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MINNESOTA DEED REPORT

...partment of Energy and Economic Development 900 American Center 150 East Kellogg Boulevard St. Paul, Minnesota 55101 612/297-1291

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HIGHLIGHTS OF RECENT EMPLOYMENT TRENDS

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Policy Analysis Division 612/296-8341

Minnesota Department of Energy and Economic Development 900 American Center 150 East Kellogg Boulevard St. Paul, Minnesota 55101

HIGHLIGHTS OF RECENT EMPLOYMENT TRENDS

EXECUTIVE SUMMARY

This report presents highlights of post-recession employment trends in Minnesota. Differences in metropolitan and non-metropolitan employment growth also are explored briefly over the 1983-1986 period. Quarterly employment data for the nation was obtained through the BLS-790 employment data series, while corresponding state data was obtained through the Minnesota Department of Jobs and Training's "Current Employment Statistics."

RESULTS

- Although Minnesota employment growth outpaced national growth in almost every industry during the 1983-1984 period, this situation was reversed over the following two years.
- Slower than average growth for the state in 1985 and 1986 was driven largely by relatively slow growth in Minnesota's services and trade sectors.
- Manufacturing and local government showed stronger than average growth in Minnesota between 1983 and 1986 that offset slower growth in virtually every other major sector.

Manufacturing Growth

- Much of the state's better than average manufacturing growth over the recovery period resulted from relatively strong growth in the nondurable manufacturing sector. Minnesota's employment in this industry grew at seven percent compared to one percent nationally.

  -The largest gains in this industry came from printing and publishing, and rubber and plastics manufacturing.

- From 1985 through 1986 Minnesota experienced losses in durable goods manufacturing at twice the national rate. These losses, counteracting gains made between 1983 and 1984, were experienced largely in the office and computing industry of the nonelectrical machinery sector. As a result, the nation and the state's durable goods sectors showed similar growth over the post-recessionary period overall.

Government

- Stronger than average growth in government employment statewide to a large extent resulted from gains in local government employment (which includes public school teachers). Whereas local government employment nationally increased by 4.6 percent, this sector grew by 8.5 percent statewide.

Performance of Greater Minnesota

- Total employment growth in Greater Minnesota over the post-recession period was only half that of the Twin Cities metropolitan region.

Greater Minnesota growth in the Finance, Insurance and Real Estate (F.I.R.E.), services, retail and wholesale trade, construction, transportation, and communications industries was especially weak in comparison to the metro area.

- While services, in general, also grew more slowly outside the Twin Cities, business services experienced their strongest growth in Greater Minnesota, adding almost 5,000 jobs in this area's economy.

- Greater Minnesota experienced relatively strong growth in manufacturing employment over the post-recession period and consequently added more than its share of new manufacturing jobs.

    -The largest gains in manufacturing employment of Greater Minnesota came from the printing and publishing, rubber and plastic products, electrical machinery, and furniture and fixtures industries.

- Mining declines over this period presented Greater Minnesota with its largest losses.

* * *

INTRODUCTION

This report presents an update of recent employment trends in Minnesota and the nation. In place of presenting an in-depth analysis of these trends by industrial sector, this report highlights the most significant post-recessionary differences in industrial employment growth of the nation and Minnesota. Differences in metropolitan and non-metropolitan growth in the state also are explored briefly.

Quarterly employment data was obtained through the BLS-790 series for the years 1983 through 1986 (third quarter) nationally, and through the corresponding "Current Employment Statistics" produced by the Department of Jobs and Training. All data has been benchmarked to March 1985. In general, this report covers the period between the third quarters of 1983 and 1986.

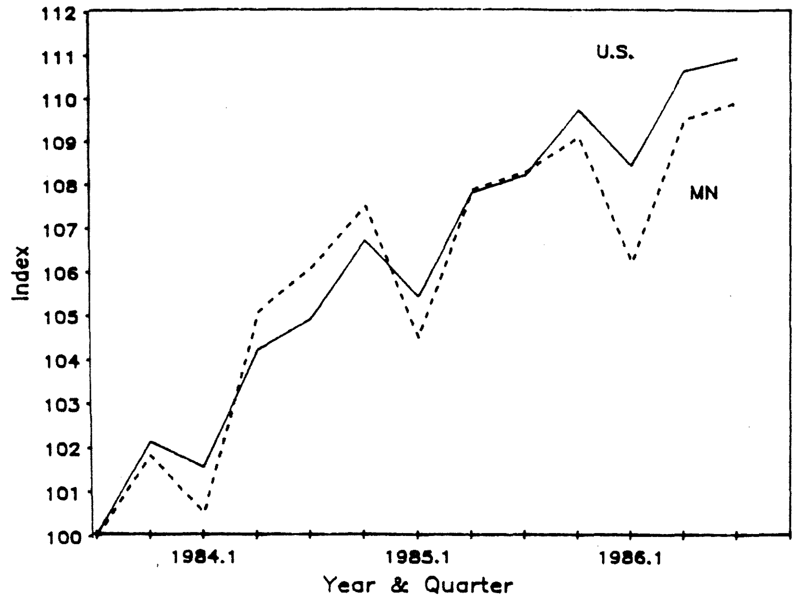
Throughout this analysis the state is broken down into two regions, the "metropolitan" region defined as the Twin Cities metropolitan area, and the "Greater Minnesota," or "non-metropolitan" region including all areas outside the Twin Cities area.

