

GLOBAL LOGISTICS AND INTERNATIONAL CHANNEL DEVELOPMENT

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Abstract: Business Logistics and Supply Chain Management (SCM) are relatively new terms that emerged in recent years concerning to be modern terms compared to the more traditional fields of production, marketing or finance. By opening new stores globally, from which to source products, by increasing the number of retailers, wholesalers, agents and distributors in the global supply chain, as well as easing global transport, these events dramatically changed the way business looked at managing its physical operations. Therefore, this paper offers deep understanding of the main characteristics, new trends and evaluation of global logistics which referred to as global supply chain management. Global logistics plays critical role in the growth and development of world trade, and in the integration of business operations on a worldwide scale. This paper also emphasizes the differences between traditional and global supply chains, by explaining several alternative types of distribution channels that are part of the international distribution channels. Also, real world examples of global organizations and their global supply chain management processes are accurately described in the end of this paper.

Key words: *Global logistics, global supply chain, trends, distribution, process*

1. Introduction

When talking about the phenomenon of globalization that has marked the previous century, the 20th, it is for sure that the international expansion of the companies, in the first half of the century, and the process of globalization, in the second half of the century, are the biggest challenges that have stressed and changed the world in some point. Globalization of manufacturing industry refers to the internationalization of the

manufacturing supply chain. Therefore, international supply chain management must satisfy all international customer needs taking into consideration different time and territorial changes, as well as different country's low, economics and political environment. Many companies have grown in big international corporations and they have started to sell products and services worldwide. Companies have to deliver products to customers both efficiently and effectively. These of appropriate distribution channels in international markets increases the chances of success dramatically

This paper gives a clear glance of the term *global logistics* as a process and management of a system that in world boundaries has never stopped working, because when one logistic activity in any part of the world starts to operate, another stops operating, and so on. Every company's goal, that is a part of a global supply chain management process, is to think globally and act locally. After introductory notes, the authors define new trends facing global logistics and proper way of fixing gaps that appear during delivering goods globally, either directly to its final consumer, or by arranging intermediaries such as retailers, wholesalers, agents and distributors. Short explanation is given about the logistics performance index (LPI) in different countries in Europe as well as Asia, concentrating the top ten countries as top performers of the supply chain management processes, as well as those ten lowest performers of the supply chain

management processes. In the end, as examples are explained some of the biggest globally expanded companies that have integrated sophisticated global supply chain management systems that use the newest high technologies

2. Defining global logistics

Global logistics and distribution have played critical role in the growth and development of world trade and in the integration of manufacturing on a worldwide scale., Global logistics is defined as: (Kotabe&Helsen, 2009),,Design and management of a system that directs and controls flows of materials into, through and out of the firm across national boundaries to achieve its corporate objectives at minimum total cost.¹ Global supply chain management process in shown in Figure 1²:

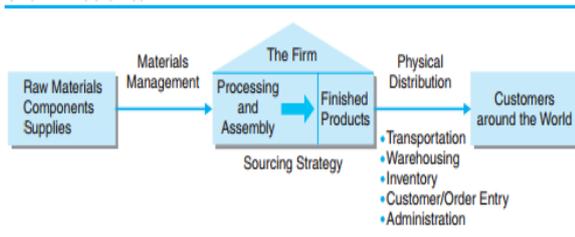


Figure 1: Global supply chain management process

Source: Donald J. Bowersox, David J. Closs, and M. Bixby Cooper (2010), *Supply Chain Logistics Management, 3rd ed.* McGraw-Hill, Boston

As shown in Figure 1, global supply chain management process covers all logistics activities. This process starts with basic raw materials and their components supplied by specified suppliers. These suppliers, supply

companies with above mentioned materials so companies can process, optimize and finalize materials in order to make final products. Final products are then transported directly to their customers around the world or are stocked in some of the companies' warehouses for some other future transaction.

