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ABSTRACT

This study examined the economic development role of small businesses in Macomb County, Michigan, in order to identify those businesses which are most significant in terms of their contribution to economic development and, which therefore, would warrant public support for their retention and growth. Using these criteria, the study isolated the role played by the tool and die, machine making, and fabricated metal parts industries. In addition, the study considered the significance of administrative and auxiliary businesses, the coordinating and research arms of manufacturing industries in Macomb County. While the latest economic census of Macomb County private businesses revealed that these areas have suffered a relative deline over the past 7 years, considerable amounts of wages are still earned in these industries. Although service sector employment (a low-wage industry) has grown, the manufacturing area still accounts for a majority of the wages earned in Macomb County. The study concluded, therefore, that the economic development of Macomb County would best be served by retaining and expanding these high-wage industries. The study suggested several ways of implementing this goal: first, the establishment of a county-wide technology center that can conduct research and aid in developing the necessary machinery to enable the metal-bending industries to remain competitive; second, the establishment of an import-export center that can aid these industries in penetrating foreign markets; and third, the application of job training funds to the needs of individuals within these industries. The study anticipates a key role for Macomb Community College in working with government, business, labor, and the community to rejuvenate and retain the metal-bending industries. (Author/KC)

Small Business and Economic Development in Macomb County

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Abstract

This study attempts to examine the economic development role of small business in Macomb County, and to identify those businesses which are most significant in terms of their contribution to economic development. Given the importance of small business as a job-creating force in Macomb County, such identification would help establish which businesses would warrent public support for their retention and growth. Using these criteria, this study isolates the particular role played by the "metal-bending" industries; most specifically, the tool and die, machine making, and fabricated metal parts industries. In addition, this study considers the significance of "administrative and auxiliary" businesses, that's the coordinating and research arms of manufacturing industries in Macomb County. While the latest economic census of Macomb County private business reveals that these areas have suffered a relative decline over the past seven years, there are still considerable amounts of wages being earned in these industries. Although there has been growth in service sector employment (a low wage industry), the manufacturing area still accounts for a majority of the wages earned in Macomb County. It is the contention of this report that the economic development of Macomb County would be best served by retaining and expanding these high wage industries.

The paper suggests several ways of implementing this goal. First, the establishment of a county-wide technology center which can do research and aid in developing the necessary machinery to enable the metal-bending industries to remain competitive. This would also involve the development of modern management practices in these small businesses. Second, the establishment of an import-export center which could aid these industries in penetrating foreign markets. Third, the application of job training funds to the needs of individuals within these

industries. In this regard, the role of the County in securing appropriate training funds is essential.

In these and other proposals a key role is anticipated for Macomb Community College. Working with government, business, labor and the community, the college can focus attention on retaining and rejuvenating the metal-bending industries.

Small Business and Economic Development in Macomb County

Regardless of the recent signs of economic recovery, the economic dislocation that affected much of the mid-west over the past decade underscores the need for some sort of industrial policy. The serious decline of United States production industries cannot be permitted to continue. Government policies are needed that will encourage private investment and economic development. As Magaziner and Reich (1982) have pointed out, industrial policy debates in the United States have too often taken the form of ideological discussion over the role of the marketplace versus the role of government intervention. Whatever the philosophical merits of those issues, the practical reality is that every other major industrialist nation has an industrial policy. The realities of international competition will force that issue upon the American economy.

Our current investigation proceeds from the assumption that intelligent industrial policy must be formulated by participants in both the public and private sector. Before this process can begin, we need to know much more about the present workings of the American economy. One important group of American businesses are "small businesses."

The purpose of this study is to analyze small business impact in Macomb County from the perspective of understanding how its development might further the economic growth of the area. There is interest in aid to small business provided that this aid targets or helps those businesses that are most likely to bring about a more stable, cohesive local economy. From this perspective, two important criteria become very relevant to the analysis of small business.

The first is size of the business. While the term "small business" is used by countless individuals, there is no commonly agreed upon definition of the term. Several taxonomies have been used to define business size, such as the number of employees, sales volume, asset size, insurance in force, and

volume of deposits. The Small Business Administration uses employee size as the standard, but depending upon the nature of the industry, small businesses vary from 15 to 2,500 employees (Broom, Longenecker, and Moore. 1983). Clearly the criteria used are dependent upon the purposes behind the inquiry.

In general, most studies of small business start with the number of employees as a usual determinant of size. For purposes of this study, employment size is used as a sign of receptivity to economic development efforts.

It should also be clear, however, that the size issue cannot be easily settled through available statistics. While the term "establishment" is used to connote a particular economic unit of private enterprise, the data are not clear whether this unit is an independent small business or a local subsidiary of a much larger firm. This issue becomes upon realization that as part of a larger firm, the small unit may be more likely to have access to sophisticated management skills than the typical small business.

