rate of capacity utilization in Canadian industry reached a level of 87.7 percent in the fourth quarter of 1987. This represents an increase of 1.5 percentage points from the rate of 86.2 percent reported for the previous quarter (Table 1). It is 4.5 percentage points above the level attained in the fourth quarter of 1986 and substantially higher than the average rate of 80.4 percent over the 1981-1987 period (Table 5). It is, in fact, the highest rate since a low of 68.8 percent was reached in the fourth quarter of 1982 during the 1981-82 recession (Chart 1). However, it is still below the pre-recession peak (89.3 percent) reached in the third quarter of 1979.

Three broad industry categories comprise the overall measure of industrial capacity: mining (including quarrying and oil wells), manufacturing, and electric utilities (including gas and water utilities). Of these three categories, on a seasonally adjusted basis, mining and manufacturing showed increases in operating rates between the third and fourth quarter of 1987 while utilities suffered a decline (Table 2). For mining, the increase was 1.3 percentage points. The current level of 85.0 percent was 6.6 percentage points higher than the level recorded in the fourth quarter of 1986. It was also significantly above the average annual rate of 73.6 percent for the 1981-1987 period, as well as the average rate for the 1971-1980 period (77.4 percent). At 79.1 percent, utilities showed a decline of 1.5 percentage points from the third quarter of 1987. The fourth quarter 1987 level is 0.7 percentage points below its level of a year ago. It is also below the rate experienced over the 1981-1987 period (80.6 percent) and well below the average for the 1971-1980 period (93.3 percent).

The rate of capacity utilization in the manufacturing sector rose by 2.0 percentage points to 89.7 percent in the fourth quarter of 1987. It was 4.7 percentage points higher than the level attained in the fourth quarter of 1986. It was also substantially above the average annual rate for the period 1981-1987 (82.2 percent) and only slightly below the average rate recorded for the 1971-1980 period (89.9 percent).

The capacity utilization rate for the non-durables segment of manufacturing in the fourth quarter of 1987 increased from its level in the third quarter by 0.7 percentage points to 90.0 percent. Within this segment, eight of the thirteen industries registered increased utilization rates. Chemical and chemical products, paper and allied, and primary textile industries showed increases amounting to 2.5, 2.5 and 2.3 percentage points, respectively from the third quarter of 1987. Some industries especially plastics, textiles, and paper and allied products were working at historical peaks of 100 percent (Table 3). The rubber, leather and clothing industries showed the most significant decreases, 8.0, 3.8 and 3.7 percentage points, respectively.

Capacity utilization rates in durable manufacturing increased by 3.2 percentage points in the fourth quarter of 1987 to reach a level of 89.5 percent. All nine industries making up this segment of manufacturing recorded increased utilization rates. The largest advances occurred in the transportation equipment, primary metals and electrical products industries, which recorded increases of 5.4, 3.9 and 3.1 percentage points, respectively. Three industries (i.e., wood, electrical products, and non-metallic minerals) were working at 100 percent capacity (Table 4).

Comparative tables and charts covering the period 1981-1987 are included. The data for the years 1971-1980 are available upon request.