TOTAL NONAGRICULTURAL EMPLOYMENT

While the state experienced stronger than average employment growth between 1983 and 1984, job growth in Minnesota slowed markedly in 1985 and 1986. Figure 1 shows nonagricultural employment over this three-year period indexed to the third quarter of 1983 for the nation and Minnesota. As seen, Minnesota outpaced the nation in employment growth throughout the 1983-1984 period. Minnesota lost its edge thereafter, however, as significant slowdowns in state employment growth occurred.

Between the third quarters of 1983 and 1984, national employment grew

Figure 1
Index of Total Nonagricultural Employment
Index (1983.3=100)



by 4.9 percent compared to 6.1 percent for Minnesota. The next year, while national employment growth slowed to 3.1 percent, Minnesota's growth fell even further to only one-third of its previous level. Finally, total employment growth in Minnesota slowed to only 1.5 percent in 1986, compared to 2.5 percent for the nation.

TABLE 1

NONAGRICULTURAL EMPLOYMENT PERCENTAGE CHANGE
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nation	4.9%	3.1%	2.5%	10.8%
Minnesota	6.1%	2.1%	1.5%	10.0%
Twin Cities Metro Area(1)	7.6%	2.6%	1.6%	12.1%
Non-Metro Area(2)	3.5%	1.2%	1.4%	6.1%

(1) Employment data of the Department of Jobs and Training's "Current Employment Statistics" defines the metro area by the 11-county region, which includes St. Croix County in Wisconsin.
(2) The inclusion of St. Croix County in the metro area biases employment estimates downward in Greater Minnesota, since these estimates are also subtracted from state totals to obtain non-metropolitan employment. Because this bias is so small, however, it would not affect the results of this analysis.

Overall, between the third quarters of 1983 and 1986, national employment grew by 10.8 percent and Minnesota employment increased by the slightly slower rate of 10 percent. Most of this state-level growth, however, occurred within the Twin Cities metropolitan area. This region, experiencing a growth of 12 percent over this period, added 134,000 jobs to its economy, or 78 percent of all new jobs. Employment in Greater Minnesota, in contrast, grew at only half this rate, adding less than 22 percent of all new jobs accruing to the state.

While total employment growth nationally and statewide was similar, the components of their growth differed. Minnesota experienced slower than average growth in all but two major sectors - manufacturing and government. Thus, relatively strong growth statewide in these two sectors alone, representing less than 40 percent of total nonagricultural employment, offset the otherwise slow growth in the other industries.

The following sections will describe individual sector growth for the state and the nation that occurred over this time period. The 1985-86 period in which Minnesota's economy slowed will be examined in detail. In addition, the metropolitan/non-metropolitan distribution of growth will be examined for each sector.

SERVICES

The service sector, accounting for the second largest proportion of total nonagricultural employment, added the greatest number of new jobs to the national and state economies between 1983 and 1986. More than 3.4 million service jobs were added to the nation's economy while Minnesota experienced an increase of 57,000 service-related jobs. These jobs represented more than one-third of all jobs added to the economy over this period.

While state service employment growth was faster than the nation's during the 1983-1984 period, subsequent growth in Minnesota was relatively slower. Whereas Minnesota's service sector grew by six percent in the first year and slowed to 4.1 and 3.5 percent the following years, national employment increased five percent the first year, almost six percent in year two, and five percent between 1985 and 1986.

TABLE 2

SERVICE EMPLOYMENT PERCENTAGE CHANGE
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nation	5.3%	5.7%	5.1%	17.0%
Minnesota	6.0%	4.1%	3.5%	14.4%
Twin Cities Metro Area	7.9%	4.7%	3.1%	16.4%
Non-Metro Area	2.1%	3.4%	4.5%	10.3%

Business service growth appears to explain a great deal of this variation. Between the third quarters of 1983 and 1984 business services grew at a strong 19 percent, adding one-half of all new service jobs in Minnesota. During the following years, however, business service employment growth slowed to an average annual rate of only five percent and represented only 24 percent of new service sector jobs.

