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C. Clifford Defee

Auburn University, czd0001@auburn.edu

Wesley S. Randall

Auburn University, wesley.randall@unt.edu

Brian J. Gibson

Auburn University, brian.gibson@auburn.edu

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ROLES AND CAPABILITIES OF THE RETAIL SUPPLY CHAIN ORGANIZATION

C. Clifford Defee
Auburn University

Wesley S. Randall
Auburn University

Brian J. Gibson
Auburn University

ABSTRACT

Supply chain management (SCM) has become a critical strategic function in recent years. Research in the discipline has been focused toward the upstream side of the supply chain on functions such as warehousing, transportation, procurement and production. As power has shifted downstream toward retailers and their customers, SCM research has been slow to respond. This represents a significant gap, and a significant opportunity. Retailers face challenges that differ from those found in upstream suppliers and manufacturers. We present findings from a study of senior supply chain executives in the retail industry that focuses on the supply chain challenges of greatest importance to retailers, and the evolving capabilities used to address these issues.

Supply chain management (SCM) has become a critical strategic function in many industries during the past 20 years. SCM has developed into an integrative discipline incorporating strategic elements with process and collaboration (Gibson et al. 2005). Further, SCM has become a critical competitive weapon favored by C-level executives searching for competitive advantage (Manrodt et al. 2005). Supply chain research has increased significantly in recent years, and many techniques have been suggested for achieving supply chain goals including collaboration (Sinkovics and Roath 2004), process integration (Min and Mentzer 2004), information sharing (Sanders and Premus 2005), standardization (Bowersox et al. 1999),

and aligning measures and rewards (Mentzer 2004). In addition, SCM research is now acknowledged as providing theoretical and practical insight into a variety of areas including collaboration in production (Nativi and Barrie 2006; Pfohl and Buse 2000), new product innovation (De Luca and Atuahene-Gima 2007; Zacharia and Mentzer 2007), quality (Harding 1998; Liker and Choi 2004), transportation (Lieb and Butner 2007; Van Hoek 1999) and just-in-time manufacturing (Giunipero et al. 2005; Sillince and Sykes 1993). The importance of SCM to business strategy, and ultimately business success, appears to be on solid footing.

During this same period there has been an increasing awareness of a fundamental shift in marketplace power from production to retail (LaLonde and Masters 1994; Maloni and Benton 2000). Where product and production once dominated (e.g., Procter and Gamble, General Motors), organizations closer to the consumer (e.g., Wal-Mart, Target) have taken a leadership role in the supply chain. Entire streams of research have picked up on the shift from a product to customer orientation (Kirca et al. 2005; Kohli and Jaworski 1990; Slater and Narver 1995). Retailers face unique supply chain challenges, and require distinct capabilities not required of upstream suppliers and manufacturers. Great retailers survive and thrive through outstanding supply chain capabilities (Brown et al. 2005), but the penalty for disappointing customers because of a single glitch in the supply chain can be steep. One study shows retailer's share prices fell an average of 9 percent on the day a supply chain problem was disclosed, with an additional 9 percent drop recorded over the next 90 days (Morrison and Assendelft 2006). Yet from a supply chain perspective, the power shift to retail and the recognition of retail as a critically important supply chain area has been neglected, revealing a substantial gap in research. Our understanding of retail supply chain management (R-SCM) may be limited at a time when effective management of the retail supply chain is more important now and into the future than in the past (Davies 2009).

The goal of this research is to address the knowledge gap identified by the relative lack of research in the area and provide insight into the supply chain capabilities developed by best-in-class retail organizations.¹ A slowing economy suggests this need is more critical today than ever before. We address two primary research questions. First, what supply chain challenges are driving strategic actions in the retail industry? Second, what are the capabilities retailers leverage to perform the role of SCM? Neither of these questions have been explored in great depth in previous research. Initially, the literature is reviewed to clarify the knowledge gap. Next, we describe the study approach built on a robust grounded theory methodology including interviews with 25 senior retail SCM executives and follow-on survey execution. Then we reveal our key findings in the areas of R-SCM role definition and best-in-class capabilities. Results of our interviews confirm the importance of SCM to long-term retail success.

LITERATURE REVIEW AND STUDY RATIONALE

It is surprising that the retail supply chain has been given so little attention in both the logistics and retail disciplines. Over the past 15 years less than a dozen articles focusing on supply chain related topics associated with retailers are found in top logistics journals (JBL, IJPD&LM, IJLM, and SCMR). Many of these articles provide a deep dive into specific issues such as in-stock position (Taylor and Fawcett 2001), inventory error rates (Waller et al. 2006), or direct product profitability (Bookbinder and Zarour 2001), and thus do not take a big picture look at retail supply chain issues. Other micro-oriented articles look at the supplier to retailer link for a single product (e.g., Hines et al. 2006 examined pineapple distribution in Australia), or describe the supply chain for a given type of retail outlet or region (e.g., Fernie et al. 2000; Mejias-Sacaluga and Prado-Prado 2002 review grocery logistics in Spain and the UK respectively). Kahn and colleagues (2008) use a retailer as a case study in their study of supply chain risk. Mukhopandhyay and Setaputra (2006) suggest the value to retailers of outsourcing costly reverse logistics activities. Kent and Mentzer (2003) develop the concept of relationship strength using retailers as part of the sample. Despite the claim that research of the supplier to retailer link in the supply chain is important to the marketing and retailing disciplines, coverage is no better when taken from the retail journal perspective. Only nine relevant articles have been published in the *Journal of Retailing* (JR), with a near-majority of those found in a single special issue on SCM in 2000. The JR articles also tend to be point-focused dealing primarily with traditional inter-firm relationship issues including power (Bloom and Perry 2001), dependence (Gassenheimer and Lagace 1994), conflict management (Bradford et al. 2004; Brown et al. 1983), coordination (Ingene and Parry 2000), and partnering (Mentzer et al. 2000). Automatic replenishment (Levy and Grewal 2000) and guaranteed profit margin programs (Lee and Rhee 2008) have also been reviewed.

We do not find fault in any of the articles mentioned above. Our concern is the lack of coverage of the issues and potential strategies available to organizations that occupy the retail node. In fact, only two studies over this time frame examine broader, strategic supply chain issues from a retail perspective.

Lawson (2001) explored the operational strategies used by 82 retailers in the U.S. and Europe and found many strategic options being used including Quick Response, time-based competition, lean, and postponement among many others. More recently Morrison and van Assendelft (2006) recap the results of an IBM Institute for Business Value study of 795 retailers worldwide. The best performing retailers demonstrated revenue growth more than twice that of retailers at the median, with operating income margins one-third higher, while holding a third less inventory.

