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The Ontario Manufacturing Sector:

Recovery, Adjustment and Change

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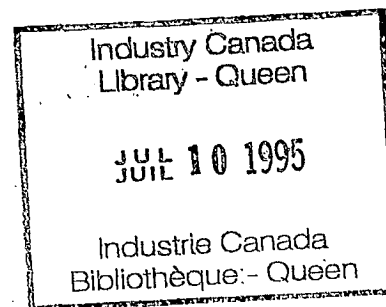
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The Ontario Manufacturing Sector:

Recovery, Adjustment and Change

An Occasional Paper



Planning & Analysis
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May 17, 1995

TABLE OF CONTENTS

Highlights	1
Introduction	2
Manufacturing in Perspective	2
Manufacturing Performance	3
Broad Sector Analysis	4
Industrial Performance	6
i) Industries in Expansion	8
ii) Industries in Recovery	8
iii) Adjusting Industries	10
iv) Industries in Decline	11
Conclusion	12
Statistical Appendix	14

HIGHLIGHTS

- Ontario's manufacturing sector was severely impacted by the recent recession and continues to be in a period of significant restructuring as a result of growing global competitiveness pressures and the trend to world-wide marketing. Manufacturing employment fell by 25% between 1989 and 1993, a loss of more than 252,000 jobs. During the past year, a slight rebound in manufacturing employment has finally taken hold, as employment increased 4% (30,737) in 1994 compared to the year previous. A disproportionate amount of employment growth in 1994 came from smaller industries such as Hardware, Tool and Cutlery, and Machine Shops. By the end of the year, however, larger industries began to account for a greater share of the hiring. The employment growth appears to be continuing into 1995, with 65,000 new manufacturing jobs being created during the first quarter of the year.
- Contrary to employment, output, as measured by real domestic product, has been recovering since 1991. This has been led primarily by very strong export growth to the U.S. Real manufacturing shipments were up 7.4% in 1994, extending two previous years of steady growth. In terms of shipments, Ontario manufacturing surpassed its pre-recession peak in December 1994. Furthermore, real exports barely declined over the recession and stood roughly 55% higher in 1994 than they did in 1989, helping Canada obtain the second fastest rate of export growth in the G 7.
- Between 1991 and 1993, real manufacturing investment averaged \$6.5 billion, declining from an average of \$7.8 billion between 1987 and 1990. However, capital expenditure on machinery and equipment was less affected than general construction. Machinery and equipment investment comprised 90% of the average 1991-1993 total investment compared with an average of 85% from 1987 to 1990. This changing capital expenditures pattern, coupled with permanent employment cuts and plant rationalization, has resulted in productivity gains.
- The manufacturing recovery in Ontario is not broad based. By placing industries into four overall performance categories -- Expanding, Recovering, Adjusting and Declining -- (which are defined in the section entitled "Industrial Performance" - see page 6), it was observed that the largest number of industries studied fell in the "Recovery" category. Only a few remain in apparent chronic decline, although several maintain a characteristic typical of overall manufacturing between 1991 and 1993 - rising shipment levels and declining employment.

INTRODUCTION

After entering recession in the third quarter of 1989, the province's key manufacturing sector was faced with the additional challenge of rationalizing, cutting costs and improving productivity in an attempt to improve competitiveness in an increasingly global market place. The recovery from this recession, which lasted 13 quarters in Ontario, was slowed by persistent restructuring in the manufacturing sector. However, by 1993, manufacturing began to once again drive GDP growth.

Within the manufacturing sector, industry performance is varied. The main purpose of this study is to categorize industries by performance to determine which alternatively lead or constrain economic growth. Although employment as an indicator is important, it does not provide a complete picture. Implications on the overall health of manufacturing industries cannot be drawn by tracking employment alone, for much of the job losses were permanent in nature and will not likely return to pre-recession levels quickly. Other indicators, such as real shipments, exports and investment levels, will supplement this information and help to create a fuller picture.

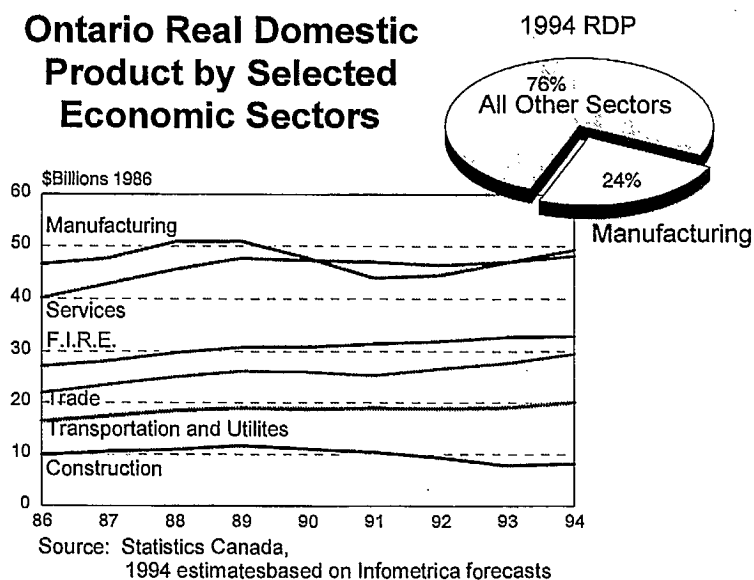
In order to put the manufacturing sector into perspective, the first section of this study provides a brief comparison of real domestic product in manufacturing and other key sectors over the past decade. The study then reflects the overall performance of the manufacturing sector through the use of a performance index of the key indicators noted above. This is followed by a more focused sectoral analysis at both the 2-digit and 3-digit SIC (Standard Industrial Classification) level. In the latter case, industries are classified into four groups according to their overall economic performance status. A statistical appendix is also provided on the size and relative importance of Ontario's various manufacturing industries.