The bound between the evolution of supply chain management and the process of globalization can be described through several phases:³

- I. In the *first phase* of the evaluation of the supply chain management in the global market, the main goal has been to optimize all uncoordinated logistic activities such as: transport, managing inventories, warehouse management and managing information in global terms.
- II. In the *second phase* of the evaluation of the supply chain management in the global market, the main goal has been to manage an integrated approach as a systematically oriented way, in order to align all processes inside companies.
- III. The *third phase* of the evaluation of the supply chain management in the global market, can be divided into two sub-phases: a) Developing and optimization of the supply chain management process and b) Developing and optimization of the process of adding value to the supply chain management activities. In this phase, logistics is treated as strong competitive advantage for many companies, with expressed averages in the

¹ Massaki Kotabe, Kristiaan Helsen, (2009), *Global Marketing Management, 5th ed.*, John Wiley & Sons, Inc, pp.500

² Donald J. Bowersox, David J. Closs, and M. Bixby Cooper (2010), *Supply Chain Logistics Management, 3rd ed.*, McGraw-Hill, Boston

³ Dr. Vladan Bozic, Dr Slobodan Acimovic (2010), *Marketing logistika*, Cugura print, Beograd

process of adding value to the supply chain management activities

- IV. The *fourth phase* of the evaluation of the supply chain management in the global market, highlighted the beginning of development and optimization process of the global supply chain management.

In global companies, logistics is treated as an operative part of the supply chain management process, that represent all activities connected with procurement of resources, conversion of those resources and all other logistic activities. Partners, who take part in the supply chain management process, are strongly coordinated and they can be grouped as: distributors, intermediaries, logistics providers and buyers. Supply chain management incorporate operative logistics activities and establishes connection with customers through marketing, selling, product design and information support. In the end, supply chain management integrates supply and demand activities inside the company and between all partners of the supply chain.

3. Trends in global logistics

In order to perform global logistic activities internationally, companies should understand basic trends in global logistics such as growth of market concentration, dispersion of productive locations and deepening and expanding product lines.

According to *BVL international supply chain network*⁴ major trends that impact organizations globally are:

1. **Customers' expectations** - activities that are oriented to fulfill all

customers' expectations starting from meeting customer requirements, on – time delivery, green logistics, the shortest delivery time, innovation, cutting logistics costs, improving logistics quality and schedule flexibility

2. **Networked economy** – activities performed in order to improve coordination, synergies and increase level of trust between partners in global supply chain management processes, increase innovativeness, share capacity and risk and increase partner's dependence.
3. **Cost pressure** – logistics cost from: retailing, machine engineering, automotive, fast moving consumers goods, chemicals, plastics and textile industries, IT, energy, material and mining, electronics
4. **Talent shortfalls** – talents for logistics activities continues to be a challenge because they do not view logistics as an exciting career
5. **Volatility** – a larger global footprint creates more volatility which is often leaded by unreliable elements of the supply chain that make prediction for delivery challenging
6. **Sustainability** - companies that are members of the supply chain channels learn that they need to be concerned about social issues in their supply chains (labor conditions, child labor and safety of stuff, as incidents can harm their reputation
7. **Increased risk and disruption** – because of everyday increased risk of nature events such as earthquakes, eruptions and floods, companies should be aware of the fact that as members of the global supply chain

⁴ Robert Handfield, Frank Straube, Hans-Christian Pfohl, Andreas Wieland (2013), *Trend and strategies in logistics and supply chain management*, DVV Media Group GmbH, Hamburg

management processes they do not operate alone, they work as a team or a network.

8. Emergence of new technologies – creating an era of digitalization and decentralized IT networks intelligence

9. Lack of reliable logistics infrastructure – global companies face with poor logistics infrastructure in several countries

10. Increased government regulation and cultural challenges – government regulations negatively impact local or transnational logistics processes and different cultural diversities that will occur when companies from different countries work together

According to the World Bank Group,⁵ in 2012, Singapore was the top performer among 155 economies ranked in the Logistics Performance Indicators (LPI). As a leader in the supply chain management process, Singapore efficiently moved goods and connected manufacturers and consumers with international markets, even though much more progress is needed to perform faster economic growth and help firms benefit from trade recovery.

The LPI covers the entire supply chain management process. It is a useful tool in comparing logistics performance across countries and identifying key reform priorities within countries. The LPI consists of two parts and is based on numerical ratings of 1 (weakest) to 5 (strongest) to assess logistics performance.