TABLE 3

BUSINESS SERVICES EMPLOYMENT GROWTH
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Minnesota	+31.5%	20,200
Twin Cities Metro Area	+27.0%	15,300
Non-Metro Area	+65.0%	4,900

Overall, during the three-year period employment growth in services statewide grew by just over 14 percent compared to 17 percent nationwide.

Metropolitan versus Non-Metropolitan

As is the case with overall employment, the metropolitan area holds almost two-thirds of the state's service-related employment. Over this three-year period service sector employment grew by 16 percent in the Twin Cities metro area and just over 10 percent outside the metro area. As a result, the metro area, with approximately 67 percent of the state's service sector employment, gained more than its share (76 percent) of new service jobs.

Health services grew at similar rates in both regions. Business services, however, showed their strongest growth in Greater Minnesota. While the Twin Cities metro area witnessed a strong growth of 27 percent between 1983 and 1986, this sector grew a remarkable 65 percent in Greater Minnesota, adding almost 5,000 jobs. These 5,000 jobs represented almost one-quarter of new business services jobs gained statewide, or twice this region's share of business services employment.

Interestingly, business services growth in Greater Minnesota occurred largely during the 1985-86 period. The metro area, in contrast, experienced its greatest growth during the 1983-1984 period.

RETAIL AND WHOLESALE TRADE

The retail and wholesale trade sectors represent the largest share of nonagricultural employment. These industries added the second largest number of new jobs to the nation and states' economies between 1983 and 1986. Minnesota gains in this sector totaled 40,000 jobs between the third quarters of 1983 and 1986, the majority of which (83 percent) occurred in the retail trade sector. As with growth in services, trade sector growth in Minnesota has been strong but slower than that of the nation over the period.

TABLE 4

RETAIL AND WHOLESALE TRADE EMPLOYMENT
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nation	5.7%	4.5%	2.9%	13.6%
Minnesota	6.1%	1.9%	.9%	9.1%

Minnesota's slower than average growth in trade employment resulted from much slower than national growth in food stores, eating and drinking establishments, miscellaneous retail stores, and wholesale trade employment, especially between the third quarters of 1984 and 1986. Each of these sectors (with the exception of miscellaneous retail) showed stronger than national growth in 1984. Minnesota growth in these sectors dropped to half the national rate on average in the following years.

Overall, the trade and service sectors accounted for two-thirds of jobs added to the national economy between the third quarters of 1983-1986 and approximately 56 percent of all new Minnesota jobs.

Metropolitan versus Non-Metropolitan

Of the 40,000 new retail and wholesale trade jobs added to the state's economy, 82 percent occurred in the Twin Cities metropolitan region. The metro area, which holds approximately 63 percent of all trade employment in the state, gained more than its share of trade jobs. This was due to a growth rate of 12 percent compared to only four percent for the non-metropolitan region.

TABLE 5

RETAIL AND WHOLESALE TRADE EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Minnesota	9.1%	40,000
Twin Cities Metro Area	12.1%	32,800
Non-Metro Area	4.3%	7,200

All net employment gains in the wholesale trade sector occurred in the Twin Cities metropolitan region. While some wholesale trade employment growth occurred in Greater Minnesota in the 1983-1984 period, declines the following two years offset gains made earlier.

GOVERNMENT

In the post-recession period, the government sector in Minnesota gained the third largest amount of new jobs in the state, 12 percent. In total, this represented approximately 21,000 jobs. Nationally, gains in government employment represented less than eight percent of all new jobs.

This difference was largely due to faster than average growth in total government employment statewide. Whereas national government employment grew by five percent between the third quarters of 1983 and 1986, total government employment in the state grew by 7.8 percent. The majority of this difference can be explained by differences in local government employment trends. Local government employment, accounting for almost two-thirds of all government employment, grew by 8.5 percent in Minnesota (included in the local government sector are public school teachers). In contrast, local government employment for the average state increased by less than five percent.

Federal employment, which accounts for somewhat less than a fifth of all government employees, also grew much faster in Minnesota over this period than nationally. Minnesota employment in state government, not surprisingly, actually grew more slowly than the national average.

