IMPACT OF E-COMMERCE ON SUPPLY CHAIN MANAGEMENT

By **SHREYA TIWARI**

ABSTRACT:

Companies must constantly integrate into a network of organisations in order to be more competitive. Businesses that ignore this challenge will inevitably lag behind their competitors. In this essay, we examine how supply chain management (SCM) and the internet interact. By responding to various inquiries, this paper will address the ideas around the impact of e-commerce on the supply chain and its potential future effects.

The article first explored the many steps in the SCM process, including the transfer of information, goods, and money. The integration of internet shopping into SCM was then demonstrated in order to achieve a competitive edge in a fast-paced business environment. Results indicated that supply chains' physical, informational, and financial flows can be impacted by e-commerce.

Keyword: Supply Chain Management, E-Commerce

INTRODUCTION:

The sector of the global economy that is expanding the fastest and has the most promise is e-commerce. Cost-effective, anytime, anywhere transactions can benefit customers. Additionally, it makes the world smaller and the distance between the buyer and seller shorter.

The ability of internet shopping to offer value to enterprises and participants' understanding of the potential benefits are what drive e-commerce adoption. Regardless of size, the bulk of businesses just do commerce in order to profit financially. E-commerce also falls into this. In his study, Standing listed more than ten advantages of online shopping for buyers and sellers. Among the benefits are fewer office space needs, cost savings, quicker sales and purchases, chance to meet new clients, user comfort and transparency, and higher quality of product/service.

The advancement of information technology and computer networks has boosted both supply chain management (SCM) and the use of internet shopping. SCM places a strong emphasis on the integrated planning, coordination, and control of all logistical business processes and activities in the supply chain in order to meet the needs of other stakeholders, such as consumer interest groups and the government, as well as to provide superior consumer value at lower cost to the chain as a whole. Supply chains that are fully connected, much more productive, and with total information transparency and optimal allocation of value-adding processes should eventually result from the full execution of the SCM notion.

WHAT IS E-COMMERCE?

The trading of goods and services through the internet is referred to as "ecommerce" or "electronic commerce." One way that customers purchase and sell goods in the retail sector is through e-commerce. While some companies only sell products online, others incorporate it as a component of a larger marketing plan that also includes physical stores and other channels of distribution. E-commerce enables start-ups, small businesses, and big organisations to sell goods in bulk and engage with clients all over the world.

E-commerce Classification:

E-commerce is the practise of conducting market transactions between two or more parties using information and communication technologies, frequently between consumers and enterprises. On occasion, the government can declare itself to be one of these groups (Bhaskar, 2004). Based on the characteristics of the transactions or the interactions between the participants, Turban and his coworkers [2010] divided e-commerce into the following categories:
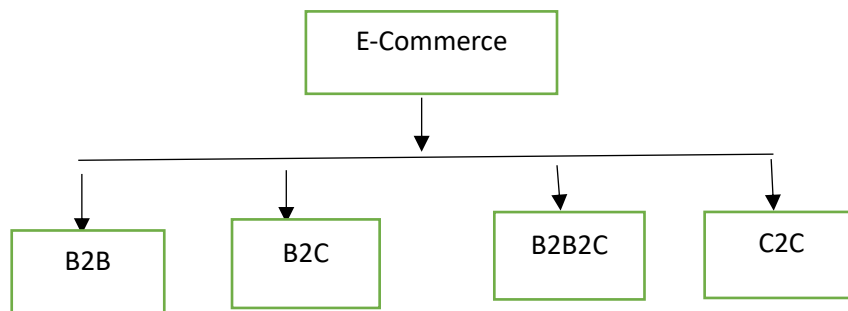
CLASSIFICATION OF E-COMMERCE

Business-to-Business B2B:

The businesses involved in this business model produce goods and services for other companies and organisations.

Business-to-Consumer B2C:

The practise of businesses selling directly to customers is known as e-commerce. Anyone can visit Amazon.com and make purchases there, for instance.

Business-to-Business-to-Consumer B2B2C:

E-commerce models entail businesses providing consumers with a good or service. For instance, Intel may produce computer CPUs and sell them to HP, which will then turn them into computers that consumers may buy. Such models are also used by massive e-commerce sites like Alibaba.

Consumer-to-Consumer C2C:

An online store is a place where customers may interact with one another directly. Numerous online marketplaces, including ebay.com and olx.in, serve as middlemen by enabling users to buy from other users.

WHAT IS SUPPLY CHAIN MANAGEMENT?

All processes used to convert raw materials into finished products are included in supply chain management, which controls the movement of goods and services. In order to optimise consumer value and gain a competitive edge in the market, it involves the purposeful simplification of a company's supply-side processes.