MANUFACTURING IN PERSPECTIVE

Although manufacturing was severely affected during the recession, it continues to be a vital sector in Ontario. Manufacturing real domestic product (RDP) has fluctuated in recent years due to cyclical and structural effects (see Chart 1). Manufacturing contributed more to provincial RDP than did any other single sector until 1990, including business and personal services. That changed as manufacturing declined during the recession, while most other sectors continued to grow. Manufacturing RDP dropped for

Chart 1

Ontario Real Domestic Product by Selected Economic Sectors



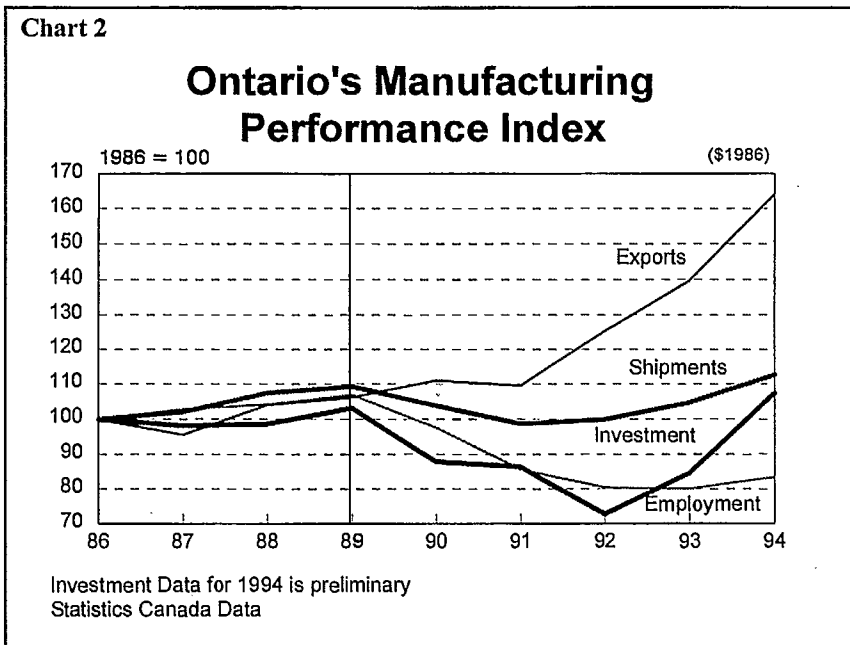
two consecutive years, by 6.3% in 1990 and 8.0% in 1991. After recovering by 1.2% in 1992 and 5.4% in 1993, manufacturing RDP regained its leading position among economic sectors. Continuing this trend, 1994 forecasts show manufacturing RDP growth of 5.2% to levels only 3.2% from the 1989 peak, suggesting manufacturing RDP will enter expansion sometime in 1995.

On a national scale, Ontario manufacturing RDP has represented approximately 50% of the Canadian total since 1980. During the past recession, manufacturing RDP decreased by more in Ontario than in the rest of Canada. Some of Ontario's most important industries were forced to lay-off employees to cut costs, a problem which was not as severe in the dominant industries of other provinces. In Ontario, the key manufacturing sectors are Transportation Equipment, Electronic Products, Food Processing, Chemicals, Primary Metal Products and Metal Fabricating. Due to a massive Automobile Parts and Vehicle Assembly industry in Ontario, the Transportation Equipment sector dominates provincial RDP. Transportation Equipment RDP, estimated to be \$10.5 billion in 1994, represented 21.3% of the manufacturing total. This industry has huge spin-off effects, impacting industries like Primary Metal (8.2% of all manufacturing RDP), Metal Fabrication (6.7%) and Plastic Products (2.1%).

MANUFACTURING PERFORMANCE

From Chart 1, it is clear that manufacturing RDP is well into recovery and is in fact approaching an expansion phase. Other indicators of the health of manufacturing, namely employment, real shipments, exports, and investment have also been improving, although at varying rates. In Chart 2, the performance of these four indicators is displayed in index form, using 1986 as the base year.

Between 1989 and 1993, employment in Ontario's manufacturing industries declined, although the pace slowed dramatically toward the end of the period. After experiencing net losses of 8.8% (88,373), 12.2% (111,299) and 6.2% (49,930) in 1990, 1991 and 1992 respectively, only 2,800 more jobs were eliminated than created between 1992 and 1993. In line with the recent manufacturing RDP increase, a rising trend emerged for employment in 1994. Compared with 1993, there were 4% or 30,737 more manufacturing jobs in Ontario.



While employment hit its recessionary low in 1993, net Ontario manufacturing shipments began increasing after 1991, jumping 1.2% and 4.9% in 1992 and 1993, respectively. After a relatively poor first quarter hampered in part by severe winter weather, second quarter shipments in 1994 jumped by \$6 billion over the previous three months. The second half of 1994 showed continued growth leading to 1994 shipment levels which were over \$10 billion (7.4%) greater than in 1993. In fact, 1994 shipment levels were the highest ever, surpassing the 1989 annual total sometime in December. Although no rigorous measure of productivity has been developed here, it is clear that productivity gains have occurred at least since 1992, as employment generally decreased, while output rose. For this reason, the recovery from the latest recession has been heralded as one which was "productivity led".