Metropolitan versus Non-Metropolitan

Government employees are relatively evenly distributed between these two regions, with 46 percent located in non-metropolitan areas and 54 percent working in the metro area. Over the period 1983-86, total government employment grew at a slightly faster rate of 8.3 percent in Greater Minnesota compared to 7.4 percent in the metro area. With faster growth in the non-metropolitan area, it gained slightly more than its share of new government jobs, or 49 percent. While the number of federal and state employees grew more slowly in the non-metro region, the number of local government employees increased by 9.4 percent compared to only 7.6 percent in the Twin Cities metropolitan area.

TABLE 6

GOVERNMENT EMPLOYMENT PERCENTAGE CHANGE
1983-1986
(3rd QT - 3rd QT)

	NATION	MINNESOTA	TWIN CITIES METRO	NON-METRO
All Government	5.0%	7.8%	7.4%	8.3%
Federal	3.8%	11.0%	12.7%	8.7%
State	7.0%	4.5%	5.0%	3.6%
Local	4.6%	8.5%	7.6%	9.4%

As noted previously, government sector employment in Minnesota accounted for a larger than average proportion of new employment. Much of this results from this sector's strong representation in the non-metropolitan region. While additional government sector jobs accounted for only eight percent of the total number of jobs added to the Twin Cities metro area, they represented 26 percent of all new jobs in Greater Minnesota, making this sector the second most important source of job growth (next to services) in this region.

MANUFACTURING

Manufacturing, the third largest employing sector, added less than six percent of all new jobs gained in the national economy between the third quarters of 1983 and 1986. The Minnesota manufacturing sector, in contrast, was responsible for almost twice that proportion of new jobs statewide.

While manufacturing employment grew at the relatively slow rate of three percent nationally between the third quarters of 1983 and 1986, state manufacturing employment grew by 5.5 percent, almost twice the average growth rate. This was the result of a much higher state growth rate over the 1983-84 period. Minnesota manufacturing employment grew a strong eight percent in 1984 compared to the average state growth of only five percent. Both the state and nation showed similar rates of approximately one percent decline in this sector over the following two years.

TABLE 7

MANUFACTURING EMPLOYMENT
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nation	5.1%	-1.3%	-.7%	3.0%
Minnesota	8.1%	-1.3%	-1.2%	5.5%
Twin Cities Metro Area	8.9%	-2.0%	-1.6%	4.9%
Non-Metro Area	6.5%	.4%	-.4%	6.6%

Metropolitan versus Non-Metropolitan

The non-metropolitan regions saw relatively strong growth of almost seven percent in manufacturing over the three-year period, compared to five percent in the Twin Cities area. This strong non-metro growth led to the situation where Greater Minnesota captured more than its one-third share of manufacturing job gains over this period. While the metropolitan area's manufacturing sector outperformed the non-metro region between 1983 and 1984, it also experienced losses the following two years, whereas Greater Minnesota's manufacturing employment remained stagnant.

DURABLE AND NONDURABLE MANUFACTURING

Minnesota employment growth in durable goods manufacturing matched that of the nation, growing by slightly more than four percent between the third quarters of 1983 and 1986. Over the three-year period, the state experienced a stronger than national growth only in the first year. During the two subsequent years, Minnesota compared poorly with the nation, losing employment in this sector at twice the national loss rate. Declines in this sector were largely the result of non-electrical machinery losses that will be discussed later.

Minnesota nondurable manufacturing employment, on the other hand, grew at a strong seven percent (or 10,300 jobs) compared to only one percent nationally. Nondurable manufacturing growth was so strong in Minnesota that employment gains in this sector represented 53 percent of the jobs gained in the manufacturing sector overall. Nondurable jobs gained nationally, on the other hand, represented only 16 percent of net new manufacturing jobs. Minnesota's favorable growth over this period resulted from a gain of more than two and one-half times the national average between 1983 and 1984, combined with growth of two percent between 1984 and 1986, when the nation experienced a loss of almost one percent.

Therefore, nondurable manufacturing growth largely accounted for the overall differences in national and state manufacturing growth. Specifically, within this sector printing and publishing employment gains represented 82 percent of all nondurable growth. Rubber, plastic and leather products showed a 15 percent growth statewide compared to only two percent nationally.

Printing and Publishing

Of the 10,300 net new jobs added to Minnesota's nondurable goods sector, 8,400 came from printing and publishing-related activities alone. Minnesota employment in this industry, which already stands at one and one-half times the national concentration, grew by 23 percent between the third quarters of 1983 and 1986, compared to less than 14 percent nationally. Minnesota's faster than average growth largely resulted from a growth rate of more than twice the national average between 1983 and 1984. State gains made the following two years, though, were also faster than the average, nine percent compared to 6.8 percent nationally.