⁵Jean-François Arvis, Monica Alina Muștra, Lauri Ojala, Ben Shepherd (2012), *Connecting to compete 2012, Trade Logistics in the Global Economy*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC

According to the LPI, high income economies dominate the top logistics rankings, where most of them occupy important places in global and regional supply chains. By contrast, the ten lowest performing countries are almost all from the low and lower income groups.⁶ These conclusions are summarized in Figure 2 and Figure 3:⁷

Table 1.1 The top 10 performers on the 2012 LPI

Economy	2012			2010			2007		
	LPI rank	LPI score	% of highest performer	LPI rank	LPI score	% of highest performer	LPI rank	LPI score	% of highest performer
Singapore	1	4.13	100.0	2	4.09	99.2	1	4.19	100.0
Hong Kong SAR, China	2	4.12	99.9	13	3.88	92.4	8	4.00	94.1
Finland	3	4.05	97.6	12	3.89	92.6	15	3.82	88.3
Germany	4	4.03	97.0	1	4.11	100.0	3	4.10	97.1
Netherlands	5	4.02	96.7	4	4.07	98.5	2	4.18	99.6
Denmark	6	4.02	96.6	16	3.85	91.4	13	3.86	89.6
Belgium	7	3.98	95.3	9	3.94	94.5	12	3.89	90.7
Japan	8	3.93	93.8	7	3.97	95.2	6	4.02	94.8
United States	9	3.93	93.7	15	3.86	91.7	14	3.84	89.1
United Kingdom	10	3.90	92.7	8	3.95	94.9	9	3.99	93.8

Figure 2: Logistics performance in 2007, 2010 and 2012

Source: Jean-François Arvis, Monica Alina Muștra, Lauri Ojala, Ben Shepherd (2012), *Connecting to compete 2012, Trade Logistics in the Global Economy*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC

⁶Findings based on the World Bank Report (2010) *Connecting to Compete 2010: Trade Logistics in the Global Economy, Kazakhstan, Kyrgyzstan, Tajikistan*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC

⁷Jean-François Arvis, Monica Alina Muștra, Lauri Ojala, Ben Shepherd (2012), *Connecting to compete 2012, Trade Logistics in the Global Economy*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC

Economy	2012			2010			2007		
	LPI rank	LPI score	% of highest performer	LPI rank	LPI score	% of highest performer	LPI rank	LPI score	% of highest performer
Comoros	146	2.14	36.5	120	2.45	46.5	85	2.48	46.3
Eritrea	147	2.11	35.5	154	1.70	22.4	124	2.19	37.2
Sudan	148	2.10	35.3	146	2.21	38.7	64	2.71	53.6
Congo, Rep.	149	2.08	34.7	116	2.48	47.4	na	na	na
Sierra Leone	150	2.08	34.5	153	1.97	31.2	144	1.95	29.9
Nepal	151	2.04	33.1	147	2.20	38.6	130	2.14	35.7
Chad	152	2.03	32.9	115	2.49	47.9	142	1.98	30.8
Haiti	153	2.03	32.8	98	2.59	51.1	123	2.21	38.0
Djibouti	154	1.80	25.5	126	2.39	44.8	145	1.94	29.5
Burundi	155	1.61	19.5	na	na	na	113	2.29	40.4

Figure 3: Logistics performance index 2007, 2010 and 2012

Source: Jean-François Arvis, Monica Alina Mustra, Lauri Ojala, Ben Shepherd (2012), Connecting to compete 2012, Trade Logistics in the Global Economy, The International Bank for Reconstruction and Development/The World Bank, Washington, DC

Figure 2 and figure 3 represent the order of the countries according to the highest percentage of the LPI index. As shown in Figure 2, high income countries dominate the top logistics ratings. The results show the openness of these countries to international trade and investment as part of their successful economic development strategy. Singapore was the highest performer in 2007, but in 2010 it lost its first place. Germany took its place since the exports of high technology products as well as information and communication products were tremendously higher than those in Singapore in that period. On the other hand, Figure 3 represent the top ten lowest performing countries, which are almost all from low, and lower – income groups, geographically concentrated in Africa. Therefore these countries have built poor regional and global supply chains.

4. International distribution channel

Distribution as a process of delivering products to end-consumers, retailers or wholesalers is part of every

daily company's activities. Furthermore, International distribution channels are link between the company and its customers in global markets around the world. Creating a reliable and efficient international distribution channel can be one of the most critical and challenging tasks that an international marketing manager can face.