Growth in manufacturing exports has been buoyant, barely experiencing any recessionary effects, fuelled by a low Canadian dollar and strong demand from the United States. Ontario's real manufacturing exports, which account for roughly 57% of all manufacturing shipments, increased by 34.4% between 1990 and 1994. Exports were increasingly concentrated in the United States market, which in 1990 consumed 87% of Ontario manufacturing exports, increasing to about 90% in 1994. Canadian export growth between 1988 and 1993 was second only to the United States among G7 nations.

Annual investment in factory equipment and construction averaged over \$6.5 billion after inflation during the 1991-1993 period. At the same time, capital expenditure concentration has switched more towards machinery investment and less on new building construction, reflecting the trend to improve worker productivity. Real Manufacturing investment in Ontario declined from 1989 to 1992, but increased in 1993 by 4% over the 1991-1993 annual average, in response to improving market demand. Continued growth in capital expenditures is anticipated, as preliminary 1994 investment figures show investment levels at an all-time high of \$8.6 billion.

BROAD SECTOR ANALYSIS

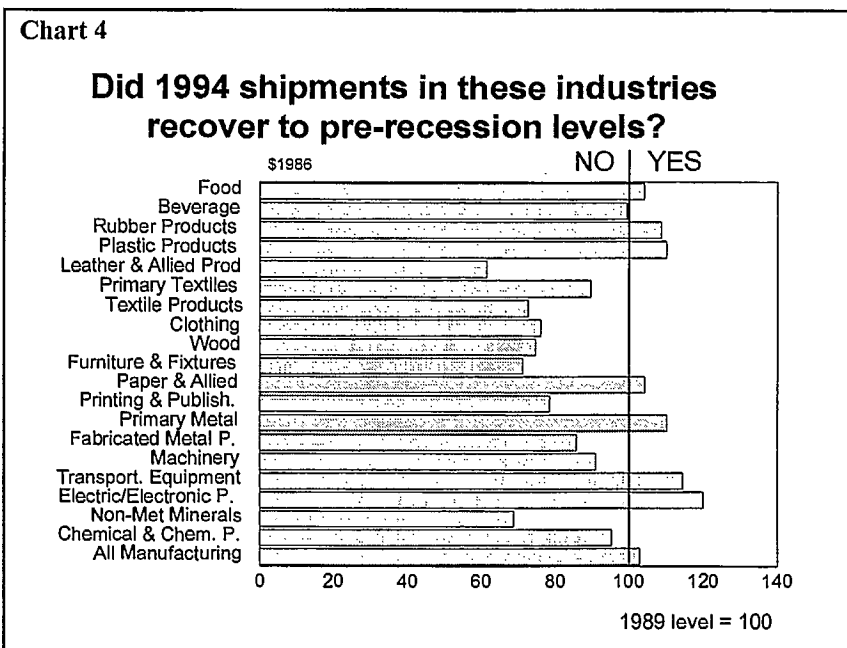
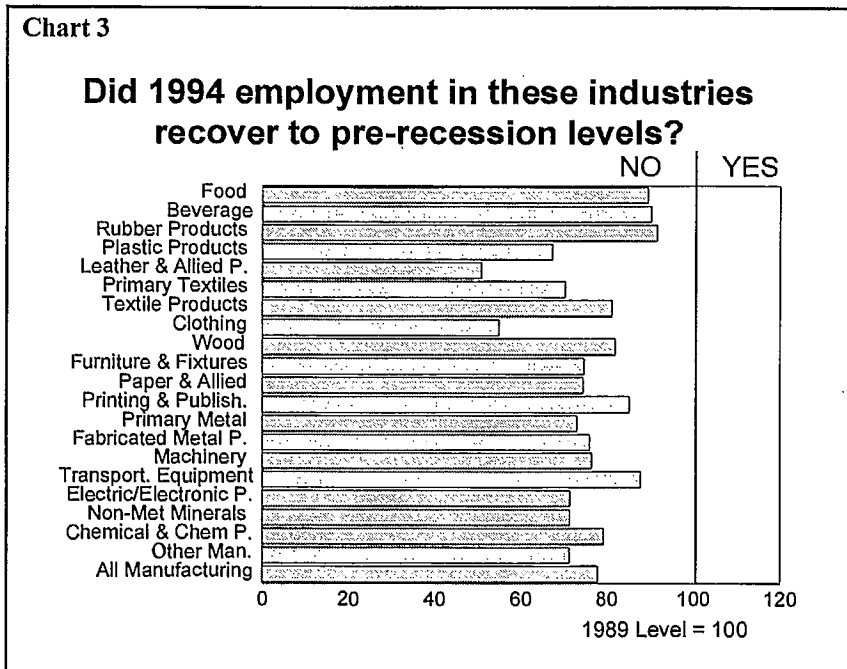
In order to provide insight into the nature of the manufacturing business cycle and to determine the status of Ontario's key manufacturing sectors, the performance of broad sector groups at the 2-digit SIC are examined here using the four indicators introduced above. Chart 3 provides a 1994 employment figure for twenty main manufacturing sectors, indexed to the pre-recession peak levels reached in 1989.

Clearly, most sectors have a long way to go in order to reach their pre-recession peak levels. Employment in the Rubber Products sector was closest to achieving 1989 levels, although none of the broad industry divisions had recovered to their pre-recession peak, reflecting the poor employment performance in manufacturing as a whole from 1989 to 1994. Leather & Allied Products, Clothing, and Plastic Products appear to have fared the worst over the recession and subsequent recovery.