There is a second dimension to analyzing small business that is critical to economic development activities. Small businesses can be examined according to their wage generating capacities. From the perspective of community policy, it is beneficial to maintain high wage industries. High wages contribute to maintaining a productive work force that will seek to increase output, thereby increasing the wealth of the nation. In general, low wage industries have less incentive to introduce new technology as a means to lower costs and raise output (Magaziner and Reich, 1982).

Conversely, the encouragement of low wage industries not only does not increase the national wealth, but may intensify rather than alleviate poverty and economic instability in a particular area (Gordon, 1979). Virtually all industrial nations initiate policies to protect their high wage industries as part of their strategy (Magaziner and Reich, 1982). Thus the employment size of the industry is significant, but its wage generating capacity is important as well.

The Relationship Between Economic Development and Small Business

Within the context of the relationship between economic development and business activity, two important indicators stand out. They are the number of employees and their wages and salaries. These factors serve as taxonomies in the description of business.

Employment Size

The number of employees is the easiest single way to categorize a business. However, size of employment is only useful in a very general sense to distinguish between economic activities of business. It does not reveal the nature of the business activity, nor its significance to a local community. Moreover, the size of a business unit can be deceiving. While many of the statistics examined have been gathered under the definition of business establishments, it is not clear from the evidence whether each unit is an independent small business or part of a larger firm. This is significant as much of the debate concerning the job potential of small firms appears to be centered around the subsidiary issue.

Employment size is also meaningful in a discussion of economic development from another perspective. Many of those firms of under 20 employees are unstable and not in a position to play a conscious role in economic development. By this we mean that even if the local agency developed programs for economic development, it is highly unlikely these firms would be able to participate to any degree. In many cases, these businesses function in an economic atmosphere which is extremely unstable and highly sensitive to so many factors such that survival rates are relatively low. National studies indicate the chances of a firm of

1-20 employees surviving beyond ten years is about 8.6 percent, or a one in twelve chance (Bluestone and Harrison, 1982).

As a group, businesses of under 20 employees can be classified as "micro-businesses." With less than 20 employees, businesses can be characterized by a management style of personal enterprise where management roles are not clearly delegated, and personal as opposed to organizational relationships predominate. Above 20 employees, however, necessitates some form of management system and authority relationships. These firms are in a position to develop systematic business practices, and thus are able to interact with economic development agencies in a somewhat less random fashion.

For the purposes of this study, we accept the standard cut-off of 100 employees as definition criteria. Any firm above that figure is not a small business. Thus, businesses with 1-19 employees, we will call "very small" businesses; 20-99 employees constitute small businesses. This distinction is based upon studies of small business by Teitz, Glasmeier and Svensson (1981).

From the perspective of community economic development the size of small businesses is less important than their job-creating potential. There is a fairly widespread dispute among economists regarding how many jobs small business creates. The standard argument has been made by David Birch (1982) at the Michigan Institute of Technology. From an examination of Dun and Bradstreet employment data, he concluded that "of all the net new jobs created in our sample of 5.6 million establishments between 1969 and 1976, two-thirds were created by firms with 100 or fewer employees" (Bluestone and Harrison, 1982, p. 221).

These conclusions have recently been challenged by economists from the Brookings Institute (Armington and Odle, 1982). They argue over Birch's definition of small business. According to the Brookings article, "nearly half the

establishments with 20 to 99 employees are owned or controlled by larger firms" (p. 3). If small business is then defined as those independently owned or controlled firms with fewer than 100 total employees, "then small business employs 33 percent of the labor and generates just 37 percent of net new jobs" (p. 4).

A study of California small businesses which attempted to trace job development with unemployment commission data concluded that "only a very small portion of small businesses appear to be strong net employment generators, and those only for relatively short periods" (Teitz et al, 1981, p. 62).

Wages and Salaries

Another significant criteria by which to judge small business activity is the level of wages and salaries. From the perspective of community development, there are obvious advantages to aiding a high wage industry. When wages expand there may be more willingness to pay taxes for governmental services and to combat crime and other behavior which drains resources from a community. High wages increase the wealth of the nation, and contribute to mainstreaming skilled workers in a particular region (Johnson, 1982; Gordon, 1979; Magaziner and Reich, 1982).

When we examine small business economic development from the perspective of wages, there is considerable evidence to suggest that there are lower wages among small businesses. This is somewhat inaccurate because it is not the size of the business that determines the wage, but the nature of the work. In general, small businesses are found in retail and service work which tends to be low-paying. These small firms fall into what has often been called the "secondary labor market." It is the base industry - the high-paying manufacturing work - that multiplies the job creation potential. Each economic base job "will stimulate enough cash flow to support ten people in the community -- the economic base worker, a couple of retail or local service workers, and the nonworking family members of all three" (Conboy and Guiles, 1981, p. 10). Thus, from the perspective of economic development,

the issue becomes one of concentration upon small business jobs which have the greatest positive impact upon the community. Indeed, if efforts are made to develop a series of low paying jobs, they may intensify, not alleviate, much of the poverty, unemployment and economic instability of a particular area (Gordon, 1979). It appears that not all small businesses are equally beneficial to economic development. Great care must be undertaken to target specific firms if economic assistance is to be maximized.

