A Course Material on

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

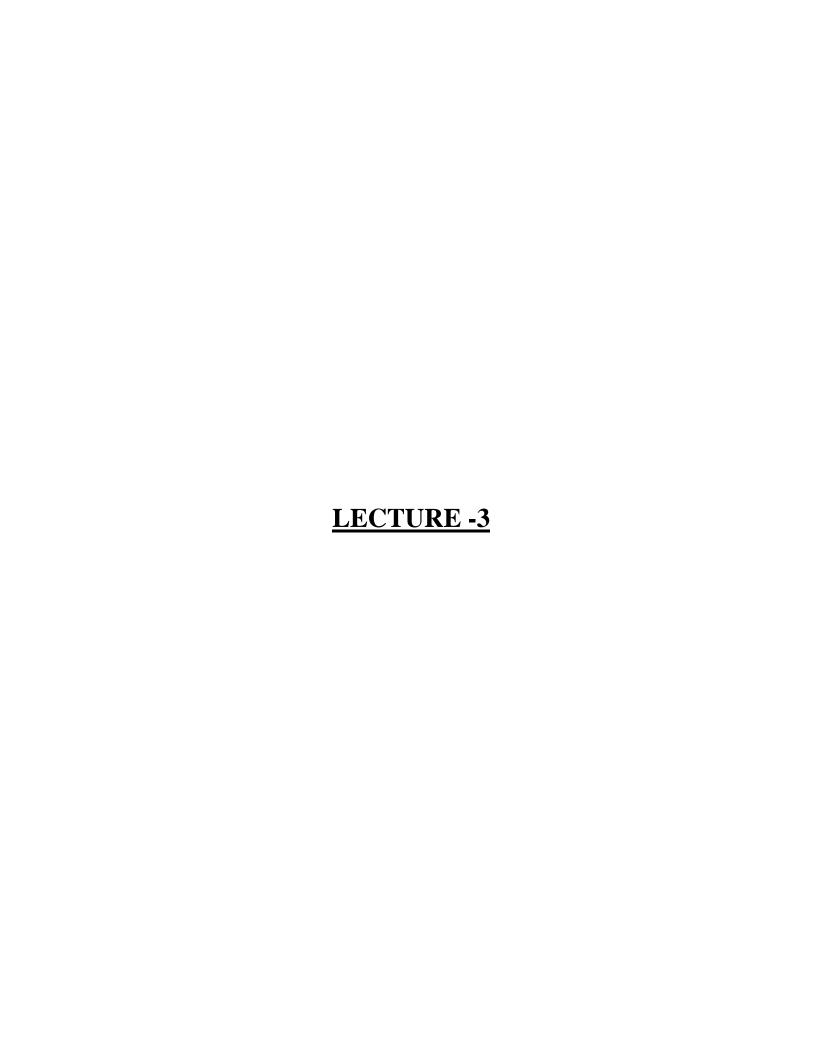


Subject: LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Subject Code: BBA404

Class : BBA 4th Semester/ 2nd Year

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1.2 KEY ISSUES IN SUPPLY CHAIN MANAGEMENT

In May 2017, luxury car manufacturer, BMW, suffered a production stoppage of its 3-Series sedan in Germany, China, and South Africa, due to a supplier's failure to supply the necessary steering gears. Aside from its 3-Series sedan, production of BMW's 1-, 2-, and 4-Series were also affected.

This incident highlights the importance of supply chain management. Effective supply chain management enables enterprises to track the movement of the raw materials needed to create products, optimize inventory levels to reduce costs, and synchronize supply with customer demand. Furthermore, supply chain management enables enterprises to maintain visibility over their logistics to ensure availability of materials and delivery of products to customers. Effective supply chain management also helps enterprises avoid production stoppages by identifying areas in which they are reliant on a single supplier.

Supply chain management provides enterprises, especially manufacturers, with tremendous competitive and business advantages. However, supply chain management is fraught with challenges especially in today's business landscape.