During the past year, the fastest growing sector group was Furniture which increased the size of its workforce by 25%, amounting to an absolute gain of 5,512 workers. The second most significant increase in employment occurred in the Textile sector which added 22% (1,933) more employees. Meanwhile, the Machinery sector, faced with soaring demand for production processes which are increasingly dependant on machines, experienced the third largest employment

growth rate at 19%, adding 6,318 workers in 1994. Large absolute gains came from Fabricated Metal Products (4,761) and Transportation Equipment (7,861). It is interesting to note that although only 20% of the manufacturing work force is employed in the smallest ten sectors, it is precisely those sectors which have created roughly 39% of the net job gain in the first half of 1994. This is changing, however, as larger sectors are beginning to account for more of the employment increase. Indeed, by the end of the year, the smallest 10 sectors accounted for only 29% of the net job gain.

A similar index is provided for manufacturing shipments (Chart 4), which illustrates a somewhat different picture on the performance of manufacturing sectors compared to employment. Seven of the sectors were well into expansion by the outset of 1995, including the dominant Transportation Equipment sector. By the end of 1994, the Food Processing sector (4% above 1989 shipments) was into expansion as was Rubber Products (9% higher), Plastic Products (10%), Paper (4%), Refined Petroleum (9%), Primary Metal (10%), Transportation Equipment (14%) and



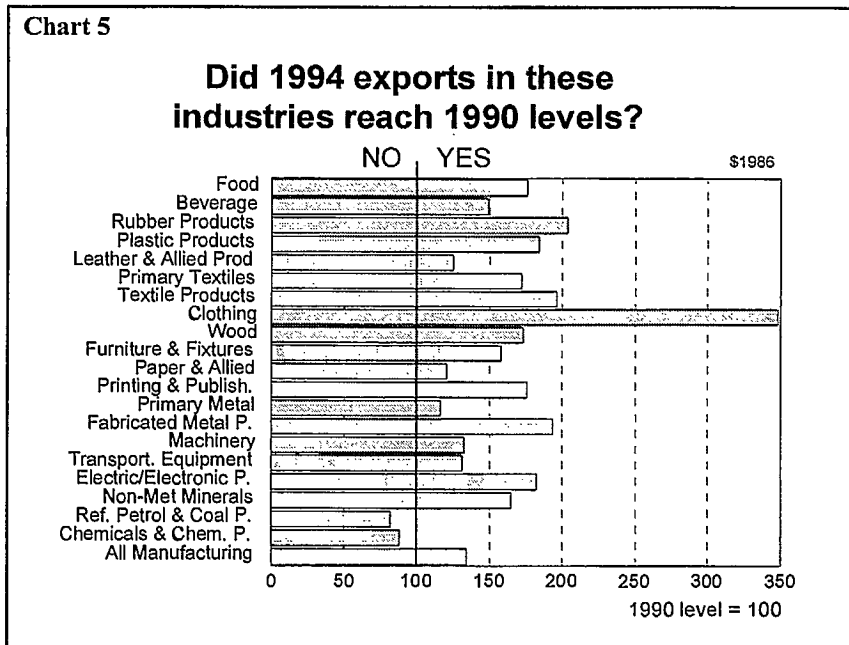
and

Electronic & Electrical Products (20%). In comparison, only the Transportation Equipment and Primary Metal sectors had surpassed 1989 levels by year-end 1993.

Business investment, which tends to be less cyclical than employment, is an important indicator illustrating an industry's potential for sustained output growth. For certain industries, fixed capital renewal cycles are to some degree separated from business cycle fluctuations. This places limits upon its use as a performance indicator to measure an industry's degree of recovery, however, it does provide insights into the long-run viability of an industry.

Investment in Textile Products jumped 56% in 1993 over its 1991-1993 average. In doing so, it posted the strongest percentage increase of any sector. Investment in the Transportation Equipment sector was 32% higher (\$621 million) than the 1991 to 1993 annual average, leading manufacturing investment in terms of absolute increases. Other strong increases came from Printing, Publishing & Allied Products (22%), Refined Petroleum & Coal Products (21%) and Electrical & Electronic Products (8%). On the other hand, some sectors failed to invest highly. For example, Primary Metal investment was 36% below the 1991-1993 average, while others like Machinery (-14%) and Chemicals & Chemical Products (-9%) also experienced relatively low investment.

As seen in Chart 5, Ontario manufacturers have greatly increased their focus on export markets. Tremendous increases in Clothing (248%) and Rubber (104%) exports from 1990 to 1994 lead total manufacturing export growth. Other large increases came from the Textile Products sector (96.4%), Fabricated Metal Products (93.8%), Plastic Products (83.9%) and Electrical & Electronic Products (82.5%). Only Refined Petroleum (-17.7%) and Chemicals & Chemical Products (-11.6%) demonstrated relatively poor export performance in 1994.



INDUSTRIAL PERFORMANCE

For some industries, it is clear which are leading the manufacturing recovery and which are in decline. When all indicators point up, or down, overall performance classification of industries is relatively straight forward. However, many industries lie in a grey zone of uncertainty. One of the purposes of this section is to settle the ambivalence among these latter industries by providing a

i) Industries in Expansion

There are some industries in Ontario which are well into expansion, including the important Motor Vehicle industry. For this group, both employment and shipments have surpassed their 1989 pre-recessionary peak, with the exception of Office, Store & Business Machines and the Boiler & Heating Equipment industry. Although employment did not surpass 1989 levels in these latter industries, 1994 growth was strong enough to place them very close to their pre-recession employment peak. Meanwhile, all 1994 shipment indices showed an expansionary path.