Within the printing and publishing sector, commercial printing accounted for the majority of this growth both nationally and at the state level.

Metropolitan versus Non-Metropolitan

Greater Minnesota's printing and publishing sector grew faster than its metro counterpart, 28 percent compared to 21 percent over this three-year period. Strong non-metropolitan growth meant that this region gained a disproportionate share of the state's new printing and publishing jobs. Overall, Greater Minnesota had 3,100 more printing and publishing jobs in 1986 than in 1983, while the Twin Cities metro area gained 5,300 new jobs.

TABLE 8

PRINTING AND PUBLISHING EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	13.7%	178,200
Minnesota	22.9%	8,400
Twin Cities Metro Area	20.8%	5,300
Non-Metro Area	27.9%	3,100

Yearly changes in printing and publishing employment show that even when metropolitan employment seemed to stagnate between the third quarters of 1985 and 1986, Greater Minnesota showed a strong 13 percent growth rate.

Rubber, Plastic and Leather

Between the third quarters of 1983 and 1986 rubber, plastic and leather products employment grew by only two percent nationally. Minnesota's rubber, plastic and leather employment, in contrast, increased almost 15 percent. This growth represented close to 2,000 new jobs in Minnesota, or 17 percent of all net job gains in the nondurable manufacturing sector.

As in many other sectors, state gains over this period largely resulted from very fast growth during the 1983-84 period. While national employment in this sector fell three percent over the next two years, Minnesota's employment actually grew by two percent.

TABLE 9

RUBBER, PLASTIC AND LEATHER EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	2.0%	20,000
Minnesota	14.7%	1,800
Twin Cities Metro Area	2.8%	200
Non-Metro Area	40.9%	1,600

Metropolitan versus Non-Metropolitan

While only 38 percent of all rubber, plastic and leather manufacturing employment is found in the non-metropolitan region, virtually all of the growth over the 1983-86 period occurred here. Employment in this sector grew by 41 percent or 1,600 jobs in Greater Minnesota compared to a growth of less than three percent or 200 jobs in and around the Twin Cities.

DURABLE GOODS

As previously noted, durable manufactured goods employment statewide did not deviate significantly from the national average over the three year period. Comparing 1983 to 1986 levels, however, does show that while Minnesota experienced stronger than average growth in the 1983-84 period, it lost employment at twice the national rate of loss in subsequent years. From this sector's peak employment in the third quarter of 1984, almost 13,000 jobs were lost statewide by the end of 1986.

Employment trends in those sectors chiefly responsible for net growth over the three-year period -- fabricated metals, furniture and fixtures, scientific instruments, transportation equipment and lumber and wood products -- will be presented first. Then, the volatility of the non-electrical machinery sector, accounting for both large gains between 1983 and 1984 and large losses over the 1984-1986 period, will be explored.

Fabricated Metals

Of the 9,000 net new durable manufacturing jobs gained in Minnesota over the 1983-86 period, the fabricated metals sector accounted for 35 percent. This sector represented the largest single gain in the durable goods industry, adding 3,200 jobs to the state's economy over the period. Included in this sector are ordnance and accessory manufacturing, sheet metal, and screw machine products manufacturing. Growth in this industry of almost 10 percent was more than twice as fast as the national average. Minnesota's better than average growth resulted from slow but steady employment gains between 1984 and 1986 in the face of losses over the same period nationally.

TABLE 10

FABRICATED METALS EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	3.8%	52,600
Minnesota	9.5%	3,200
Twin Cities Metro Area	10.4%	2,800
Non-Metro Area	5.6%	400

Metropolitan versus Non-Metropolitan

Less than 20 percent of fabricated metals employment is located outside the Twin Cities metropolitan area. As expected, the majority of growth in this sector occurred within the Twin Cities metro area. In fact, of the 3,200 jobs gained in the state, 2,800 or 88 percent occurred here.

Furniture and Fixtures

The furniture and fixtures sector was responsible for an increase of 1,700 jobs statewide. This represented the second largest gain among durable manufacturing industries. Over the 1983-86 period, the industry expanded a remarkable 46 percent statewide compared to only nine percent nationally. The strong growth has helped to push the state's location quotient (measuring relative industry concentration) from .4 to .6 in only three years. This stronger than average growth was a result of a steady growth of almost 13 percent annually throughout the period.

