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Canada

## **RATE OF CAPACITY UTILIZATION**

Third Quarter, 1988

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## **RATE OF CAPACITY UTILIZATION**

Third Quarter, 1988

Statistical Analysis  
Policy and Evaluation  
Industry, Science and Technology Canada

December 1988

## FOREWORD

The Rates of Capacity Utilization published by Industry, Science and Technology Canada (ISTC) 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 are more useful 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 on industrial production published by Statistics Canada.

## **RATE OF CAPACITY UTILIZATION - CANADA**

### **THIRD QUARTER 1988**

The overall rate of capacity utilization in Canadian industry recorded in the third quarter of 1988 was 87.8 percent, slightly above (0.3 percentage points) the rate of 87.5 percent reported for the previous quarter (Table 1). It is about three percentage points above the level attained in the third quarter of 1987 and substantially higher than the average rate of 79.3 percent over the 1981-1987 period (Table 5). It is the highest rate since a low of 68.5 percent was reached in the fourth quarter of 1982 during the 1981-1982 recession (Chart 1). However, it is still substantially below the pre-recession peak (89.3 percent) attained 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, both mining and manufacturing showed an increase in operating rates between the second and third quarters of 1988 while utilities registered a slight decline (Table 2).

For mining, the increase was 1.3 percentage points. Its current level of 90.2 percent is 6.5 percentage points higher than the level recorded in the third quarter of 1987. The data presented in Table 1 show that the current capacity utilization rate in mining is the highest since 1982. It is significantly above the average annual rate of 73.4 percent for the 1981-1987 period, as well as the average annual rate of 77.4 percent over the 1971-1980 period (Table 5).

At 78 percent, utilities showed a decrease of 0.2 percentage points in the third quarter of 1988 from the second quarter rate of 78.2 percent. The current rate is substantially (2.6 percentage points) below its level a year ago. It is also less than the average rate experienced over the 1981-1987 period (80 percent) and well below the average rate for the 1971-1980 period (93.3 percent).

As already mentioned, the third quarter capacity utilization rate in manufacturing increased slightly (0.1 percentage point) from the second quarter level of 88.5 percent. It was, however, 2.4 percentage points above the level attained a year ago in the third quarter of 1987, and substantially above the average annual rate of 80.9 percent over the 1981-1987 period.

The capacity utilization rate for the third quarter for the non-durables segment of manufacturing remained unchanged from its second quarter level of 88.9 percent. Among the 13 industries which make up this segment, seven recorded a decline in their operating rates during the third quarter of 1988, the largest decrease (-3.2 percentage points) being in tobacco products. Five industries recorded increases; the most significant increase (2.5 percentage points) occurred in both the beverage and the rubber products industries. The operating rate for paper and allied industries (96.6 percent) remained unchanged from the second quarter (Table 2).

The capacity utilization rate in durable manufacturing was at 88.3 percent in the third quarter, up 0.1 percentage points from the second quarter of 1988. Five of the nine industries belonging to this segment of manufacturing recorded higher utilization rates. Electrical products showed the largest increase (5.9 percentage points) and it reached full capacity utilization, 100 percent. Transportation equipment registered the greatest drop, 3.3 percentage points.

Detailed comparative tables and charts are included in this report. Data for the years 1971-1981 are available upon request.