Table 1 EXPANDING Industries*	Employment			Shipments			Exports	Investment
	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	1994 Index '90=100	1993 Index Annual Avg. '91-'93=100
Paper Box/Bag	81.1	95.0	109.5	86.3	97.3	117.8	374.8	84.2
Hardware, Tool and Cutlery/ Machine Shops	89.9	94.7	137.6	85.5	99.3	117.1	355.6	80.2
Motor Vehicles	97.8	100.5	104.7	No Low	124.4	132.0	144.7	100.8
Power Boilers/ Heating Equipment	87.1	87.1	99.1	77.9	104.0	114.2	159.7	135.7
Office, Store & Business Machines	75.0	75.0	98.3	No Low	120.6	232.0	199.9	124.0
Plastic & Synthetic Resin s	77.8	111.2	144.5	91.8	98.2	112.1	198.3	76.6

* Shipment, Export and Investment calculations are based on 1986 constant dollars.

Collectively, the strong pace of expansion in this group has been reinforced by strong 1994 growth in employment of 14.1% and real shipments of 13.2%. Largely because of the representation of the Motor Vehicles industry within this group, the expanding industries group produces nearly a third of total manufacturing output and employs 101,943 people, or 13% of the entire manufacturing workforce in Ontario.

Despite low indices for some of the smaller industries in this group, investment in construction and machinery and investment in the expanding group was 33% (\$526 million) higher in 1993 than the 1991 to 1993 annual average. In 1993, group investment accounted for 31% of the manufacturing total, well above the share of total employees and shipments, implying that the actual investment levels for this group can be considered high.

ii) Industries in Recovery

The industries listed below have experienced significant employment and shipment recovery in recent years. However, employment in these industries has not reached its pre-recession peak.

Table 2 RECOVERING Industries*	Employment			Shipments			Exports	Investment
	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	1994 Index '90=100	1993 Index Annual Avg. '91-93=100
Food	85.1	85.7	89.4	92.1	95.4	104.1	175.7	97.1
Beverage	77.9	88.1	90.3	92.1	99.8	99.4	149.3	110.3
Rubber Products	68.5	84.4	91.6	93.7	100.6	108.7	203.9	88.6
Plastic Products	56.7	66.9	67.3	90.7	99.2	110.1	183.8	96.9
Wood Products	67.2	74.4	81.9	74.3	74.3	74.6	173.2	103.3
Textile Products	63.4	66.4	81.2	72.3	72.3	72.5	196.4	156.3
Office Furniture	65.6	65.6	79.4	65.7	65.7	66.3	227.4	103.4
Other Furniture & Fixtures	65.3	65.3	86.9	77.3	77.3	89.9	129.4	102.7
Commercial Printing	74.2	83.0	84.9	80.7	80.7	83.9	142.8	104.1
Primary Non- Ferrous Metal	72.7	75.6	76.0	89.5	110.0	102.1	106.8	80.4
Non-Metallic Mineral Prod	70.5	70.5	71.4	65.0	66.1	68.7	164.7	93.6
Motor Vehicle Parts & Accessories	78.5	84.6	90.9	81.0	93.3	98.6	113.7	113.5
Railroad Rolling Stock/ Ship Building	50.1	53.1	68.1	55.6	65.9	107.4	151.4	N/A
Agricultural Implements	78.8	83.6	96.8	57.4	69.6	78.5	66.0	69.5
Other Machinery & Equipment	63.9	63.9	77.5	69.1	78.2	94.4	144.3	87.1

* Shipment, Export and Investment calculations are based on 1986 constant dollars.

In terms of employment (352,463 or 45.1% of all manufacturing), these 15 industry categories account for the largest of the groups. In 1994, collective employment increased 7.9% while shipments increased by 7.7%. By the end of 1994, the group produced 36.3% of all shipments. Leading the group's performance were elements of the Other Machinery & Equipment industry, which added 6,190 jobs in 1994 and boosted production 21%.

Real investment by these recovering industries increased 0.2% (\$4.4 million) in 1993 relative to the 1991 to 1993 annual average, bringing construction and machinery & equipment spending to \$2.3 billion. This represented 35.9% of all manufacturing investment in 1993, indicating that this group's investment share was lower than its employment and shipment shares. In terms of absolute increases in investment, the Motor Vehicle Parts and Accessories industry lead the group with a \$77 million increase in 1993 over the 1991-1993 annual average of \$568.8 million. The largest relative increase came from the Textile Products industry which increased investment 56% in 1993 over the 1991-1993 annual average.

Although shipments are still relatively low in the Furniture industry, they have recovered well thanks to strong growth in export markets. The Office Furniture industry increased exports 127% from 1990 to 1994, the largest increase in exports in the recovering industries group. Only the Agricultural Implements industry has actually decreased the amount of goods it ships to international markets.

iii) Adjusting Industries

At the start of the recession, manufacturing industries typically experienced both a loss in employment and shipment levels. Then, the shipment decrease flattened while employment continued to fall. Some industries still remain in this scenario as they attempt to increase productivity. Industries exhibiting these characteristics are grouped as "Adjusting Industries". In terms of the overall business cycle, these industries have reached a trough likely in advance of recovery.

Although real shipments increased in 1994 by 8.0% to \$27.5 billion (17.8% of the manufacturing total), employment dropped 4.7% to 165,308 (21.1% of the manufacturing total). Most industries have reached all time lows in employment while others have fluctuated downwards in recent years. At 45% of its 1989 level, the relative employment level in the Fabricated Structural and Architectural Metal Products industry is the lowest of all industries in the study. Despite these drastic declines in employment, real shipments are slowly increasing for Fabricated Structural & Architectural Metal Products, implying it is no longer in outright decline.

