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# International Business Activity of West Michigan Firms in 1995: Results of First Annual Survey

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lower teen employment by between 2.1% and 6.3% nationally. In other words, the proposed hike would cost somewhere between 126,000 and 380,000 teenage jobs.

A recent series of highly publicized studies by Princeton University economists David Card and Alan Krueger calls into question this conventional wisdom. Their best known study is of fast food restaurants in New Jersey. The New Jersey state government instituted a state minimum wage of $5.05 on April 1, 1992--$.80 greater than the federal minimum wage. Card and Krueger compared employment in fast food restaurants in New Jersey and northeastern Pennsylvania before and after the increase in New Jersey's minimum wage. They find no evidence of a negative employment effect in New Jersey. In fact, there is some evidence for a small, positive effect Krueger is currently chief economist for the Dept. of Labor. Members of Clinton's administration are undoubtedly referring to Card and Krueger's research when they state that recent research suggests that there will be no adverse employment effect from modest increases in the minimum wage. Nonetheless, Card and Krueger's findings have been strongly criticized on methodological grounds and because of concerns regarding their data. Michigan State University economist David Neumark, working with William Wascher of the Board of Governors of the Federal Reserve System, attempted to reproduce Card and Krueger's New Jersey study using data from payroll records, which they argue is more reliable than Card and Krueger's data. They find a negative employment effect from the New Jersey increase. In fact, their estimate of the disemployment effect is in line with the traditional estimates in that they find an employment elasticity of between -.18 and -.27 (Neumark and Wascher, 1995). Most economists still currently believe that a price floor above the market wage will have a small, but real, disemployment effect.

There are several reasons why the 2.1%-6.3% disemployment effect referenced above overstates the employment effects in the West Michigan labor market. The size of the effect depends on the relationship of the minimum wage to average wages. The greater is the minimum wage relative to the market wage, the greater will be the impact on employment. Wages in West Michigan are high. The average hourly wage in manufacturing the Grand Rapids-Muskegon-Holland area is currently around $14 compared to a national average of about $12. Moreover, unemployment rates are very low--around 4%. The tightness of the local labor market has driven wages for entry-level, unskilled jobs above the proposed floor of $5.15. In these circumstances, then, a wage floor of $5.15 per hour is not effective.

The analysis so far ignores any wage spillover, or "ripple effects" from a hike in the minimum wage. The July 10, 1996 headline in the *Grand Rapids Press* stated "'Ripple effect' seen in low-wage hike" and quotes David Smith, president of the Employers Association suggesting that workers who are currently above the minimum wage may feel they deserve a raise if the minimum wage increases. How important is the ripple effect? Unfortunately, economists know little about the size of the ripple effect. A few studies have found some evidence for a ripple effect but it is difficult to pinpoint the causes of wage changes and so the importance of the effect is unclear. For example, in a less well-known aspect of their research, Card and Krueger looked for a spillover effect stemming from the minimum wage increase to $4.25. They summarize their findings this way: "The figures provide some support for the existence of spillover effects up to $4.50 per hour, but little evidence of spillovers beyond $4.50." Moreover, the importance of the effect was smaller in high wage states. Once again, this research suggests that the ripple effect will be small in the West Michigan labor market.

Minimum wage legislation is a hotly debated topic. House Republican leader Richard Armey promised to fight an increase "with every fiber of my body." President Clinton, on the other hand, argues that the increase is necessary so that working mothers can feed their children. Both sides overstate the importance of the minimum wage. An increase to $5.15 per hour would still mean that a family of four relying solely on a minimum wage worker would still be below the poverty line. Also, even if we accept the conventional wisdom that generally minimum wages cause disemployment, the proposed minimum wage will have virtually no local employment effect.

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## *International Business Activity of West Michigan Firms in 1995: Results of First Annual Survey*

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In early 1996, the Seidman School of Business sent a survey to managers of 561 West Michigan manufacturing firms located in Allegan, Kent, Muskegon, and Ottawa counties. The purpose of the survey was to learn how and to what extent West Michigan firms are involved in international sales. We chose manufacturing companies because manufactured goods made up 98% of all exports from Michigan in 1993. Also, manufacturing activity in West Michigan is expanding while it is shrinking in other parts of the country, according to a 1996 report of the Grand Rapids Area Chamber of Commerce. One report suggests that exports from West Michigan increased 81% since 1990, and many firms expect export growth to continue. Nevertheless, exports probably represent no more than 5% of sales of West Michigan firms at this time suggesting that there is potential for increased export activity in the region.

