



Institute for Vehicular Business and Supply Chain Management College of Business Administration The University of Toledo

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Overview

- The primary sources of employment in Northwest Ohio and Southeast Michigan are the automotive and its ancillary industries
- The auto industry greatly impacts state and local revenues
- The automotive industry is in severe retrenchment and in need of reorientation
- The manufacturers and suppliers in the automotive industry are part of a supply chain that is at risk of not surviving because of the lack of robustness and diversification.



The Automotive Supply Chain

- The automotive supply chain is made of vehicle manufacturers, also called Original Equipment Manufacturers (OEMs) and tier 1, 2 and 3 suppliers
- Firms that sell finished components (for example, starter or generator) directly to the vehicle manufacturers are called Tier 1 suppliers
- Firms supplying directly to tier 1 (for example, copper wire or carbon brushes) are classified as Tier 2
- Firms supplying raw materials to either of the two are classified as Tier 3.



The Automotive Supply Chain

- The current economic downturn has bankrupted two of the big three automakers, also affecting the automotive supply chain
- Employment in the Midwest, especially in Southern Michigan and Northwest Ohio is largely driven by jobs related to the automotive supply chain. Between 2003 and 2005, \$3.3 billion was invested in Ohio by companies operating in the automotive industry
- Saving the employment base of the region is an urgent imperative to avoid serious negative repercussions for the region and the nation



The Automotive Supply Chain

- It has been shown from input–output models that automotive supply chain expenditures account for a considerable percentage of production of many materials–producing industries, such as metals industries
- In 2001, about 32 percent of all aluminum, and 14 percent of all U.S. steel purchases was attributed to the automotive industry
- The automotive supply chain generates close to 59,000 jobs in the electronics industry



Impact of Automotive Supply Chain

- The automotive industry has the largest employment multipliers in the economy
- The auto suppliers industry constitutes the largest manufacturing sector in the United States, directly employing 686,000 people and indirectly contributes to 3.29 million jobs, which is a multiplier of 4.8
- The average wage in the tier 2 and 3 automotive suppliers is close to the average wage in the service industry, hence making it easier to compete in other sectors such as aerospace and alternative energy
- Auto suppliers have the technology and capability to manufacture high quality products, helping transition into high precision medical instruments industry, and DoD contracting



Automotive Industry Needs

- Manufacturers and suppliers in the automotive industry are in need of help with:
 - Organizational Restructuring
 - Product development
 - Business planning
 - Building of the supply chain infrastructure
 - Retooling
 - Workforce Retraining
 - Knowledge building and organizational learning



Proposed Assistance

- The College of Business Administration, University of Toledo has the expertise to help the automotive industry and its supply chain return to viability and profitability. We can offer:
 - Consultative services
 - Retraining programs
 - Business planning and product development assistance
 - Reorienting and diversifying the supply chain
 - Help in developing and reshaping the supply chain infrastructure



Activities

- The Institute, with inputs from other thought leaders, will
 - Develop new business models and best practices
 - Become a national resource in testing and advancing such new models
 - Work to diversify the supply chain to service Dept. of Defense and Govt. Contracting, the medical device industry and emerging industries such as alternative energy



Activities (contd.)

- **The Institute will also assemble academic, business, industry and government thought leaders for:**
 - Identifying new ways of doing business through modeling, simulation methodologies and other means.
 - Determining the validity, efficacy and/or effects of various types of federal intervention, federal and state regulations, and other proposed actions.



Activities

- The Institute expects to play a significant role in
 - Developing the current and next generation workforce for vehicular businesses.
 - Educating and training in the latest concepts and strategies in automotive and related businesses.



Activities

- The Institute expects to become a one stop shop for:
 - Vehicular industry *business* expertise
 - Supply chain infrastructure development
 - Analytical and statistical modeling and simulation resources.
 - Evaluation and determination of new business strategies to increase global viability and competitiveness



Next Steps

- Set up an initial advisory board comprising University leadership, COBA leadership, the Consultant and a few industry “leaders”.
- Determine feasibility of the enterprise and identification of action steps. At that point contacts should be established with key stakeholders (Government, Industry, and Other Academia) and start up efforts intensified
- Conduct a census of suppliers in the region and gather data on product lines, market situation, financial health, infrastructure and capabilities. Identify needs for preserving and growing the supply chain



Conclusion

- The institute will lead by developing:
 - New ways of doing business
 - New business models
 - Different types of business relationships and strategic partnerships
 - Supply Chain risk mitigating strategies and Reengineering

We can position ourselves as THE premier institute for vehicular business and supply chain management in the USA

Thank you!