The Amount and Significance of Small Business in Macomb County

Number of Establishments

In order to determine the size of small business activity, Table 1 lists the number of private enterprises in the county by employment size. About 85 percent of the businesses have less than 19 employees. Another 13 percent are establishments with 20-100 employees. The overall distribution of small businesses seems relatively unchanged since 1973 (see Table 2). In 1981, about 87 percent of all the state's businesses were under 19 employees and 11 percent had between 20-99 employees.

Table 1

Private Employment in Macomb County by Size of Establishment
March 1981

Size of Establishment (Number of Employees)	Percent of All Establishments	Number of Establishments
1-4	49	5,582
5-9	22	2,509
10-19	14	1,595
20-49	10	1,074
50-99	3	338
100-249	--	137
250-499	--	25
500-999	--	16
1000+	--	25
		11,301

-- less than 1 percent

(Source: County Business Patterns, U.S. Census, 1981)

Table 2

Private Employment in Macomb County by Size of Establishment
March 1973

Size of Establishment (Number of Employees)	Percent of All Establishment		Number of Establishments
1-4	83%	40	2,993
4-7		23	1,733
8-19		20	1,490
20-49	14%	11	780
50-99		3	243
100-250		2	115
250+		1	73
			7,427

(Source: County Business Patterns, U.S. Census, 1973)

Employment

Perhaps more important than the number of small business establishments is their overall contribution to employment in Macomb County. Upon examining the number of people at work in each of the size categories, an interesting picture emerges (see Table 3). The smallest firms, those with 19 or less employees, produced a little over one-fourth the total private employment. However, the firms with 20-99 employees account for almost one-third of the total employment. While numerically less significant, it appears these small firms have a greater employment potential.

Table 3

Percent of Total Employment by Business Size
March 1981

Size of Establishment	Estimated Percent of Total Employment[1]	
1-4		7
5-9	27%	9
10-19		11
20-49	30%	18
50-99		12
100-249		12
250-499		5
500-999		6
1000+		20

(Source: County Business Patterns, U.S. Census, 1981)

[1]This was obtained by taking the mean number of employees per group and multiplying by the number of establishments in each group.

Analysis of this employment potential from 1973 to 1981, in relative terms, shows the employment growth in Macomb County came from firms with 20-99 employees (See Table 4). Not only was the share of these firms increased from 1973 to 1981 (from 28 percent to 30 percent), but of the 42,000 new jobs created in the County by private employment, 36 percent of them were in industries of 20-99 employment size.

It is also interesting to note that while larger business does account for growth, the relative share of the firms with over 100 employees has shrunk from 47 percent to 43 percent.

Table 4

Small Business Growth by Employment[1]

	1973		1981		Jobs Gained 1973-1981	
Size	Number	% of Total Employees	Number	% of Total Employees	Number	Percent of Gain
1-19	41,333	25%	54,645	26%	13,312	32%
20-99	45,525	28%	62,133	30%	16,608	36%
100+	75,625	47%	87,581	43%	11,956	16%
	162,483		204,359		+41,876	

(Source: County Business Patterns, U.S. Census, 1973, 1981.

[1]Estimated.

Care should be taken with the use of these data. While there appears (based on the estimate) to be more jobs created among small businesses, the data does not indicate which firms have "exited" the market place either through takeover or ceasing to operate. It would be necessary to conduct a year-by-year count of specific firms to indicate the overall stability of the units. In addition, we do not know if the new jobs created are from firms who are recently established or represent business re-location decisions from other parts of the Detroit metropolitan area. Nor does the data indicate what job turnover does exist. There may be more small businesses created but they may last for only very short periods of time. If this is true, our net jobs given is merely a sequential phenomena and does not produce lasting employment in the community.

What are the Most Significant Businesses in Macomb County?

In order to obtain an overall view of private economic activity in Macomb County, data has been extensively drawn from two sources: The County Business Patterns, compiled by the U.S. Bureau of the Census, and more recent data compiled by the Michigan Employment Security Commission (MESC). While the means of collecting this data are somewhat different, in general they are the best sources for aggregate data on small business (see Appendix A for further discussion).

Analysis of Contributions by Type of Industry

A general look at private employment reveals the importance of the manufacturing sector in Macomb County (see Table 5). Not only are almost one-half of the people working in the county employed in manufacturing industries, but over 60 percent of the total county's income is obtained from these industries. Compared with retail trade, which employs over 20 percent of the work force but only accounts for 10 percent of the payroll, the manufacturing sector is far more vital in contributing to the wage structure of the area. This suggests that many of the "good jobs" are to be found in this sector.