TABLE 11

FURNITURE AND FIXTURES EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	8.9%	40,500
Minnesota	45.5%	1,700
Twin Cities Metro Area	44.7%	700
Non-Metro Area	46.2%	1,000

Metropolitan versus Non-Metropolitan

Close to 60 percent of furniture and fixture employment is located outside the Twin Cities area. Similar growth in the two regions over this period led to employment share related gains. That is, Greater Minnesota gained almost 60 percent of newly created furniture and fixture jobs while the Twin Cities region, with 40 percent of these jobs, gained a similar proportion over this period.

It is interesting to note that while the metropolitan area experienced its largest gains in this sector during the 1983-84 period, Greater Minnesota's strongest growth occurred during the 1984-86 period.

Scientific Instruments

The Minnesota scientific instruments sector employs approximately twice the proportion of people as the average state and was responsible for the third largest gain in employment of the durable goods sector. Almost 1,600 jobs were created in this sector in Minnesota, which grew at a rate of six percent. National growth in this sector stood at slightly more than three percent. As with many other industries, the greatest gains occurred during the 1983-84 period. Nationally, employment losses of .6 percent in scientific instruments occurred between the third quarters of 1984 and 1986. Minnesota employment in this sector, in contrast, increased by almost one percent over the same period.

Metropolitan versus Non-Metropolitan

More than 90 percent of scientific instruments manufacturing employment is located within the Twin Cities metropolitan area. Accordingly, all employment growth came from within this area. In fact, the metro area experienced a growth of eight percent (or 1,900 jobs) while the non-metropolitan region experienced a loss of almost 10 percent, or 300 jobs.

In the 1983-84 period, the non-metropolitan region witnessed an employment growth of more than five percent. Subsequent losses of five percent and 10 percent, however, more than offset earlier gains.

TABLE 12

SCIENTIFIC INSTRUMENTS EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	3.3%	22,900
Minnesota	6.0%	1,600
Twin Cities Metro Area	8.1%	1,900
Non-Metro Area	-9.7%	-300

Transportation Equipment

A relatively small proportion of workers are employed in the state's transportation equipment manufacturing sector. Even so, growth of more than twice that of the nation added 1,500 jobs to the state's economy. This growth resulted from much stronger than average growth between 1983 and 1985. Whereas national transportation employment increased by almost 12 percent over these two years, Minnesota's employment grew by 29 percent. Over the 1985-86 period, however, Minnesota industry employment fell by almost four percent while the nation's employment remained relatively stagnant.

Metropolitan versus Non-Metropolitan

Transportation equipment manufacturing employment, more equally divided between the two regions than many other sectors, locates 40 percent of its workers outside the Twin Cities metropolitan area. Virtually all growth in this sector, however, came from growth in the Twin Cities metropolitan region. While the non-metropolitan region did experience employment growth in the 1983-84 period, these gains were offset by large losses, especially between 1985 and 1986.

TABLE 13

TRANSPORTATION EQUIPMENT EMPLOYMENT
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nation	8.6%	2.8%	.2%	11.9%
Minnesota	18.1%	8.7%	-3.5%	24.9%

TABLE 14

TRANSPORTATION EQUIPMENT EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Minnesota	24.9%	1,500
Twin Cities Metro Area	46.7%	1,400
Non-Metro Area	1.2%	100

Electrical Machinery

Between 1983 and 1986, electrical machinery employment grew by almost six percent or 1,500 workers in Minnesota. Nationally, this industry experienced a slightly faster growth of seven percent. As in the transportation sector, these employment gains represented more than 16 percent of the net durable manufacturing gains made statewide in the recovery period.

Although state employment gains of this sector were greater than average between 1983 and 1984, losses of the following two years occurred at more than twice the national rate of loss.

Metropolitan versus Non-Metropolitan

The electrical machinery sector showed its strongest employment growth outside the Twin Cities metropolitan region between 1983 and 1986. In the non-metropolitan region, this sector grew by a strong 30 percent, or 2,700 jobs. Over this period the greatest growth took place between 1983 and 1985. A slight decline in employment was experienced in this region after 1985. Of all durable manufacturing jobs added to the non-metropolitan region over this period, this sector accounted for the largest share.

The Twin Cities metropolitan region, in contrast, lost approximately 1,200 jobs over the post-recession period. While strong growth of 14 percent occurred in this region in 1984, employment losses the following two years more than offset these gains.

Lumber and Wood

The lumber and wood industry grew by more than 11 percent over the 1983-86 period, adding approximately 1,400 jobs in the state. This compares to the relatively slower national growth of just 7.9 percent. As with many other industries, employment gains resulted largely from strong growth between 1983 and 1984.