TABLES / CHARTS

Table 1

**CAPACITY UTILIZATION - CANADA
MAJOR SECTORS**

YEAR		INDUSTRIAL	MINING	MANUFACTURING			UTILITIES
				TOTAL	NON-DURABLE	DURABLE	
1981	1	82.8	66.0	87.4	89.5	85.6	83.6
	2	84.1	65.4	89.1	91.2	87.3	85.9
	3	81.4	66.0	85.2	87.9	82.8	85.6
	4	78.4	64.7	81.5	85.4	78.0	83.6
1982	1	75.4	64.1	77.5	81.8	73.7	82.5
	2	71.3	63.4	72.7	77.6	68.2	77.4
	3	69.6	62.1	70.9	77.8	64.7	75.6
	4	68.8	64.1	69.3	77.6	61.7	74.7
1983	1	70.3	64.7	71.2	80.0	63.3	75.3
	2	72.3	64.7	73.4	82.0	65.7	79.8
	3	75.2	69.9	76.0	83.8	68.9	80.3
	4	77.6	71.2	79.1	84.4	74.3	80.1
1984	1	79.0	73.2	80.6	83.7	77.8	79.1
	2	82.2	78.4	83.4	87.2	80.1	81.1
	3	83.3	79.1	84.8	87.3	82.6	80.9
	4	83.4	79.1	84.8	87.9	82.1	81.4
1985	1	83.4	81.0	84.3	86.9	81.9	81.9
	2	83.8	81.0	84.9	86.9	83.2	81.0
	3	84.6	79.7	86.5	87.2	85.8	81.5
	4	85.2	81.0	86.7	88.8	84.9	82.7
1986	1	84.3	80.4	86.0	88.4	83.9	80.4
	2	84.1	79.1	86.2	89.1	83.6	79.5
	3	83.3	77.8	85.3	89.3	81.7	80.0
	4	83.2	78.4	85.0	88.0	82.3	79.8
1987	1	84.2	78.4	86.3	89.8	83.1	81.0
	2	84.9	79.7	86.9	89.8	84.4	81.4
	3	86.2	83.7	87.7	89.3	86.3	80.6
	4	87.7	85.0	89.7	90.0	89.5	79.1