## **TABLES / CHARTS**

Table 1

**CAPACITY UTILIZATION - CANADA  
MAJOR SECTORS**

YEAR		INDUSTRIAL	MINING	MANUFACTURING			UTILITIES
				TOTAL	NON-DURABLE	DURABLE	
1982	1	75.1	64.1	77.2	81.7	73.2	82.5
	2	71.1	63.4	72.4	77.5	67.7	77.4
	3	69.4	62.1	70.6	77.7	64.1	75.6
	4	68.5	64.1	68.9	77.5	61.2	74.7
1983	1	70.2	63.4	71.2	80.1	63.2	76.1
	2	72.3	65.4	73.2	81.7	65.6	79.8
	3	75.2	70.6	75.8	83.8	68.5	80.3
	4	76.8	71.2	77.8	83.9	72.4	80.1
1984	1	77.8	73.2	79.2	83.7	75.1	77.7
	2	80.5	77.8	81.4	86.7	76.6	79.7
	3	81.2	78.4	82.3	86.7	78.4	79.5
	4	81.1	78.4	82.0	85.7	78.6	80.0
1985	1	81.5	80.4	82.0	85.1	79.3	80.5
	2	82.0	81.0	82.6	84.4	81.0	79.6
	3	82.7	79.1	84.1	84.7	83.5	80.1
	4	83.8	81.0	84.8	87.1	82.7	82.0
1986	1	82.8	79.7	84.1	86.9	81.5	79.7
	2	82.4	78.4	84.0	87.2	81.2	78.9
	3	81.3	77.1	83.0	86.7	79.6	78.0
	4	81.7	77.8	83.2	86.6	80.2	79.2
1987	1	82.7	78.4	84.5	87.3	81.9	79.0
	2	83.6	79.7	85.0	88.1	82.3	80.8
	3	85.1	83.7	86.2	88.6	84.0	80.6
	4	86.9	85.6	88.3	89.2	87.6	79.1
1988	1	87.2	86.9	88.4	89.4	87.6	79.6
	2	87.5	88.9	88.5	88.9	88.2	78.2
	3	87.8	90.2	88.6	88.9	88.3	78.0

