

supply chain SOURCE

Managing Suppliers for Effective Procurement

Ananth. V. Iyer
GSCMI Director

Recent headlines dealing with new ways to manage procurement in the auto industry (newsletter article, p. 2) highlight the role of supplier coordination in delivering optimal firm performance. In the past few years, Professor Lee Schwarz and I, as part of a Ford Foundation grant, worked with procurement managers at Ford to develop both cases for class discussion and an academic paper. I will focus on the ideas in the academic paper to suggest an approach to think about the supplier management problem. At Ford, for example, procurement consists of "core buyers", who manage supplier selection and contract negotiation and "commodity buyers", who manage the details of the logistics given that a contract has been signed. Suppose we focus on the core buyers.

One way to think about the challenge faced by the core buyer is to frame it as a principal-agent problem, using the language of economists. The principal (in this case the OEM) contracts with an agent (the supplier) but faces some information asymmetry (e.g., the capability of the supplier to deliver cost reductions, productivity improvements etc for the particular product). In the usual agency problem, the principal pays for the activity but the agent performs the activity. In this context, the principal often has to pay an "information rent", in the form of a higher cost, to get the agent to provide cost reductions that are possible given his capability.

However, in the auto component procurement context, the OEM can work with the supplier and assist the supplier in efforts to improve productivity, quality, costs etc. This can take the form of negotiating product specifications to coordinate with the supplier (e.g., adjust to supplier machinery and production skills, supplier product portfolio etc), sharing OEM past experience with the product manufacture, adjusting materials permissible etc. (At Ford, for example, there was a Total Cost Management

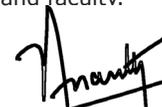
(TCM) center that provided a forum for such joint OEM-supplier activity.) In addition, the OEM often provided engineering and production management assistance through the provision of OEM engineers on site at the supplier facility to improve performance. The question then is what level of assistance provision to suppliers is best from the OEM's perspective.

The paper studies this problem within a mathematical framework and suggests that a key tradeoff is that while assistance costs the OEM, it may be used to level out differences across supplier capability. In such a case, the OEM's assistance efforts, by reducing the impact of supplier capability on performance, may reduce "information rents" and the corresponding contracting costs. However, in other contexts, if the assistance from the OEM has a bigger impact on productivity for more capable suppliers and a smaller impact for less capable suppliers, then it may be optimal for the OEM to provide NO assistance to the suppliers.

What does all this mean? When determining how much assistance an OEM should provide its suppliers, an important question is how this assistance depends on supplier capability to affect productivity. If such provision neutralizes the impact of supplier capability, then offering this assistance is a great idea. But if such assistance depends on supplier capability to be successful, then it merely accentuates the differences between less and more capable suppliers, thus increasing information rents to be paid for contracting. Thus the question is not just whether or not to assist suppliers but how that assistance gets translated into delivered performance for the OEM based on supplier capability. Of course it is important to think about the procurement portfolio and separate our strategic suppliers from commodity suppliers but that is yet another story.

I hope you enjoy this issue of the newsletter that focus on procurement issues in the global supply chain. As always, we welcome your comments and feedback as we endeavor to create a community of active students, alumni, company representatives and faculty.

Thank you,



NOVEMBER 2005



Global Focus:

Is abundant petroleum a thing of past?

By Charlie Kuo
MBA Class of 2007
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While we all know that petroleum is not an unlimited resource, few of us know that we are very likely to see the end of the abundant petroleum supply in the near future. For decades Saudi Arabia has been the major oil exporting country and has provided us with all the oil we need but such seemingly unlimited supply is also creating a false sense of security for governments and consumers around the world. According to some experts that Saudi Arabia will reach its peak in terms of oil production capacity in the near future and the troubling fact is that no other countries can take its place as the most important oil exporting country.

Sources:

http://www.atimes.com/atimes/Middle_East/GF29Ak01.html
http://www.economist.com/business/displayStory.cfm?story_id=2705562

With increasing demand in the U.S., Europe, China and India, the Department of Energy estimates that oil consumption will increase from 77 million barrels per day in 2001 to 121 million barrels by 2025; an increase of more than 57% in 25 years. Despite its best efforts Saudi Arabia has failed to discover any significant new oil source in the past 30 years and it is not likely to be able to increase its production to meeting the increasing demand. Although Saudi officials and oil managers stated that they are "confident" in supplying future demand, such confidence has not been independently verified.

Another important factor we must take into consideration, besides supply and demand, is terrorist activity in the region. Saudi Arabia's oil production facilities are a very high profile target for terrorist attacks due to the impact of such attack to global and especially U.S. economy. For now the fears of such threat have already

caused \$8 increase in current price per barrel and could escalate in the future once actual attacks take place. And even the attack might never take place; the production shortage is still a problem.