Key Issue -1: **Globalization**

Globalization presents several critical supply chain management challenges to enterprises and organizations:

First, to reduce costs across the supply chain, enterprises are moving manufacturing operations to countries which offer lower labor costs, lower taxes, and/or lower costs of transport for raw materials. For some companies, outsourcing production involves not only a single country, but several countries for different parts of their products.

However, outsourcing not only extends the production process globally, but also the company's procurement network. Having suppliers in different geographic locations complicates the supply chain. Companies will have to deal with, coordinate, and collaborate with parties across borders regarding manufacturing, storage, and logistics. Furthermore, they have to extend or maintain fast delivery lead times to customers who want to receive their products on schedule despite the increased complexity in the manufacturer's supply chains. Finally, they also have to maintain real-time visibility into their production cycle — from raw materials to finished goods — to ensure the efficiency of their manufacturing processes.

Second, as companies expand sales into global markets, localization of existing products requires a significant change in the supply chain as companies adapt their products to different cultures and preferences. There is an inherent risk of losing control, visibility, and proper management over inventory, especially if enterprise applications are not integrated. This requires managing diverse structures of data across geographies effectively.

For example: many manufacturers in Asia still handle trading partner communications via fax and email while suppliers in North America and Europe have utilized EDI for decades. As technology matures, suppliers in emerging markets may skip EDI altogether and move to a more modern API driven approach to communication just as developing countries have skipped land lines in favor cell phones.

Supply chain practitioners need to ask if their enterprise technology is prepared to handle these diverse forms of communication that arise from Globalization, and build a business case to stay prepared.

Key Issue -2: Fast-changing Markets

According to EduCBA, consumer behavior is affected by cultural, social, personal, and psychological factors that are quickly being changed by

technology and globalization. Social media is creating new pressures for consumers to conform while putting pressure on enterprises to utilize these sources of information to respond to changing preferences in order to stay interesting and relevant.

Like globalization, the fast-changing consumer market also brings with it supply chain management challenges:

First, products have shorter life cycles due to rapidly changing market demands. Enterprises are under pressure to keep up with the latest trends and innovate by introducing new products, while keeping their total manufacturing costs low because they understand that trends will not last for a long time. This also demands a flexible supply chain that can be utilized for manufacturing other products and for future projects.

Second, aside from new products, companies also need to constantly update product features. Enhancing product features requires enterprises to redesign their supply chain to accommodate product changes.

Finally, innovation presents a challenge in forecasting demand for new products. The constant innovation necessitated by fast-changing markets also means enterprises will constantly have to anticipate demand for new products. Enterprises need to create and maintain an agile supply chain that can respond well to spikes and dips in demand and production needs.

Companies should be asking if they have all the data needed to make planning decisions to address challenges created by fast-changing markets. For example, if stated lead times from suppliers are longer than actual times, this will lead to higher inventory levels than are actually required and affect costly decisions around network planning and optimization. Omnichannel retail has created silos of sales data that have to be blended and harmonized to detect demand signals earlier in the planning process as well.

Key Issue -3: Quality and Compliance

Aside from influencing consumer behavior, social media highlights the importance of having high-quality products. According to research conducted by eMarketer, reading reviews, comments, and feedback is the top social media activity that influences online shopping behavior. Furthermore, social media has not only raised consumers' expectations of product quality, but has also amplified the damages caused by product recalls. Thus, enterprises are under increasing pressure to create high-quality products and to create them consistently. They can do so by addressing quality at every level of the supply chain, such as raw materials procurement, manufacturing, packaging, logistics, and product handling.

Product quality often goes hand-in-hand with compliance. Enterprises need to ensure that they meet local and international regulatory standards in manufacturing, packaging, handling, and shipping of their products. Aside from passing quality control and safety tests, enterprises are also required to prepare compliance documents such as permits, licenses, and certification which can overwhelm them and their supply chain management systems.

Emerging capabilities like IoT, Smart Packaging, and Blockchain are changing how compliance is enforced and measured. However, these innovations will produce streams of data that can't be handled with the enterprise technology of the past 20 years. Managers should carefully consider where these investments make sense and asking IT if the business is utilizing platforms based on microservices and big data to support these heavy data lifting requirements.