Chart 1

**CAPACITY UTILIZATION**  
**Industrial Sector (Canada)**

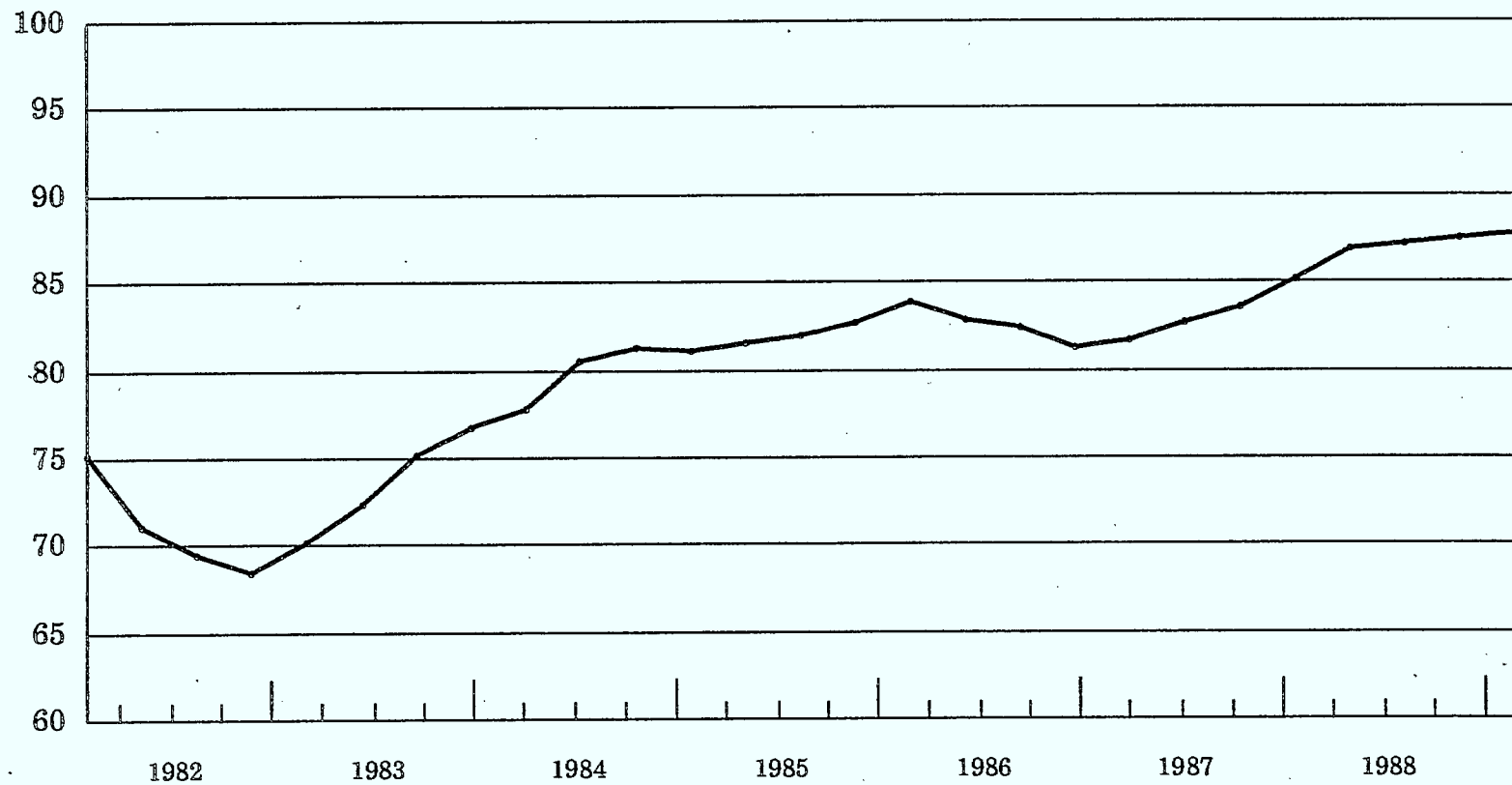




Table 2

**CAPACITY UTILIZATION**

		Percentage Points Changes From			
	III Q. 1988 Level	II Q. 1988	III Q. 1987	Last Peak	
Industrial	87.8	0.3	2.7	-9.6	(I,1974)
Mining	90.2	1.3	6.5	-9.8	(III,1973)
Manufacturing	88.6	0.1	2.4	-9.6	(I,1974)
Non-Durables	88.9	0.0	0.3	-9.0	(I,1974)
Food	90.6	-0.4	-0.8	-9.4	(IV,1973)
Beverage	75.4	2.5	4.6	-24.6	(II,1974)
Tobacco	44.1	-3.2	-3.8	-55.9	(IV,1977)
Rubber	82.0	2.5	-1.1	-18.0	(IV,1984)
Plastics	94.4	-2.2	-2.9	-5.6	(IV,1987)
Leather	79.4	0.9	-3.1	-20.6	(I,1981)
Prim. Textile	97.2	2.1	1.0	-2.8	(IV,1987)
Textile Prod.	95.0	-0.2	-0.9	-5.0	(IV,1987)
Clothing	96.1	-1.0	-3.9	-3.9	(III,1987)
Paper & Allied	96.6	0.0	2.6	-3.4	(II,1974)
Printing & Publ.	94.3	-0.6	1.3	-5.7	(II,1981)
Ref. Pet. & Coal	79.8	-0.8	3.2	-20.2	(III,1983)
Chem. & Chem. Prod.	77.7	0.5	-0.9	-22.3	(II,1973)
Durables	88.3	0.1	4.3	-10.2	(I,1974)
Wood	92.5	1.2	-7.1	-7.5	(IV,1987)
Furniture & Fixtures	89.8	0.6	0.7	-10.2	(I,1974)
Primary Metals	86.7	-3.1	3.7	-13.3	(III,1974)
Metal Fab.	98.5	1.6	3.0	-1.5	(I,1980)
Machinery	67.9	-0.5	4.2	-32.1	(III,1979)
Trans. Equip.	82.9	-3.3	6.3	-17.1	(I,1979)
Electrical Products	100.0	5.9	14.9	0.0	(III,1988)
Non-Met. Min.	99.2	1.7	2.5	-0.8	(I,1988)
Other Mfg.	68.9	-1.3	-2.7	-31.1	(II,1979)
Utilities	78.0	-0.2	-2.6	-22.0	(III,1973)

