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# ***Staff Paper***

## **Analysis of Socioeconomic Data for the I-75 Cluster of Michigan Counties**

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**STAFF PAPER 98-42**

**November 1998**



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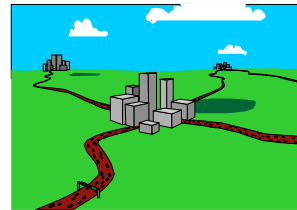
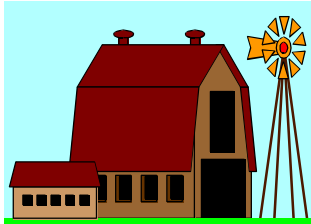
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12 pages

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Nov. 20, 1998 (Ver. 1.1)

# Analysis of Socioeconomic Data for the I-75 Cluster of Michigan Counties



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“Enhancing Rural Economies Through Comprehensive Extension Research & Partnering Approaches Using Multi-County Clusters in Michigan With Application to National Rural Settings”, a United States Department of Agriculture Fund for Rural America Grant

This grant is administered by the Department of Agricultural Economics, Michigan State University, Dr. Colletta Moser, Project Director; Dr. Raymond Vlasin, Project Co-Director. For further information about the grant, contact Dr. Paul Wessen, Project Manager, (517)353-5946.

# Analysis of Socioeconomic Data for the I-75<sup>1</sup> Cluster of Michigan Counties<sup>2</sup>

## ***Abstract***

*This paper presents an analysis of socioeconomic data for a cluster of five counties in northern lower Michigan. These adjacent counties (Cheboygan, Crawford, Ogemaw, Otsego, and Roscommon) are part of a three-year rural development project. Data for individual counties as well as averages for the cluster are given. Topics covered include population growth, age of residents, educational attainment, unemployment, employment/jobs, sources of personal income, household income, poverty rates, and household composition. An executive summary is also provided.*

## ***Executive Summary***

Following is an analysis of socioeconomic data for the I-75 Cluster of Michigan counties, i.e. Cheboygan, Crawford, Ogemaw, Otsego, and Roscommon. These counties were combined into a group for a Michigan State University economic development project. The project, called Enhancing Rural Economies, involves concentrating extension programming and research programs, as well as using partnering approaches to improve economic conditions in local areas. The key findings of this analysis are listed below.

## **Population Growth:**

All five cluster counties are growing in population at a higher rate than that of Michigan. Although the cluster began the 1990s with a relatively low population, the high rate of population growth is a distinguishing characteristic for the cluster.

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<sup>1</sup> This cluster of counties is called the “I-75 Cluster” because the interstate freeway I-75 runs through each of the counties. This freeway is a major north/south corridor which connects the upper peninsula of Michigan with its largest city, Detroit.

<sup>2</sup> This analysis was prepared by Jon C. Phillips, Graduate Research Assistant, Department of Agricultural Economics, M.S.U. Data for this analysis was organized and provided by Mary Lou McPherson, Extension Specialist, Department of Resource Development. Additional information pertaining to the operation of the I-75 Cluster of the Enhancing Rural Economies project may be obtained from Roy Spangler, Cluster Administrator, M.S.U. Extension Roscommon County, (517)275-5043.

**Age of Residents:**

The median age of the residents of the I-75 Cluster was significantly higher than that of the state of Michigan in 1990. This gap is projected to increase by the year 2000.

**Educational Attainment:**

The educational attainment of the residents of this cluster lags behind the state average. The educational attainment in the cluster increased between 1980 and 1990, however.

**Unemployment:**

The unemployment rate in the cluster has declined slightly since 1990, but remains above the state's rate. Some areas in the cluster (e.g. Cheboygan County) have a relatively high unemployment rate.

**Employment/Jobs:**

The cluster added a substantial amount of jobs (measured both on a percentage and a raw numbers basis) between 1990 and 1996. The counties in this cluster have a relatively large fraction of their jobs in the retail/service sector.

**Sources of Personal Income:**

Compared to Michigan, residents of the cluster receive a substantially smaller portion of their personal income as net earnings, and larger portions from other sources.

**Household Income:**

This cluster has a relatively large percentage of low income households, and a relatively small percentage of high income households.

**Poverty Rate:**

Except for certain limited locations, poverty is quite common in the I-75 cluster.

