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INTRODUCTION

With the rapid changing business landscape, a global supply chain has to synchronization with demand uncertainty, higher operation and business risk and increased competitive intensity. The success of global manufacturing and services firm is entirely depending upon the ability to restructure its supply chain to dynamic changes in customer needs and preferences. Recent times witnessed “flexible” and more “responsive” Supply Chains to serve multiple objectives- increasing customer bases and enhancing long-term profitability, besides improving efficiency for competitiveness.

Conceptually, the global supply chain facilitates functions such as purchasing, operations, manufacturing and logistics and contributes a vital role in overall brand building of a firm (Narasimhan & Talluri, 2009). There is a transformation in the scope of issues related to global supply chains – from operational issues (such as, manufacturing and efficiency) to market issues (such as competitive intelligence, customer orientation, Supply Networks, Business environment, Shortened product cycles) (Kuei, Madu, Lin, & Chow, 2002; Lin, Chow, Madu, Kuei, & Yu, 2005). The transformation leads to opening of enormous opportunities especially in multilayered supplier-customer relationships, outsourcing decisions, products design, etc. (Lin et al., 2005). However, some scholars argue that the importance of services has been underemphasized (Metters & Marucheck, 2007). Therefore, companies in the supply chain must understand the needs of service stakeholders in order to identify problems and opportunities.

The aim of this book is to give students, researchers, and practitioners a critical understanding of current academic and pragmatic approaches to Global Supply Chain Management. With these book readers able to:

- Assess the structure, nature, and management of Global Logistics and Supply Chain Management and the changing external environment in which business operate;
- Evaluate the tools and technique logistics managers may use to measure cost and performance;
- Examine the role of logistics in ensuring customer satisfaction in different areas of business activity;
- Evaluate logistics trade-offs in relation to integrated strategy;
- Debate the impact of logistics decisions on the environment and global industries;
- Analyze the contribution of e-business logistics to competitive strategy, productivity, and value advantage;
- Judge critically concepts and methods applicable to the implementation of Global Logistics;
- Identify how major functional areas within business influence ICT; and
- Engage in and reflect upon problem solving in Global Supply Chain.
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The book contains 13 excellent chapters (organized in 4 sections) that examine most of the key aspects of Global Supply Chain. The first section examines the “Global Supply Chain Operations and Management”:

- Introduction to Global Logistics and Supply Chain and web technologies;
- Usage of Supply Chain Analytics for Multi-criteria decision making;
- Logistics and Transportation decision using routing problems and algorithms;
- Scenario planning for future global supply chain;
- Systems for Knowledge Management for effective global networked supply chain.

The second part of the book looks at the element of “Global Service Supply Chain Management: Strategies and Practices”:

- Framework for Operational efficiency of 3 PL in closed loop supply chain in emerging market.
- Mapping Tourism Supply Chain into an emergency management for Disaster Risk Planning and its reduction.
- Role of Lean and Green Supply Chain Strategies in Global Service Supply Chain.

The third part of the book on evolving business discusses the future research directions for “Evolving Business: Contemporary Supply Chain Issues/Research Advancement in Global Supply Chain”:

- Global Strategies for Micro and Small Businesses- Handicraft and Handlooms in South Asia- A Case Study of India;
- Customer purchasing intentions in Apparel Business- Evidence from India;
- Determinants of key performance measures for sustainable manufacturing in global SMEs;
- Readiness issues towards cold Chain management in Emerging Economies.

The Forth and the last part of the book on evolving business discusses the future research directions for “Evolving Business: Contemporary Supply Chain Issues/Research Advancement in Global Supply Chain”:

- Global Challenges and issues in e-banking services and operations.

This book is considered to be of aid to the following prospective audiences:

- First of all, students (both at final year Undergraduate and Postgraduate level) who study Business, Computer Science and Information Systems, Logistics and Supply Chain Management.
- Moreover, researchers in the above fields.
- Practitioners that either hold the position in the logistics system of companies/organizations or work in third-party logistics services providers.