TABLE 15

LUMBER AND WOOD EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	7.9%	54,900
Minnesota	11.4%	1,300
Twin Cities Metro Area	22.7%	1,200
Non-Metro Area	2.0%	100

Metropolitan versus Non-Metropolitan

Oddly enough, the lumber and wood industry, which employs a relatively high proportion of its workers in non-metropolitan Minnesota, experienced growth in the metropolitan area alone. More than 90 percent of these new jobs were located in and around the Minneapolis/St. Paul area.

* * *

Much of the state's stronger than average growth in durable goods manufacturing during the 1983-84 period was the result of large gains in the non-electrical machinery sector. Similarly, subsequent losses in durable goods of almost twice the national rate over the following two years were accounted for by non-electrical machinery losses.

Non-electrical Machinery

Over the 1983-86 period, this sector appeared to be the most stable, growing by only 1.3 percent nationally and declining by .4 percent statewide. Point comparison, however, masks the annual volatility of this sector.

Between the third quarters of 1983 and 1984, Minnesota's non-electrical machinery sector outperformed the nation with a growth of almost 15 percent (adding 12,000 jobs) compared to slightly over nine percent nationwide. The office and computing sector (which is almost five times as concentrated in Minnesota as in the nation) accounted for 60 percent of that growth. Office and computing sector growth alone amounted to 7,200 jobs. Three other components of the non-electrical machinery sector -- engines and special machinery, construction and related machinery, and general industrial equipment -- also showed stronger than average growth in Minnesota over this period.

During the next year, non-electrical machinery employment fell by 6.3 percent statewide compared to a decline nationally of only 2.9 percent. The largest losses both nationally and statewide came from the office and computing sector. In the state, 2,700 office and computing jobs were lost. These losses accounted for 44 percent of net job losses in the durable goods manufacturing sector. In contrast, office and computer losses represented only 21 percent of national durable goods losses. In addition, three other non-electrical machinery sectors -- construction and related machinery, metal working machinery, and general industrial equipment -- experienced much stronger than national declines, accounting, to a large extent, for the state's loss rate of more than twice the national average.

Between the third quarters of 1985 and 1986, the non-electrical machinery sector again experienced dramatic declines. In one year alone, employment declined by 4.5 percent nationally and by almost twice that rate statewide. The eight percent decline in non-electrical machinery employment translated into a loss of almost 7,000 jobs in the state. These losses came chiefly from the office and computing sector, which lost state employment at slightly more than the national rate during this year. Between the third quarters of 1985 and 1986, 5,300 office and computing jobs were lost in Minnesota. Thus, gains made in the 1983-84 period were more than offset by the 1984-86 losses in these sectors. The engines and special machinery sectors also fell at almost twice the national rate, accounting for a loss of 1,300 jobs statewide.

Metropolitan versus Non-Metropolitan

While certain components of the non-electrical machinery sector (such as farm and garden machinery) are located in the non-metro rather than metropolitan area, non-electrical machinery employment overall is heavily concentrated in and around the Twin Cities metropolitan area. Almost 80 percent of employment in this sector is found within the metro area. Accordingly, this area was most affected by the volatility of this sector.

Over the period 1983-86, non-electrical machinery employment actually increased by 4.4 percent or 800 jobs in Greater Minnesota, while it fell by almost two percent or 1,100 jobs in the metropolitan region. Within the non-metropolitan region two sectors were chiefly responsible for this gain, the office and computing and the general industrial equipment sectors. Similarly, these two sectors were responsible for the losses of the metropolitan area.

Thus, metropolitan gains made in non-electrical machinery employment over the 1983-84 period were more than offset by losses in subsequent years. While the non-metropolitan area also experienced strong gains in the 1983-84 period, its losses the following two years were not as sharp as those of the Twin Cities area. Specifically, of the 12,000 new non-electrical machinery jobs gained in the 1983-84 period, 9,600 occurred in the metropolitan region. Similarly, of the 12,400 jobs lost in the sector statewide between the third quarters of 1984 and 1986, 10,700 were

TABLE 16

MINNESOTA NONELECTRICAL MACHINERY EMPLOYMENT
(3rd QT - 3rd QT)

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nonelectrical Machinery	+14.7%	-6.3%	-7.8%	-.4%
Engines & Special Machinery	16.7%	.2%	-9.3%	6.1%
Farm & Garden Machinery	2.0%	-7.9%	10.0%	4.1%
Construction & Related Machinery	19.9%	-14.8%	-7.7%	-3.7%
Metal Working Machinery	12.9%	-7.5%	2.7%	7.9%
General Industrial Equipment	12.1%	-15.9%	-4.8%	-7.9%
Office and Computing Machines	17.2%	-5.8%	-11.4%	-1.9%
Service Industrial Machines	5.6%	-5.1%	-3.0%	-2.5%