**Household Composition:**

In the cluster, there has been a decline in the fraction of households in the “Married With Children” category. The other categories have increased.

A more detailed discussion of each of the variables mentioned above follows.

## Analysis of Socioeconomic Data for the I-75<sup>3</sup> Cluster of Michigan Counties<sup>4</sup>

Following is an analysis of socioeconomic data for the I-75 Cluster of Michigan Counties i.e. Cheboygan, Crawford, Ogemaw, Otsego, and Roscommon. These counties were combined into a group for a Michigan State University economic development project. The project, called Enhancing Rural Economies, involves concentrating extension programming and research programs, as well as using partnering approaches to improve economic conditions in local areas.

### *Population*

This examination of population growth focuses on changes that occurred between 1990 and 1996. Table 1 lists the population for each of the five cluster counties and the cluster as a whole in these two points in time. It also lists percentage changes during this time period for each county and the overall cluster. The population growth rate for each county exceeded that of Michigan and the United States, which had growth rates of 3.2% and 6.6% respectively during this period.

Within the cluster, Otsego and Roscommon had the greatest population growth both in terms of growth rate and raw numbers. The areas of greatest growth were recreational areas, e.g. townships surrounding Gaylord and townships with many inland lakes in Roscommon.

### *Age of Residents*

The age of the residents of the I-75 Cluster is an important demographic issue. As shown in Table 2, the median age in the counties in the Cluster was significantly higher than the median age in Michigan in 1990. Furthermore, this gap is projected to increase in the year 2000. Retirees have been attracted to this cluster for many years, and this trend appears to be increasing. There are many reasons for this, including the fact that population density is lower than in metropolitan areas of Michigan and traffic is less intense. In addition, retirees commonly sell their primary residence downstate and move into the “family cottage up north.”

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<sup>3</sup> This cluster of counties is called the “I-75 Cluster” because the interstate freeway I-75 runs through each of the counties. This freeway is a major north/south corridor which connects the upper peninsula of Michigan with its largest city, Detroit.

<sup>4</sup> This analysis was prepared by Jon C. Phillips, Graduate Research Assistant, Department of Agricultural Economics, M.S.U. Data for this analysis was organized and provided by Mary Lou McPherson, Extension Specialist, Department of Resource Development. Additional information pertaining to the operation of the I-75 Cluster of the Enhancing Rural Economies project may be obtained from Roy Spangler, Cluster Administrator, M.S.U. Extension Roscommon County, (517)275-5043.



**Table 1: Population Changes for the I-75 Cluster, Michigan, and the United States.**

<b>POPULATION</b>				
<b>COUNTY</b>	<b>1990</b>	<b>1996</b>	<b>RAW CHANGE</b>	<b>% CHANGE</b>
<b>Cheboygan</b>	<b>21,398</b>	<b>22,993</b>	<b>1,595</b>	<b>7.5%</b>
<b>Crawford</b>	<b>12,260</b>	<b>13,671</b>	<b>1,411</b>	<b>11.5%</b>
<b>Ogemaw</b>	<b>18,681</b>	<b>20,790</b>	<b>2,109</b>	<b>11.3%</b>
<b>Otsego</b>	<b>17,957</b>	<b>21,343</b>	<b>3,386</b>	<b>18.9%</b>
<b>Roscommon</b>	<b>19,776</b>	<b>22,847</b>	<b>3,071</b>	<b>15.5%</b>
<b>(sum)</b>	<b>90,072</b>	<b>101,644</b>	<b>11,572</b>	
<b>Cluster Average</b>				<b>12.8%</b>
<b>Michigan</b>				<b>3.2%</b>
<b>United States</b>				<b>6.6%</b>

**Table 2: Median Age Information for the I-75 Cluster and Michigan.**

<b>Median Age (years)</b>				
<b>County</b>	<b>1990</b>	<b>1996</b>	<b>Raw Change</b>	<b>% Change</b>
<b>Cheboygan</b>	<b>37.0</b>	<b>42.5</b>	<b>5.5</b>	<b>14.9%</b>
<b>Crawford</b>	<b>34.7</b>	<b>40.1</b>	<b>5.4</b>	<b>15.6%</b>
<b>Ogemaw</b>	<b>36.9</b>	<b>41.7</b>	<b>4.8</b>	<b>13.0%</b>
<b>Otsego</b>	<b>33.6</b>	<b>38.8</b>	<b>5.2</b>	<b>15.5%</b>
<b>Roscommon</b>	<b>44.9</b>	<b>50.5</b>	<b>5.6</b>	<b>12.5%</b>
<b>Cluster</b>	<b>37.4</b>	<b>42.7</b>	<b>5.3</b>	<b>14.2%</b>
<b>Michigan</b>	<b>32.5</b>	<b>35.3</b>	<b>2.8</b>	<b>8.6%</b>

