



Fred Zimmerman, Professor Emeritus of Manufacturing Systems Engineering and International Management at the University of St. Thomas

Well-run companies the key determinant of strong, competitive communities

A Civic Caucus Focus on Competitiveness Interview

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Present

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Summary

Fred Zimmerman, Professor Emeritus at the University of St. Thomas, says well-run, forward-looking companies, rather than public policies or foundational competitiveness, appear to be the most powerful determinant of a strong, competitive position for a community. He says without good companies, a community will not be competitive and probably will not be a very good place to live.

He observes that Minnesota has not fared well in terms of retaining employment in key industries, noting the departures of Control Data, ADC, Northwest Airlines, the St. Paul Ford plant, Lockheed Martin and Burlington Northern. He says the Control Data and ADC departures were probably not influenced by public policy, but that the situations with the other four companies were very poorly handled by the state authorities.

He believes that, compared to education systems present in many other developed and developing countries, Minnesota's education system is mediocre and not world class.

Zimmerman holds that within a certain range, taxes are not a big factor for companies considering relocation. He says well-run companies care less about public subsidies than about government doing what it's supposed to be doing-maintaining roads, providing good schools and law enforcement, building a well-prepared workforce and having even-handed courts.

Background

Fred Zimmerman is Professor Emeritus of Manufacturing Systems Engineering and International Management at the University of St. Thomas. He has taught at the University of Minnesota, Universidad Catolica in Montevideo, Uruguay, and at the Czech Management Center in Celovice, Czech Republic.

Prior to returning to academia in 1985, Zimmerman had spent over 25 years in industry as an engineer, manager, vice president and president, primarily with IBM, National Computer Systems and an NCS affiliate company, CAMAX. He is the author of numerous professional and technical articles and is a frequent contributor to the Business Forum section of the Minneapolis StarTribune.

His most recent book, *Manufacturing Works: The Vital Link Between Production and Prosperity*, co-authored by Dave Beal, discusses the relationship between manufacturing and community prosperity.

Zimmerman received his B.A. in Economics and Statistics from the University of Minnesota, attended the University of Southern California Graduate School and received his Ph.D. in Strategic Management and Organizational Studies from the Carlson School of Management at the University of Minnesota. He and his wife, Joanell, have five children and have housed over 90 foster children.

Discussion

Well-run, forward-looking companies, rather than public policies or foundational competitiveness, appear to be the most powerful determinant of a strong, competitive position for a community. Fred Zimmerman, Professor Emeritus at the University of St. Thomas, added, "It works both ways. The companies can help the community develop and the community can help the companies in some low-key, but significant, ways. Companies are precious ingredients to a promising future."

"If there aren't good companies, there probably isn't going to be a competitive community," he continued. "It probably isn't going to be a very good place to live."

Companies can help communities grow. Communities can work proactively with companies to enhance the prosperity of both. He made a comparison between Ottumwa, Iowa, and Pella, Iowa. They're not far apart and are about the same size. Ottumwa used to be bigger, but Pella has Pella Windows and Vermeer, the company that makes machinery for moving trees, and several other key businesses.

Another example, he said, is Platte County, Nebraska. "That little town out in the middle of the prairie has the highest concentration of manufacturing per capita of any city in the country," he said. "It has a whole flock of really well-run companies."

"If taxes and state policies are the driving factor in how a community does competitively," Zimmerman asked, "how come so many states have counties and cities on the declining list and on the advancing list?"

He noted that the interconnection between higher education and well-run companies is very significant, but doesn't run only in one direction. Companies like 3M and Honeywell do a lot of favorable things for universities, like funding endowed chairs at the University of Minnesota and at St. Thomas. "So it is bidirectional," he said.