NATIONAL NONELECTRICAL MACHINERY
EMPLOYMENT

Percentage Change

	1983-84	1984-85	1985-86	OVERALL 1983-1986
Nonelectrical Machinery	9.2%	-2.9%	-4.5%	1.3%
Engines & Special Machinery	11.7%	-10.5%	-5.4%	-5.4%
Farm & Garden Machinery	.4%	-10.3%	-4.3%	-13.8%
Construction & Related Machinery	6.1%	-3.6%	-11.8%	-9.8%
Metal Working Machinery	11.2%	.4%	-1.5%	10.0%
General Industrial Equipment	9.6%	-2.6%	-3.2%	3.3%
Office and Computing Machines	8.9%	-5.7%	-10.0%	-7.6%
Service Industrial Machines	9.9%	-2.4%	.1%	7.4%

located in the Twin Cities metropolitan area.

CONSTRUCTION

Nationally the construction industry gained the third largest proportion of jobs between 1983 and 1986, or 11 percent of all new jobs. In Minnesota these jobs represented only nine percent of the 173,000 jobs added to the state's economy over this period.

Between the third quarters of 1983 and 1986, national construction employment grew by slightly more than 25 percent, spurred on by falling interest rates. Minnesota's slower employment growth of just over 21 percent during the same period resulted from slower than average gains over the 1984-86 period. Minnesota growth in this sector matched national growth between 1983 and 1984.

Metropolitan versus Non-Metropolitan

Greater Minnesota, which accounts for 36 percent of total state construction employment, gained less than its share of new construction jobs over the 1983-86 period. The Twin Cities metro area gained more than its share with a growth of more than two and a half times that of the non-metro region.

F.I.R.E.

The nation's finance, insurance, and real estate (F.I.R.E.) sectors employed 873,000 more people by the third quarter of 1986 than 1983. This gain represented approximately nine percent of net new jobs added to the economy over this period. In Minnesota, 14,000 F.I.R.E. jobs were added, which represented a similar proportion (eight percent) of all newly created jobs in the state.

National employment growth over this period amounted to approximately 16 percent compared to almost 14 percent in Minnesota. While the state's employment in this industry grew faster than the nation's between 1983 and 1985, Minnesota's employment growth in this industry slowed dramatically to less than half the average growth rate during the 1985-86 period.

Metropolitan versus Non-Metropolitan

Strong growth of almost 20 percent led to an increase of 15,000 new F.I.R.E. sector jobs in the Twin Cities metro region between 1983 and 1986. While 1,600 jobs were added to Greater Minnesota in the 1984-85 period, losses in following years more than offset these gains, leaving this region with a net loss of 700 jobs by the end of 1986. These losses probably reflect the ripple effect of declines in the nation's agricultural industry.

MINING

Nationally, mining employment declined 20 percent during this three-year period. Similarly, Minnesota saw a decline of more than 23 percent, or 2,100 jobs. While the state experienced growth of almost 10 percent during the 1983-84 period (a gain of 900 jobs), 3,000 jobs were lost over the following two years.

Metropolitan versus Non-Metropolitan

Virtually all of these jobs were lost in the non-metropolitan region, specifically the Iron Range of northeastern Minnesota. Of all the sectors which lost employment over the three-year period outside the Twin Cities metropolitan region, mining presented the largest losses.

TABLE 17

MINING EMPLOYMENT
(3rd QT - 3rd QT)

	PERCENTAGE CHANGE 1983-1986	ABSOLUTE CHANGE IN EMPLOYMENT
Nation	-19.9%	-189,700
Minnesota	-23.4%	-2,100
Twin Cities Metro Area	0	0
Non-Metro Area	-26.2%	-2,100

CONCLUSION

Overall, during this post-recession period Minnesota has shown employment growth similar to the nation's. However, yearly employment changes reveal that while the state experienced stronger than national employment growth during the 1983-84 period, a dramatic slowdown occurred statewide over the following two years.

This slowdown has been driven largely by slower than average growth in services and trade sector employment over the 1984-86 period.

Manufacturing losses occurring statewide over the 1984-86 period closely matched those of the nation. However, since this sector experienced strong growth in the 1983-84 period, state manufacturing posted larger than average gains over the post-recession period overall.

Thus, a relatively strong performance of Minnesota's manufacturing sector reveals an underlying strength of the state's economy not seen in recent overall employment trends. This should be especially critical in the face of recent declines in the dollar and the expected growth in manufacturing exports.