

LINKAGES

Global Supply Chain Management

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Clarkson's Global Supply Chain Management Program is ranked #13 in the Nation by *U.S. News & World Report*

Highlighting our competitive Advantage



Recent turmoil in the global marketplace and the severe economic slowdown have underscored the role of supply chain management as a critical source of competitive advantage. Clarkson's Global Supply Chain Management program continues to be recognized as one of the finest programs in the nation, rated 13th in the 2009 *U.S. News & World Report* rankings — one of only four private institutions (with MIT, U. Penn-Wharton, and Carnegie Mellon) and the smallest university on the list.

This issue of *Linkages* shows why we have maintained a top-20 ranking for seven consecutive years: We consistently generate high-quality groundbreaking research and our graduates contribute immediate value to supply chains. We enjoy unique strengths in cross-disciplinary collaboration thanks to our relatively small size — our competitive advantage. Using a systems approach, we integrate cutting-edge research, the latest technology, and ongoing corporate feedback into teaching. We create powerful new links by spanning

conventional boundaries.

Consider the stories in this edition. Our distinctive interdisciplinary culture inspired Professors Mary Graham and Sandra Fisher to address an under-researched field with a special issue of *Human Resource Management* focused on the "people factor" in the supply chain. Professor Fred Miao, attracted in 2007 by Clarkson's rising research reputation and personalized teaching environment, is gaining international recognition for his scholarship on sales force management and buyer-supplier relationships in distinguished publications such as *The Journal of the Academy of Marketing Science*. And the real-world relevance of Clarkson coursework is apparent in the internship experience of undergraduate Patrick Chevier, who helped a division of Honeywell reduce excess inventory.



*Dr. Farzad Mahmoodi
Professor and Director
GSCM Programs*

We hope you enjoy this issue and welcome your feedback (mahmoodi@clarkson.edu).

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School of Business

new tricks for old dogs and other research surprises

Professor Fred Miao's marketing studies are challenging traditional supply chain wisdom

"A research presentation from a different discipline may spark your thoughts. It's good to hear different perspectives."

Dr. Fred Miao
Assistant Professor of
Marketing

The common wisdom in supply chain sales management is that while new salespeople need careful training, experienced veterans are more effective when left alone to apply their knowledge and expertise. But in a research paper he is now preparing for submission to the *Journal of Marketing*, Clarkson Professor Fred Miao demonstrates that traditional thinking in sales force management may have been wrong because often these "old dogs" can apply "new tricks" even better than their less experienced colleagues. Similarly, his research team has broken new ground in determining how suppliers can gain true customer loyalty. These landmark findings will appear in a forthcoming issue of the highly regarded *Journal of the Academy of Marketing Science*.



Dr. Fred Miao was drawn to Clarkson by the dynamism and diversity of its research community.

Since he joined Clarkson in the fall of 2007 as an assistant professor of marketing, Dr. Miao's scholarship has been living up to the promise he showed while earning his Ph.D. at the University of Missouri, Columbia. In 2006 his doctoral dissertation "Salesforce Control Systems — An Integrated Approach" won both the Direct Selling Education Foundation Sales Dissertation Grant of the American Marketing Association and the Best Doctoral Dissertation Award of the Academy of Marketing Science. Currently, his research interests include marketing strategy, supply chain channel relationships, and sales management, while his teaching focuses on supply chain distribution channels, marketing management, and retail management.

According to Dr. Miao, his scholarly curiosity about marketing was sparked when he worked in the purchasing group for General Motors (GM) in Shanghai, China. During three years at the company's buying center, he became increasingly intrigued by the interactions between suppliers' sales people and GM's buyers. "Some of the sales people appeared to be much more adaptive, flexible and successful in providing required product and service." Fascination with the dynamics of corporate sales and purchasing



led him to a Ph.D. at Missouri, Columbia, where he benefited from studying with two internationally recognized scholars.