How would the shortage affect us? First, although the oil would still be available, the price is might no longer be affordable to many of us. The logistics will be more costly and so will the consumer goods prices. The petroleum by-products such as plastics, paints, and such will be expensive as well. The final result is inevitably a downward spiraling global economy.

Although the world is better prepared for the impact than it was in the 70s, as rich countries are less dependent on oil than they were and establishment of strategic petroleum stocks will help combat the sudden decline in the oil supply, how the economy will react to the change remains an uncertainty.

Council of Supply Chain Management Professionals Conference

San Diego, CA, was home to the 2005 CSCMP Global Supply Chain and Logistics Conference October 23rd – 26th. Sunday began with CSCMP's Educator's Series" which targeted academia followed by the evening kick-off event - a fabulous 'Hollywood' themed reception during which conference attendees were welcomed by adoring fans and paparazzi as they walked the red-carpet. The Sunday reception was the talk of the town as evidenced by appearances from Marilyn Monroe and Tiger Woods (impersonators).

Energy and anticipation were high as business professionals attended various sessions Monday and Tuesday with hot topics such as RFID and ERP as

well as more traditional subjects such as supply chain strategy and government regulations affecting the industry. The sessions provided valuable insight into what companies are doing to improve their business as well as information on industry trends observed in academic studies. More importantly, CSCMP provides high-quality, informative sessions without the sales pitch! Attendees can be confident that the speaker's content will actually match the description in the guidebook and not turn into a "If you buy my..." session. If you wanted to attend a more interactive event, attendees could participate in Roundtable Discussions during which industry professionals discussed specific topics in groups limited to 25 people. CSCMP also does an excellent job

of sharing and disseminating information. Attendees could indulge themselves with free industry articles, journals, and other publications or they could browse and order books from the book display.

This year CSCMP has posted the speakers' presentations on its website at <http://cscmp.org>. This is an excellent learning opportunity for those of you who could not attend this year or those that missed one session while attending a different session; however, you must be a member to access this information. Registration for the 2006 Conference held in San Antonio, TX, October 15th – 18th begins March 2006.

By Rasheeda Washington



Executive Interview

Mr. Joe Poi

Director of Global Risk Management
Ford Motor Credit Company



Poi joined Ford right after graduation. His reason for choosing Ford? "I wanted to work in a company that was innovative and where the customers are passionate about the products. People don't talk about toothpaste or paper products at too many parties, but cars and trucks are a topic of discussion at most social events from high school age on up. People are passionate about their vehicle, good or bad". When asked about how his experience at Krannert contributed to his success at Ford, he said: "Krannert gives you the skills and the confidence to enter the work force". He recalled how he was able to easily work with experts in the field straight out of college.

How are things in the automotive industry? Mr. Poi acknowledged that this was a challenging time for U.S. automakers. "The key to success is to offer a quality product that customers would want to buy without gimmicks or discounts."

What are companies looking for? "Everyone wants people who are experienced and intelligent. But most importantly, companies are looking for someone with initiative and leadership skills, who can contribute as soon as possible."

Sound advice from someone who's been there and done that. MBA's take note!

In Touch

Going forward, all activities, projects and events will be available for partner's to peruse online utilizing our new website and its many features. Be sure to surf in to find electronic copies of presentations, event photos, the news blog, annual reports and the online newsletter. A new and easy web address will also help you, so be sure to visit dcmme.org and gscmi.org during your next online scan!

Daily the DCMME and GSCMI graduate assistants summarize relevant articles in global business, manufacturing management or global supply chain management. Use us as an easy way to stay abreast of current events; also post your opinions and read the reactions of other partners. Partners can even post article summaries that they are interested in and find out what our students and partners think.

Be sure to visit the website to view the alternating monthly DCMME and GSCMI newsletter. Each month will feature articles from Director Ananth Iyer, Assistant Director Amanda Thompson, and graduate assistants who will write features on: Partner's in the News, Center Events and Projects, Global Focus, Executive Interview and Student Profiles.

GSCMsearch.com is a resource for finding "where who is doing what" with relevance to global supply chain management. Convenient features allow you to quickly find a wealth of resources to answer your supply chain management questions.

Visit our new Web sites www.mgmt.purdue.edu/centers/gscmi and www.mgmt.purdue.edu/centers/dcmme.

Joe Poi graduated from Purdue University in 1985 with a Bachelor of Science in Industrial Management. He later returned to Krannert to get his Masters degree in Management. Since 1989, he has been working for Ford Motor Company in various assignments. He is currently the Director of Global Risk Management.

Poi is the winner of Krannert Distinguished Service Award for 2005. (The Krannert School Distinguished Service Award is presented to an individual who has given distinguished service to enhance the visibility of the Krannert School and the quality of its programs).