Several adjusting industries have surpassed their 1989 real shipment levels. The Pharmaceutical & Medicine industry, for instance, produced 35% more output in 1994 than it did in 1989. In fact, real shipments in that industry have been steadily rising since 1989, one of only three such industries in the entire study. Other industries whose real shipment levels in 1994 were higher than in 1989 include the Publishing, Primary Steel, Steel Pipe & Tube and some aspects of the Other Converted Paper Products/Asphalt Roofing industry. These industries had some of the highest levels of 1994 exports in the adjusting group.

As a whole the adjusting group invested 20% less in 1993 than the average between 1991 and 1993. However, this may imply high investment in 1991 and 1992 rather than insufficient investment in 1993. Indeed, the adjusting groups share of total manufacturing investment, at 17.8%, is roughly proportional to its employment and shipment shares.

Although the Other Converted Paper Products/Asphalt Roofing industry experienced a decline in real shipments in 1994 relative to 1993, nominal shipments increased. As a result, it was felt that it best fitted the characteristics of this group. Also included in this group is the Leather & Allied Products industry and the Household Furniture industry which experienced minor increases in employment and minor decreases in shipments. Although contrary to the general movement of the group, such behaviour indicates that the industry is neither in recovery nor decline.

Table 3 ADJUSTING Industries*	Employment			Shipments			Exports	Investment
	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	1994 Index '90=100	1993 Index Annual Avg. '91-'93=100
Leather & Allied Products	47.6	47.6	51.0	59.2	62.0	61.5	125.5	N/A
Primary Textiles	70.4	78.6	70.4	78.4	78.4	89.7	171.8	101.1
Household Furniture	50.3	51.2	61.2	53.9	58.9	53.8	209.2	105.4
Pulp & Paper	67.1	70.6	67.1	86.3	90.2	99.1	105.4	95.7
Other Converted Paper/Asphalt Roofing	60.2	69.1	60.2	98.0	109.3	105.3	174.3	57.1
Combined Printing & Publishing	81.2	98.3	81.2	61.4	61.4	62.0	59.1	39.2
Publishing	91.3	99.6	94.7	90.8	90.8	100.8	237.7	96.0
Primary Steel, Steel Pipe & Tube	68.0	70.4	68.0	86.0	109.8	113.2	146.6	48.7
Wire & Wire Products	81.6	85.8	81.6	68.7	74.9	93.8	146.6	126.7
Fabricated Structural & Architectural Metal Prod	45.0	50.1	45.0	58.5	58.5	60.2	203.2	73.4
Commercial Refrigeration & Air Conditioning	51.9	57.4	53.3	45.5	45.5	59.3	146.4	77.1
Pharmaceutic & Medicine	78.8	88.5	78.8	No Low	128.2	134.5	255.7	102.6
Paint & Varnish	52.0	65.5	52.0	80.8	82.8	86.3	227.7	108.2
Stamped, Pressed & Coated Metal	57.6	57.6	59.7	71.8	74.6	74.1	85.6	114.9
Other Metal Fabricating	95.6	100.5	101.9	74.2	74.2	84.1	177.2	102.7
Other Chemical Products/Toilet Preparations	59.3	63.0	59.3	93.3	103.2	110.7	204.6	96.9

* Shipment, Export and Investment calculations are based on 1986 constant dollars.

iv) Industries in Decline

The "Declining Industry" group is characterized by industries whose employment and shipment levels have been declining for years and continue to do so into 1994. As a group, these industries decreased their employment by 5.4% (3,025), while shipments declined 4.3% (\$5 billion). These

four industries comprise 6.8% of total manufacturing employment and 3.1% of manufacturing shipments.

Aircraft & Aircraft Parts manufacturing in Ontario, following worldwide passenger carrier problems and faced with defence cut-backs, displayed decline in all areas in 1994 after similar decreases during the recession. Meanwhile, the Communications & Energy Wire/Electrical Industrial Equipment industry is experiencing declining demand likely as a result of changing technologies like fibre optic transmissions. After cutting 1,154 jobs, this industry experienced the largest absolute decrease in employment in 1994.

Table 4 DECLINING Industries*	Employment			Shipments			Exports	Investment
	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	Recessionary Trough Index '89=100	1993 Index '89=100	1994 Index '89=100	1994 Index '90=100	1993 Index Annual Avg. '91-93=100
Clothing	54.9	57.1	54.9	76.0	81.2	76.0	346.9	97.7
Platemaking, Typesetting & Bindery	74.0	87.3	80.2	54.2	59.7	54.2	302.6	56.0
Aircraft and Aircraft Parts	64.7	67.3	64.7	56.3	57.4	56.3	47.2	100.8
Communicat'n and Energy Wire & Cable / Electrical Ind. Equipment	62.0	67.2	62.0	68.9	71.1	68.9	180.7	N/A

* Shipment, Export and Investment calculations are based on 1986 constant dollars.

While some industries in decline have experienced tremendous export increases since 1990, others have experienced significant declines. The Platemaking, Typesetting & Bindery industry has seen its exports dramatically increase (203%) as has the Clothing (247%) industry from 1990 to 1994. Despite the fact that these increases were some of the largest of any industries in the study, shipments produced for domestic consumption dropped so far that overall shipments fell from 1989 to 1993. On a positive note, elements within these industries had the flexibility to search out and adapt to new markets in the face of dramatic demand shifts.