One was Dr. Kenneth R. Evans, an authority on industrial sales force management. The second was Dr. Lisa K. Sheer, a well-known expert in buyer-supplier relationships. Working on research projects with both mentors, he says, "taught me how to formulate a very sound theoretical basis on which empirical studies can be conducted." Subsequently, he has continued to publish joint research findings with each of them. He feels he also benefited from the school's guest speaker program. Each year he met four or five leading experts from other universities. "I was able to really interact with them and see what was out on the front line in research findings and unsolved problems." Dr. Miao says he was drawn to Clarkson because its relatively small size promotes fruitful interactions between professors and students and also among faculty members.

A second attraction was the dynamism of the University's research community. "Although the business school is small, we have a lot of diversity in terms of people from different cultures and different disciplines," he says. "A research presentation from a different discipline may spark your thoughts. It's good to hear different perspectives, as opposed to just from marketing." In the future he may well become involved with Clarkson colleagues in cross-disciplinary research. "Especially I think there is a potential in a marketing and finance interface because marketing is becoming more and more accountable to the bottom line."

Dr. Miao believes that significant new supply chain research questions are developing in the U.S. as the economy increasingly shifts from goods-based to service-based industries. "Service industries, such as health care, involve a lot more human-based skills instead of machine-based equipment or production processes." The development of networked links among hospitals, medical doctors, clinics, laboratories and insurance companies, for example, are creating increasingly complex channels. So with respect to his research findings on long-term loyalties, trust and confidence become even more significant. "If a patient has a long trusting relationship with a medical provider, he's much less likely to switch."

managing salespeople and building loyalties

In his award-winning Ph.D. dissertation, Dr. Miao compared the effectiveness of three common approaches to sales force management: outcome-based (commission rewards with minimal monitored direction); activity-based (fixed salary based on following prescribed routines); and capability-based (fixed salary based on individual skills). Among his findings: an ability-based approach is most effective at early career; an outcome-based approach may be most effective at mid-career; and a capability-based approach in late career.

In follow-up research with Dr. Kenneth Evans, Dr. Miao has further explored this area. A paper under review by the *Journal of Personal Selling and Sales Management* (also authored with Don Lund) is titled "Re-examining the Influence of Career Stages on Salesperson Motivation — A Cognitive and Affective Perspective." A second in preparation for the *Journal of Marketing* is titled "Teaching Old Dogs New Tricks? The Relative Impact of Sales Control Systems on Sales People's Adaptive knowledge, Selling Behaviors, and Sales Performance." It concludes that, contrary to common wisdom, training experienced salespeople can have an even bigger pay-off than training beginners because the veterans' adaptive knowledge (ability to perform "new tricks") advances even faster.

In the forthcoming *Journal of the Academy of Marketing Science* paper, coauthored with Dr. Lisa Sheer and Dr. Jason Garrett, the researchers explored factors affecting how a supplier can build long-term customer loyalty. They assess a complex set of variables related to development of unique product quality, design, features and service in determining ways that a supplier can differentiate itself from competitors so that buyers face higher switching costs (in time or money). Higher switching costs and unique benefits increase loyalty by making buying firms less sensitive to competitive suppliers' offerings.

learning supply chain in the procurement trenches

How both Honeywell and Patrick Chevier '10 benefited from his internship

"At Clarkson I had learned the basics of SAP, which helped me pick up applications quickly at Honeywell."

Patrick Chevier '10
Interdisciplinary
Engineering & Management

When he learned that he had a 2008 summer internship at Honeywell's Imaging and Mobility Division in Skaneateles Falls, N.Y., Patrick Chevier knew he would be at least somewhat involved in global supply chain operations. But he had no idea how valuable, interesting and satisfying that three-month experience would turn out. Nor did he realize how well his first two years of classes had prepared him to make real and immediate contributions in the procurement department.

"I got to experience just about everything you could ask for in a summer internship," says Patrick, an Interdisciplinary Engineering & Management (iE&M) major pursuing the global supply chain management track.

From late May through early August, he was on the job at the Honeywell division (formerly Hand Held Products), a manufacturer of data collection and management solutions for in-premise mobile and transaction processing. Patrick's initial responsibilities included buying parts, representing procurement at interdepartmental meetings, and serving as point man working with a Mexican supplier to resolve a problem with stray orders. But soon his focus turned to one major project: helping the division reduce unnecessary inventory.