The notion of what constitutes a "good job" is, of course, based upon perspective and the individual. However, from the perspective of community economic development, we can define a "good job" as one which pays high wages and is relatively stable. To attempt to isolate a monetary figure, we can say that a "good job" would be any occupation that paid a worker sufficient funds to live moderately. In 1980, according to the Bureau of Labor Statistics, in the Detroit SMSA, a moderate standard of living for a family of four was $23,168. Assuming both parents work and assuming the male earns 75 percent of the income, that

would mean a weekly wage of about $335 or $8.38 an hour (Michigan Statistical Abstract, 1981, p.236).

Table 5

Macomb County Percentages[1]
Employed, Annual Payroll, and Total Establishments
March 1981

	Number Employed	Annual Payroll	Total Establishments
Agriculture	--	--	1%
Construction	3%	3%	10%
Manufacturing	46%	62%	15%
Wholesale Trade	4%	5%	6%
Retail Trade	22%	10%	27%
Finance	3%	2%	7%
Services	18%	14%	28%
Transportation	3%	3%	2%
County Base Totals	204,359	$4,085,321,000	11,301

--less than 1 percent.

(Source: County Business Patterns, U.S. Census, 1981)

[1]Excludes government employees, railroad employees, self-employed persons.

The significance of manufacturing to Macomb County is underscored by a comparison to Michigan, and the neighboring counties (see Table 6). In the Detroit metropolitan area, Macomb County is the most dependent on manufacturing. In particular, Table 7 shows manufacturing as the greatest source of income for Macomb County.

Table 6

Employment by Type of Industry
March 1981

	Michigan	Macomb County	Oakland County	Wayne County
Construction	4%	3%	5%	3%
Manufacturing	36%	46%	25%	36%
Wholesale Trade	6%	4%	9%	6%
Retail Trade	20%	22%	21%	17%
Finance	6%	3%	9%	6%
Service	22%	18%	26%	25%
Transportation	5%	3%	5%	7%
County Base Totals	2,760,060	204,359	409,884	738,866

Table 7

Annual Payroll by Type of Industry
March 1981

	Michigan	Macomb County	Oakland County	Wayne County
Construction	5%	3%	6%	4%
Manufacturing	49%	62%	34%	49%
Wholesale Trade	7%	5%	11%	7%
Retail Trade	10%	10%	11%	9%
Finance	5%	2%	7%	6%
Service	17%	14%	23%	18%
Transportation	6%	3%	6%	8%
County Base Totals ($1,000)	49,828,145	4,085,321	7,663,039	14,630,590

While manufacturing is the predominate aspect of the private economy of the county, there has been a decrease in its weight in the last decade. In 1973, manufacturing accounted for 57 percent of the total employed work force and 71 percent of all wages and salaries. While the numbers of people involved in manufacturing increased absolutely, the share of manufacturing shrank 11 percent in terms of employment and 9 percent in terms of wages and salaries.

Table 8

Macomb County Percentages
Employed, Annual Payroll, and Total Establishments

	Number Employed		Annual Payroll		Total Establishments	
	1973	1981	1973	1981	1973	1981
Construction	4%	3%	4%	4%	13%	10%
Manufacturing	57%	46%	71%	62%	18%	15%
Wholesale Trade	4%	4%	4%	5%	5%	6%
Retail Trade	19%	22%	10%	10%	10%	27%
Finance	2%	3%	2%	2%	5%	7%
Service	11%	18%	6%	14%	27%	28%
Transportation	3%	3%	3%	3%	2%	2%

(Source: County Business Patterns, U.S. Census, 1973, 1981)

Metal Bending Industries

Within the manufacturing sector, there are four major job classifications of particular interest: (1) Fabricated Metal Parts (SIC Code 34), (2) Machinery, Except Electrical (SIC Code 35), (3) Transportation Equipment (SIC Code 37) and (4) the Administrative and Auxiliary category (see Table 3). Together they employ over three quarters of all the persons engaged in manufacturing and contribute to over four-fifths of the payroll and salaries. Taken as a group, these four occupational categories, even though they comprise only 10 percent of the business in the county, contain over one-third of all the employees and half the payroll and salaries.

Table 9

Manufacturing in Macomb County
March 1981

	Number Employed	Annual Payroll ($1,000)	Total Establishments
Fabricated Metal Parts SIC Code 34	14,838	321,001	348
Machinery Except Electric SIC Code 35	19,646	524,809	702
Transportation Equipment SIC Code 37	15,958	440,732	72
Administrative & Auxiliary	23,357	819,795	30
Totals	73,799	2,106,337	1,152
% of All Manufacturing	79%	83%	70%
% of All County Private Business	36%	52%	10%

(Source: County Business Patterns, U.S. Census, 1981)

It is useful to compare Macomb County data with Oakland and Wayne counties as in Tables 10 and 11. While both Oakland and Wayne counties have a large concentration of workers in these industries, as a relative percentage of all businesses they are less impressive. Moreover, in terms of generation of "good jobs" it is clear that these industries exercise a greater priority in Macomb County.