The aging of the population will have important effects on social and infrastructural needs of the communities of the I-75 Cluster. Medical care needs will certainly increase, as will demand for elder care, assisted living and skilled nursing facilities. And since older citizens tend to oppose property tax increases, it will likely be difficult for local governments to pass millage increases.

### *Educational Attainment*

Human resources are an essential ingredient for the proper functioning of a regional economy. In order for existing businesses to expand (or to attract new businesses) a skilled, educated workforce must be available. Table 3 below provides information regarding the educational attainment of residents of the I-75 Cluster and Michigan. Ogemaw stands out as the county with the lowest educational attainment, both in 1980 and 1990. As indicated in the table, the educational attainment of the I-75 Cluster lagged behind the average educational attainment for Michigan in 1980. Although the educational attainment of the Cluster improved by 1990, the “educational attainment gap” with Michigan actually *increased*. This does not bode well for the economic development of the Cluster. There is an explanation for this phenomenon that would tend to mitigate its effect, however. The educational attainment of age cohorts has increased over time. In other words, the young adults of today have substantially more education than their grandparents have. The influx of retirees noted in the previous section, therefore, will pull down the educational attainment levels in this Cluster.<sup>5</sup> So with respect to the available labor force in the Cluster, the situation is actually better than a superficial examination of Table 3 would suggest.

**Table 3: Educational Attainment for the I-75 Cluster and Michigan.**

<b>Educational Attainment</b>						
County	High School Grad		Some College		College+	
	<u>1980</u>	<u>1990</u>	1980	<u>1990</u>	<u>1980</u>	<u>1990</u>
Cheboygan	64.4%	73.5%	14.1%	20.8%	9.1%	10.0%
Crawford	70.9%	73.2%	14.9%	25.0%	9.6%	12.6%
Ogemaw	57.5%	63.0%	11.0%	17.8%	6.8%	7.2%
Otsego	70.9%	79.5%	14.1%	25.0%	14.1%	13.7%
Roscommon	62.9%	69.4%	13.1%	20.9%	8.1%	7.9%
Cluster Average	65.3%	71.7%	13.4%	21.9%	0.095	0.103
Michigan	68.0%	76.8%	15.7%	27.1%	0.143	0.174

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<sup>5</sup> The data presented in Table 3 is based on all persons over age 25, it is not limited to participants of the labor force.

*Unemployment and the Labor Force Participation Rate*

Table 4 provides unemployment information (number and percent) for the I-75 Cluster and for Michigan. The unemployment rate in the I-75 Cluster has declined slightly since 1990, but remains stubbornly above the state average. An exception to this is Otsego County, which has a low unemployment rate, right at the state's rate of unemployment. Cheboygan County has an especially high unemployment rate, and has been experiencing this for at least 15 years. A somewhat steady decline in the unemployment rate has occurred in all five counties since the early 1980s, however.

Cheboygan's labor force participation rate has been quite close to Michigan's rate for the past seven years. The participation rate in Otsego, on the other hand, has been above the state's rate and has been increasing over this period. In the other three counties, the participation rate has been substantially below that of Michigan. This is undoubtedly due to the preponderance of retirees in these counties.

**Table 4: Unemployment Information for the I-75 Cluster and Michigan.**

<b>Unemployment</b>			
County	Number 1997	Rate 1997	% Change in Number 1990 to 1997
Cheboygan	1300	10.6%	4.0%
Crawford	400	7.0%	6.7%
Ogemaw	700	8.2%	0.0%
Otsego	600	4.6%	-4.0%
Roscommon	700	8.4%	7.7%
Cluster Average		7.05%	2.60%
Michigan		4.20%	-39.10%

*Employment/Jobs*

The counties in this cluster each added a substantial amount of jobs (measured both on a percentage and a raw numbers basis) between 1990 and 1996 (see Table 5 below). Otsego, once again, stands out in this area. The amount of jobs there increased by 83.2% in this period, which represents an increase of 3,492 jobs. The job growth in Otsego looks even more impressive when examined along with the other counties over the past 25 years.