Investment by this group is relatively minor, comprising only 1.7% of the manufacturing average between 1991 and 1993. Comparing 1993 to the 1991-1993 annual average, investment decreased 11% for the declining group.

CONCLUSION

After years of decline and stagnation, the manufacturing sector in Ontario is regaining strength. However, recovery has been slow by historical standards and has not been broad based. Export growth has been the driving component of the sector's recent performance, benefitting immensely from the low value of the Canadian dollar and strong U.S. demand. This is particularly encouraging in light of manufacturing's importance to the Ontario economy. In 1994, manufacturing accounted for 23.9% of all Ontario real domestic product. Paralleling the RDP recovery has been a recovery

in several other economic indicators used in this study. Real shipment growth has steadily increased since 1991 and continued to do so in 1994. Meanwhile, manufacturing employment only began to recover in 1994. By significantly increasing production capacity with investment in machinery and equipment, which is approaching pre-recession levels, manufacturing growth is likely to continue. This investment, however, will slow full employment recovery.

From a spatial perspective, it is worth noting that not all regions are equally benefitting in the manufacturing recovery. In Northern Ontario, employment has returned to previous levels prior to the recession, led by recovery in resource processing and industrial diversification. Eastern Ontario, too, has been relatively unaffected. Employment in 1994 was only down 3.7% from pre-recessionary levels in 1989. Signs of strong recovery were evident in Southwestern Ontario, where 26,000 new jobs in 1994 partially offset the 45,000 manufacturing jobs lost during the recession. This resurgence is very much linked to the strong performance of the auto sector and its ancillary industries. In contrast, the news from the Greater Toronto Area and the Hamilton-Niagara Area is considerably more negative. Hamilton-Niagara, home to much of the province's traditional, heavy industries, accounts for 22.3% or 42,000 of the outstanding job loss related to the recession. Some evidence of regional stabilization, however, is now evident. This is not the case in the Greater Toronto Area where manufacturing jobs have been in steady decline during the past six years. This region is the home of most of the adjusting and deteriorating industry sectors -- notably Clothing, Aircraft, Publishing, Fabricated Metals, Wire & Cable and Electrical Equipment. By 1994, 110,000 manufacturing jobs had been lost, 58.5% of the total provincial loss and 22.9% of the region's 1989 manufacturing job base.

The use of various indicators to group individual industries has produced the conclusion that the overall outlook for the manufacturing sector is improving. Indeed, some of Ontario's most important industries, notably the Transportation Equipment industry, entered into an expansionary phase in 1994. Based on the analysis, expanding industries account for 14.9% of employment, 33.3% of shipments, 47.0% of exports and 28.6% of investment. When combined with the industries in recovery, the employment climbs to 67.4%, shipments to 75.5%, exports to 84.5% and investment to 70.9%. Meanwhile, those industries which are in decline are relatively minor ones, accounting for only 8.0% of employment and less than 4.0% in shipments, exports and investment. As more industries move into the higher performance categories, the pace of employment increase should accelerate, assuming that the high employment growth in the top two industry categories can be maintained. It is likely, therefore, that the economy will continue to be driven by recovery in manufacturing, at least in the short run.

In terms of assessing long run stability, several factors must be taken into consideration. Amongst these, the enormous growth in exports to the U.S. is not likely to continue at its current pace, as a significant slowdown in U.S. demand is expected to occur in the near term. Exports will also depend on movements of the Canadian dollar on exchange rate markets. In addition, Ontario's manufacturing sector is heavily concentrated in automobile production, which is now showing early signs of slackening, as interest rates have risen considerably during the past year. Continued high interest rates could impact demand for other durable goods as well. Finally, the manufacturing sector will continue to be impacted by international competition and the fast pace of technological change. The extent to which the economy can adapt to this dynamic environment will ultimately determine the long run prospects for a vital manufacturing sector.

STATISTICAL APPENDIX

Industry		Values and Percentage Share of Total			
(Ranked by Employment)	SIC Code	Employment 1994	Shipments 1994 \$000 1986	Exports 1994 \$000 1986	Avg. Investment 1991-1993 \$000 1986
Motor Vehicle Parts & Access.	325	74,868 (9.6%)	15,056,593 (9.8%)	10,714,831 (12.2%)	568,800 (8.8%)
Food	10	74,285 (9.5%)	14,744,394 (9.6%)	1,999,628 (2.3%)	587,300 (9.0%)
Motor Vehicles	323	45,415 (5.8%)	32,925,510 (21.4%)	32,168,967 (36.8%)	1,303,200 (20.1%)
Other Machinery & Equipment	319	35,452 (4.5%)	4,743,975 (3.0%)	3,414,493 (3.9%)	161,700 (2.5%)
Commercial Printing	281	30,014 (3.9%)	2,531,197 (1.7%)	146,315 (0.2%)	140,700 (2.2%)
Primary Steel, Steel Pipe & Tube	291 292	27,713 (3.5%)	7,537,333 (4.9%)	2,196,549 (2.5%)	323,400 (5.0%)
Hardware, Tool, Cutlery & Machine Shops	306 308	26,664 (3.4%)	2,439,867 (1.6%)	1,632,603 (1.9%)	62,100 (1.0%)
Plastic Products	16	26,366 (3.4%)	3,418,779 (2.2%)	1,145,900 (1.3%)	152,200 (2.3%)
Wood Products	25	22,844 (2.9%)	2,139,670 (1.4%)	1,418,537 (1.6%)	57,500 (0.9%)
Clothing	24	21,399 (2.7%)	1,337,641 (0.9%)	257,990 (0.3%)	32,600 (0.5%)
Non-Metallic Mineral Products	35	19,496 (2.5%)	2,643,203 (1.7%)	1,070,064 (1.2%)	123,800 (1.9%)
Stamped, Pressed & Coated Metal	304	18,962 (2.4%)	2,303,126 (1.5%)	411,879 (0.5%)	64,400 (1.0%)
Combined Printing/Publish	284	14,393 (1.8%)	932,454 (0.6%)	6,148 (0.01%)	159,900 (2.5%)
Primary Non-Ferrous Metal	295 - 299	13,797 (1.8%)	2,740,374 (1.8%)	4,912,255 (5.6%)	222,400 (3.4%)
Communication and Energy Wire & Cable/Electrical Industrial Equip.	337 338	13,749 (1.8%)	1,929,713 (1.3%)	1,393,590 (1.6%)	N/A
Pulp & Paper	271	13,705 (1.8%)	3,773,426 (2.5%)	2,370,445 (2.7%)	345,500 (5.3%)
Publishing	283	12,718 (1.6%)	1,074,321 (0.7%)	95,638 (0.1%)	20,200 (0.3%)