The Editors’ intention was to help the above groups by giving them an easy to read and understand book with the right depth and the right amount of topic coverage.
ORGANISATION OF THE BOOK

The book is organized in four sections. Each section refers to a specific area regarding Global Supply Chain Design and Implementation in service and manufacturing settings.

Section 1 - Global Supply Chain Operations and Management

The first section serves as an introduction to Global Supply Chain Operations and Management. Its five chapter synthesize the literature and provide definitions of Global Supply Chain Strategies and their implementation. It also analyzes the main concept and parameters in Service and Manufacturing Industry.

Chapter 1: Fashion Supply Chain Optimization: Linking Make-to-Order Purchasing and B2B E-Commerce

The chapter reflects various aspects of supply chain. Precisely, in certain supply chains, characterized by long trade routes and short product life cycles, the make-to-order (MTO) principle of purchasing is dominant in securing the match between customers’ commitment and ordered goods. Whereas reordering is a rare option in case of undersupply, overstocking is a more obvious risk closely associated with the speculation as a principle of supply. The risk of loss can be addressed by linking detailed knowledge on inbound logistics to the market by use of e-business solutions. Along the B2B line of the supply chain, the owner of an inbound shipment can exhibit a host of initiatives to secure that unsold goods are sold whether they are on board a ship, a truck or in warehouses or terminals. This chapter describes a multi-method approach using both traditional B2B and B2C methods of sales initiatives all implemented as an e-business system connecting inbound and outbound supply chains.

Chapter 2: Intuitionistic Fuzzy Sets-Based Method for Multi-Criteria Decision-Making

In this study, the familiarity or expertise of the experts with the evaluation areas (called confidence levels) is also incorporated in the multi-criteria decision making (MCDM) process under intuitionistic fuzzy environment, i.e. two types of information is involved: one is the performance of the evaluation evaluation areas objects under intuitionistic fuzzy environment and other is the familiarity or expertise with the. In this direction recently, Yu (2014) proposed some operators to aggregate the two types information described above effectively. In this paper, the weighted confidence level is used instead of simply confidence levels as used by Yu (2014) to enhance MCDM method under intuitionistic fuzzy environment. So, two operators such as intuitionistic fuzzy weighted averaging operator under weighted confidence level (IFWAOUWCL) and intuitionistic fuzzy weighted geometric operator under weighted confidence level (IFWGOUWCL) are introduced to aggregate the two types of information. Finally, the presented technique is implemented effectively to a real life problem of supply selection.


Vehicle Routing Problem (VRP), a well-known combinatorial optimization problem had been presented by Dantzing and Hamser in 1959. The problem has taken its inspiration from the transport field. In real field environment, a lot of variants of the problem exist that actually belongs to the class of NP-hard
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problem. Dynamic Vehicle routing problem (DVRP) is one of the variant of VRP that varies with respect to time. In DVRP, new customer orders appear over time and new route must be reconfigured at any instantaneous time. Although, some exact algorithms such as dynamic programming methods, branch and bound etc. can be applied to find the optimal route of a smaller size VRP. But, These Algorithms fail to give the solution of existed model of VRP in real field environment under given real time constraints. Courier services, dial a ride services and express mail delivery etc. are the few examples of real field environment problems that can be formulated in the form of DVRP. In this chapter, A novel variants of DVRP named as DVRP with geographic ranking (DVRP-GR) has been proposed. In DVRP-GR, geographical ranking, customer ranking, service time, expected reachability time, customer satisfaction level have been optimized.