Minnesota has not fared well in terms of retaining employment in key industries. "One of the problems for Minnesota," Zimmerman observed, "is that it assumes there's going to be a lot of industrial movement in a year. There isn't a lot of industrial movement." In 2008 through 2010, nobody moved anyplace. A few things shut down, but they didn't move from one place to another. In any given year, he noted, companies don't move very much, but they do expand in other locations and shrink in existing locations. "That's a much more powerful determinant of manufacturing employment," he said. Ninety-seven percent of pacemakers are not built in Minnesota, he noted, but in places like Puerto Rico and Holland.

"Minnesota has been materially disadvantaged with several key cases," he said. "Some involve the state, but many don't. He mentioned Control Data and ADC and said those declines probably weren't influenced much by public policy. But both Northwest Airlines and the Ford plant were very poorly handled by the state authorities, as were Lockheed Martin and Burlington Northern. There were no meaningful proposals for integrating metal stamping into the Ford plant, when it looked like the plant was going to close.

"We've lost some really big companies," he said, "and that's something that should be reviewed. Whether the declines of these major employers are caused by public policy or their own internal shortcomings, the outcome is the same. You lose employment and the community begins to stagnate."

Substantive and well-done academic research can contribute materially to community prosperity. He noted the University of Minnesota's agricultural and horticultural projects and the integration of the University and Medtronic are very significant. St. Thomas does about 18 projects every year with companies about their products that are significant, as well.

Weak "me-too" education is overrated as a contributor to community prosperity. "In order for education to be a contributor," Zimmerman said, "it has to be rigorous and it has to keep pace with a better-educated world." Thirty years ago, if somebody from Korea or China or other places in the developing world wanted to advance their education, they'd come to the U.S. He said that's no longer necessary, because there are now schools like China's Nan Ying University or Sanata Dharma in Indonesia. "There are emerging, very capable universities in other places," he said.

He quoted a high-ranking official in the United Auto Workers who said, "The only place our education system excels is in graduate education and that's beginning to slip." Zimmerman said it's not because we're doing poorly, but because other people are doing better. If we look at the students in our

graduate programs, many are from other countries and many of them are going to go back home. He said probably the best engineering school in the world is in India, the Indian Institute of Technology. They accept one out of 10,000 applicants.

Compared to education systems present in many other developed and developing countries, Minnesota's education system is mediocre and not world class. In some places in might even be poor, Zimmerman said. He noted that he has taught five times overseas. In the high schools in the Czech Republic, students are required to take four languages and take math through differential equations. In Uruguay, students take three languages and by the time they get an undergraduate degree, they have approximately twice as many contact hours in their major field as students have in the U.S. He said students who are not up to it go into the trades.

Effective higher education redesign can provide broadly based liberal arts education, coupled with market-appropriate technical skills, along with the cultivation of work and character traits sought by employers and the general community . He observed that this can be done at a lower cost and said some schools, like Dunwoody, are providing this already.

He noted that when he was department head at St. Thomas, he once tracked student ratings by degree of the teacher. The student ratings declined with every degree the teacher had. The people who were teaching with bachelor's degrees, who were usually industrial specialists, got very high ratings, because they had so much industrial experience. He said it costs four times as much for a newly minted Ph.D., who's never worked anyplace, to teach a class, as for someone with experience, who may or not have a Ph.D.

At St. Thomas, the people with business experience who were teaching are the ones who drew the students. Zimmerman said those people didn't care about rank, pay, tenure or governance. They just wanted to come and work with the students. He said now St. Thomas is using fewer people with business experience to teach some classes, but they remain teachers in many engineering classes.

The business accreditation, he noted, says 80 percent of the classes have to be taught by full-time staff. "I would argue that the business accreditation is harmful to the educational process," he said.

The major competitive disadvantage shared by both the U.S. and Minnesota is not higher wages, but too much overhead. "It's overhead internal to the company (that's what helped kill Control Data) and external overhead, like finance, services, insurance, health care, government," he said. They have grown so much that they're a financial burden to anybody who's trying to compete doing anything. That's where we're out of line." He observed that some dedicated and capable people work in these industries, but the industries are too large and resistant to productivity increases.

He said health care is also a big rising cost. Family health care is about 75 percent of the usual beginning wage in manufacturing.