Chart 2

**CAPACITY UTILIZATION**  
**Major Sectors (Canada)**

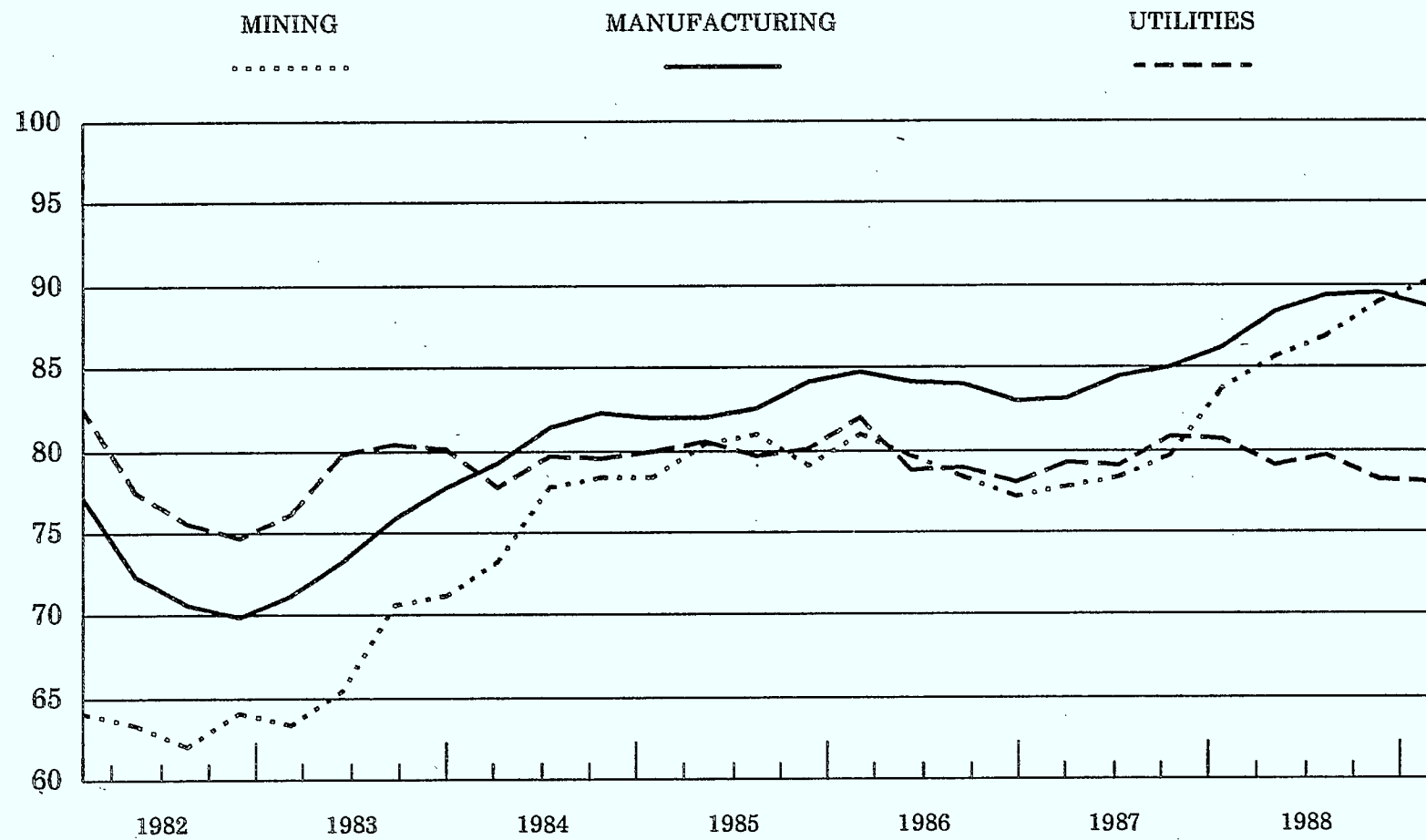


Table 3

**MANUFACTURING INDUSTRIES  
CAPACITY UTILIZATION  
NON-DURABLE**

YEAR	NON-DURABLE	FOOD	BEVERAGES	TOBACCO	RUBBER
1982 1	81.7	89.7	73.7	83.5	67.8
2	77.5	90.2	72.7	84.0	63.8
3	77.7	91.5	69.3	80.3	67.3
4	77.5	88.4	68.2	80.0	62.6
1983 1	80.1	88.0	67.2	78.8	70.5
2	81.7	86.6	65.4	72.7	73.3
3	83.8	85.3	68.2	69.1	75.2
4	83.9	85.8	67.2	70.5	82.3
1984 1	83.7	89.7	67.7	71.8	87.9
2	86.7	88.4	69.7	68.3	91.2
3	86.7	88.9	70.2	64.8	94.5
4	85.7	88.5	69.2	66.9	100.0
1985 1	85.1	88.9	68.9	59.4	89.5
2	84.4	90.2	68.7	59.2	94.3
3	84.7	91.4	68.4	53.4	96.1
4	87.1	93.5	69.6	51.6	93.6
1986 1	86.9	91.4	71.6	52.2	95.5
2	87.2	92.7	73.5	46.5	87.3
3	86.7	92.2	70.3	51.8	79.2
4	86.6	92.6	72.3	47.7	79.7
1987 1	87.3	92.2	69.8	48.2	78.7
2	88.1	91.8	71.0	48.1	80.6
3	88.6	91.4	70.8	47.9	83.1
4	89.2	90.2	71.2	45.4	82.8
1988 1	89.4	92.2	72.4	44.4	79.8
2	88.9	91.0	72.9	47.3	79.5
3	88.9	90.6	75.4	44.1	82.0

Table 3 (cont'd)

**MANUFACTURING INDUSTRIES  
CAPACITY UTILIZATION  
NON-DURABLE**

YEAR	NON-DURABLE	PLASTICS	LEATHER	PRIM. TEXTILE	TEXTILE PRODUCTS	CLOTHING
1982 1	81.7	81.3	89.1	75.3	74.7	86.4
2	77.5	73.4	81.5	63.3	67.2	81.7
3	77.7	74.0	82.3	63.0	70.7	82.6
4	77.5	74.6	77.5	72.6	75.0	79.7
1983 1	80.1	77.6	81.2	83.0	83.9	82.5
2	81.7	79.7	84.0	91.5	88.2	82.4
3	83.8	83.3	87.6	92.0	89.7	81.5
4	83.9	86.0	93.2	92.5	89.5	82.3
1984 1	83.7	88.7	96.9	86.9	89.3	86.0
2	86.7	91.2	97.7	88.3	91.8	90.6
