

Editorial

The Luxury Paradox: How Systems Thinking and Supply Chain Collaboration Can Bring Sustainability Into Mainstream Practice

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It is not hard to imagine sustainability behaviors that could be labeled as “luxury,” but for many sustainability efforts this might not be descriptive. Systems thinking is at the core of the total cost concept of logistics and this is where there is often lots of overlap and opportunity for logistics and sustainability initiatives. Some companies are now sharing reliable product level information and performance indicators that are crucial to successful logistics as an outcome of collaboration on sustainability initiatives. In some cases, various sustainability performance metrics can serve as proxy measures or leading indicators for logistics costs and service measures. They can also serve as a point of collaboration for multiple firms in the supply chain.

Keywords: total cost concept; systems thinking; supply chain management; sustainability

INTRODUCTION

Over the years, as we have learned about sustainability initiatives, we have been struck by the frequency with which we heard familiar terminology. Consider for example, “the total cost of sustainability.” Such language is at the heart of systems thinking—a central tenant of modern logistics and supply chain management. Although we already had interest in exploring the interactions between sustainability and core supply chain phenomena, we were encouraged to do so from dialog with a colleague, Jonathan L. Johnson, who is deeply immersed in the quest to overcome the challenges inherent in making sustainability a mainstream practice.

Indeed, in an earlier editorial addressing “supply chain game changers...and forces that impede supply chain design,” we described proactive supply chain risk management and sustainability as costly “luxuries” that are often treated as “peripheral” decision areas (Fawcett and Waller 2014). One might argue that all corporate social responsibility (CSR) initiatives could be described this way—they are vital to long-term corporate success, but they are managed outside of the immediate primary value-creation scope of supply chain managers. As a result, these activities are managed as an afterthought or in an ad hoc manner. Perhaps unsurprisingly, this contextualization of CSR attracted the attention of readers interested in corporate sustainability. In the spirit of our earlier call for dialog—conversation that is open to others’ points of view (Fawcett and Waller 2013)—we have invited Jon to further explore these ideas with us.

LUXURY AND PERIPHERAL

The word “luxury” caught the eye of many readers. By luxury, we meant activities that, although desirable or even necessary

among some social sectors, are costly to the firm and its customers. Indeed, luxury goods are often defined by the price premium they command. However, for some, “luxury” has a less-positive connotation; that is, extravagant self-indulgence. We can certainly imagine sustainability behaviors that would fit this latter description. Consider, for example, a manager donating company funds to a favorite cause that is wholly irrelevant to the company. However, the real challenge we sought to bring into the spotlight is how supply chain decision makers can make sustainability affordable for the masses. Simply put, can sustainability in all its forms become mainstream rather than niche or localized practice?

The language “peripheral” is another matter. Many sustainability issues—especially those related to the development and marketing of sustainable products—are driven outside logistics and supply chain management. These issues are peripheral. By contrast, many activities that lead to more sustainable operations fall squarely in supply chain managers’ decision core. Examples here tend not to be transformative, but that is not to say that many have not been substantial. A good example may be found at Walmart U.S. Logistics, which improved fleet efficiency over 82% from 2005 to 2014, a savings of \$64 million. Walmart leaders attributed these efficiency gains to Lee Scott’s ambitious sustainability strategy (Walmart Stores, Inc 2014). That is, Walmart could not have achieved these efficiency gains with ad hoc initiatives. Success required the application of total costing analysis and systems redesign, which were at the heart of Walmart’s sustainability strategy. Of course, systems thinking is also at the core of the total cost concept of logistics.

SYSTEMS THINKING AND BUSINESS PROCESS INTEGRATION

It is not uncommon for product life cycle analyses to show that some of the greatest environmental gains can come from improvements in yield relative to miles driven, resources consumed, electricity used, and waste generated—all actions that

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can improve efficiencies that contribute to the bottom line. One might reasonably ask if projects that are so clearly aligned with financial interests, so core to the firm's strategy and operations, should even count as sustainability—an argument occasionally made by critics of corporate sustainability initiatives. Indeed, consumers and nongovernmental organizations often do not give efficiency maximizers credit for reducing their carbon footprint or other improvements in sustainability. Yet, to the extent that sustainability drives the search for innovative integrative logistics and operating solutions based on systems thinking and total costs—for example as occurred in the Walmart U.S. Logistics case—sustainability is not only just consistent with world-class logistics but it also empowers enhanced supply chain operations.

Of course, sustainability challenges frequently span broader sections of supply chains, and as such may remain outside the core of supply chain management. This is where the challenges we identified in our earlier editorial are most relevant, among them establishing organizational buy-in, developing guiding measures, and promoting supply chain wide behavioral change. These are big problems. They are problems that reside beyond the scope of most individual organizations to solve. As such, progress has been slower than early advocates had hoped. This is partly a function of the enormity of the challenge of reengineering complex supply chains, along with uncertainties in the political environment.