The few available studies focusing on retail supply chain issues is the first rationale for undertaking this research. The second extends from the fact that annual studies are common in both the retail industry and the supply chain discipline. Retail studies focusing on consumer satisfaction issues, sales and cost benchmarks, and infrastructure development are often conducted by consulting firms or industry publications (Frazelle 2008; National Retail Federation and IBM 2009). Existing SCM studies of outsourcing trends, general supply chain strategies, and transportation metrics are most frequently led by universities (Holcomb and Manrodt 2008; Langley 2007; Lieb and Butner 2007). Interestingly, only two

of the annual studies fully address the intersection of retailing and SCM. One study addresses only Internet-based and direct retailing methods. The other touches upon supply chain management in the midst of an annual study of nine diverse retailing topics. Figure 1 highlights the existing gap in the research. The lack of one-time research and ongoing studies into retail supply chains suggests a significant gap exists. We believe the retail industry's supply chain leadership role, impact, and trends are largely under-studied and ripe for investigation. Our research is targeted at this knowledge gap.

METHODOLOGY

This paper uses grounded theory (GT) to create greater understanding of the role of SCM in the retail industry. By combining archival research, expert advice, executive interviews, and surveys we bring greater understanding to macro-level challenges and best practices that extend across the retail supply chain. We generated our finding using extensive open ended interview with 25 retail executives, and a follow up quantitative survey of 36 supply chain executives. Using field observation makes this research timely as retail supply chain manager struggle with the currently constrained global economy.

FIGURE 1
RETAIL INDUSTRY/SCM DISCIPLINE ANNUAL STUDY MATRIX
Is the annual study SCM specific?

		YES	NO
Is the annual study retail specific?	YES	*Benchmarks In Operations And Fulfillment / Georgia Tech **Retail Horizons: Benchmarks / National Retail Federation	Brand Awareness Study / Retailing Today Consumer Satisfaction Study / U.S. Census Bureau Global Retailing / Retailing Today Most Common / Retailing Today Order Management / Retailing Today Retail Economics / Retailing Today Retail: A Supply Chain Perspective / Retailing Today State of Retailing / Retailing Today
	NO	Annual Salary Survey / Logistics Management 3PL CEO Study / Transportation Management Distribution Metrics / Logistics Management Global Supply Chain / U.S. Consulting Logistics Challenges / Logistics Management Master of Logistics / Logistics Management State of Logistics Outsourcing / Georgia Tech Transportation Annual Survey / U.S. Census Bureau	Automotive The U.S. Supply Chain / Planning Perspectives Census of Retailing / Retailing Today Enterprise Retailing / Retailing Today National Retailing / Retailing Today Retail Economics / Retailing Today Retailing Today / Retailing Today Revenue Management / Retailing Today Service Annual Survey / U.S. Census Bureau

*Addresses only direct-to-consumer retailing
 **Broad ranging annual study of retailer practices—SCM is one of nine major areas investigated

GT is the appropriate method for understanding how human organizations react to their environment and change as that environment evolves (Charmaz 2006; Glaser and Strauss 1967). Support for inductive qualitative techniques, like GT is on the rise in business research (Day and Montgomery 1999; Deighton and Narayandas 2004; Hunt 1992; Kavanagh 1994; MacInnis 2005). This is particularly true in SCM where qualitative research has provided an effective mechanism for understanding key phenomenon (Frankel et al. 2005) such as logistics service driven loyalty (Davis and Mentzer 2006), supply chain management coordination mechanisms (Fugate et al. 2006), logistics management in a transitional economy (Price 2006), logistics outsourcing strategy (Mello et al. 2008), and drivers of inter-organizational relationship magnitude (Golicic and Mentzer 2005). GT has proven successful in supply chain management (Flint et al. 2005; Flint et al. 2002; Mollenkopf et al. 2007; Pappu and Mundy 2002) and marketing research (Kohli and Jaworski 1990; Noble and Mokwa 1999; Parasuraman et al. 1985), and therefore we believe it is an appropriate tool for this exploration.

Analytical Process

Table 1 depicts the steps followed in this investigation. We used the inductive GT technique espoused by Glaser (1998; 1978), and adapted that to SCM research by following the practical guidance of Charmaz (2006).

MAXQDA was the software used to facilitate organizing and filtering the interview data. The software enables word pattern searches (e.g., word combination frequencies), and quantitative statistical analyses through word counts and frequencies. For instance, MAXQDA identified the frequency that "cost" and "service" occurred in the same paragraph (144 times in 19 interviews). Programs like MAXQDA provide efficient coding of text, coding of relationships, code trees, memo writing, and analysis of code intersections, therefore increasing the efficiency of a GT analysis.

The first step in the investigation involved definition of the initial research question. To form that question we met and discussed the project with retail executives, retail consultants, personnel from a major retail trade group, and academic experts. During this process we identified those retail executives that served as the primary data source. Table 2 shows the retail sectors represented by study participants.

At step 2, and again at step 4, interviews were conducted with retail supply chain executives from a wide cross-section of the retail industry. This sampling approach allowed identification of themes that appeared to broadly permeate the retail supply chain environment (Charmaz 2006; Glaser and Strauss 1967). In step 3 we began identifying initial conceptual codes from the interviews. Once identified, we verified the more aggregate applicability and interpretation of those codes by "testing" these codes in follow on interviews. The process involves hypothesizing a relationship based upon one set of interviews and then testing that relationship in follow-on interviews (Charmaz 2006; Glaser and Strauss 1967). As the codes begin to evolve toward categories and constructs, notes (known as memos in GT) were taken within MAXQDA to document the analytical process. Memos captured hypothesized relationships, provided a record for how these relationships developed in subsequent interviews, and were used to keep track of the logic behind the emerging themes, challenges, and best practices (Charmaz 2006). Sifting through transcripts and memos led to increasingly focused follow-on interviews and the adoption of theoretical coding as shown in steps 6 and 7.

Unlike statistical validity, GT is concerned with theory validation. The basis of validation, as shown in step 6, is theoretical sampling (Glaser 1998). Theoretical sampling entails testing not only concepts but relationships in new samples. For example, initial interviews suggested velocity as a key theme in R-SCM. Theoretical sampling provided dimensionality to the variable "velocity" and related that variable to other variables such as "stock keeping unit (SKU) management" and "high fashion-short life product." This suggested that velocity was not only an important characteristic that impacted inventory turn rates, and cost of inventory, SKU specific velocity management was also a best in class capability in the retail industry. Subsequent interviews, as shown in step 6, tested the hypothesized themes, categories and best practices in new samples and validated the predicted relationship. The theoretical sampling process was continued until constant comparison, as shown in step 7, raised codes to theoretical categories. Sorting and theoretical sampling continued until theoretical saturation. Theoretical saturation occurred when follow-on interviews, coupled with team meetings, and survey results demonstrated consistent constructs and relationships. In step 8 and 9 we saturated and related those categories into a theoretical framework.