Chart 1

CAPACITY UTILIZATION
Industrial Sector

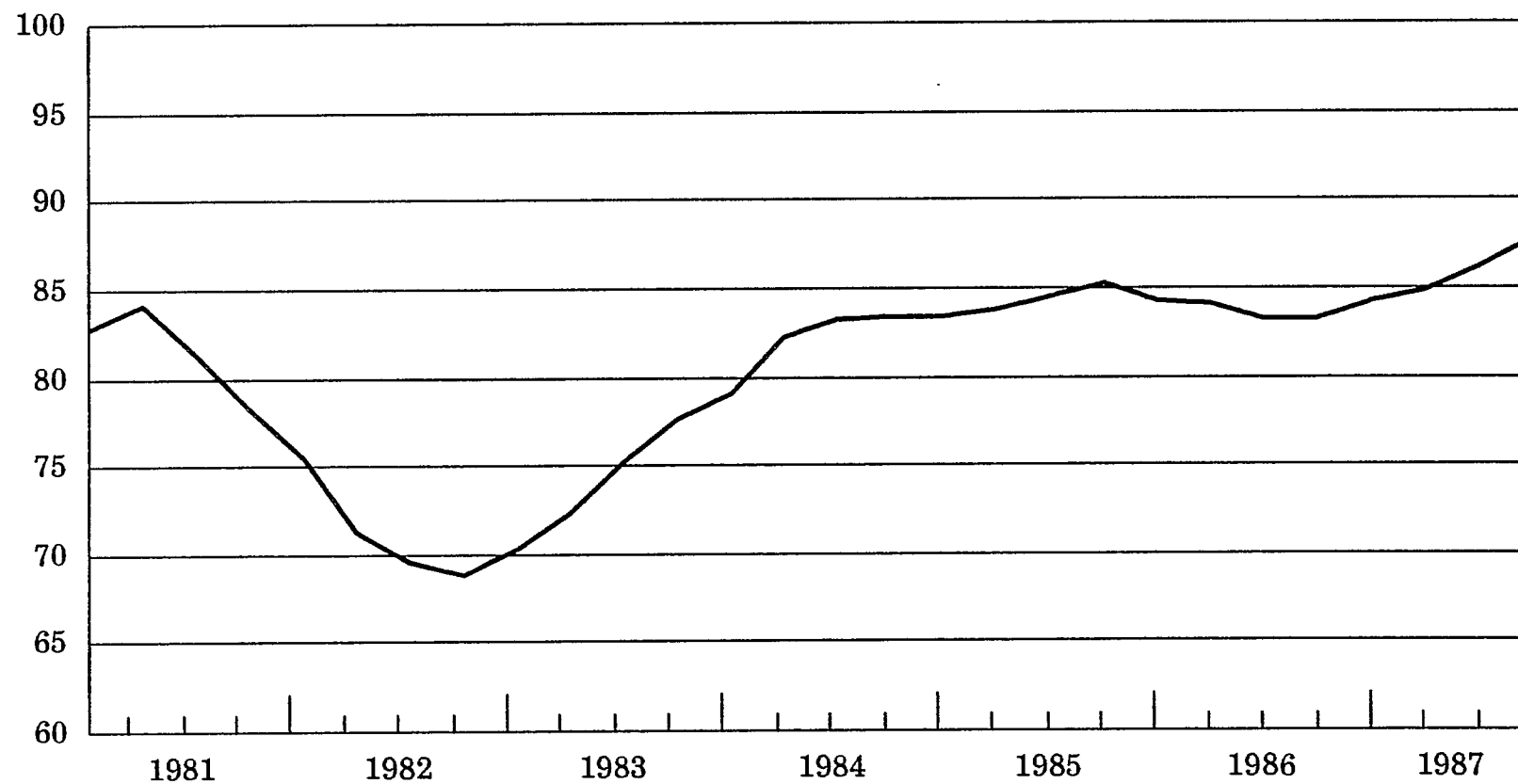


Table 2

CAPACITY UTILIZATION

		Percentage Points Changes From		
	IV Q. 1987 Level	III Q. 1987	IV Q. 1986	Last Peak
Industrial	87.7	1.5	4.5	-9.7 (I,1974)
Mining	85.0	1.3	6.6	-15.0 (III,1973)
Manufacturing	89.7	2.0	4.7	-8.5 (I,1974)
Non-Durables	90.0	0.7	2.0	-7.9 (I,1974)
Food	86.9	0.4	-2.4	-13.1 (IV,1973)
Beverage	70.5	0.5	-0.3	-29.5 (II,1974)
Tobacco	56.9	-2.6	-3.3	-43.1 (IV,1977)
Rubber	82.3	-8.0	-5.3	-17.7 (IV,1984)
Plastics	100.0	1.1	3.0	0.0 (IV,1987)
Leather	83.3	-3.8	-10.6	-16.7 (I,1981)
Prim. Textile	100.0	2.3	10.9	0.0 (IV,1987)
Textile Prod.	100.0	1.5	8.8	0.0 (IV,1987)
Clothing	96.3	-3.7	3.0	-3.7 (III,1987)
Paper & Allied	100.0	2.5	5.9	0.0 (IV,1987)
Printing & Publ.	97.9	1.7	3.6	-2.1 (II,1981)
Ref. Pet. & Coal	80.6	-0.9	4.8	-19.4 (III,1983)
Chem. & Chem. Prod.	80.5	2.5	2.3	-19.5 (II,1973)
Durables	89.5	3.2	7.2	-9.0 (I,1974)
Wood	100.0	1.3	16.5	0.0 (IV,1987)
Furniture & Fixtures	90.5	1.4	4.6	-9.5 (I,1974)
Primary Metals	87.6	3.9	6.6	-12.4 (III,1974)
Metal Fab.	99.0	1.7	11.2	-1.0 (I,1980)
Machinery	66.7	3.0	4.4	-33.3 (III,1979)
Trans. Equip.	83.7	5.4	1.3	-16.3 (I,1979)
Electrical Products	100.0	3.1	8.7	0.0 (IV,1987)
Non-Met. Min.	100.0	2.4	8.7	0.0 (IV,1979)
Other Mfg.	72.2	2.6	3.1	-27.8 (II,1979)
Electric Power, Gas. W. Util.	79.1	-1.5	-0.7	-20.9 (III,1973)

Chart 2

CAPACITY UTILIZATION
Major Sectors (Canada)