In 1996, the counties in this cluster generally had a larger fraction of their jobs in the retail/service sector, compared to counties in other clusters.<sup>6</sup> Ogemaw and Roscommon, in particular, added a substantial number of jobs in retail/wholesale between 1985 and 1996. Also, the manufacturing sector and farming sector was relatively small in these counties. In the past 25 years, manufacturing jobs have been either stagnant or declining in all counties except Otsego (which added about 800 manufacturing jobs between 1982 and 1996). All counties exhibited a steady increase in the number of service jobs over the past 25 years. The number of service jobs in Otsego actually appears to be increasing at an increasing rate since the recession that ended in 1982.

**Table 5: Change, Both in Number and on a Percentage Basis, in Full- and Part-time Employment in the I-75 Cluster and in Michigan.**

County	Change (number) '90-96	% Change '90-'96
Cheboygan	1,760	20.0%
Crawford	463	9.1%
Ogemaw	1,653	25.0%
Otsego	3,492	32.9%
Roscommon	1,660	22.4%
Cluster Average		21.88%
Michigan		9.90%

### *Personal Income*

Examining the sources of personal income in a region provides insight for economic development. Definitions of the three categories of personal income will facilitate this examination for the I-75 Cluster. First, "Net Earnings" refers to wages, salaries and tips received by employees. "Dividends, Interest, and Rent" is self-explanatory, and is sometimes referred to as "unearned income". The final category is "Transfer Payments". This category is made up of such items as pensions and social security benefits.

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<sup>6</sup> The other three clusters are the Value-Added Agriculture Cluster (Gratiot, Mecosta, and Montcalm), Western U.P. (Baraga, Gogebic, Houghton, Iron, Keweenaw, and Ontonagon), and Southern Tier (Branch, Hillsdale, Lenawee, and St. Joseph).

Table 6 contains a breakdown of the sources of personal income for the I-75 Cluster and the state of Michigan. The contrast between the cluster average for the percentage of personal income in each category and that of the state of Michigan is striking. The fraction of personal income in the I-75 Cluster from Net Earnings is substantially less than the corresponding measure for the state of Michigan. Further, the fraction of personal income in the I-75 Cluster from the other two categories (Dividends, Interest, and Rent; and Transfer Payments) is much higher than the corresponding measures for Michigan. The large number of retirees in the cluster is once again the key explanatory variable for this statistical feature. Because retirees are not working, the fraction of personal income from Net Earnings will tend to be low in areas where there are a lot of retirees. And because the fractions of personal from each category must combine to 100%, the fractions from the other two categories (or at least one category) must be higher the baseline comparison rates (Michigan's fractions, in this case).

**Table 6: Major Sources of Personal Income for the I-75 Cluster and Michigan.**

<b>Major Sources of Personal Income</b>			
<i>Percent of Total Personal Income - 1996</i>			
County	Net Earnings	Dividends, Interest, & Rent	Transfer Payments
Cheboygan	50.5%	26.6%	22.9%
Crawford	54.9%	26.4%	18.6%
Ogemaw	47.6%	33.3%	19.1%
Otsego	63.0%	17.7%	19.3%
Roscommon	39.6%	36.3%	24.2%
Cluster Average	51.1%	28.1%	20.8%
Michigan	67.0%	17.5%	15.4%

#### *Household Income*

There is a large proportion of households in this cluster that have low incomes. In fact, each county in the cluster, except for Otsego, had more than 30% of its households earning less than \$15,000 per year in 1989. Table 7 contains information regarding the high and low ends of the income distribution for the I-75 Cluster and Michigan. The table shows that household incomes in this cluster lag behind Michigan's average by two measures. For the lower end of the income distribution, the percentage of households in the I-75 Cluster with an income less than \$25,000 is 47% higher than the percentage in this

range in Michigan as a whole.<sup>7</sup> The other measure relates to the upper end of the income distribution. The percentage of households in the I-75 Cluster with incomes greater than \$50,000 is 62.3% less than the percentage of households in Michigan in this income category. Finally, except for Otsego, each of the counties in this cluster had a median household income \$10,000 less than the state's median in 1990.