TABLE 1
ANALYTICAL STEPS

Step 1	Develop the opening research question
Step 2	Begin data collection and initial coding
Step 3	Arrange initial codes (using memos) in tentative categories
Step 4	Data collection aimed at validated tentative categories and defining new categories
Step 5	Refine conceptual categories (using memos)
Step 6	Theoretically sample to validate hypothesized relationships
Step 7	Sort memos and codes into aggregate categories
Step 8	Define relationships between categories (memos and diagrams) saturate concepts
Step 9	Emerge theory
Step 10	Member checking

TABLE 2
RETAIL INDUSTRY SECTORS OF PARTICIPANTS

Global Retail: Super Center	5
Fashion	4
Discounter	3
Grocery	2
Home Improvement / Builder Supply	2
Office Products	2
Retail Auto Supplies	1
Technology	1
Drug Store	1
Pet Products	1
Sporting Goods and Supplies	1
Toy Store	1
Specialty	1

Next (step 10) the team organized the interview findings into a survey. The objective of this survey was to provide robust validation of the themes uncovered through the interview. The survey provided an ordinal ranking among the elements of the emerged categories (e.g., challenges, trends, and best practices) uncovered through analysis of the

interview data. The survey was distributed to 175 senior supply chain executives. A total of 36 surveys were returned. This response rate is acceptable from both a quantitative perspective and additionally this met our object as a satisfactory method for member checking, or validating, the inductively derived interview conclusions (Charmaz 2006; Dillman 2000).

To verify the challenge and best practices themes (step 10) a number of member checking sessions were conducted with senior executives, senior managers, academics, and consultants experienced in R-SCM. Finally, the themes were reviewed by more than 80 retail supply chain executives, suppliers, and consultants at an industry conference. The checking sessions strongly supported the research findings, the generated variables, and their theoretical relationships.

FINDINGS AND DISCUSSION

In this section we describe two areas from the study where the findings appear to be particularly useful to furthering our understanding. Specifically, we explain two challenges R-SCM organizations must deal with, and four capabilities developed by best-in-class retailers that prepare them to compete effectively.

Challenges

One of the main topics of the research interviews and surveys dealt with a series of questions about the future. Despite facing a number of challenges and unfavorable trends, retail SCM executives remain upbeat about their ability to cope and succeed in this difficult environment.

External forces affecting retail SCM. The crisis of confidence among consumers and the continual barrage of bad news from the media create an obvious retail challenge. Compounding these problems are other external issues that impact SC strategy, planning, and performance. Figure 2 suggests that these headaches may linger into the future and make for some sleepless nights among retail SCM executives.

We cut a billion dollars of inventory out of our supply chain. There's another billion to cut, (R-SCM Executive).

It is also notable that the widely discussed SC infrastructure and workforce issues from 2007 are the least of the executives' concerns today.

The executives in the study placed a huge emphasis on cost. Cost is squeezing the retail sector on two fronts. The first is volatility in fuel prices. Increases in the price of diesel fuel significantly increases the cost of moving product through the distribution network to the retail store, either directly in the cost of operating their own fleets or through higher freight bills from carriers. Additionally, the cost of many products also

increases as a result of higher petroleum prices. Retailers were hesitant to pass along the resulting increased cost of doing business to consumers.

We are making cost decisions in the negotiation process with a goal to reduce cost throughout the network.

Second, the global economic downturn created flattening to declining sales across the board for retailers, and reduced consumer spending limited the retailers' ability to adjust prices upward. The combination of these factors drove the executives to search for cost reduction opportunities throughout their supply chain operations.

Retailers place a great deal of importance on creating and maintaining supply chain capabilities that may allow them to out-perform competitors. But, as Figure 3 indicates, a discrepancy exists with actual retailer performance in most of these capabilities. The participants assessed their internal performance as average to slightly above average in each of these key areas. Retailers clearly believe that they have a significant opportunity to further develop exceptional SC capabilities.

The real focus is to lower our net inventory without compromising the in-stock experience for the customer.

The findings point out that cost control is a point of emphasis for retail supply chains. While many retailers strive to find an effective balance between cost and customer service, as the economic outlook for 2009 worsened the importance of controlling costs appears to have heightened.

Responding to market conditions. R-SCM executives are not shying away from the dramatic economic issues facing them. In fact, the economic environment and less than robust consumer spending has prompted R-SCM executives to act decisively. When asked how they are coping with the challenge of eroding consumer confidence, Figure 4 clearly indicates that they are making drastic asset investment reductions.

The retail sector has been a proving ground for many SC strategies over the years. The participants indicate that their inventory flow and fulfillment initiatives have a stronger impact on customer service than cost efficiency. Figure 5 indicates that collaborative planning, forecasting, and replenishment (CPFR), demand driven replenishment, and velocity-based