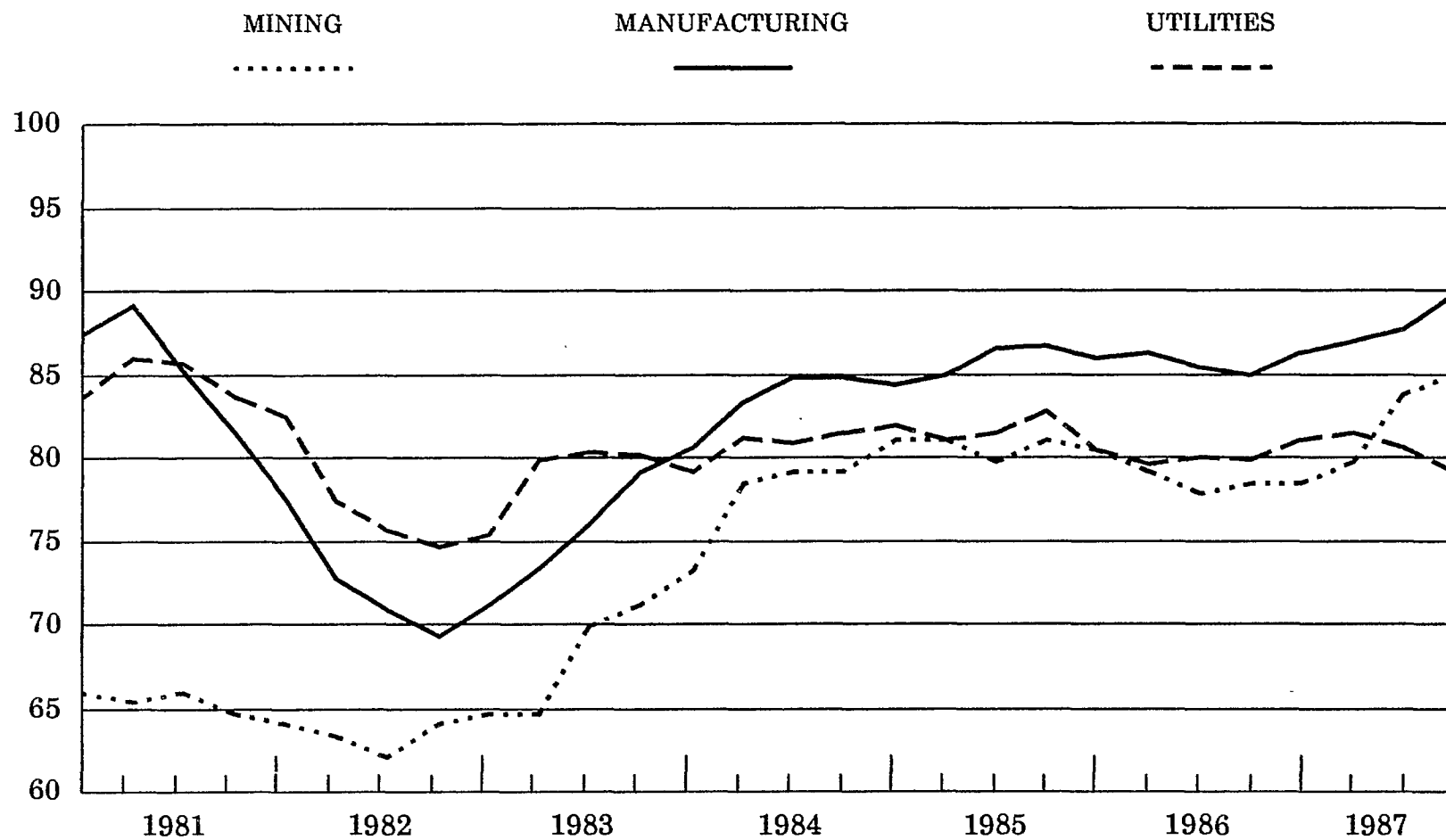


Chart 3

CAPACITY UTILIZATION
Major Sectors (Canada)