Table 10

Employment in Metal Parts, Machinery, and Transportation
March 1981

	Macomb County	Oakland County	Wayne County
SIC Codes 34, 35, 37, A&A	73,799	80,878	180,786
% of all manufacturing	79%	78%	68%
% of all private business	36%	20%	24%

Table 11

Annual Payroll in Metal Parts, Machinery, and Transportation
in Thousands of Dollars
March 1981

	Macomb County	Oakland County	Wayne County
SIC Codes 34, 35, 37, A&A	2,106,337	2,174,826	5,198,948
% of all manufacturing	83%	83%	72%
% of all private business	52%	28%	36%

(Source: County Business Patterns, U.S. Census, 1981)

Further evidence of the concentration of these "metal bending" industries can be found by comparing Macomb data to the State of Michigan's overall figures. In doing so, it is helpful to develop a localization coefficient defined as the ratio of actual employment in a given industry in Macomb County to a pro-rated share of state employment in that industry (see Table 12). While Macomb County has 7 percent of the work force in the State of Michigan, over 11 percent of all those who are employed in Fabricated Metal Parts in Michigan work in Macomb County. Taken as a ratio this is 1.57 or 57 percent greater than the average for the state. Note the considerable concentration of employment in Macomb County of administration and auxilary workers. Although there is considerable difficulty in determining more precisely the content of this category, it appears to be of importance to the structure of the Macomb County economy.

Table 12

Localization Coefficient of Manufacturing Employment in Macomb County

Fabricated Metal Parts: SIC Code 34	1.57
Machinery Except Electric: SIC Code 35	1.85
Transportation Equipment: SIC Code 37	1.14
Administrative and Auxiliary	6.71
Total	1.71

(Source: County Business Patterns, U.S. Census, 1981)

Finally, since these particular industries are significant, their actual growth in Macomb County should be analyzed (see Table 13). There has been considerable growth in two areas: machinery building and administrative and auxiliary. The amount of employment in fabricated metal parts is slightly higher, and transportation equipment is down 43 percent. The decline in the amount of employment in SIC Code 37, of course, is directly related to considerable cutbacks in automobile production initiated by American automakers in early 1979. No doubt these cutbacks have also affected the fabricated metal parts employment as well. Whether this is a temporary or long term phenomena is a question of consequence to the economic future of Macomb County.

Table 13

Change in Employment in Macomb County

	1973	1980	% Change
Fabricated Metal Parts: SIC Code 34	14,000	14,838	+6
Machinery Except Electric: SIC Code 35	16,728	19,646	+17
Transportation Equipment: SIC Code 37	26,199	15,958	-43
Administrative and Auxiliary	14,950	23,357	+56

(Source: County Business Patterns, U.S. Census, 1973, 1981)

Comparison of Employment Over Time

The data from County Business Patterns is correlated with more recent figures derived from employment and income statistics collected by the Michigan Employment Security Commission. Unfortunately, difference in the data collection procedures make it impossible to make specific comparisons between the evidence (see Appendix A).

Using MESC data over a time interval reveals the significance of these industries to the local economies. The fourth quarter of 1978 was the last "good year" for the automobile industry. A comparison is shown in Table 14 of the employment among the three SIC Codes under study. Comparison is made of data from 1978 to the lastest MESC data collected for September 1982. During the latter period, the automobile industry was experiencing the full effects of the economic slump. Unemployment in the County was officially over 17 percent at this time. A survey of Macomb County residents conducted in October of 1982 by the Center for Community Studies revealed an unofficial rate nearer to 25 percent (Jacobs and Pritchard, 1982). Figures show that in the SIC Code 34 catagory, the rate of decline was somewhat more than the overall decline, while for SIC Code 35 the decrease was less than the county average. The large decline in SIC Code 37 can be attributed to the extreme volatility of the auto irdustry in general, and the specific down sizing at the Chrysler Corporation which resulted in sharp cutbacks at its operations in Macomb County. The size of employment in these sectors suggests that even during the hardest times in Macomb County, these industries maintain their dominance of the local economy.

Table 14

Employment Change in Manufacturing Industries
Macomb County
December 1978 - September 1982

	% Decrease Employment
Fabricated Metal Parts: SIC Code 34	-25%
Machinery (except electrical): SIC Code 35	-15%
Transportation equipment: SIC Code 37	-41%
Total County Employment: All Industries	-22%

(Source: Michigan Employment Security Commission)

Table 15 displays the size distribution of Macomb County businesses by type of industry. On the whole, manufacturing tends to be composed of large units that realize economies of scale and thus lower their costs. However, a considerable number of firms (28%) are located within the 20-99 employee range, and perhaps may be considered an optimum size for receiving economic development aid.