FIGURE 2
UNCONTROLLABLE ISSUES ARE FUTURE CONCERNS FOR SCM EXECUTIVES

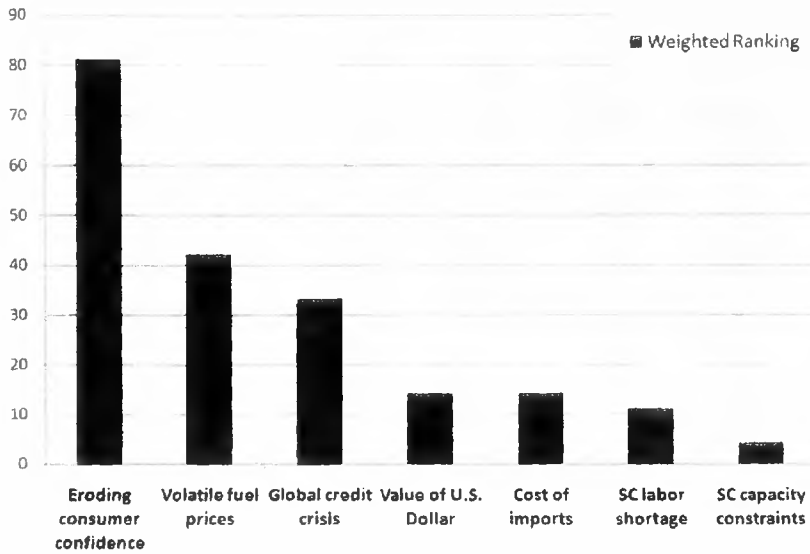


FIGURE 3
DISCREPANCY BETWEEN IMPORTANCE OF CAPABILITIES AND THE RETAILERS' ABILITY TO DEVELOP THE CAPABILITIES

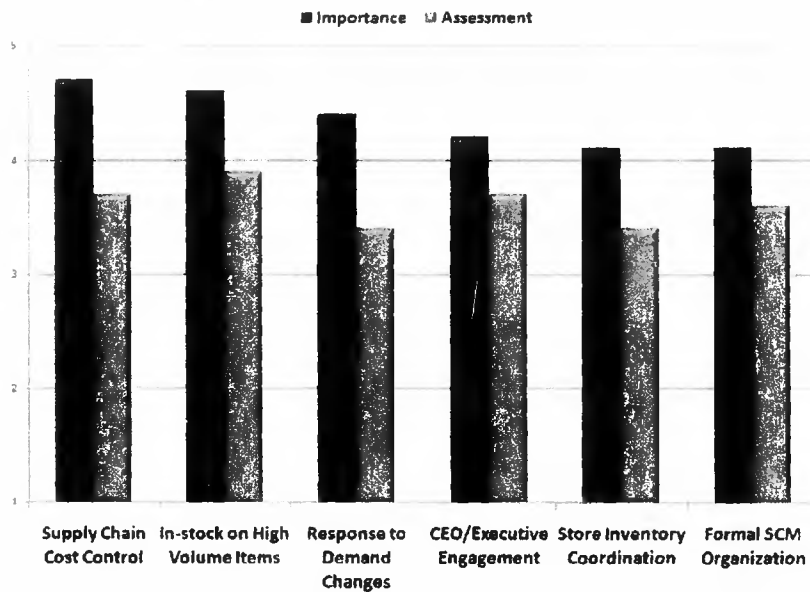


FIGURE 4
REDUCED SPENDING PLANNED AS A RESULT OF SOFT ECONOMY

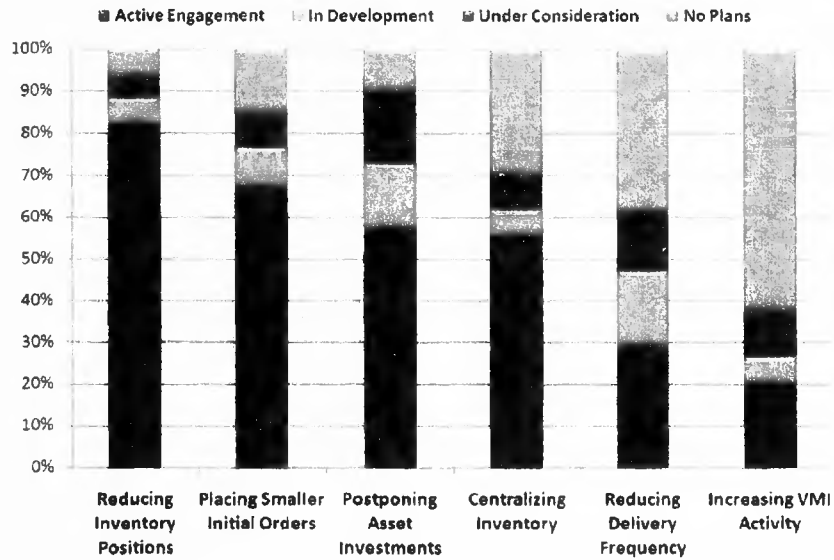
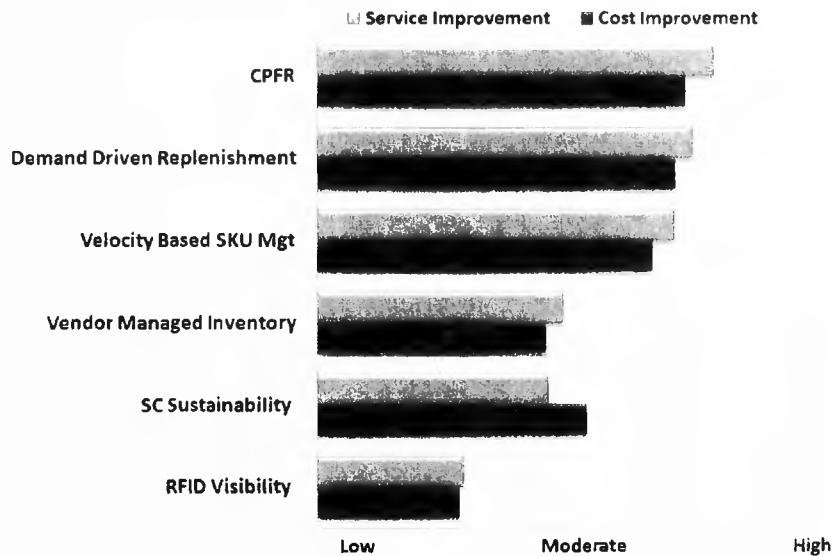


FIGURE 5
STRATEGIC IMPORTANCE OF SERVICE VS. COST IMPROVEMENTS



SKU management are particularly beneficial for pulling assets through the pipeline. In contrast, newer initiatives have not had as great an impact on performance. It will take time for retailers to fully harness the potential of sustainability efforts and RFID technology.

Best-in-Class Capabilities

This section describes the capabilities the executives viewed as representing the best practices found in retail supply chains. No single retailer was identified as exhibiting all these capabilities; rather best-in-class retailers have produced outstanding performance by leveraging excellence in one or two of these areas. This is a significant finding and suggests no retailer is in a position to dominate competitors because of they are best-in-class across a wide array of SCM capabilities.

Leverage a strong distribution network. A major advantage of the mature, big box retailers is the existence of fully-deployed, high-volume distribution networks. Wal-Mart, Target, Walgreens, Lowes and others have each built networks with enormous capacity to flow product to their widely dispersed store locations. One of the most frequently mentioned strengths of large retailers described by the executives was the cost efficiency advantage gained from this robust asset. Just utilizing the existing network infrastructure does not create industry leading performance. Best-in-class retailers understand the need to capitalize on past logistics infrastructure investments and continue to drive lower operating costs year-on-year.

As costs go up, we have to get much better at network utilization. We're really trying to sweat our assets.

The survey results supported the importance of leveraging infrastructure to achieve ongoing operating cost reductions. The executives were asked to rate the importance of a dozen capabilities and then classify those that are critical to becoming best-in-class. In each case "supply chain cost control" was the top choice as shown previously by the importance bars in Figure 3. A follow-on question asked the executives to identify their strategic focus. Again, "control supply chain related costs" ranked highest when referencing the current year (2008), and increased in importance when considering the next year (2009).

Despite this feedback the executives made it clear that size alone does not make a retail infrastructure best-

in-class. In many respects, comparing retailers is like comparing apples and oranges. Different product categories require different kinds of support from R-SCM. Electronics, garments, and fresh produce each have very different logistical requirements, and the executives reflected this need for finding an infrastructure that best fit their specific needs.

We have to continue to search for a physical network that is well thought out, rationalized and appropriate for the retail space as our product assortment adjusts to changes in customer demand.