International distribution channels vary from direct, producer-to-consumer types to elaborate, multilevel channels employing many types of intermediaries, each serving a particular purpose. The producer to consumer structure is considered to be a very direct channel compared to for example the producer to agent to wholesaler to retailer to consumer structure which is an indirect channel.⁸ Most international firms would prefer to run a direct channel when using the company's own sales force, but instead they use indirect distribution channels because they are forced to use intermediaries, such as agents or distributors, due to low sales volume, high start-up costs and local knowledge. Figure 4⁹ represent five alternative types of distribution channels.

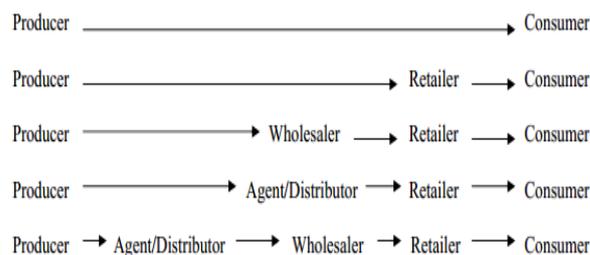


Figure 4: Alternative types of distribution channels

Source: Jobber, D (2001). *Principles and Practice of Marketing*. 3rd ed., McGraw-Hill, London, pp.469

⁸Czinkota, M. R., & Ronkainen, I. A., (2004). *International Marketing*. 7th ed. Mason: South-Western

⁹Jobber, D (2001). *Principles and Practice of Marketing*, 3rd ed., McGraw-Hill, London, pp.469

As shown in Figure 4, the first alternative type of distribution channel, *producer – consumer* is the basic distribution channel where producers sell their goods directly to their consumers from their point of purchase. The second basic distribution channel is *producer – retailer – consumers*, where producers sell their goods through first type intermediaries – the retailers. In this case retailers can be in direct contact with producer's end consumers and its own consumers as well. Consumers have the ability to view or test the product at the retail outlet. Third distribution channel is slightly different from the previous two channels. In this type of distribution channel, *producer - wholesaler - retailer – consumer*, wholesalers buy products from producers, and sell smaller quantities to numerous retailers. Retailers then, sell those products to final consumers. Buying power of large retailers is strong since they can sell products to their customers cheaper than a small retailer can buy from the wholesaler. These type of channels will survive if retail's rules do not dominate inside the channel. Finally, the fourth and the fifth alternative types of distribution channels, *producer - agent/distributor - retailer - consumer* and *producer - agent/distributor - wholesaler - retailer – consumer*, are most common when companies enter international markets. Producers contact agents or distributors in order to delegate them the task of selling the product. Then, an agent contacts wholesalers or retailers in producer's name and receives commission on sales.

Using indirect distribution channels always result in loss in control over company's marketing operations. In these cases, companies should rely on actions of its foreign intermediaries, since they haven't permanent presence in the foreign market which leads to channel conflict between the members of the

international supply chain management process. In order to deal with these conflicts, companies should actively manage relationships between themselves and their chosen intermediaries, and often among intermediaries themselves.¹⁰ Selection of intermediaries becomes crucial to the process of obtaining permanent channel relationships for a company that wishes to achieve its foreign sales. A framework for selecting and dealing with foreign intermediaries includes:¹¹

- Making researches for intermediaries capable of developing markets.
- Regarding intermediaries as long-term partners
- Building loyalty and trust with selected intermediaries
- Supporting intermediaries by providing resources such as marketing ideas, funds and know-how
- Ensuring that selected intermediaries provide information such as: market information, competitive information and detailed sales performance data
- Companies are trying to maintain as much control as possible over marketing strategy
- Companies should try and make links with national intermediaries as soon as they enter foreign markets

¹⁰Leonidas C. Leonidou, Constantine S. Katsikeas, and John Hadjimarcou, (2002). "Building Successful Export Business Relationships: A Behavioral Perspective," *Journal of International Marketing*, 10(3), pp. 96–115

¹¹ David Arnold (2000) "Seven Rules of International Distribution," *Harvard Business Review*, 78, pp. 131–137