Chapter 4: Scenario Planning – Preparing the Future of Global Supply Chains

A crystal ball methodology that foresees the future is probably one of the most sought-after tools by any organization operating in this ever-changing world. The ability to correctly navigate through uncertainties and drastic changes in the external environment is found to be limited when an inward perspective of the company is utilized. The measurement of performance indicator and the mining of usable information in a sea of big data, among other approaches, may provide limited results in guiding the company towards choosing effective strategic decisions that will sustain the company in the future. This chapter is an effort to pursue an alternative perspective in planning by using Scenario Planning, a group thinking process that encourages knowledge exchange and development of mutual deeper understanding of central issues important to the future of an organization. Applying Scenario Planning framework, a structured approach is elaborated to describe a replicable methodology for sensing critical uncertainties in the external environment.

Chapter 5: Systems for Knowledge Management along the Supply Chain

This chapter explains the role of knowledge management systems, whether technology-based or people-based, in service supply chain management. It will review existing theory, technologies and practice at all levels from within one organization to an integrated system along the entire supply chain. We will not attempt to define knowledge precisely here: philosophers have addressed this issue for millennia without reaching universal agreement. Rather, we take the pragmatic stance that knowledge is whatever the people involved in a particular supply chain system say that it is. We do however need to define both knowledge management and, in the next section, knowledge management systems.

Section 2 - Global Service Supply Chain Management: Strategies and Practices

The Global Service Supply Chain functions are the main topic of this section. Functions, such as procurement, distribution and transport. Traceability, customer relationship management, supplier relationship management, and enterprise resource planning, are discussed in this section based on real life examples.
Chapter 6: Operational Efficacy of 3PL in Reverse Logistics and Closed Loop Supply Chain – Service Quality Challenges in Emerging Markets

The paper presents an empirical research aims to establish service quality relationship between focal firm and 3PL operations and their performance in a reverse logistic and closed loop supply chain particularly in emerging economies like India and China. Seven Constructs has been formulated viz. Outsourcing contract between focal firm – 3PL; Supply Chain Integration; 3PL operational assessment; Service Quality; Return shipping; Lead-time; Reverse logistics cost. Five hypotheses were tested using Confirmatory Factor Analysis (CFA). The results shows the efficacy of reverse logistics determine the customer satisfaction, whereas the degree of supply chain integration between focal firm and 3PL. The research gives broad insight on the 3PL functionality in reverse logistics especially for consumer centric emerging market places.

Chapter 7: Mapping Sustainable Tourism into Emergency Management Structure to Enhance Humanitarian Networks and Disaster Risk Reduction Using Public-Private Partnerships (PPP) Initiatives in Himalayan States – The Global Supply Chain Issues and Strategies

The overall aim of the paper is to analyze supply chain performance in humanitarian context, in aligning with PPP interventions for Himalayan States. A preliminary Framework for Performance evaluation of private and public actors, with seven constructs has been formulated viz. Mutual Coordination; Risk Management; Organizational Structure; Humanitarian Operational Assessment; Service Quality; Operation Flexibility; Humanitarian Logistics cost has developed for Humanitarian operations in Himalayan region. Five Hypotheses were tested using Confirmatory Factor Analysis (CFA). The results show that PPP efficacy in humanitarian logistics enhances the sustainability of local economy. Implementation of Public Private Partnership (PPP) as a new strategy in managing disaster, the study suggest that they should complement each other with certain characteristics such as: (1) Mutual Coordination; (2) Shared Risk and Profits/ Benefits; and (3). Organizational Arrangement and it should also support the sustainability of Tourism industry.

Chapter 8: The Roles of Lean and Green Supply Chain Management Strategies in the Global Business Environments

This chapter introduces the roles of lean supply chain management (SCM) strategies and green SCM strategies in the global business environments, thus explaining the theoretical and practical concepts of SCM, lean SCM strategies, and green SCM strategies; the importance of lean and green SCM strategies; and the interfaces of lean and green SCM strategies in terms of implementing green and global supply chain strategies, implementing green and lean supply chain strategies, and implementing lean and global supply chain strategies. Lean supply chain and green supply chain strategies help firms to maximize the improvement of lean production in operations management. Applying lean SCM strategies and green SCM strategies in the global business environments will significantly enhance organizational performance and achieve business goals in digital age.