Creating flexible capacity. Several executives touched on the thought that "one size doesn't fit all" in the retail world. In addition, the retail environment was frequently described as "dynamic" and "rapidly changing." The ability to quickly adjust operating capacity in line with changes in demand is a distinguishing capability of the best R-SCM organizations.

Flexibility is the key component, because things are changing constantly.

Being able to change capacity to handle changing demand, cost effectively, and still providing the service your stores and customers want.

Retailers, by the nature of their business have created infrastructures that are already flexible because most have to deal with two, three, or more times the volume increase during the holiday season compared with the rest of the year. However, a key differentiator of the best organizations is the ability to flex capacity in line with *unexpected* changes in the demand. This is especially true in a weakening economy that was already affecting retailers as we were collecting research data.

It is critical that we are able to change capacity to handle changing demand, cost effectively, and still provide the service our stores and customers want.

The importance of flexibility was driven home in the survey results through a series of questions dealing with retailers' capabilities in this area. Retailers responded with a strong belief that their existing supply chain is prepared to cope with the challenges found in the current business environment (4.3 on a 5.0 scale). Similarly, the executives believe

their organizations are positioned to quickly respond to volatile customer demand (4.3 on a 5.0 scale).

Internal alignment. Retailer culture has traditionally been driven out of one of two other organizations: Merchandising or Store Operations. The importance of both is clear. Merchants decide what products to include in the selling assortment, and often determine how the product is to be displayed in the store. Their primary goal is to increase sales, and the incentive structure of the Merchant organization has historically been heavily weighted toward achieving revenue targets by category, with less emphasis on cost. The focus of Store Operations is producing a consistently high-quality shopping experience for the customer by ensuring the products are on the shelf, available for sale, and easy to locate. Stores are evaluated on a variety of metrics, but since they generally do not take part in the item selection process, and often do not have the ability to adjust inventory replenishment levels, they are put in a position of selling what has been given to them, again making revenue a primary measure.

R-SCM has generally been viewed as a support function with the conflicting goals of keeping costs low while achieving high service levels to the stores. Cases exist where the R-SCM organization may already be at the strategic core of these companies, as arguably is the case with Wal-Mart and the world class distribution operation it has used to facilitate its expansion to almost 4,000 stores in the U.S., but this is generally not the case. The executives explained a shift is occurring today as R-SCM has begun to take on a greater role. Retailers are beginning to break down the walls between these three operating silos and manage the process holistically. Several retailers described the existence of ongoing cross-functional teams that meet frequently to ensure Merchandising, R-SCM, and Store Operations stay on the same page.

We manage cross-functionally to ensure the supply chain is as seamless as possible and not silo-driven.

Our supply chain steering committee includes SCM leadership, the chief merchant, the CIO, the merchandise planning exec, and the CEO.

An important tool used to improve alignment across the organization is the elimination of silo-specific

metrics that may be in opposition to aggregate company goals, and the introduction of new, cross-functional metrics used to evaluate all three organizations. However, this is a nascent area where the executives were hesitant to share what they felt was competitively sensitive information. A few comments do provide insight into the value of aligning metrics.

My experience has taught me that if you just think about supply chain cost, you are not taking advantage of optimizing the entire end-to-end process from the customer's customer to the supplier's supplier.

A great retail organization not only understands the cost of running a supply chain, but understands how those costs are cascaded down onto the customer and back upstream to the supplier.

The survey provided interesting results regarding alignment as shown in Figure 6. Current R-SCM involvement with the Store Operations organization is significantly greater than with the Merchant organization, suggesting the importance of extending the supply to cover the "last 100 yards" to the store shelf (Taylor and Fawcett 2001), or as one executive told us:

The most powerful section of the supply chain is the last 50 feet.

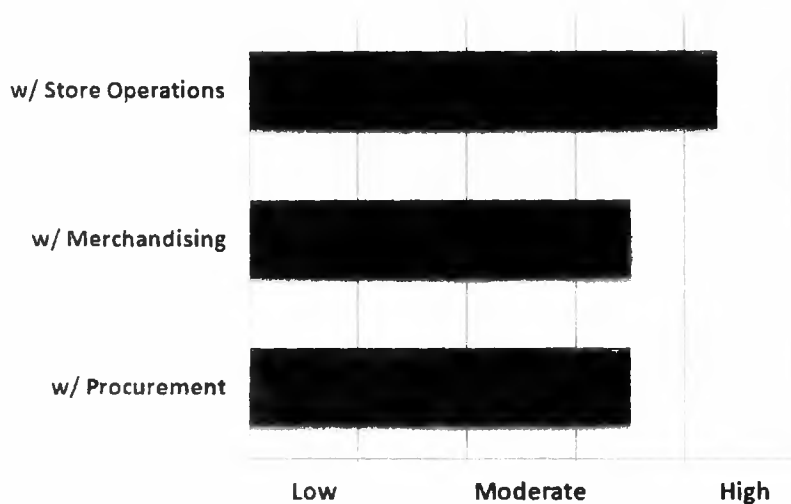
Developing the best people. Another foundational strength of the best R-SCM organizations is the people that keep the operation running. The great majority of executives described their high caliber managers and employees as one of their significant strengths. This was true across all types of retailers we spoke with from discount to high-end.

People are the main success factor behind any organization.

We have the best people in the industry.

We are evolving our culture, so that our associates are engaged in helping us identify where we have process failures, taking waste out, and reducing the number of defects that we produce.

FIGURE 6
R-SCM INVOLVEMENT WITH OTHER INTERNAL FUNCTIONS



An in-depth analysis of the transcripts finds two specific themes underpinning the “best people” comments. First, the best performing R-SCM organizations have developed a culture in which the majority of employees share a core belief in the mission of the organization, and are committed to helping the organization fulfill that mission. Cultural is shaped by company leaders and consistent support of R-SCM from top management is essential, particularly in the retail firms that have been primarily dominated by the merchant organization since the dawn of retailing. This support is often quite active, as multiple executives mentioned the importance of the CEO taking a major role in forming supply chain strategies.

I would argue that in the best supply chains, the architect is the CEO.