5. Global companies and their supply chain management processes

Dell is a global company that operates in 34 countries in three world regions, with about 35,000 employees and \$30 billion in sales. Dell operates in the Americas, Asia-Pacific and Japan, and Europe/Middle East/Africa (EMEA) regions. Each of the regions has its own regional headquarters and its own supply chain management processes. Dell doesn't manufacture its own components or subassemblies, but it manages with all of its desktop PCs and servers. Dell organizes the process of manufacturing by regions where each assembly plant serves its major market. Plants in the Austin, Texas and Nashville, Tennessee areas serve North America; Brazil serves Brazil and South America; Malaysia serves the Asia-pacific regions, China serves China and Japan, Ireland serves Europe, the Middle East and Africa. Dell sells 90% of its PCs directly to final customers, most of the time excluding reseller channel that accounts for most of the world's PC sales. In order to provide services such as system integration, installation, on-site repairs and consulting Dell relies on outside partners such as Wang, Unisys, IBM and BancTec. Dell also cooperates with resellers who support Dell hardware and receive referral fees for recommending Dell to customers.¹²

Wal-Mart Stores Inc., operates retail stores in various formats across the world. Its operations consist of three reportable business segments, Wal-Mart U.S., Wal-Mart International and Sam's Club that operate in three categories: retail, wholesale and others. Wal-Mart

competitive advantage is consisted of offering huge range of products at the lowest costs in the shortest possible time. This is possible since Wal-Mart uses highly automated distribution centers, which significantly reduces cost and time, as well as computerized inventory system, which speed up the checking out time and recording of transactions. Each distribution center is divided into different sections on the basis of the quantity of goods received. In order to make global distribution process more efficient, Wal-Mart uses advanced logistics technique named, cross-docking. This technique is rarely used since its usage requires high educated and qualified employees. It enables retailers to pick up finished products directly from manufacturing suppliers' plant and then sorts and directly supply customers.¹³ Retail giant Wal-Mart held on to the top spot on the Fortune 500, excluding out Exxon Mobil for the second year in a row. For fiscal year 2014, Wal-Mart's net sales totaled \$473.1 billion, up 1.6% from the year-earlier period. In the U.S., Wal-Mart is completely sure that is the leader on the global market so competing with drugstores and small grocery stores is an easy task to handle.¹⁴

Carrefour Group (Carrefour), is the second largest retailer in the world that used upon a \$170 million project to standardize its business systems and processes across the world. Carrefour uses advanced technology to manage its various supply chain processes including procurement, logistics and warehouse management. The company relies on third-party logistics providers (3PLs) to manage its supply chain in most of its

¹²Kenneth L. Kraemer and Jason Dedrick, (2002), *Dell Computer: Organization of a Global Production Network*, Center for research on information technology and organizations, California

¹³P. Mohan Chandran (2008), *Wal-Mart supply chain management practices*, ICFAI Center for management research, India

¹⁴ Fortune 500, 2014, retrieved September 2014 from <http://fortune.com/fortune500/wal-mart-stores-inc-1/>

global operations. Carrefour's 1,366 hypermarkets feature an extremely wide range of both food (fast-moving consumer goods, fresh produce) and non-food products (textiles, household appliances, decoration).¹⁵

Carrefour has started its first global venture in 1969, by opening a hypermarket in Belgium under the brand name 'Champion. In 1972, the company opened its first stores in the UK and Italy. In 1973, Carrefour opened its first hypermarket in Spain under the 'Pycra' brand while the first hypermarket in Brazil started functioning in 1975. In 1989, Carrefour opened its first hypermarket in Asia, in Taiwan. By the late 1980s, Carrefour had a significant presence in a major part of Europe and had established its stores in North America, South America and Asia. In 1990, Carrefour diversified into the oil business by establishing 'Express Oil4.' In 1991, Carrefour acquired two French hypermarket chains - Euromarche and Montlaur. Carrefour used the Electronic Data Interchange (EDI) for procurement, which required electronic linking of stores, warehouses and suppliers through computer networks.¹⁶

6. Conclusion

Giving exceptional explanation about the main topic of this paper, global logistics has become one of the most intrigued topics to be examined since it

summarizes the process of delivering flows and materials into the company, then from the company to wholesalers and retailers, agents and distributors and finally, strictly and directly to its final consumers across the world. Global logistics supply chain management, tends to minimize delivery and inventory cost, as well as cost for procurement internationally. Managers of global companies must have skills and abilities to coordinate logistics activities on international basis. This means dealing with complex supply chain networks, new trends facing global logistics and building desired alternative type of international distribution channel.