"They were carrying excessive amounts of inventory," he recalls. "So they wanted me to calculate how many days of inventory they actually needed in the warehouse, then work with suppliers to formulate agreements on how much both they and Honeywell would carry." Much of the excess

inventory consisted of molded plastic housings for mobile computers that

wasted space, as well as money, because they were awkwardly packaged and didn't stack well. He strived to apply the just-in-time approach in which "ideally as you're pulling the last item off the shelf, the new one's coming in."

To make safety stock calculations, Patrick applied models he had learned in class from Professor Farzad Mahmoodi. Honeywell managers had become aware of these models in October 2007 while participating in a customized four-day executive seminar presented by Clarkson faculty that covered supply chain topics ranging from inventory management to flexibility to evaluating various supply chain configurations.

Another tool Patrick brought from Clarkson coursework was his ability to use the SAP software system. "In SAP you could see the dollars in inventory trailing off, along with the amount," he recalls, "and yet our service level stayed up." It was gratifying, he says, to observe his positive impact on the warehouse operation. And it was beneficial to see SAP perform within a corporate setting. "At



Patrick Chevier helped reduce excess inventory.

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supply chain-related articles by clarkson faculty (2008 and forthcoming):

(Clarkson Faculty Members are noted in bold.)

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Visit

www.clarkson.edu/business/gscm/facultypubs.html

to view a list of recent supply chain-related journal articles and book chapters authored by Clarkson faculty.

The “people factor” in the supply chain

Professors Mary Graham and Sandra Fisher spotlight an under-researched field

“Retention of critical supply chain professionals comes up every year because companies keep taking each others’ really skilled people.”

*Dr. Mary Graham,
who teaches regularly in
GSCM Executive Seminars*

In recent years, research into global supply chains has focused on the fields of logistics and operations, information systems, and marketing. What has been largely missing? Analysis of the “people factor” as

a source of competitive advantage. But now that gap is being seriously addressed, thanks to a special upcoming issue of *Human Resource Management* journal. Its guest editors include two Clarkson Human Resource (HR) experts: Dr. Mary Graham, an associate editor of the prestigious journal who proposed the special issue, and Dr. Sandra Fisher, with whom she has collaborated previously in teaching and research.*

“Both of us like to ground our teaching in research data,” says Professor Fisher. “And we both incorporated supply chain issues into the course and noticed the dearth of research on the topics.” In addition to developing more hard research data, they hope to raise awareness of the topic among colleagues elsewhere. The special issue is slated to appear in fall 2009.

The pair believes they are more conscious of supply chain issues than many HR scholars who teach in larger universities. “This is one way in which Clarkson is pretty unique with the size of the business school — and how interdisciplinary our supply chain curriculum is,” explains Dr. Graham. “So for us, it’s a natural fit. But we’ve talked to many colleagues in HR and organizational studies faculties and often they don’t even know what supply chain is.”

The published findings should not only beef up teaching in organizational studies, but also help supply chain professionals. “*Human Resource Management* is aimed at academics,” says Professor Graham, “but also speaks to practitioners so they can take the research and use it right away in their everyday decisions.”

The editors identify two main types of linkages between human resource management and supply chains. One involves the application of current HR theories and practices within a firm as it manages its supply chain. The second relates to activities across companies in a chain; for instance, one partner might require others to adopt certain HR best practices, or all might voluntarily reconfigure their practices to increase overall chain efficiency. Having encouraged joint submissions from HR scholars working with researchers in operations management or other supply-chain related disciplines, the editors’ call for papers suggests 15 potential research topic areas for the issue, ranging from retention of skilled supply line professionals to partner relationships (see sidebar).



HR experts Sandra Fisher and Mary Graham are addressing topics in supply chain research in their special issue of the *Human Resource Management* journal.

