

Review of Literature and Curricula in Smart Supply Chain & Transportation

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Image source: <https://www.jct600.co.uk/blog/future-of-motoring/what-will-motoring-look-like-70-years-from-now/>

Evolving advanced Information Technology (IT) systems present both new opportunities and unique challenges for modern organizations. We consider the smart supply chain as a modern supply chain system emerging in response to the recent IT-initiated movements, such as the smart city, e-supply chain, IoT, or smart factory. In response to requirements for smart city projects around the world, current transportation or logistics systems need to adopt a high degree of smart supply chain activities. Given that the concept of a smart supply chain management (SCM) and the corresponding literature are still at a preliminary stage, there is an urgent need to discover what specific curricular items should be considered by the real-world practitioners.

Study Methods

Motivated by the lack of sufficient information regarding the smart SCM, this report provides a review of existing SCM literature and current course

offerings in order to identify unexplored implications of smart SCM (SSCM) with a focus on California. Search efforts focused on the courses that contain at least one of the following keywords: “supply chain management,” “supply chain,” “value chain,” “logistics,” “transportation,” “enterprise resource planning/ERP,” “radio frequency identification/RFID,” and “SAP.”

Findings

The researchers identified 137 courses offered by 34 universities, among which 107 are taught by business schools (colleges), 27 by non-business schools (colleges), and 3 jointly by both schools (colleges). Among these 137 courses, the syllabi of only 26 courses (19%) cover SSCM concepts, tools, or skills. The most frequently-discussed topics are ERP, SCM Lab sessions/Simulations, and RFID. The low coverage of SSCM-related contents or topics in high education courses signifies a need for further research and other efforts towards

equipping students with the smart supply chain/ transportation knowledge and skills needed by the real world.

Recommendations

The researchers developed a conceptual framework that includes key drivers for a successful smart supply chain management and should be incorporated into curriculum (See Figure 1). Specifically, practitioners should know how to acquire meaningful information from individual data sets. After obtaining meaningful information, the

practitioners should understand the importance of supply chain collaboration to better operationalize such information. Since practitioners may face newly-introduced infrastructure, they need to exploit innovation contexts for efficient value creation processes.

This research can serve as a the stepping stone for future researchers and educators. Using the framework delivered herein, researchers can consider new research opportunities and educators can redesign their curricula to provide a better understanding of smart SCM or transportation management to the next generation of SCM/ transportation practitioners.

The triangulation of key drivers, such as collecting meaningful information, information sharing, and innovative supply chain collaboration, can lead to effective smart supply chain management.

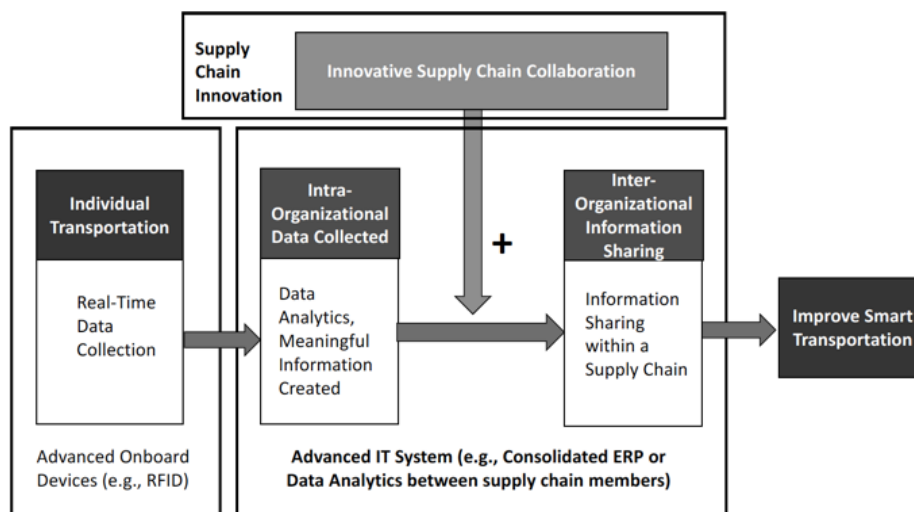


Figure 1. Framework for Effective Smart Supply Chain Management

About the Authors

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/1737.html



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