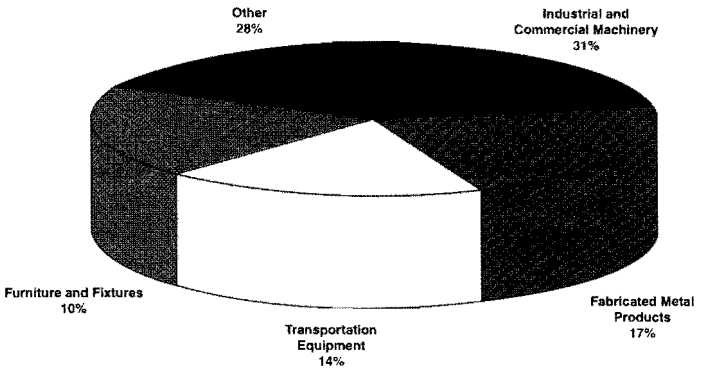
**Demographics.** We mailed the survey to the CEOs of each firm, asking them to give it to the individual who could best respond to questions regarding international business activity. About 100 companies responded to the survey. Most of the companies that responded were located in Kent County (49%), and in Ottawa County (29%). Most companies were small, employing under 150 people (69%), while 4% of companies

employ over 1000. The average number of employees of the firms that responded was 220. Eighty-three percent of the firms that responded describe themselves as having a national distribution network, as opposed to a local, state, or multi-state network, for domestic sales.

**Less than half of the firms have a manager whose main job is international business.** Among the firms that do business internationally, 47% said there was a person in their firm whose main responsibility is international business, and 53% said there was not such a person. Of the firms with an international business person, 34% said the job was done by a mid-level manager, 25% said the job was done by a vice president, 9% said the president did the international business work.

**Exporting is the principal mode of international business.** Most of the companies that do business internationally currently engage in exporting (57%), followed by involvement in joint ventures and wholly-owned subsidiaries (11% each). In the future, nearly 20% said they would be interested in engaging in joint ventures, while 10% said they would like to become involved in exporting.

**Types of Products Sold Internationally by West Michigan Firms**




**International sales support less than 25% of jobs.** Eighty-eight percent of the respondents said that less than 25% of the company's jobs were supported by international sales, and 10% said that between 25% and 49% of jobs were supported by international sales.

**Canada is the top country for international sales.** Canada is the top target country for international sales, cited by 28% of firms that sell internationally. Ten percent of companies cited Great Britain and another 10% cited Japan as their top international sales targets. Firms sell an average of 40% of their gross international sales in their top target country. The second most important country for international sales was Mexico (16%), followed by Great Britain (12%) and Canada (10%). Firms sell an average of 18% of gross international sales in their secondary target country.

**Germany and China are top candidates for future international sales.** Executives said the top countries where they would like to sell in the future were Germany (11%), China, and Canada (9% each). The second top countries where they would like to sell in the future were China (6%), Japan, Great Britain, and Mexico (5% each),

**International sales account for 2.3% of total sales.** Average total sales in 1995 for the firms surveyed were $68 million, although the median total sales were $18 million, and total sales figures ranged from $1.1 million to $1.5 billion. Average international sales in 1995 were $13 million, median international sales were $1.7 million, and international sales figures ranged from $10,000 to $300 million. Based on these figures, international sales accounted for an average of 2.3% of total sales in 1995, while most respondents reported that international sales ranged from 0.5% and 5% of total sales. Most respondents estimated that their total sales and their international sales would increase by the year 2000, although we could not determine by how much.

**The main type of product sold internationally is industrial and commercial equipment.** Industrial and commercial machinery and equipment was cited by 31% of respondents as the principal type of product sold internationally. This includes specialized industrial machinery, dies, tools, and jigs, machine tools, conveyers, and packaging machinery. The second most important type of product sold internationally is fabricated metal products (17%), including metal stamped products, coated and engraved products, screw machine products, wire products, and hardware. The third most important type of product sold is transportation equipment (14%), including motor vehicle parts and accessories. Finally, furniture and fixtures (10%) takes fourth place as the most important type of product sold internationally, and includes office furniture and fixtures. The principal type of product sold internationally accounts for an average of 75% of firms' gross international sales, although in 13% of firms, sales of the principal international product accounts for 90% of gross international sales.

**Most firms compete on either price or quality.** We asked managers to tell us how they competed in foreign markets. Sixty-one percent said they competed either on price or on quality attributes, while 39% said they competed equally on price and quality attributes.

**West Michigan firms have a moderate level of experience doing business internationally.** We asked managers a series of questions that attempted to determine how much experience firms have doing business internationally. Given a possible high experience score of 60, we found that the average score was 29.5 and the median score was 30. Therefore, we may interpret that these firms have a moderate level of experience doing business internationally.

**Managers of west Michigan firms do not think there are high barriers to doing business internationally.** We asked the managers if they encountered any of a series of problems in doing business internationally. These questions tried to measure if respondents felt that there were high barriers or impediments to doing business internationally. Given a possible high barriers score of 94, the average score was 30. This suggests that on the average the respondents did not perceive that there were high barriers impediments to doing business internationally.