Industry		Values and Percentage Share of Total			
(Ranked by Employment)	SIC Code	Employment 1994	Shipments 1994 \$000 1986	Exports 1994 \$000 1986	Avg. Investment 1991-1993 \$000 1986
Other Chemical Products/Toilet Preparations	377 379	11,882 (1.5%)	2,140,724 (1.4%)	651,515 (0.7%)	77,600 (1.2%)
Textile Products	19	11,880 (1.5%)	1,004,912 (0.7%)	255,396 (0.3%)	35,500 (0.5%)
Aircraft & Aircraft Parts	321	10,582 (1.4%)	1,180,937 (0.8%)	906,498 (1.0%)	51,000 (0.8%)
Fabricated Structural & Architectural Metal	302 303	10,530 (1.4%)	1,325,801 (0.9%)	166,151 (0.2%)	12,500 (0.2%)
Paper Box & Bag	273	10,409 (1.3%)	1,608,170 (1.0%)	166,109 (0.2%)	45,800 (0.7%)
Beverage	11	9,804 (1.3%)	2,329,915 (1.5%)	550,455 (0.6%)	112,700 (1.7%)
Pharmaceutical & Medicine	374	9,601 (1.2%)	1,945,540 (1.3%)	281,140 (0.3%)	148,800 (2.3%)
Office, Store & Business Machines	336	9,596 (1.2%)	4,909,741 (3.2%)	4,043,740 (4.6%)	105,900 (1.6%)
Rubber Products	15	9,380 (1.2%)	1,416,041 (0.9%)	1,018,183 (1.2%)	118,100 (1.8%)
Other Furniture & Fixtures	269	8,973 (1.2%)	822,184 (0.5%)	789,351 (0.9%)	11,200 (0.2%)
Other Metal Fabricating	309	7,540 (1.0%)	1,227,146 (0.8%)	465,578 (0.5%)	29,500 (0.5%)
Other Converted Paper Prod. Incl. Asphalt Roofing	272 279	7,525 (1.0%)	1,492,690 (1.0%)	743,237 (0.8%)	99,200 (1.5%)
Household Furniture	261	7,236 (0.9%)	426,729 (0.3%)	191,471 (0.2%)	4,500 (0.1%)
Platemaking, Typesetting & Binding	282	7,161 (1.0%)	352,885 (0.2%)	50,621 (0.1%)	26,300 (0.4%)
Railroad Rolling Stock/Ship & Boat Building	326 - 328	6,926 (0.9%)	1,479,135 (1.0%)	921,953 (1.1%)	37,033 (0.6%)
Wire & Wire Products	305	6,647 (0.9%)	835,825 (0.5%)	448,118 (0.5%)	30,700 (0.5%)

Industry		Values and Percentage Share of Total			
(Ranked by Employment)	SIC Code	Employment 1994	Shipments 1994 \$000 1986	Exports 1994 \$000 1986	Avg. Investment 1991-1993 \$000 1986
Office Furniture	264	6,300 (0.8%)	479,364 (0.3%)	416,443 (0.5%)	21,400 (0.3%)
Primary Textiles	18	6,119 (0.8%)	1,108,676 (0.7%)	510,173 (0.6%)	91,900 (1.4%)
Leather & Allied	17	6,081 (0.8%)	328,983 (0.2%)	79,781 (0.1%)	NA
Power Boilers/ Heating Industrial Equipment	301 307	5,802 (0.7%)	884,156 (0.6%)	199,925 (0.2%)	14,000 (0.2%)
Plastic & Synthetic Resins	373	4,057 (0.5%)	1,447,721 (0.9%)	931,399 (1.1%)	64,300 (1.0%)
Paint & Varnish	375	2,624 (0.3%)	806,616 (0.5%)	112,494 (0.1%)	36,500 (0.6%)
Agricultural Implements	311	2,078 (0.3%)	331,623 (0.2%)	282,713 (0.3%)	15,600 (0.2%)
Commercial Refrigeration & Air Conditioning	312	2,032 (0.3%)	201,815 (0.1%)	173,421 (0.2%)	2,300 (0.04%)
Total* Manufacturing		782,282	154,077,440	87,483,120	6,496,500

* industries do not add to total. Some industries are missing because of data confidentiality.
Source: Statistics Canada

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