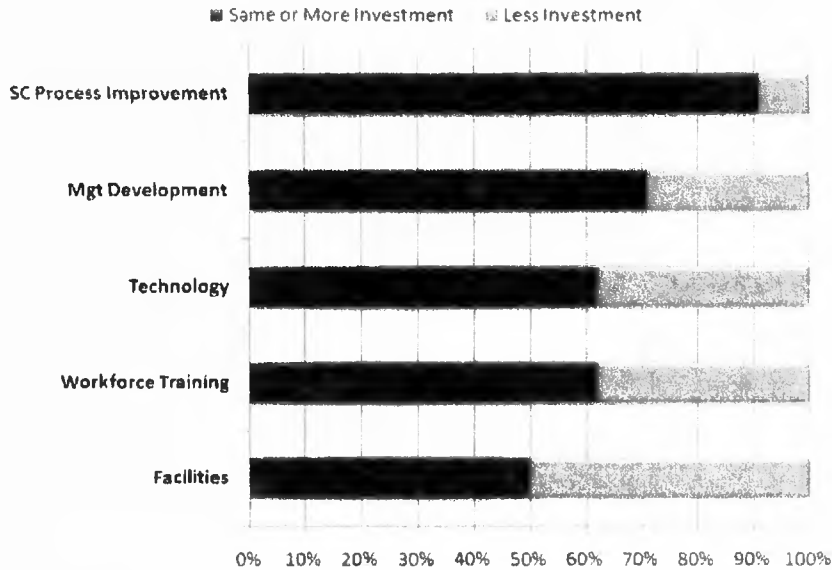
Second, the best-in-class organizations have developed formal training programs that are available to a wide

array of people, not just managers and executives. Existing infrastructure and dedicated people both represent barriers to competitors that are difficult to overcome, and the best retailers leverage these assets continually. Figure 7 shows the areas R-SCM executives are investing in as the economic outlook appears gloomy.

The best-in-class retailers continue to invest strategically as evidenced in 64% of survey respondents stating their supply chain investment plans for 2009 will be consistent with 2008 or greater. Spending is anticipated to be maintained or grow in the areas of process improvement (91%), management development (71%), and workforce training (62%).

We are meeting the current challenges yet preparing for coming out the other side.

FIGURE 7
PROJECTED INVESTMENT LEVELS IN KEY R-SCM AREAS



CONCLUSION

Understanding the role of R-SCM is critical as retailers face tremendous supply chain challenges, increasingly demanding consumers, and an insatiable appetite for reducing cost while maintaining high customer service levels. Meeting these challenges represents a significant obstacle and a significant opportunity, particularly in an environment of flat or negatives sales.

In this paper we have used a grounded theory method, validated using survey results, to identify the challenges R-SCM organizations face and the best practices used to overcome these challenges. Each of these issues represents an opportunity for future research and suggests research questions such as: What is an acceptable logistics cost (as a percentage of gross margin, or revenue)? How do we incorporate fully loaded cost into the sourcing decisions made by merchants? What is the right inventory turn rate by SKU class? What is the tradeoff between global sourcing, velocity, and markdown management? How is velocity best managed in the retail supply chain?

We identified four best-in-class capabilities used strategically by retailers to compete. No one retailer

was seen as possessing all these capabilities, yet many retailers were identified as exemplifying one or more of the capabilities. A possible area for follow-on research involves diving more deeply into each of the capabilities. For example, further study may uncover appropriate combinations of capabilities that provide better performance results than other capability sets. The potential of linking these capabilities across multiple supply chain firms to form inter-organizational capabilities is another area that may be extremely beneficial to practitioners.

Our findings have several implications for transportation providers. Feedback from the study participants demonstrates that each retailer should be treated as a unique group of customers with needs that are different from manufacturers and suppliers. In periods of volatility with respect to shipping volumes and fuel prices carriers may be able to differentiate their offering by understanding the specific requirements and volumes of each retailer they serve. If a retailer cuts inventory levels or reduces delivery frequency to reduce costs, transportation providers must be ready to develop new schedules, alter routes to limit empty miles, and consolidate freight to avoid "shipping air." These types of service modifications will help carriers hold on

to key accounts during a period of retailer belt-tightening.

A best practice of many of the study participants is increasing internal alignment across departments. Transportation providers are in a position to help retailers extend this alignment outside the firm. Aligning goals and performance metrics across both the retailer and the carrier should enhance performance and ultimately the nature of the supply chain relationship.

Also, transportation providers may use our findings in making strategic adjustments they are considering. Surviving the current soft economy requires that carriers focus on efficiencies and be willing to live with reduced volume for the time being. This may mean mothballing rolling assets or reducing some amount of the driver workforce to less than fulltime status, while being prepared to respond quickly when retail sales recover. Carriers with the ability to maintain their fleet and workforce will be positioned to provide additional capacity rapidly when shipping volumes increase at the end of the recession.

A more immediate opportunity may exist for carriers holding onto significant excess capacity. Retailers, and other supply chain members, that own in-house fleets may be interested in reducing or even eliminating the private fleet as a cost saving measure. This provides a strategic opportunity for transportation providers to acquire new business.

One of the recurring calls in academic research is the need to understand how the phenomena changes over time through the use of longitudinal research. Our goal is to expand this effort into an annual study that can be useful in understanding the role of R-SCM,

stay in touch with current trends and shifting challenges, and routinely update the best practices being used by retailers to manage their supply chain related issues. We believe understanding how capabilities evolve over time is an area of interest to the discipline.

The purpose of this research was to gain greater understanding of the issues and competitive strengths of retailers and while more remains to be learned, we believe the findings do shed light onto those areas. Our interviews and survey results confirm the importance of SCM to long-term retail success. This research begins to address the knowledge gap identified by the relative lack of research in the area. We have provided initial insight into the challenges of R-SCM, and described a number of the capabilities that characterize best-in-class R-SCM. This research lays a foundation for a more expansive agenda oriented toward uncovering the role of supply chain management in the retail industry.

All research has limitations and this effort is no different in that respect. While we firmly believe the findings are informative and robustly developed, the qualitative techniques used do not lend themselves to broad generalization of findings. The goal of the study was to explore and provide greater understanding of R-SCM, and establish a path for future research to follow.

ENDNOTE

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REFERENCES

- Bloom, Paul N. and Vanessa G. Perry (2001), "Retailer Power and Supplier Welfare: The Case of Wal-Mart," *Journal of Retailing*, 77 (3), 379-97.
- Bookbinder, James H. and Feyrouz H. Zarour (2001), "Direct Product Profitability and Retail Shelf-Space Allocation Models," *Journal of Business Logistics*, 22 (2), 183-208.
- Bowersox, Donald J., David J. Closs, and Theodore P. Stank (1999), *21st Century Logistics: Making Supply Chain Integration a Reality*. Oak Brook, IL: The Council of Logistics Management.
- Bradford, Kevin D., Anne Stringfellow, and Barton A. Weitz (2004), "Managing Conflict to Improve the Effectiveness of Retail Networks," *Journal of Retailing*, 80 (3), 181-95.
- Brown, James R., Robert F. Lusch, and Darrel D. Muehling (1983), "Conflict and Power-Dependence Relations in Retailer-Supplier Channels," *Journal of Retailing*, 59 (4), 53-80.
- Browna, James R., Rajiv P. Dant, Charles A. Ingene, and Patrick J. Kaufmann (2005), "Supply Chain Management and the Evolution of the "Big Middle"," *Journal of Retailing*, 81 (2), 97-105.