We plan to conduct the survey of international business activity of West Michigan firms every year. The results reported in this article are preliminary, and represent only one point in time. We are grateful to the managers of West Michigan companies who participated in this first survey. We hope we can count on their continued support so that over time, we can create a more accurate and useful assessment of international business trends in west Michigan.

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# *Manufacturing Practices of West Michigan Organizations*

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Introduction

A dominant theme in manufacturing strategy literature is the linkage between the differential emphasis placed on a firm's competitive priorities of cost, quality, flexibility, and dependability and the manufacturing strategies adopted. The manufacturing strategies include emphasis on total lead time, quality, cost, customer service, advanced technology and innovation, human resources, and operations flexibility. Previous research indicates that it is difficult to offer superior performance across all competitive priorities simultaneously. For example, pursuit of the cost priority through the use of low-cost labor may entail sacrifices in delivery, reliability, and quality. The extent to which the firm's strategies are contingent on a particular competitive priority relate to what is termed "order-winning" criteria.

This study was initiated to develop insights into the strategic directions and operational priorities West Michigan manufacturing organizations are setting for themselves. Specifically, this study addresses two issues: (1) To what extent are each of these strategies and priorities adopted by West Michigan organizations, and (2) Is there a relationship between the demographic and background characteristics of the organization and the manufacturing strategy implemented?

Based on the literature, the researchers reasoned that the type of operations strategy selected and adopted by West Michigan organizations may differ among organizational focus, organization size, and labor status. Therefore, for example, instead of measuring sales or market share of a company based on the type of strategy used, the researchers preferred to examine if a type of strategy used by a company is dependent on the size of the company. In this study, sales, market share, labor status, and other variables were treated as independent rather than dependent variables contrary to what one would expect.

Methodology

Participants

For the study, a potential sample representing all manufacturers in the West Michigan region was identified. Using the *Directory of Manufacturers* published by various chambers of commerce, 250 firms were selected by a systematic stratified random sample. The questionnaire was then mailed to the President/CEO or manufacturing managers of the firms identified in the sample.

Procedure

Based on an extensive literature review, a listing of variables representing possible strategies for competing in today's manufacturing environment was developed by the researchers. A questionnaire was constructed around these items. A Likert scale of 1 to 5, where 1 was not true and 5 very true, was selected to record the respondents' opinions of the importance of each degree of practice within each operational strategy. Additionally, demographic questions were devised and included. The questionnaire was then reviewed and pre-tested by other researchers, who are familiar with the literature and practices, and modifications were made prior to distribution.

For the purpose of data analysis, given the large number of variables identified, the researchers wanted to determine if the items/individual questions related to the concepts being studied. Factor analysis was used to identify underlining patterns among the possible operational strategies. All the hypotheses were tested using multivariate and one-way analysis of variance. A significance level of 0.05 was used.

Results

Eighty-five questionnaires were returned, completed by individuals that identified themselves as being in position of plant manager or higher. Out of these, 18 were considered unusable as major portions of the survey were incomplete. This resulted in a 27% response rate.

Table 1 summarizes the characteristics of the respondents' firms. The strategic priorities adopted by the organizations are shown in Table 2. More than 68% of the firms ranked quality as the highest strategic priority followed by on-time delivery (27.3%), cost (18.2%), and variety of products produced (12.1%). Table 3 provides summary statistics for the operational priorities for these firms. The arithmetic mean responses show that customer service was ranked the highest operational priority followed by technology, operational flexibility, human resources, total lead time, quality, and cost.

A principal component analysis and the varimax rotation of the factor analysis procedure were used to identify those items that collectively explain each factor better. A loading criteria of 0.50 was used as a cutoff point. The factor analysis results show that, for operational variables total lead time, quality, cost, human resources, and operational flexibility, all original statements were necessary in the explanation of that variable. However, for customer service, only statements 2-6 had a factor rating of 0.50 or greater and were considered suitable. For advanced technology and innovation, the factor analysis grouped the statements into two separate factors. The first grouping consisted of statements 1-4 and 7 while the second grouping included statements 15, 17, 18, 22, and 23.

To examine the relationship between each operational priority and firm characteristics, six independent MANOVAs were conducted. For the dependent variables, only items having a factor loading of 0.50 or greater were used for MANOVA. The results are shown in Table 4. Sales, number of employees, labor status, and global orientation were significantly related to the operational priorities at the 0.05 level. Since type of product manufactured and market share did not show significance, these relationships were not further examined using ANOVA.

To further examine the relationships between the significant independent variables and each operational priority, separate ANOVA analyses were conducted. Detailed results are available from the author. Sales was significantly related to all operational priorities except operational flexibility. The number of employees was significantly related to total lead time, quality, cost, technology 2, and human resources. Labor status was significantly related to all variables. Global presence was significantly related to technology 2, quality, and human resources.