Student Profile

By Wayne Chan MBA Class of 2007

Rasheeda Washington is a second year student in Krannert's MBA program with her concentration in operations management and manufacturing technology management.

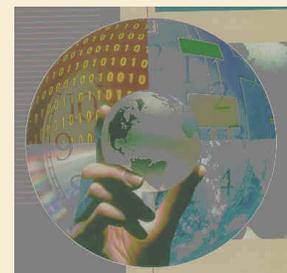


She comes to Krannert with an abundance of experience. She served as the operations supervisor of The Limited, located in Columbus, Ohio working at the logistics services division managing between 75-100 employees. During this time, she was responsible for managing daily work flow and implementing quality and safety procedures where necessary.

Washington chose to attend Krannert for her MBA because it is known for its strong quantitative curriculum; a skill she wants to strengthen. Also, Krannert has a world-renowned operations management program and she wants to continue honing her expertise in operations.

Washington is a member of the Krannert Operations Club and president of the Krannert Graduate Society of Black Managers.

During the summer of 2005, Washington's internship took her to Brunswick, New Jersey where she worked for Johnson & Johnson on the sales and logistics side and was in the global transportation group.



In the News:

Ford Plans to Partner with Suppliers to Cut Supply Chain Costs

By Brent Horrocks

Ford Motor Company recently announced major changes to take place in its relationships with suppliers. In a move that mimics Toyota and other successful Asian firms, Ford is partnering with suppliers in hopes that both sides will cut costs and boost profitability.

The traditional industry relationships for the Big Three automakers and their suppliers have primarily focused on relentlessly squeezing suppliers for price breaks. This practice is starting to show its ineffectiveness as auto suppliers, such as Collins & Aikman or Delphi, have started to declare bankruptcy.

Ford's new strategy is to partner with its suppliers in the product design phase and give them larger contracts. In order to do this more effectively, Ford plans to cut the number of suppliers from 2,500 to around 1,000. In addition, Ford wants increased transparency with suppliers. Ford wants to share design specs, financial information, and sales forecasts with suppliers so that both parties can be better informed about market trends. In addition, Ford will help pay for research and development costs up-front instead of burdening the supplier with development costs.

There is a lot of internal support for the new strategy both from Ford executives and auto parts suppliers. Delphi President and Chief Operating Officer Rodney O'Neal praised the strategy, stating "Anytime you get these bigger contracts you can take your resources and utilize them across more volume and that helps. It's tough to make a buck without volumes."

Despite the support, Ford will face some obstacles in implementing the new plan. One of the hurdles will be overcoming the traditional focus on price cuts and short term contracts, which has been reinforced by bonus incentives. Suppliers will also have to overcome some culture barriers of their own as they share financial data with Ford. Ford will also expect suppliers to give Ford the best technology, something that Ford has had trouble obtaining in the past.

Ford plans to have the new relationships in place by the 2008/2009 model year. It has already started paring down its list of suppliers and announced several key suppliers. While Ford has not publicly announced any specific estimate for savings, it has said that it expects the new relationship to provide greater wealth for everyone participating in the supply chain. Ford's new strategy is to partner with its suppliers in the product design phase and give them larger contracts. In order to do this more effectively, Ford plans to cut the number of suppliers from 2,500 to around 1,000.

Source:
McCracken, Jeffrey, "Ford Seeks Big Savings By Overhauling Supply System", The Wall Street Journal, September 29, 2004, Page A1

Ops Club Schedule

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| November 4 | Overnight visit to American Axle Manufacturing |
| November | Target Distribution – Panel Discussion |
| November 11 | KOC team at Carnegie Melon |
| November 18 | Visit to Accenture RFID Labs, Chicago, IL |

Save This Date!

February 17, 2006

Spring Supply Chain Management Conference:

"Coordinating the Global Supply Chain."

Student Profile

**By Wayne Chan
MBA Class of 2007**

Annie Lin is a first year MSIA student of Krannert School of Management of Purdue University. Before coming to Krannert, Lin worked for Adidas in Taiwan.

Initially working as marketing specialist, she moved on to public relations and advertising with the objective of building a brand image in Taiwan. Annie learned about Krannert by consulting the U.S. News business rankings to determine the quality of the Krannert business program.

Lin is specializing in organizational behavior and operations management and is a member of the following Krannert clubs: KGSA, Operations Management and Asian Business Club. Some of her goals while at Krannert include improving her English communications skills and learning more about the American culture.

After graduating from Krannert, she aspires to continue working in brand marketing. Namely, she would like to work for FMCG (fast moving consumer goods) companies such as P&G, Coca Cola or McDonald's.



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