Again Walmart is an instructive example. "Supply chain" is littered throughout its latest sustainability report (Walmart Stores, Inc 2014), including local and even "informal" supply chains that have required system changes to accommodate smaller and more numerous deliveries direct to stores and distribution centers. There are also references to global supply chain nodes that are far removed from the retailer's gate. Keenly aware of the difficulties posed by lack of reliable product level information from its supply chain, it has made progress in developing guiding measures, primarily through its support of The Sustainability Consortium (TSC). Suppliers, at Walmart's invitation, have begun to report product supply chain information against performance indicators developed by TSC into an SAP administered database that will also be made available to other retailers. This product-sustainability information is not to be confused with the point-of-sale and other sales and logistics data shared with suppliers by Walmart. But, the open exchange of sustainability information is consistent with Walmart's culture of sharing data with suppliers.

PRODUCT LEVEL INFORMATION AND PERFORMANCE

Reliable product level information and performance indicators are crucial to successful logistics—and are certainly not a luxury. World-class logistics requires minimization of total cost across the supply chain, and many of these costs cannot be measured directly. In some cases, various sustainability performance metrics can serve as proxy measures. Metrics that tap energy efficiency, waste reduction, and water conservation initiatives all have the potential to reduce total costs. In addition, CSR metrics related to worker health and safety can be leading indicators of

shortages due to conflicts resulting from labor disputes, factory disasters, and foreign government relations.

Reliable product level information and performance indicators are also crucial to successful supply chain management. Supply chain excellence requires the integration of business process with customers and suppliers. Integration of these business processes requires performance metrics, understanding of the business processes per se, coordination, and collaboration. Collaboration requires trust and transparency. Vitality, well-constructed sustainability and CSR metrics can facilitate trust and transparency, as is being discovered by the work of the TSC. While often arduous, developing performance indicators through an iterative multistakeholder process that is vetted against published scientific evidence is critical to aligning sustainability and supply chain decision making.

This is an important juncture. If Walmart and other retailers—many of whom are under increasing pressure by campaigning NGOs to address global supply chain issues—were to meaningfully incorporate this newly available product supply chain information into their procurement decisions, what has been peripheral may quickly become central. Among other things, such a shift in decision-making priorities and processes could create additional demand for product tracing (including chain-of-custody certifications), the creation of alternative supply chains (including bulk commodities), new procurement practices, and supply chain auditing. All of these can be helpful in calculating total logistics costs to better reengineer supply chains and drive continuous improvements.

MULTIFIRM SUPPLY CHAIN COLLABORATION

Multifirm collaboration is on the rise in many supply chains, especially Walmart's supply chain. TSC is an example of this new level of collaboration. TSC's initial focus has been on creating a credible measurement and reporting system for social and environmental impacts from the production, distribution, use, and disposal (or reuse) of consumer goods.

One of the biggest obstacles to operate at a supply chain systems level has been the lack of credible information from across the supply chain and insufficient understanding of the underlying issues. TSC addresses the credibility issue by explicitly grounding its measurement and reporting systems in the best available science and by collecting information from multiple social sectors, including researchers, supply chain members, NGOs, and others (Dooley and Johnson 2015).

The system begins by defining product categories that are sufficiently broad to efficiently encompass as many stock keeping units as possible, but sufficiently narrow to ensure that underlying environmental and social issues are accurately identified. Information on hot spots and best practices—which TSC calls "improvement opportunities"—is then gathered from relevant experts from the aforementioned sectors and examined against the published scientific literature. This leads to a much richer understanding of the supply chain as a whole as well as the underlying processes and costs, leading to improved logistics and supply chain management.

Information with sufficient scientific support is then translated into guidance documents that are written for business decision

makers as well as a limited number of key performance indicators (KPIs). Those materials undergo another round of intensive stakeholder review and revision. Once finalized, the guidance documents and KPIs for each product category are published in the form of a “Toolkit.” Over 100 product category Toolkits covering a broad array of products have been published.

Suppliers can purchase Toolkits and report against their KPIs, usually at the invitation of a retailer, on a system developed and managed by SAP. Suppliers can opt to have SAP share their data with designated retail partners. Retailers can download the guidance documents and the data from their suppliers for use in their procurement decisions, including comparing the performance of their suppliers within categories. Thus far, Walmart is the only retailer to rely on product-sustainability data at scale, but TSC is in a pilot phase project with other retailers.

CONCLUDING DISCUSSION

Systems thinking is at the core of logistics and supply chain management decision making. Systems thinking is also indispensable in efforts to broaden sustainability initiatives beyond efficiency optimization. Simply put, systems thinking enhances compatibility between supply chain and sustainability decisions, making it possible for supply chain decision makers to bridge sustainability’s luxury conundrum. More research is needed to understand where logistics management objectives and sustainability

initiatives both coincide and compete. Similarly, business process integration and multifirm collaboration are at the heart of supply chain management as well as a number of sustainability initiatives. There is a lack of understanding of the overlap between these concepts. In addition, many of the sustainability metrics may serve as proxies and leading indicators for various logistics costs and service metrics. This is based on casual observation but research is needed to dig deeper into this concept.

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