It's ironic that much of the activity of higher education is aimed at training people for overhead. He noted that we're turning out accountants, middle managers and what he called "functionaries." "But that's not making us more competitive," he said. "It could be argued that it's making us less competitive."

Our societies are not prepared to compete, because everyone seems to want all of the adjustments, sacrifices and behavior modifications to be done by people other than themselves. Nobody wants to give up anything or reduce their compensation, Zimmerman said. He noted that a radiologist makes about \$600,000 a year, while a manufacturing engineer makes about \$65,000 or \$70,000 a year. "And they're both about equal in terms of complexity," he said. "Somebody's going to have to make some adjustments or we will not remain competitive."

Higher education must become more efficient in preparing people for work and for life. An interviewer offered his impression that behind the scenes, a big battle is going on between those who believe higher education is supposed to prepare people for work and those who say it must prepare people for life. Zimmerman said they're not mutually exclusive and that we need to be more efficient in preparing people for both. He said the level of student debt is not sustainable and that higher education must get more efficient.

CEOs of companies that emerged successfully from distressed situations tended to come from a background in manufacturing or engineering. CEOs from unsuccessful cases tended to come from finance. Zimmerman reached that conclusion from a longitudinal study in his book *The Turnaround Experience*. The study examined 16 companies over a 25-year period. Despite these findings, he said, there has been a broad trend away from CEOs with manufacturing or engineering backgrounds toward those coming from finance. Those newer CEOs tend not to have the same broad experiences with their communities as the earlier CEOs.

We need both good adjunct professors, who bring work experience to the classroom, and good full-time professors. In response to a question about balancing rigor in education with the appeal to students of adjunct professors with work experience, Zimmerman said there's not a conflict. He noted that adjuncts are especially applicable to something like manufacturing. "We shouldn't assume that the 'war story' group does not have good theoretical background," he said. "It can be applied and still be theoretical."

"We need a good foundation with full-time professors, too," he continued. "What we don't need is the mediocre to below-average professor who has tenure and doesn't bring anything to the party, either good teaching or any kind of war stories. If we could get rid of all those, it would cut tuition by 25 percent."

Many MBA programs are in decline. An interviewer observed that one big industry is the manufacturing of MBAs. These programs employ a lot of people and employers support the effort by sending employees to get their MBAs. However, recently, Zimmerman said, companies are capping the tuition they'll pay and are not sending as many people, so many MBA programs are in decline.

Manufacturers deciding on location look at the community first and then the state. If the community is a good fit, then other factors controlled at the state level will be considered. But state policy is secondary to community assets in weighing a location decision.

Minnesota's Department of Employment and Economic Development (DEED) lacks people with industrial experience. Zimmerman noted that when Winnebago Industries was going to build a new plant in 2004, nine states sent unsolicited proposals. Minnesota's ranked last. When asked why, he said, "In the first place, we don't have anybody in DEED that's worked anyplace. They don't have

industrial experience." Some other states, like Tennessee and Indiana, do have agency staff with that experience. Second, he said, there's no database that supports Minnesota's economic development efforts.

"We're not as bad as we are disorganized," he said. "We're not taking the steps that other economic development organizations take."

Within a certain range, taxes are not a big factor for companies considering relocation.

Zimmerman said the quality of the labor force, the location of customers, and many other things rank higher than taxes. He said, though, that Minnesota is edging toward the top of that range and we ought to be cautious.

An official with a company Minnesota was trying to recruit some years ago told him, "We don't pay much attention to taxes within a certain range. But we pay lots of attention to state spending, because we know that if that's going up, the taxes are going to follow."

Well-run companies care less about public subsidies than about government doing what it's supposed to be doing. Zimmerman said he suspects that well-run companies aren't very interested in the giveaways that states are offering. "They do care about governments doing what they're supposed to do," he said. They want them to build and maintain roads, have good schools, have good law enforcement, even-handed courts and a well-prepared work force.