3	86.7	86.4	94.8	85.3	88.0	87.7
4	85.7	88.9	89.1	84.1	86.0	89.5
1985 1	85.1	90.0	87.1	84.6	84.0	88.6
2	84.4	92.4	90.7	82.5	84.7	88.5
3	84.7	93.4	92.5	87.4	89.8	88.5
4	87.1	94.4	92.4	85.3	91.4	95.8
1986 1	86.9	91.2	93.3	85.0	90.3	94.8
2	87.2	90.8	88.5	85.5	91.8	95.7
3	86.7	92.4	91.2	86.0	88.1	96.5
4	86.6	91.4	91.1	87.3	88.8	94.7
1987 1	87.3	95.6	86.4	92.8	93.8	97.4
2	88.1	96.4	81.6	95.0	94.4	99.1
3	88.6	97.3	82.5	96.2	95.9	100.0
4	89.2	100.0	81.5	100.0	100.0	96.3
1988 1	89.4	99.5	80.5	98.0	98.0	99.0
2	88.9	96.6	78.5	95.1	95.2	97.1
3	88.9	94.4	79.4	97.2	95.0	96.1

Table 3 (cont'd)

**MANUFACTURING INDUSTRIES  
CAPACITY UTILIZATION  
NON-DURABLE**

YEAR	NON-DURABLE	PAPER & ALLIED	PRINT & PUB.	REFINED PETROL & COAL	CHEM. & CHEM. PRODUCTS
1982 1	81.7	78.4	91.7	73.4	73.6
2	77.5	73.3	87.1	61.3	68.0
3	77.7	71.6	84.5	70.2	69.6
4	77.5	71.6	82.8	94.4	69.6
1983 1	80.1	77.6	84.9	72.6	75.0
2	81.7	81.9	86.0	71.0	77.9
3	83.8	85.3	87.1	100.0	80.9
4	83.9	86.2	87.3	75.0	81.5
1984 1	83.7	78.4	89.3	78.2	79.9
2	86.7	87.9	90.3	77.4	83.4
3	86.7	88.8	91.4	72.6	85.4
4	85.7	87.1	90.6	71.0	81.7
1985 1	85.1	85.3	89.9	72.6	83.0
2	84.4	82.8	90.1	75.0	78.0
3	84.7	81.9	89.4	72.6	78.6
4	87.1	86.2	92.1	75.8	79.9
1986 1	86.9	87.9	92.2	72.6	79.8
2	87.2	90.5	92.4	73.4	77.0
3	86.7	90.5	91.7	75.8	76.3
4	86.6	90.5	90.2	72.6	76.9
1987 1	87.3	93.1	90.3	75.8	75.5
2	88.1	93.1	91.3	76.6	78.7
3	88.6	94.0	93.0	76.6	78.6
4	89.2	96.6	94.7	76.6	79.2
1988 1	89.4	95.7	94.0	79.8	78.5
2	88.9	96.6	94.9	80.6	77.2
3	88.9	96.6	94.3	79.8	77.7