Human Resource Topics in Supply- Chain Research

Potential areas suggested in the editors’ call for submissions:

- Using strategic HRM to support supply chain activities
- Retention of critical supply chain management professionals
- Change management and the supply chain
- Effects of organizational culture on supply chain collaboration
- Cross-cultural management challenges in the supply chain
- HR architecture and the supply chain
- People-related supply chain disruptions
- Training and development of supply chain professionals
- Use of incentive pay in the supply chain
- Workforce diversity in the supply chain
- Competency profiles of successful supply chain professionals
- Worker relationships across supply chain partners
- Health and safety issues in the supply chain
- Management of co-located employees from multiple organizations
- Outsourcing as a staffing strategy in supply chains

Dr. Graham, associate professor of Organizational Studies, earned her M.S. and Ph.D. at Cornell University, and is also a C.P.A. She has numerous scholarly publications on HR professional credibility and gender issues in the workplace. Among her teaching interests: leading organizational change, strategic human resource management, and rewards management. In addition to undergraduate teaching, at Clarkson she teaches regularly in the Engineering and Global Operations Management (EGOM) program.

As well, Dr. Graham has participated in the Global Supply Chain Management Executive Seminar (GSCM) session “Improving Supply Chain Performance through Strategic Human Resource Management.” And her interactions with business managers in the seminar provided further impetus for the *Human Resource Management* special issue. “Retention of critical supply chain professionals comes up every year,” she says, “because companies keep taking each others’ really skilled people away from one another. Another issue is supply chain disruptions due to labor unions or work stoppages.” (Indeed, in a recent *McKinsey Quarterly* survey, business executives cite lack of well-trained labor as the top threat to supply chain efficiency — especially in retail, manufacturing and energy sectors.)

Dr. Fisher, associate professor of Organizational Studies, earned her M.A. and Ph.D. in industrial-organizational psychology at Michigan State University. Her primary research interests and areas of expertise include the interface between people and technology, changing

employment relationships, training systems, and performance management. Her teaching interests include human resource management, organizational behavior, and management of technology. She has consulted for numerous federal government and corporate clients.

At Clarkson Dr. Fisher has taught a variety of graduate courses in the EGOM program. Among many scholarly publications, she is the lead author on a fall 2008 contribution to *Human Resource Management* titled “Human Resource Issues in Outsourcing: Integrating Research and Practice,” which addresses several challenges at the intersection of HR management and supply chain management.

Professors Graham and Fisher are currently reviewing submissions and both are enthusiastic about the diversity, international flavor, and quality of the papers.

Human Resource Management, which was founded by Dr. David Ulrich at the University of Michigan, has a wide international readership and is one of the most highly respected journals in the field, observes Dr. Graham: “We wanted to come up with a special topic that would make an impact.”

**They are joined by guest editors Dr. Stephan Vachon, HEC Montreal, Canada, a former Clarkson colleague, and Dr. Ann Vereecke, Vlerick Leuven Gent Management School and Ghent University (Belgium).*

continued from page 4 ...

Clarkson I had learned the basics of SAP, which helped me pick up applications quickly at Honeywell, where everything they do relies on that system.”

On the other hand, says Patrick, he also learned important lessons that went beyond his classes and books as he observed day-to-day operations. “I learned it’s not always about numbers, even though textbooks show how you can model almost anything using statistics and math. Sometimes you have to look at other factors, like the reliability of a supplier or what big sales might be coming up. The guys that know how the chain really works can tweak the numbers for better results.” As well, by watching the procurement manager on the job, Patrick improved his own communication abilities: “He made a lot of presentations and he really helped me learn how to better convey information to those who need it.”

One of the most satisfying aspects of the internship occurred during a meeting between a team of business and engineering executives from a French company supplying microprocessors and a comparable executive management team from Honeywell. “I could comfortably converse with the professionals on both the engineering and business sides,” says Patrick, crediting the unique preparation of his Interdisciplinary Engineering & Management major. “Being able to communicate and work with both sides was a huge asset.”

Patrick’s internship experience convinced him that he is on the right track in an exciting field. But before launching that career after graduation in 2010, he will probably continue at Clarkson to earn his MBA with a concentration in Global Supply Chain Management.

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