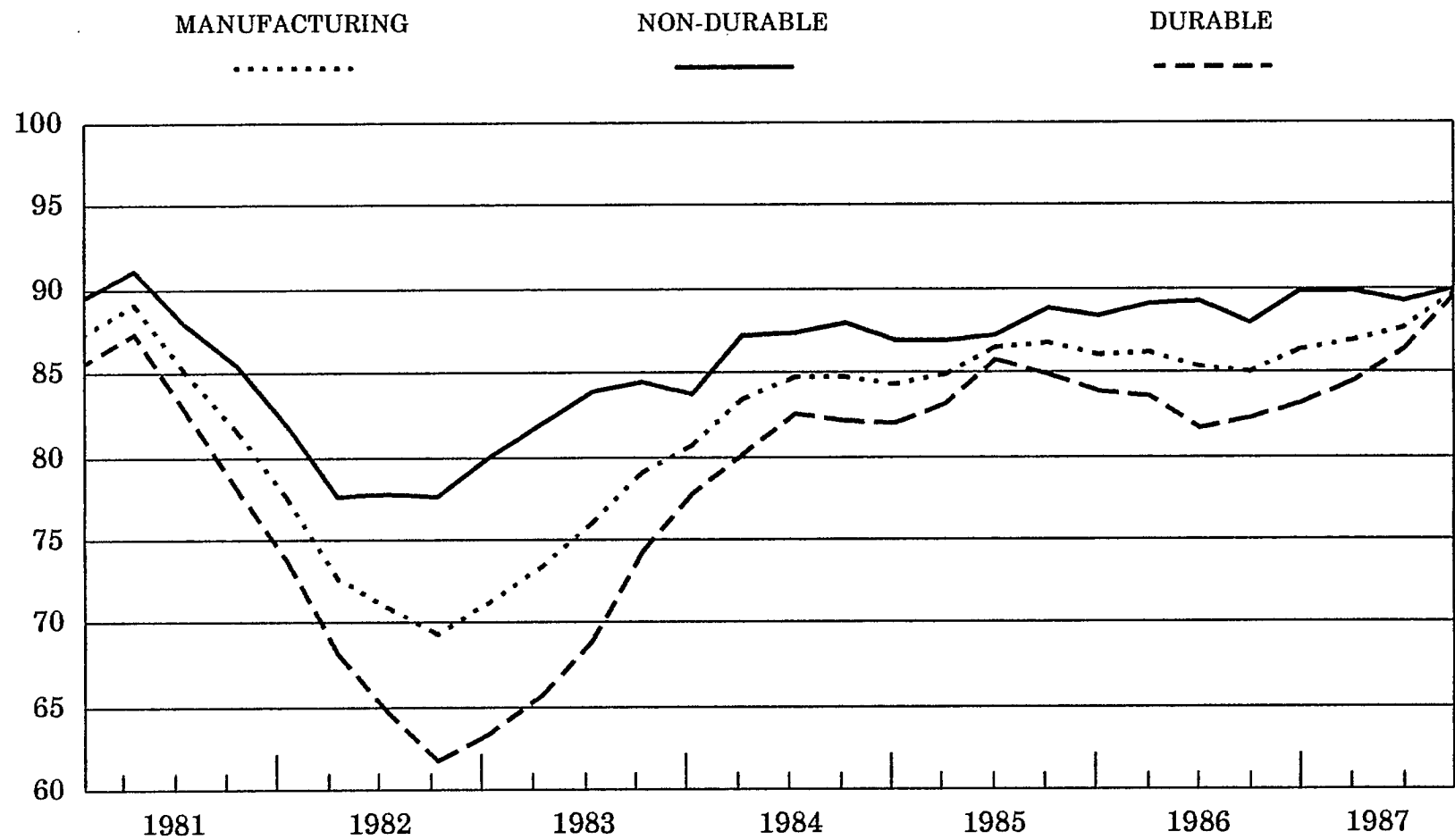


Table 3

**MANUFACTURING INDUSTRIES
CAPACITY UTILIZATION
NON-DURABLE**

YEAR	NON-DURABLE	FOOD	BEVERAGES	TOBACCO	RUBBER
1981 1	89.5	92.5	79.7	79.8	78.1
2	91.2	92.0	81.0	83.8	81.7
3	87.9	91.6	80.6	91.9	74.6
4	85.4	92.0	75.6	85.6	70.5
1982 1	81.8	89.7	73.7	83.5	68.0
2	77.6	90.2	72.7	84.0	64.0
3	77.8	91.5	69.3	80.3	67.6
4	77.6	88.4	68.2	80.0	62.9
1983 1	80.0	88.8	68.0	78.8	71.6
2	82.0	86.6	65.4	72.7	72.9
3	83.8	85.3	68.2	69.1	75.6
4	84.4	85.8	67.9	70.5	82.8
1984 1	83.7	87.1	67.7	71.8	87.7
2	87.2	89.3	70.5	66.7	96.2
3	87.3	88.9	71.7	64.8	98.8
4	87.9	91.0	70.7	71.0	100.0
1985 1	86.9	89.7	69.7	69.1	90.2
2	86.9	88.5	70.9	74.4	91.4
3	87.2	90.6	69.1	68.5	94.0
4	88.8	91.9	71.1	65.1	88.7
1986 1	88.4	91.4	70.8	65.6	90.6
2	89.1	90.2	74.3	58.3	88.8
3	89.3	89.8	71.1	62.0	86.4
4	88.0	89.3	70.8	60.2	87.6
1987 1	89.8	89.8	72.0	59.9	94.4
2	89.8	88.5	71.0	58.9	87.1
3	89.3	86.5	70.0	59.5	90.3
4	90.0	86.9	70.5	56.9	82.3