- Charmaz, Kathy (2006), *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Thousand Oaks, CA: Sage Publications, Inc.
- Davies, Malory (2009), "Identifying the Real Challenges," *Logistics Management*, 48 (2), 5.
- Davis, Beth R. and John T. Mentzer (2006), "Logistics Service Driven Loyalty: An Exploratory Study," *Journal of Business Logistics*, 27 (2), 53.
- Day, George and David Montgomery (1999), "Charting New Directions for Marketing," *Journal of Marketing*, 63, Special Issue, 3-13.
- De Luca, Luigi M. and Kwaku Atuahene-Gima (2007), "Market Knowledge Dimensions and Cross-Functional Collaboration: Examining the Different Routes to Product Innovation Performance," *Journal of Marketing*, 71 (1), 95-112.
- Deighton, John and Das Narayandas (2004), "Stories and Theories," *Journal of Marketing*, 68 (1), 19-20.
- Dillman, Don A (2000), *Mall and Internet Surveys* (Second ed.). New York: John Wiley and Sons.
- Fernie, John, Francis Pfab, and Clive Marchant (2000), "Retail Grocery Logistics in the UK," *International Journal of Logistics Management*, 11 (2), 83-92.
- Flint, Daniel J., Everth Larsson, Britta Gammelgaard, and John T. Mentzer (2005), "Logistics Innovation: A Customer Value-Oriented Social Process," *Journal of Business Logistics*, 26 (1), 113-47.
- Flint, Daniel J., Robert B. Woodruff, and Sarah Fisher Gardial (2002), "Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context," *Journal of Marketing*, 66 (4), 102-17.
- Frankel, Robert, Dag Naslund, and Yemisi Bolumole (2005), "The "White Space" of Logistics Research: A Look at the Role of Methods Usage," *Journal of Business Logistics*, 26 (2), 185-208.
- Frazelle, E.H. (2008), "Benchmarks in Operations and Fulfillment, 2nd Year Results," in Conference on Operations and Fulfillment Penton Media.
- Fugate, Brian, Funda Sahin, and John T. Mentzer (2006), "Supply Chain Coordination Mechanisms," *Journal of Business Logistics*, 27 (2), 129.
- Gassenheimer, Jule B. and Rosemary Ramsey Lagace (1994), "The Impact of Dependence on Dealer Satisfaction: A Comparison of Reseller-Supplier Relationships," *Journal of Retailing*, 70 (3), 196-96.
- Gibson, Brian J., John T. Mentzer, and Robert L. Cook (2005), "Supply Chain Management: The Pursuit of a Consensus Definition," *Journal of Business Logistics*, 26 (2), 17-25.
- Giunipero, Larry C., Kishore Gopalakrishna Pillai, Stephen N. Chapman, and Ronald A. Clark (2005), "A Longitudinal Examination of JIT Purchasing Practices.," *International Journal of Logistics Management*, 16 (1), 51-70.
- Glaser, Barney G. (1998), *Doing Grounded Theory: Issues and Discussions*. Mill Valley, CA: Sociology Press.
- (1978), *Theoretical Sensitivity*. Mill Valley, CA: Sociology Press.
- Glaser, Barney G. and Anselm L. Strauss (1967), *The Discovery of Grounded Theory*. Chicago, IL: Aldine Transaction.
- Golicic, Susan L. and John T. Mentzer (2005), "Exploring the Drivers of Interorganizational Relationship Magnitude," *Journal of Business Logistics*, 26 (2), 47-71.
- Harding, Forrest E. (1998), "Logistics Service Provider Quality: Private Measurement, Evaluation, and Improvement.," *Journal of Business Logistics*, 19 (1), 103.
- Hines, Peter, Mark Francis, and Kate Bailey (2006), "Quality-based Pricing: A Catalyst for Collaboration and Sustainable Change in the Agrifood Industry?," *International Journal of Logistics Management*, 17 (2), 240-59.
- Holcomb, Mary C. and Karl B. Manrodt (2008), "The Masters Increase Their Lead," *Logistics Management*, 47 (9), 37-42.

- Hunt, Shelby D. (1992), "For Reason and Realism in Marketing," *Journal of Marketing*, 56 (2), 89-102.
- Ingene, Charles A. and Mark E. Parry (2000), "Is Channel Coordination All It Is Cracked Up To Be?," *Journal of Retailing*, 76 (4), 511-47.
- Kavanagh, Donncha (1994), "Hunt versus Anderson: Round 16," *European Journal of Marketing*, 28 (3), 26-41.
- Kent, John L. and John T. Mentzer (2003), "The Effect of Investment in Interorganizational Information Technology in a Retail Supply Chain," *Journal of Business Logistics*, 24 (2), 155-75.
- Khan, Omera, Martin Christopher, and Bernard Burnes (2008), "The Impact of Product Design on Supply Chain Risk: A Case Study," *International Journal of Physical Distribution & Logistics Management*, 38 (5), 412-32.
- Kirca, Ahmed H., Satish Jayachandran, and William Bearden (2005), "Market Orientation: A Meta-Analytic Review and Assessment of Its Antecedents and Impact on Performance," *Journal of Marketing*, 69 (2), 24-41.
- Kohli, Ajay K. and Bernard J. Jaworski (1990), "Market Orientation: The Construct, Research Propositions, and Managerial Implications," *Journal of Marketing*, 54 (2), 1-18.
- LaLonde, Bernard J. and James M. Masters (1994), "Emerging Logistics Strategies.," *International Journal of Physical Distribution & Logistics Management*, 24 (7), 35-47.
- Langley, Jr C. John (2007), "The State of Logistics Outsourcing: 2007 Third-Party Logistics," in Council of Supply Chain Management Professionals. Philadelphia, Pennsylvania: C. John Langley and Caggemini U.S., LLC.
- Lee, Chang Hwan and Byong-Duk Rhee (2008), "Optimal Guaranteed Profit Margins for Both Vendors and Retailers in the Fashion Apparel Industry," *Journal of Retailing*, 84 (3), 325-33.
- Levy, Michael and Dhruv Grewal (2000), "Supply Chain Management in a Networked Economy," *Journal of Retailing*, 76 (4), 415-29.
- Lieb, Robert and Karen Butner (2007), "The North American Third-Party Logistics Industry in 2006: The Provider CEO Perspective," *Transportation Journal*, 46 (3), 40-52.
- Liker, Jeffery K. and Thomas Y. Choi (2004), "Building Deep Supplier Relationships," *Harvard Business Review*, 82 (12), 104.
- Lowson, Robert H. (2001), "Retail Operational Strategies in Complex Supply Chains," *International Journal of Logistics Management*, 12 (1), 97-111.
- MacInnis, D. J. (2005), "Them Versus Us: Woes on the Bifurcation of the Academic Marketing Discipline," *Journal of Marketing*, 69 (4), 1-25.
- Maloni, Michael and W. C. Benton (2000), "Power Influences in the Supply Chain," *Journal of Business Logistics*, 21 (1), 49-73.
- Manrodt, Karl, Brian J. Gibson, and Stephen M. Rutner (2005), "Has Supply Chain Management Found It's Seat at the Table?," *Harvard Business Review Supply Chain Management*, 1 (1).
- Mejias-Sacaluga, Ana and J. Carlos Prado-Prado (2002), "Integrated Logistics Management in the Grocery Supply Chain," *International Journal of Logistics Management*, 13 (2), 26-77.
- Mello, John E., Theodore P. Stank, and Terry L. Esper (2008), "A Model of Logistics Outsourcing Strategy," *Transportation Journal*, 47 (4), 5-25.
- Mentzer, John T. (2004), *Fundamentals of Supply Chain Management*. Thousand Oaks, CA: Sage.
- Mentzer, John T., Soonhong Min, and Zach G. Zacharia (2000), "The Nature of Interfirm Partnering in Supply Chain Management," *Journal of Retailing*, 76 (4), 549-68.
- Min, Soonhong and John T. Mentzer (2004), "Developing and Measuring Supply Chain Management Concepts," *Journal of Business Logistics*, 25 (1), 63-99.