Table 15

Size Distribution by Type of Industry
March 1981

	Number Establishments	Number of Employees	
		0-19	20-99
Construction	1,144	95%	5%
Manufacturing	1,647	66%	28%
Wholesale Trade	644	86%	14%
Retail Trade	3,050	84%	16%
Finance	755	91%	9%
Services	3,195	92%	7%
Transportation	234	82%	13%

(Source: County Business Patterns, U.S, Census, 1981)

Specific examination of targeted industries indicates their size distribution closely approximates manufacturing as a whole (Table 16). The only exception is in the category of administration and auxiliary which reflects the existence of large white collar technical facilities such as the General Motors Tech Center. Thus, not only are these industries instrumental to the county, but at least a good proportion appear within the range of being small, but not so small as to make it impossible to systematically interact with economic development institutions.

Table 16

Size Distribution of Metal Bending Industries
Macomb County
March 1981

	Total	0-19	20-99
Fabricated Metal Parts: SIC Code 34	(348)	61	34
Machinery (except electric): SIC Code 35	(702)	70	28
Transportation Equipment: SIC Code 37	(72)	49	22
Administrative and Auxiliary	(30)	20	23

(Source: County Business Pattern, U.S. Census, 1981)

General Economic Trends in SIC Codes 34, 35, 37

SIC Code 34: Fabricated Metals

According to the Standard Industrial Classification system, employers in the category of fabricated metals includes:

> ". . . establishments engaged in fabricating ferrous and nonferrous metal products such as metal cans, tinware, hand tools, cutlery, general hardware, nonelectric heating apparatus, fabricated structural metal products, metal forgings, metal stampings, ordnance (except vehicle and guided missiles), and a variety of metal and wire products not elsewhere classified." (MESC, 1982, p. 8).

This industry follows the general cyclical pattern of the U.S. economy. The employment growth in this particular industry, however, is affected by changes in the automobile and housing industries. In large part, the firms in SIC Code 34 are those which have produced metal parts for the automobile industry. As auto companies substitute more plastic parts for steel, these industries are adversely affected. The adoption of the unit body construction and new adhesive techniques in auto production which eliminates the demand for metal fasteners have also meant a decline in the demand for steel products from the automobile industry. In addition, a good many of these products are used by the new home construction industry. As Michigan's population appears to be growing at a slower rate, and given the general long-term economic stagnation, the demand for new housing is expected to remain low. This will further erode the potential growth for this industrial area (MESC, 1982).

Still, the prospects for these businesses are not entirely gloomy. First, the adoption by the American automakers of the just-in-time system, coupled with the establishment of three new assembly plants (Poletown, Lake Orion, and Chrysler Assembly in Sterling Heights) in or adjacent to Macomb County will bring the potential of more automobile work to Macomb County (Van Hull, 1982).

Second, there is a potential market for replacement parts for Japanese and other imported cars. With over 25 percent of the domestic market captured by foreign exporters, a good many of these automobiles will be in need of replacement parts. To date they come from overseas sources, but through a combination of United States government negotiations, some local upgrading of the precision capabilities of the industry, and knowledge of Japanese production techniques, it is feasible to place these Macomb industries in a serious competitive position for this market (Lamb, 1983).

Finally, there may be a new market for this industry in the growing field of office furniture and office machinery. The expansion of the office functions in American business means a consistent demand for equipment and furniture designed to increase productivity in the office. The skills necessary to mass produce this material are similar to the skills in the present industry. To make the transition, it would be necessary to initiate an orientation or training program regarding the market for these goods. Another promising field may be in the development of medical equipment which might have world-wide implications

SIC Code 35: Nonelectrical Machinery

The Standard Industrial Classification for nonelectrical machinery is:

> ". . . establishments engaged in manufacturing machinery and equipment, other than electrical equipment and transportation equipment. Machines powered by built-in or detachable motors ordinarily are included in this major group along with portable tools, both electric and pneumatic powered. However, electrical household appliances and hand tools are excluded." (MESC, 1982, p. 10).

This industry is also heavily influenced by the American automobile industry. However, unlike SIC Code 34 which followed automobile production in the present depressed period, the machine tool industry has not been adversely affected. The major reason has been the massive retooling efforts of the autombile companies during the present period. Even now, there are shortages for certain

hydraulic and other parts for automobile assembly machinery and the machine industry is being forced to respond to the retooling programs of some automobile companies (American Metal Maker, 1983). In addition, the growing computer and service industry machinery fields will continue to provide a growing demand for skills of this industry (MESC, 1982).

There are, however, a number of important negative trends which could jeopardize the future of this industry. The most significant concern is the instability of capital investment patterns and manpower within the industry. In turn, these reflect the relative small size of the businesses and lack of professional and management manpower. In comparison, the Japanese machine tool firms are larger and, given their close ties to automobile industries and research and planning agencies, the capital investment ratio and availability of professional management advice is considerably greater (National Academy of Engineering, 1983).