Section 3 - Evolving Business: Contemporary Supply Chain Issues/Research Advancement in Global Supply Chain

Section 3 is focused on the evolving business areas for the global market places. The concerns and issues related to recent advancements in global supply chain has been covered.

Chapter 9: Indian Handicraft and Globalization – The Export Context

Globalization has put both east and west into one compartment and makes a single village a global village. In the age of jet travel and mobile communication, boundaries between cultures are liable to erode and deterritorialised. Indian handicraft products have great opportunities in the domestic and international markets. Main products of handicrafts consist of art metal wares, embroidered and crocheted goods, shawls and art wares, and zari goods, woods wares, hand printed textiles and imitation jewelry. Talking about Indian Handicrafts, which constitutes a significant segment of the decentralized sector of the economy, its export has reached at a commendable height.

Chapter 10: Purchase Intentions of Consumer towards Foreign Brand Apparel – Evidences from India

Clothing is an important product category through which people express their interests, status, and lifestyle. With the advance of consumerist culture in India, expression of identity and social standing through clothing is becoming imminent. In this context, we have identified the factors relating to self-concept, like the need for uniqueness and clothing interest are insignificant, but the perceived quality of foreign brand apparel is a significant factor in determining the purchase intention.

Chapter 11: Development of Key Performance Measures for Sustainable Manufacturing in Global SMEs

Sustainable manufacturing strives to produces the goods by minimizing negative environmental impact and reducing the resource consumptions. It also strives for safety of employee and community while maintaining an affordable cost. This study focuses on the development of a set of measures and metrics for assessing sustainability performance of manufacturing SMEs. In this study, various literatures on sustainable manufacturing performance measurement, green manufacturing, traditional manufacturing performance measurement and performance measurements in manufacturing small and medium enterprises (SMEs) are reviewed. Triple Bottom Line (TBL) is considered as framework in order to establish the relevant measures in an effective and comprehensive manner. The measures for performance measurements are classified in the three aspects of TBL known as economic, environmental and social.

Chapter 12: Assessing the Readiness of Farmers towards Cold Chain Management – Evidences from India

In light of the emergent international agricultural trade and increasing organized retail operations, an efficient linkage among various food chain partners is imperative in order to connect farmers to rest of the downstream food chain. The purpose of the paper is to gain an insight into the current status of
farmers’ awareness and practices towards maintaining the postharvest cold chain. For this, one sector from each living and non-living category of perishables is chosen. The sectors, Fruits and Vegetables (FV) and Milk and Milk Products (MMP) are chosen from the living products’ and non-living products’ categories respectively. The FV and MMP sectors include product handling at temperatures of -20°C to +100°C and that range covers handling temperatures of most of the perishable items. A questionnaire based survey is administered to a total of 120 farmer respondents (60 each from both the chosen sectors). These farmers were resident of North India (Delhi, Rajasthan, Haryana and Uttrakhand) having their own farms and livestock.

**Section 4 - Industrial Challenges in Designing and Implementing Global Supply Chain**

Section 4 highlights various issues and challenges industries are facing while catering global operations.

**Chapter 13: Challenges and Issues in E-Banking Services and Operations in Developing Countries**

The E-Banking phenomenon has transformed the way banks across the world carry out banking transactions. In the chapter, the author reviews the literature on perception and readiness of people towards E-Banking in different developing countries. E-Banking is an emerging concept in the field of commerce and banking. This paper provides the research trends in the diffusion and adoption of E-banking in developing countries through a content analysis of existing literature that focused on developing countries. The main purpose of the study is to present the current level of research on E-banking in developing countries. Electronic banking (e-banking) is the new technology in banking environment that allows the bank customers to do banking activities at any time and from any place.

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