The main subject of this paper is to emphasize main characteristics, advantages and disadvantages of becoming a global company and dealing with global logistic supply chain management processes. After defining global logistics and global supply chain management process, deep explanation is given about trends that global logistics should face with such as: meeting customers' expectations, improve coordination and synergies between partners in the channel, motivate young people to work with business logistics, sustainability, increased risk and disruption, emergence of new technologies, lack of reliable logistics infrastructure and increased government regulation and cultural challenges. Complexity of international distribution channel depends from the number of members in the channel. Real world's examples of some of the biggest international companies such as Dell, Wall-Mart and Carrefour are used in the end of this paper, to prove the paper's goal. These companies gained benefits when they became international companies and have well organized, coordinated and hi-tech equipped supply chain management processes so they can become

¹⁵ Carrefour annual report (2013), retrieved September 2014 from http://www.carrefour.com/sites/default/files/OVERVIEWEN2013_0.pdf

¹⁶ Carrefour: Managing the Global Supply Chain (2004), retrieved September 2014 from <http://www.icmrindia.org/casestudies/catalogue/Operations/Carrefour-Managing%20the%20Global%20Supply%20Chain.htm>

leaders and tend to sustain their leader's position on the global market.

7. References

1. Czinkota, M. R., & Ronkainen, I. A., (2004). *International Marketing. 7th ed.* Mason: South-Western
2. David Arnold (2000). "Seven Rules of International Distribution," *Harvard Business Review*, 78, pp. 131–137
3. Donald J. Bowersox, David J. Closs, and M. Bixby Cooper (2010). *Supply Chain Logistics Management, 3rd ed.*, McGraw-Hill, Boston
4. Dr. Vladan Bozic, Dr Slobodan Acimovic (2010). *Marketing logistika*, Cugura print, Beograd,
5. Findings based on the World Bank Report (2010). *Connecting to Compete 2010: Trade Logistics in the Global Economy, Kazakhstan, Kyrgyzstan, Tajikistan*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC
6. Jean-François Arvis, Monica Alina Muștra, Lauri Ojala, Ben Shepherd (2012). *Connecting to compete 2012, Trade Logistics in the Global Economy*, The International Bank for Reconstruction and Development/The World Bank, Washington, DC
7. Jobber, D (2001). *Principles and Practice of Marketing. 3rd ed.* McGraw-Hill, London, pp.469
8. Kenneth L. Kraemer and Jason Dedrick, (2002). *Dell Computer: Organization of a Global Production Network*, Center for research on information technology and organizations, California
9. Leonidas C. Leonidou, Constantine S. Katsikeas, and John Hadjimarcou, (2002). "Building Successful Export Business Relationships: A Behavioral Perspective," *Journal of International Marketing*, 10(3), pp. 96–115
10. Masaki Kotabe, Kristiaan Helsen, (2009). *Global Marketing Management, 5th ed.*, John Wiley & Sons, Inc, pp.500
11. P. Mohan Chandran (2008). *Wal-Mart supply chain management practices*, ICFAI Center for management research, India
12. Robert Handfield, Frank Straube, Hans-Christian Pfohl, Andreas Wieland, (2013). *Trend and strategies in logistics and supply chain management*, DVV Media Group GmbH, Hamburg
13. Wood, F. Donald, Barone Anthony, Murphy Paul I Wardlow L. Daniel (1995). *International logistics*, Chapman & Hall publishing Co., New York, pp.343-346
14. Fortune 500 2014, Retrieved September 2014 from <http://fortune.com/fortune500/wal-mart-stores-inc-1/>
15. Carrefour annual Report (2013), Retrieved September 2014 from http://www.carrefour.com/sites/default/files/OVERVIEWEN2013_0.pdf
16. Carrefour: Managing the Global Supply Chain (2004), Retrieved September 2014 from <http://www.icmrindia.org/casestudies/catalogue/Operations/Carrefour-Managing%20the%20Global%20Supply%20Chain.htm>