The economic result of these problems is that the American machine tool industry is being seriously undermined by its inability to adopt technological advances, and is not only losing an export market potential, but is in serious jeopardy of losing its domestic market (Higgens, 1983). As long as the industry remains a conglomeration of small employers who lack a coordinated policy of research and technological development, this critical industry will be threatened.

The National Research Commision has recommended an export policy which emphasizes sensitivity to the special export needs of small business, a new manpower policy which stresses retraining and the development of progressive managerial talent, and a public policy which would permit sharing of research (National Academy of Engineering, 1983). It may be very appropriate for economic development agencies in Macomb County to consider how local programs can be developed to deal with these current problems in the industry.

Another area of great concern for the machine tool industry is the growing robotics industry. The reliance on "turn key" systems will make inroads into the

tool and die industry makeup. The Upjohn study of the effect of robotics in Michigan states "it appears, however, that robot systems may not create a boom for Michigan's machine tool sector because of the substitution effect and the increased competition for provision of such systems" (Hunt and Hunt, 1982, p. 82). The large machine tool manufacturers have recognized the threat posed by automated factory systems to their abilities to win contracts, and have attempted to enter the market for such systems. One local example of the process was the development of the "mill and drill" unit by a Bendix subsidiary, Drillunit, located in Warren, Michigan. This new machinery process will be vital in a new process of body panel mounting adopted by Pontiac Motors for their new Fiero cars (American Metal Maker, 1983). It is not clear at this time what will be the effect of robotic systems upon the small machine tool firms, although the indication is that they will be adversely affected.

SIC Code 37: Transportation Equipment

The Standard Industrial Classification for transportation equipment includes:

> ". . . establishments primarily engaged in manufacturing or assembling complete passenger automobiles, trucks, truck trailers, commercial cars and buses, and special purpose motor vehicles. The industry also includes establishments primarily engaged in manufacturing chassis or passenger car bodies and motor vehicle parts and accessories." (MESC, 1982, p. 14).

and

> ". . . establishments primarily engaged in manufacturing or assembling complete aircraft or aircraft parts; building and repairing all types of ships, barges and lighters whether propelled by sail or motor power; building and rebuilding locomotives, and railroad, street and rapid transit cars and equipment for operation on rails for freight and passenger service; and manufacturing motorcycles, bicycles, guided missiles, space vehicles, travel trailers and tanks" (MESC, 1982, p. 16).

Macomb County is one of the centers of this production, and new developments in any automobile production have strong impact locally. The transformations in the automobile industry will mean a reduction in production workers, although

with the opening of the new Chrysler Assembly facility at least 1,500 new jobs will be created. In addition, any substantial change in the number of imported cars, either through a local import law, change in the international value of the U.S. dollar, or a combination of the two, will alter automobile employment.

There are two trends specifically related to transportation equipment which may have some importance to our examination of small business in Macomb County. First is the increase of federal defense spending and its impact upon tank production. The headquarters of the U.S. Tank Automobile Command (TACOM) is in Warren, Michigan. In fiscal 1982, of a total $4.9 billion spent by TACOM for procurement and production, about 36 percent went to contractors inside of Michigan. The major contractors are General Dynamics, General Motors and Teledyne, but over 505 small Michigan firms were also awarded contracts. An examination of these firms reveals that less than 5 percent of them are located in Macomb County. There may be a potential for new firms in this area (Nordaune, 1983). Care should be taken with these figures, however. The data compiled by TACOM only list prime contractors. A great proportion of military work is subcontracted to other firms. For example, it is not known how much of the General Dynamics contract for the production of the M-1 Tank is spent in the small machine and tool and die shops. Still, since the TACOM contracts represent a considerable amount of all defense procurement and production funds spent in the entire state (over 60 percent of all military spending in Michigan is done by TACOM), it appears Macomb County small business could be more involved in the process.

A second major trend in the automobile production industry is in the heavy emphasis upon research and technical developments. Inside of Macomb County is the General Motors Technical Center, which has become increasingly important to the future of many companies. A very important area of further study should be whether research functions in the automobile industry are subcontracted to small firms, and how many of them are to be found within the county.

In any case, while these two specific areas might increase employment possibilities in Macomb County, at this point the direct production of transportation equipment appears to be uncertain. If the level of imported cars continues, there will be less employment growth in this industry. The county employment patterns would be far more stabilized by moving away from the dependency upon motor vehicle production.

Administrative and Auxiliary Functions

Administrative and auxiliary is not a specific SIC category, but contains facilities which are primarily oriented toward research and administration. As the automobile industry becomes more heavily dependent upon automated production systems, the need to coordinate that policy becomes even greater. Indeed, direct labor now accounts for only 10-25 percent of all manufacturing costs. Thus the real challenge is in the "organizing, scheduling and managing the total manufacturing enterprise" (Gunn, 1982, p. 115). It appears the growth of employment in this sector reflects this pattern.