Chart 3

**CAPACITY UTILIZATION**  
**Major Sectors (Canada)**

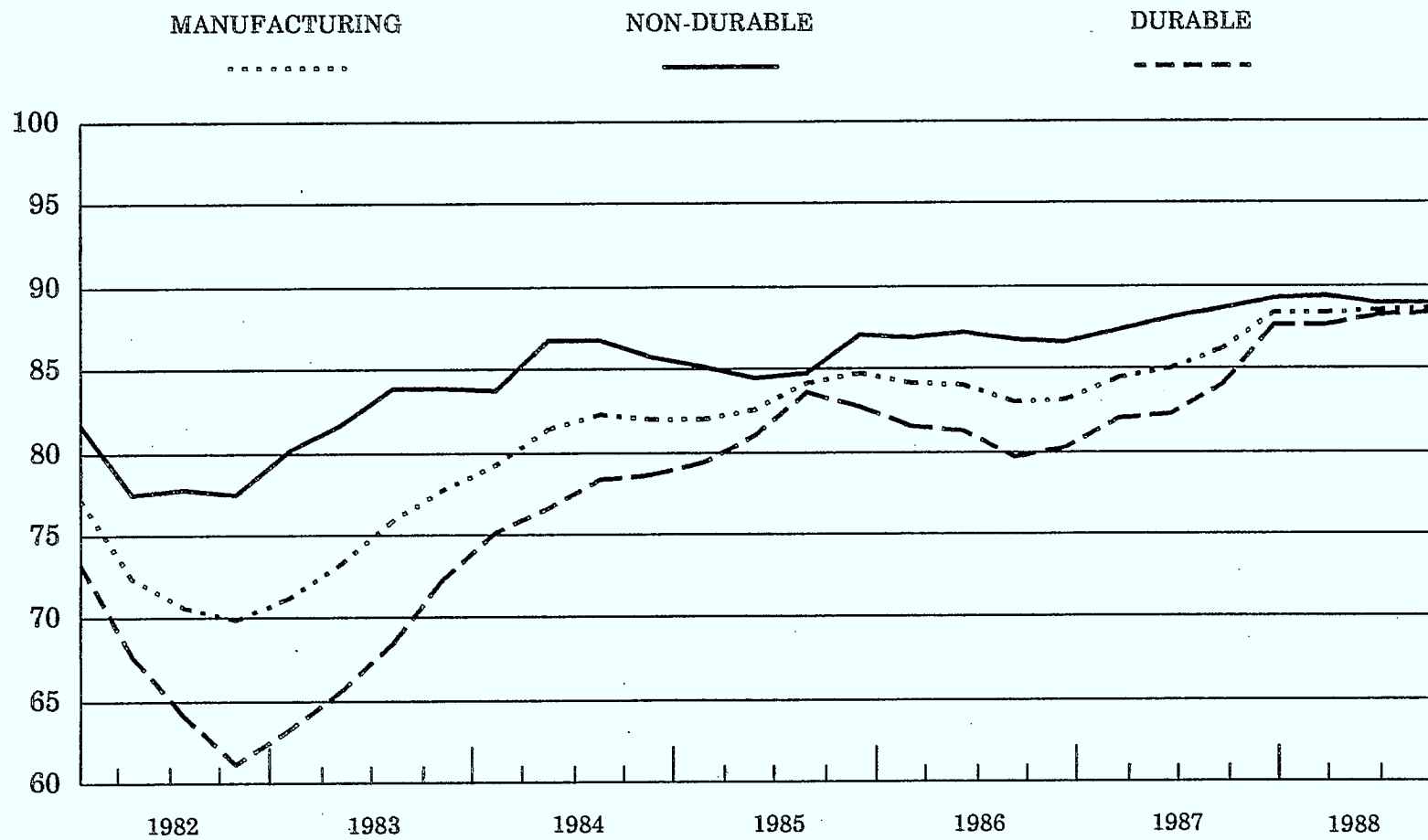


Table 4

**MANUFACTURING INDUSTRIES  
CAPACITY UTILIZATION  
DURABLE**

YEAR	DURABLE	WOOD	FURNITURE & FIXTURES	PRIMARY METALS	FAB. METAL	MACHINERY	
1982	1	73.2	65.9	66.6	68.5	89.4	74.3
	2	67.7	63.6	61.5	58.2	79.1	63.5
	3	64.1	62.9	59.7	50.4	75.2	58.7
	4	61.2	63.0	62.0	52.5	72.3	54.8
1983	1	63.2	71.6	65.9	54.5	72.2	51.0
	2	65.6	72.4	68.1	62.6	73.0	52.2
	3	68.5	81.5	72.0	66.9	74.8	54.2
	4	72.4	77.7	73.4	71.9	76.5	56.1
1984	1	75.1	75.5	77.2	74.6	78.2	60.4
	2	76.6	82.1	73.8	76.6	78.1	63.8
	3	78.4	84.2	72.0	78.5	78.9	63.2
	4	78.6	86.3	73.4	77.5	81.5	62.7
1985	1	79.3	84.7	75.6	77.9	85.1	61.4
	2	81.0	86.1	81.0	79.9	87.7	62.4
	3	83.5	92.3	83.1	82.5	90.3	62.6
	4	82.7	93.5	84.5	80.0	91.0	62.1
1986	1	81.5	90.6	83.5	79.7	87.3	62.3
	2	81.2	92.5	83.2	76.5	88.0	64.8
	3	79.6	83.6	84.6	76.3	88.8	62.8
	4	80.2	81.5	84.4	79.6	87.8	62.3
1987	1	81.9	92.7	84.9	81.4	91.3	61.8
	2	82.3	92.6	86.3	81.1	93.8	62.0
	3	84.0	99.6	89.1	83.0	95.5	63.7