Table 3 (cont'd)

**MANUFACTURING INDUSTRIES
CAPACITY UTILIZATION
NON-DURABLE**

YEAR	NON-DURABLE	PLASTICS	LEATHER	PRIM. TEXTILE	TEXTILE PRODUCTS	CLOTHING
1981 1	89.5	88.0	100.0	93.0	93.9	95.5
2	91.2	92.3	97.0	98.3	100.0	96.5
3	87.9	92.0	91.2	95.2	92.5	93.7
4	85.4	87.3	93.0	82.9	81.3	88.1
1982 1	81.8	83.6	89.1	76.2	74.8	87.2
2	77.6	75.7	81.5	64.1	67.3	82.5
3	77.8	76.4	82.3	63.9	70.8	83.5
4	77.6	77.2	77.5	73.7	75.2	80.7
1983 1	80.0	80.4	82.2	83.4	84.1	83.5
2	82.0	82.7	85.8	93.1	89.3	83.6
3	83.8	86.6	86.7	94.6	89.1	83.6
4	84.4	89.6	91.3	93.4	89.8	83.6
1984 1	83.7	92.6	96.9	91.3	89.7	85.5
2	87.2	95.4	97.7	92.8	91.3	92.1
3	87.3	93.6	92.0	89.8	90.2	92.1
4	87.9	96.4	90.9	89.6	90.0	92.2
1985 1	86.9	93.8	88.0	90.2	88.0	89.4
2	86.9	94.3	91.7	86.4	88.7	89.4
3	87.2	96.3	95.3	89.6	92.1	91.3
4	88.8	96.0	95.2	93.7	92.8	95.1
1986 1	88.4	95.0	94.2	93.4	93.5	93.2
2	89.1	94.7	93.2	92.3	95.1	95.1
3	89.3	95.9	92.1	93.7	91.4	97.1
4	88.0	97.0	93.9	89.1	91.2	93.3
1987 1	89.8	96.7	89.2	96.6	94.5	97.1
2	89.8	97.9	87.2	98.0	95.2	99.0
3	89.3	98.9	87.1	97.7	98.5	100.0
4	90.0	100.0	83.3	100.0	100.0	96.3

Table 3 (cont'd)

**MANUFACTURING INDUSTRIES
CAPACITY UTILIZATION
NON-DURABLE**

YEAR	NON-DURABLE	PAPER & ALLIED	PRINT & PUB.	REFINED PETROL & COAL	CHEM. & CHEM. PRODUCTS
1981 1	89.5	86.7	96.9	84.7	85.5
2	91.2	90.1	100.0	88.7	84.5
3	87.9	82.4	98.1	79.8	81.9
4	85.4	84.9	94.4	69.4	77.7
1982 1	81.8	78.1	91.7	73.4	73.6
2	77.6	72.9	87.1	61.3	68.0
3	77.8	71.1	84.5	70.2	69.6
4	77.6	71.2	82.8	94.4	69.6
1983 1	80.0	77.2	85.8	50.0	75.0
2	82.0	81.4	86.0	71.0	78.7
3	83.8	84.8	87.1	100.0	79.4
4	84.4	85.7	88.2	80.6	81.5
1984 1	83.7	78.0	88.4	87.9	81.4
2	87.2	85.7	90.3	85.5	83.4
3	87.3	88.2	92.3	76.6	82.6
4	87.9	88.2	91.5	73.4	83.9
1985 1	86.9	88.2	90.8	75.8	84.4
2	86.9	87.3	91.8	79.8	84.3
3	87.2	87.3	91.1	76.6	82.1
4	88.8	89.9	92.9	79.8	83.3
1986 1	88.4	90.7	93.9	75.8	81.2
2	89.1	94.1	95.7	77.4	80.4
3	89.3	94.1	95.8	82.3	81.6
4	88.0	94.1	94.3	75.8	78.2
1987 1	89.8	96.6	94.4	82.3	80.1
2	89.8	96.6	94.5	82.3	81.9
3	89.3	97.5	96.2	81.5	78.0
4	90.0	100.0	97.9	80.6	80.5