On the other hand, there appears contradictory evidence that there is a conscious statewide effort by large employers to shrink the management work force (McKinsey, 1983). How much this effort will continue at the level of small firms is not known. It appears that the growth of management, communications, and technical advising to manufacturing industries will be a growing sector for Macomb County small businesses.

Conclusion

The preceeding analysis of small business in Macomb County can produce a number of important general policy recommendations. But first, perhaps, it is necessary to clarify why any policy is necessary.

In the past, there has been a strong belief that the American economy should be free from any governmental policies; that the market system would be capable of handling any difficulties. Thus the overall posture of economic development authorities should be to create a climate to encourage small business development. The market system would determine which small businesses emerge. As a corollary, some will argue that local governments should offer small business a variety of incentives such as tax abatements, training assistance, and marketing programs, in order to stimulate their growth. Again, while this approach does call for some governmental programs, the general orientation is still to create a better context in which small business can develop.

Precisely what will emerge from this philosophy and how it will effect the economy of Macomb County is not known, but the barest outlines of a possible sceneric can be sketched. The probability is that the present "metal-bending industries" will continue to play less of a role in the local economy as more high-wage jobs disappear in favor of lower wage work in the service areas. No doubt, some of the larger manufacturers would remain, but they would not find very many other firms to which to subcontract out some of their work.

The growing decline of this industry would be felt by local governmental units in two ways. The closing of the smaller facilities will have an impact upon the local property taxes. Even if equal numbers of establishments were replaced by service businesses, the property tax received by local communities

would be less. In addition, sizable segments of the educational infrastructure currently devoted to vocational and technical training in manufacturing areas would need to be revised. This would cost taxpayers some revenues which in the past would have been spent in curricular development. The field of administrative and auxiliary could continue to grow, but as the entire industrial base shrinks, this would eventually also decline.

This bare outline is unacceptable to the citizens of Macomb County. It would be hard to imagine a community that would vote to lower its income, but in effect the lack of any governmental policy toward the retention of an industrial base may be a defacto agreement to support decline. Rather, what is necessary is some attempt at retaining the present business and if possible target specific projects for aid to the metal-bending industries. Some of these might include:

A. The Creation of a Technical Center. It appears major needs of small tool and die machine firms are some form of technical skill upgrading and managerial skills and assistance. One of the considerable aids to any small business is the adoption of modern management techniques. This would be especially important in developing skills for any moves to diversify away from auto industry business. Obviously this center should work closely with Macomb Community College and any other technical centers in the county.

B. Export and Trade Center. The skilled machine industry has a tremendous opportunity for expansion all over the world. While this area has already been pursued aggressively by the Japanese and German fimms, it has not been by most local firms. Given slight changes an American international dollar prices, and/or some form of conscious industrial policy to encourage exports, the area of world trade becomes extremely viable. At this time, only the largest of Macomb firms directly engage in world trade. A small business will need a considerable amount of direct business support to open up new markets.

C. Job Training Funds. If specific industries are targeted for attention, a very real question emerges considering the impact of technology upon the jobs in the "metal-bending" industries. Macomb County may be advised that there should be consistent attempts to raise and maintain the skill levels of the present work force in these targeted industries. In other training programs, the County should take some clear responsibility for facilitating the training needs of the targeted industries for new workers. The new Jobs Training Partnership Act should be used as a vehicle to keep a trained work force in place in Macomb County.

Clearly, there is much work to be done. But what must be avoided are attempts to aid everyone, or to undertake too much. Economic development implies choice. What Macomb County does at the same time determines a sacrifice. We should be very conscious of the role choice plays in the area of small business development.

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Appendix A

The County Business Patterns report is derived from Social Security tax contributions data and is conducted every year. The latest published figures are for March 1981. The MESC obtains its figures on a quarterly basis. They are collected from data on state unemployment insurance contributions by employer. Since employers are required by law to report to these agencies, their figures are considered more accurate than any private surveys. However, there are some discrepancies in categories which may be of significance to those interested in using the data.

For example, the County Business Patterns tend to classify all "administrative and auxiliary" separate from the manufacturing work force SIC codes. Thus, in the 1981 data there are about 23,400 employees, or about 30 percent of the entire manufacturing work force that is not classified within the SIC codes for these occupational categories. In addition, comparisons between the two sets of data are difficult because the total county work force numbers are considerably different.

According to data analyst Abel Feinstein from the MESC, the reason for the discrepancy is the method each agency uses in reporting multi-site businesses, particularly those engaged in retail operations. For example, if a shoe store chain had its headquarters in Oakland County, but employed 100 workers at its store in Macomb County, the MESC might record all these people working at the Oakland County site. The County Business Patterns might record each as a separate business establishment (Macomb County Planning Commission, 1977).

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