	4	87.6	100.0	92.0	87.6	98.1	68.8
1988	1	87.6	92.8	92.5	85.9	98.8	69.6
	2	88.2	91.3	89.2	89.8	96.9	68.4
	3	88.3	92.5	89.8	86.7	98.5	67.9

Table 4 (cont'd)

**MANUFACTURING INDUSTRIES  
CAPACITY UTILIZATION  
DURABLE**

YEAR	DURABLE	TRANS. EQUIP.	ELECT. PROD.	NON-METALLIC MINERALS	OTHER MFG.
1982 1	73.2	61.1	81.4	69.7	78.5
2	67.7	63.8	77.3	60.7	76.8
3	64.1	63.9	71.9	59.8	71.9
4	61.2	53.5	69.1	60.7	68.8
1983 1	63.2	60.1	67.2	65.6	66.4
2	65.6	63.4	65.4	69.7	67.9
3	68.5	66.7	65.9	71.3	68.7
4	72.4	78.0	69.8	71.3	70.9
1984 1	75.1	81.7	72.8	74.6	76.8
2	76.6	79.8	78.4	76.2	73.7
3	78.4	84.0	81.1	76.2	74.4
4	78.6	82.6	81.1	77.0	74.3
1985 1	79.3	81.9	83.0	77.0	76.3
2	81.0	84.2	81.2	83.6	76.9
3	83.5	90.0	79.5	86.9	76.8
4	82.7	88.1	79.6	86.1	72.6
1986 1	81.5	85.6	80.8	85.2	72.5
2	81.2	84.4	79.7	85.2	73.8
3	79.6	80.2	80.8	86.1	72.4
4	80.2	80.2	82.5	89.3	73.0
1987 1	81.9	78.9	81.5	96.7	69.1
2	82.3	76.1	85.1	95.9	69.7
3	84.0	76.6	85.1	96.7	71.6
4	87.6	81.5	89.0	100.0	72.8
1988 1	87.6	83.1	92.3	100.0	70.8
2	88.2	86.2	94.1	97.5	70.2
3	88.3	82.9	100.0	99.2	68.9