Table 4

**MANUFACTURING INDUSTRIES
CAPACITY UTILIZATION
DURABLE**

YEAR	DURABLE	WOOD	FURNITURE & FIXTURES	PRIMARY METALS	FAB. METAL	MACHINERY	
1981	1	85.6	98.9	83.1	80.5	90.9	88.8
	2	87.3	93.7	87.8	83.3	97.3	93.2
	3	82.8	71.7	86.0	79.8	95.3	87.9
	4	78.0	75.2	74.2	68.0	90.5	81.1
1982	1	73.7	67.9	66.6	68.5	89.4	74.3
	2	68.2	65.6	61.5	58.2	79.1	63.5
	3	64.7	65.0	59.7	50.4	75.2	58.7
	4	61.7	65.2	62.0	52.5	72.3	54.8
1983	1	63.3	74.2	65.9	53.8	71.3	51.9
	2	65.7	74.3	67.3	62.6	73.0	51.4
	3	68.9	84.6	72.0	66.2	74.8	54.2
	4	74.3	81.5	75.0	72.7	77.4	56.9
1984	1	77.8	81.6	76.4	77.6	78.2	61.2
	2	80.1	88.5	73.8	81.0	79.9	65.4
	3	82.6	92.3	73.6	83.0	81.7	64.8
	4	82.1	92.3	74.2	81.2	81.5	66.6
1985	1	81.9	89.2	76.4	78.7	83.2	66.0
	2	83.2	88.5	81.0	79.9	85.8	64.7
	3	85.8	95.8	82.3	81.8	88.4	65.6
	4	84.9	95.7	83.7	79.3	88.3	65.9
1986	1	83.9	89.9	84.3	79.7	87.3	63.8
	2	83.6	91.3	84.8	76.5	88.0	67.0
	3	81.7	84.2	86.2	76.3	87.9	65.7
	4	82.3	83.5	85.9	81.0	87.8	62.3
1987	1	83.1	91.9	86.5	80.7	89.5	63.2
	2	84.4	91.9	87.0	81.9	93.8	62.7
	3	86.3	98.7	89.1	83.7	97.3	63.7
	4	89.5	100.0	90.5	87.6	99.0	66.7

Table 4 (cont'd)

**MANUFACTURING INDUSTRIES
CAPACITY UTILIZATION
DURABLE**

YEAR	DURABLE	TRANS. EQUIP.	ELECT. PROD.	NON-METALLIC MINERALS	OTHER MFG.	
1981	1	85.6	70.5	97.3	82.5	83.4
	2	87.3	70.5	96.2	86.6	83.2
	3	82.8	68.4	94.3	80.0	84.6
	4	78.0	66.4	88.9	78.3	82.8
1982	1	73.7	61.1	83.8	69.3	78.5
	2	68.2	63.8	79.8	60.3	76.8
	3	64.7	63.9	74.4	59.5	71.9
	4	61.7	53.5	71.7	60.3	68.8
1983	1	63.3	58.8	69.9	63.5	66.4
	2	65.7	63.4	66.7	69.2	67.2
	3	68.9	66.0	68.1	71.6	67.9
	4	74.3	79.3	75.2	71.5	73.1
1984	1	77.8	83.0	81.4	73.9	79.0
	2	80.1	82.2	85.8	76.3	75.9
	3	82.6	87.0	90.8	77.9	75.1
	4	82.1	84.5	90.2	80.3	75.7
1985	1	81.9	84.3	92.9	77.8	74.9
	2	83.2	86.0	92.3	84.3	76.9
	3	85.8	90.6	92.9	86.7	76.1
	4	84.9	89.9	90.5	87.4	74.0
1986	1	83.9	89.1	90.0	89.0	73.2
	2	83.6	87.2	89.4	89.0	73.2
	3	81.7	82.5	88.9	88.9	71.8
	4	82.3	82.4	91.3	91.3	69.1
1987	1	83.1	81.2	89.1	96.1	68.4
	2	84.4	78.3	95.3	94.4	69.0
	3	86.3	78.3	96.9	97.6	69.6
	4	89.5	83.7	100.0	100.0	72.2