**Table 7: Percentages of Households in the I-75 Cluster and Michigan in Certain Income Categories.**

<b>Household Income - 1990</b>		
<b>County</b>	<b>% of Households \$0 - \$24,999</b>	<b>% of Households \$50,000+</b>
Cheboygan	59.1%	8.3%
Crawford	58.6%	9.5%
Ogemaw	65.0%	7.2%
Otsego	46.9%	14.6%
Roscommon	68.7%	8.2%
Cluster Average	59.7%	9.6%
Michigan	40.6%	25.5%

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<sup>7</sup> As indicated in Table 7, the percentage of households in the I-75 Cluster with an income less than \$25,000 is 59.7%. The percentage of households in this income category in Michigan is 40.6%. If the difference between these percentage values (i.e. 19.1%) is divided by the percentage of households in this income category in Michigan, the result is 47%. The figure for the percentage difference between the I-75 Cluster and Michigan in the upper income category was calculated similarly.

### *Poverty*

Areas of low percentage of persons in poverty include Otsego County, Grayling Township, and a few townships surrounding the city of Cheboygan. In 1990, poverty was quite common in all of the other areas of the cluster. Table 8 below lists the 1990 poverty rate in the I-75 Cluster and Michigan. The poverty rate for each county in the cluster except Otsego exceeds the average poverty rate for Michigan. Clearly, the household income and poverty data indicate that the cluster has economic development needs.

**Table 8: Poverty Rate in 1990 for the I-75 Cluster and Michigan.**

<b>Poverty Rate</b>	
County	Rate (in Percent)
Cheboygan	15.65
Crawford	14.6%
Ogemaw	21.8%
Otsego	9.5%
Roscommon	18.1%
Cluster Average	15.9%
Michigan	13.1%

### *Household Composition*

Information pertaining to household composition in the I-75 Cluster in 1980 and 1990 is included in Table 9 below. The only category to change substantially during this period was “Married with Children”. The percentage of households in the “Married with Children” category declined by 18.2% in the cluster over this time period.<sup>8</sup> The most pronounced decline in the percentage of household in this category was in Cheboygan County. Marginal increases in the percentage of households in each of the other categories<sup>9</sup> occurred in the cluster between 1980 and 1990.

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<sup>8</sup> This percentage was calculated in two steps. The cluster average in 1980 (31.9%) was subtracted from the cluster average in 1990 (26.1%). This difference, 5.8%, was divided by the cluster average in the base year, 1980, to obtain the result of 18.2%. Note that the cluster average was obtained by calculating the arithmetic mean of the percentages of the five counties.

<sup>9</sup> The other categories are: “Married Without Children”, “Single Parent Family”, “Other Family Household”, “Single Person Household”, and “Other Non-Family”.

**Table 9: Household Composition for the I-75 Cluster for the Years 1980 and 1990.**

<b>Household Composition</b>						
	Married w/Children		Married w/o Children		Single Parent Family	
County	1980	1990	1980	1990	1980	1990
Cheboygan	33.9%	26.4%	34.6%	35.8%	6.0%	8.3%
Crawford	32.5%	27.9%	34.7%	34.4%	7.4%	8.7%
Ogemaw	30.9%	25.7%	36.7%	36.7%	6.0%	8.4%
Otsego	38.8%	31.9%	31.0%	33.6%	6.6%	7.4%
Roscommon	23.6%	18.5%	43.6%	42.4%	6.8%	6.5%
Cluster Average	31.9%	26.1%	36.1%	36.6%	6.6%	7.9%
	Other Family HH		Single Person HH		Other Non Family	
County	1980	1990	1980	1990	1980	1990
Cheboygan	4.3%	4.2%	19.0%	22.1%	2.2%	3.2%
Crawford	3.3%	4.0%	19.8%	21.0%	2.3%	4.0%
Ogemaw	3.9%	3.5%	20.1%	22.1%	2.4%	3.5%
Otsego	3.6%	3.5%	17.1%	20.1%	2.8%	3.4%
Roscommon	1.9%	3.5%	21.2%	25.9%	2.9%	3.2%
Cluster Average	3.4%	3.7%	19.4%	22.2%	2.5%	3.5%