Table 5

**CAPACITY UTILIZATION - CANADA**  
(Percent)

								1981-1987		1971-1980	
								Quarter			
	1981	1982	1983	1984	1985	1986	1987	Avg.	Low	High	Average
Industrial	81.5	71.0	73.6	80.1	82.5	82.0	84.6	79.3	68.5	86.9	87.7
Mining	65.5	63.4	67.6	76.9	80.4	78.2	81.8	73.4	62.1	85.6	77.4
Manufacturing	85.5	72.3	74.5	81.2	83.4	83.6	86.0	80.9	68.9	88.8	89.8
Non-Durables	88.4	78.6	82.4	85.7	85.3	86.8	88.3	85.1	77.5	91.1	90.8
Food	92.0	89.9	86.4	88.9	91.0	92.2	91.4	90.3	85.3	93.5	95.3
Beverage	79.2	71.0	67.0	69.2	68.9	71.9	70.7	71.1	65.4	81.0	90.2
Tobacco	85.3	81.9	72.8	67.9	55.9	49.5	47.4	65.8	45.4	91.9	91.5
Rubber	76.0	65.4	75.3	93.4	93.4	85.4	81.3	81.5	62.6	100.0	86.4
Plastics	87.9	75.8	81.6	88.8	92.5	91.4	97.3	87.9	73.4	100.0	87.3
Leather	95.3	82.6	86.5	94.6	90.7	91.0	83.0	89.1	77.5	100.0	93.3
Prim. Textile	91.5	68.5	89.7	86.1	84.9	85.9	96.0	86.1	63.0	100.0	89.1
Textile Prod.	91.9	71.9	87.8	88.8	87.5	89.7	96.0	87.7	67.2	100.0	93.4
Clothing	92.8	82.6	82.2	88.4	90.3	95.4	98.2	90.0	79.7	100.0	94.2
Paper & Allied	86.4	73.7	82.7	85.5	84.0	89.8	94.2	85.2	71.6	96.6	85.8
Printing & Publ.	97.3	86.5	86.3	90.4	90.4	91.6	92.3	90.7	82.8	100.0	95.7
Refined Petrol & Coal	80.6	74.8	79.6	74.8	74.0	73.6	76.4	76.3	61.3	100.0	82.1
Chemicals & Chemical Products	82.4	70.2	78.8	82.6	79.9	77.5	78.0	78.5	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	82.9	66.5	67.4	77.2	81.6	80.6	83.9	77.2	61.2	87.6	89.0
Wood	82.7	63.8	75.8	82.0	89.1	87.0	96.2	82.4	62.9	100.0	89.7
Furniture & Fixtures	82.8	62.4	69.8	74.1	81.0	83.9	88.1	77.5	59.7	92.0	82.5
Primary Metals	77.9	57.4	64.0	76.8	80.1	78.0	83.3	73.9	50.4	87.6	86.3
Metal Fabrication	93.5	79.0	74.1	79.2	88.5	88.0	94.7	85.3	72.2	98.1	91.1
Machinery	87.7	62.8	53.4	62.5	62.1	63.0	64.1	65.1	51.0	93.2	91.2
Transportation Equipment	68.9	60.6	67.0	82.0	86.0	82.6	78.3	75.1	53.5	90.0	88.1
Electrical Products	92.2	74.9	67.1	78.3	80.8	80.9	85.2	79.9	65.4	95.7	88.2
Non-Metallic Minerals	82.2	62.7	69.5	76.0	83.4	86.4	97.3	79.6	59.8	100.0	91.6
Other Manufacturing	83.5	74.0	68.5	74.8	75.6	72.9	70.8	74.3	66.4	84.6	91.5
Utilities	84.7	77.6	79.1	79.2	80.5	79.0	79.9	80.0	74.7	85.9	93.3