Table 5

CAPACITY UTILIZATION - CANADA
(Percent)

								1981-1987		1971-1980	
								Quarter			
	1981	1982	1983	1984	1985	1986	1987	Avg.	Low	High	Average
Industrial	81.7	71.3	73.8	82.0	84.2	83.7	85.7	80.4	68.8	87.7	87.7
Mining	65.5	63.4	67.6	77.4	80.7	78.9	81.7	73.6	62.1	85.0	77.4
Manufacturing	85.8	72.6	74.9	83.4	85.6	85.6	87.6	82.2	69.3	89.7	89.9
Non-Durables	88.5	78.7	82.5	86.5	87.4	88.7	89.7	86.0	77.6	91.2	90.8
Food	92.0	89.9	86.6	89.1	90.2	90.2	87.9	89.4	85.3	92.5	95.3
Beverage	79.2	71.0	67.4	70.1	70.2	71.7	70.9	71.5	65.4	81.0	90.2
Tobacco	85.3	81.9	72.8	68.6	69.3	61.5	58.8	71.2	56.9	91.9	91.5
Rubber	76.2	65.6	75.7	95.7	91.1	88.5	88.5	83.0	62.9	100.0	86.5
Plastic	89.9	78.2	84.8	94.5	95.1	95.6	98.4	90.9	75.7	100.0	87.5
Leather	95.3	82.6	86.5	94.4	92.5	93.3	86.7	90.2	77.5	100.0	93.3
Prim. Textile	92.3	69.5	91.1	90.9	90.0	92.1	98.1	89.1	63.9	100.0	89.1
Textile Prod.	91.9	72.0	88.1	90.3	90.4	92.3	97.0	88.9	67.3	100.0	93.4
Clothing	93.4	83.5	83.6	90.5	91.3	94.7	98.1	90.7	80.7	100.0	94.2
Paper & Allied	86.0	73.3	82.3	85.0	88.2	93.2	97.7	86.5	71.2	100.0	85.7
Printing & Publ.	97.3	86.5	86.8	90.6	91.6	94.9	95.7	91.9	82.8	100.0	95.7
Refined Petrol & Coal	80.6	74.8	75.4	80.8	78.0	77.8	81.7	78.5	50.0	100.0	82.1
Chemicals & Chemical Products	82.4	70.2	78.6	82.8	83.5	80.3	80.1	79.7	68.0	85.5	88.5

Table 5 (cont'd)

CAPACITY UTILIZATION - CANADA
(Percent)

								1981-1987		1971-1980	
								Quarter			
	1981	1982	1983	1984	1985	1986	1987	Avg.	Low	High	Average
Durables	83.4	67.1	68.0	80.6	83.9	82.9	85.8	78.8	61.7	89.5	89.0
Wood	84.9	65.9	78.6	88.7	92.3	87.2	95.6	84.8	65.0	100.0	90.2
Furniture & Fixtures	82.8	62.4	70.0	74.5	80.8	85.3	88.3	77.7	59.7	90.5	82.5
Primary Metals	77.9	57.4	63.8	80.7	79.9	78.4	83.5	74.5	50.4	87.6	86.3
Metal Fabrication	93.5	79.0	74.1	80.3	86.4	87.7	94.9	85.1	71.3	99.0	91.1
Machinery	87.7	62.8	53.6	64.5	65.5	64.7	64.1	66.1	51.4	93.2	91.2
Transportation Equipment	68.9	60.6	66.9	84.2	87.7	85.3	80.5	76.3	53.5	90.6	88.1
Electrical Products	94.2	77.4	70.0	87.0	92.1	89.9	95.3	86.6	66.7	100.0	88.3
Non-Metallic Minerals	81.8	62.3	68.9	77.1	84.0	89.5	97.0	80.1	59.5	100.0	91.6
Other Manufacturing	83.5	74.0	68.6	76.4	75.5	71.8	69.8	74.2	66.4	84.6	91.5
Elec. Pow. Gas. W. Util.	84.7	77.6	78.9	80.7	81.8	80.0	80.5	80.6	74.7	85.9	93.3