- Mollenkopf, Diane, Ivan Russo, and Robert Frankel (2007), "The Returns Management Process in Supply Chain Strategy," *International Journal of Physical Distribution & Logistics Management*, 37 (7), 568-92.
- Morrison, Gina Pagucia and Anca va Assendelft (2006), "Charting a New Course: The Retail Merchandising Supply Network," *Supply Chain Management Review*, 10 (8), 54-60.
- Mukhopandhyay, Samar K. and Robert Setaputra (2006), "The Role of 4PL as the Reverse Logistics Integrator," *International Journal of Physical Distribution & Logistics Management*, 36 (9), 716-29.
- National Retail Federation and IBM (2009), "Retail Horizons: Benchmarks for 2008, Forecasts for 2009." 7th ed. Washington, D.C.: National Retail Federation.
- Nativi, Andy and Douglas Barrie (2006), "Billion-Dollar Baby," *Aviation Week & Space Technology*, 165 (20), 90-90.
- Noble, Charles H. and Michael P. Mokwa (1999), "Implementing Marketing Strategies: Developing and Testing a Managerial Theory," *Journal of Marketing*, 63 (4), 57-73.
- Pappu, Madhav and Ray A. Mundy (2002), "Understanding Strategic Transportation Buyer-Seller Relationships from an Organizational Learning Perspective: A Grounded Theory Approach," *Transportation Journal*, 41 (4), 36-50.
- Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, 49 (4), 41.
- Pfohl, Hans-Christian and Hans Peter Buse (2000), "Inter-organizational logistics systems in flexible production networks An organizational capabilities perspective," *International Journal of Physical Distribution & Logistics Management*, 30 (5), 388.
- Price, Philip M. (2006), "A Model for Logistics Management in a Post-Soviet Central Asian Transitional Economy," *Journal of Business Logistics*, 27 (2), 301.
- Sanders, Nada R. and Robert Premus (2005), "Modeling the Relationship Between Firm IT Capability Collaboration, and Performance," *Journal of Business Logistics*, 26 (1), 1-23.
- Sillince, J A A and G M H Sykes (1993), "Integrating MRPII and JIT: A Management Rather Than a Technical Challenge," *International Journal of Operations & Production Management*, 13 (4), 18.
- Sinkovics, Rudolf R. and Anthony S. Roath (2004), "Strategic Orientation, Capabilities, and Performance in Manufacturer - 3PL Relationships," *Journal of Business Logistics*, 25 (2), 43-64.
- Slater, Stanley F and John C. Narver (1995), "Market Orientation and the Learning Organization," *Journal of Marketing*, 59 (July), 63-74.
- Taylor, John C. and Stanley E. Fawcett (2001), "Retail On-Shelf Performance of Advertised Items: An Assessment of Supply Chain Effectiveness at the Point of Purchase," *Journal of Business Logistics*, 22 (1), 73-89.
- Van Hoek, Remko I. (1999), "The Role of Transportation in Customized Supply Chains," *Journal of Transportation Management*, 11 (1), 50-64.
- Waller, Matthew A., Heather Nachtmann, and Justin Hunter (2006), "Measuring the Impact of Inaccurate Inventory Information on a Retail Outlet," *International Journal of Logistics Management*, 17 (3), 355-76.
- Zacharia, Zach G. and John T. Mentzer (2007), "The role of Logistics in New Product Development," *Journal of Business Logistics*, 28 (1), 83-110.

AUTHOR BIOGRAPHY

C. Clifford Defee (Ph.D., University of Tennessee) is assistant professor of supply chain management at Auburn University. Previously he was chief operating officer of international outsourcing firm PFSweb, Inc., based in Plano, TX. He earned BBA and MBA degrees from Texas A&M University. His research interests include supply chain leadership, supply chain structure and performance, and the creation of dynamic capabilities in an interorganizational context. His work has appeared in the *Journal of Business Logistics*, the *International Journal of Logistics Management*, the *Journal of Transportation Management*, *Supply Chain Management: An International Journal* and *Supply Chain Forum*.

AUTHOR BIOGRAPHY

Wesley S. Randall (PhD. University of North Texas) currently serves as Assistant Professor of Supply Chain Management at Auburn University. Prior to entering academia, Dr. Randall acquired considerable practical experience serving as United States Air Force Officer, and NATO staff officer, supporting global operations and research, development and manufacturing efforts involving the F-16, A-10, F-117, F-22, & NATO AWACS. Along with being actively involved in research and publication dealing with performance based logistics strategies, Wesley also acts as the Academic Advisor to the Product Support Action Team tasked to chart the direction for Department of Defense post production support for the new administration. Wesley teaches undergraduate supply chain decision making and air transportation management. His work has appeared in the *Journal of Supply Chain Management*, the *International Physical Distribution and Logistics Management*, the *Journal of Transportation Management*, *Aviation Week and Space Technology: Maintenance Repair and Overhaul*, *Journal of Knowledge Management and Produce Quarterly*.

AUTHOR BIOGRAPHY

Brian J. Gibson is professor of supply chain management at Auburn University, brian.gibson@auburn.edu. He received a Ph.D. in Logistics and Transportation from the University of Tennessee. His primary research interests are in the area of supply chain training & development, performance analysis, and retail logistics.