A complex supply chain management process is necessary to transfer goods and services from the supplier to the client successfully and efficiently. According to Chaffey (2009, 2009), supply chain management is the coordination of all supply-related activities carried out by a firm, from its partners and suppliers to its customers.

RELATIONSHIP BETWEEN E-COMMERCE AND SUPPLY CHAIN MANAGEMENT:

Supply chains have undergone significant changes as e-commerce continues to expand, and these changes are increasingly represented in supply chain management that is centred on e-commerce.

E-commerce is a sophisticated payment mechanism that is based on computer networks because of the widespread usage of computer networks, communication technologies, and the internet. Supply chain management in an e-commerce environment integrates these two concepts. The client is given first priority, the whole supply chain is integrated, outside resources are completely utilised, quick and efficient replies are

realised, and the amount of stock is greatly reduced. SCM adoption is made easier by the expansion of e-commerce, but it also raises the demand for, electronic supply chain management (SCM) will actually replace traditional SCM as the preferred format for enterprise supply chain management as more organisations become aware of it and begin to use it.

CORE COMPONENT OF E-COMMERCE:

There are many core component are as follows-

Sourcing:

The term "sourcing" describes a range of procurement strategies used by businesses to find, evaluate, and collaborate with their suppliers of goods/services.

Procurement:

Procurement is the process of adapting goods, services, works from an outside source. It is favourable if the goods, services, or works meet the buyer's needs in terms of quantity, quality, timing, and location and can be acquired for the lowest possible cost.

Inventory:

Inventory mean that goods and materials that a business keeps on hand with the goal of reselling. The type and proportion of stocked products are primarily discussed in the science of inventory management. Before the regular and scheduled course of production and material stocking at multiple locations inside a company or at various sites of a supply network, it is required to do so.

Logistics:

In order to satisfy the needs of customers or businesses, logistics is the process of the movement of commodities from the place of origin and the site of consumption. As well as managing abstract resources like food, materials, animals, equipment, and liquids, logistics can also manage real resources like time, information, particles, and energy. Integrating information flow, material handling, production, packaging, inventory, shipping, warehousing, and security is typically essential for the logistics of physical goods.

Distribution:

You have the technology, know-how, and labour required to keep your goods moving if you employ a distribution management solution that automates everything from staff hiring to inventory management, packing, reverse logistics, and value-added services. There are various models for distribution centres, including:

- Centres for Mixing and Consolidation (MACC)
- Customer pages dedicated to many clients
- Cross docking

Indian E-commerce:

The e-commerce industry has grown tremendously quickly. However, a lot of variables—internet connectivity being the most important—affect its development. A 2013 Forrester McKinsey study found that 11% of India's 137 million inhabitants use the internet. Internet users make up 18% of all online buyers. Internet user numbers in China, Brazil, Sri Lanka, and Pakistan are all higher than those in India, with 538 (40%), 79 (40%), 3.2 (15%), 29 (15%) million users, respectively. E-commerce contributes about 4% of GDP.

According to a prior assertion, more than 70% of all consumer e-commerce transactions in India are connected to travel, with the vast majority being online reservations for flights, trains, and hotels. The three major players in the travel sector are Makemytrip.com, Yatra.com, and the IRCTC website for making train reservations. The

B2C e-Commerce sector is made up of non-travel-related online sales to the tune of 25–30%. Because infrastructure and governmental restrictions do not prevent the growth of the online travel industry, this is made possible. Due to the lack of physical transportation required for the products, infrastructure issues are also avoided.

Literature Review:

E-commerce and supply chains are connected, claim Susan L. Golicic and Donna F. Davis. They have shown that when relationship management is prioritised higher in corporate strategy, managers are better prepared to handle uncertainty. More information does not lessen the sense of uncertainty, according to WHANG and JOHNSON. The web has a big impact on how businesses connect with one another and their customers. Many of the previous obstacles to supply chain integration have been removed by the internet, including the high costs of partner transactions, the lack of information, and the challenges of managing intricate connections between functional organisations.

Supply chain and electronic commerce are combined by HL Lee and S Whang. The main aim of this research is to provide information on the impact of B2B e-commerce on SCM and the use of online marketplaces in Amman-based companies. The study reached the following conclusions after carrying out the analysis to test the hypotheses: - Companies adopting B2B e-commerce in Amman saw the application of e-commerce as having moderate benefits. The report also reveals that these firms moderately manage their supply chains and utilise internet markets.

The management of inter-organizational operations is significantly impacted by the use of e-business systems and processes that rely on widely used infrastructures like the internet and web browser. Three typical supply chain management components are examined as part of the research of how e-business impacts supply chain strategy: fulfilment, customer relationship management, and purchasing. As a result, supply chain management has been significantly impacted by e-business. It was able to create a normative, five-stage model for categorising the use of e-business technologies in SCM.

E-Business Strategy: How Organisations are Reshaping their Supply Chains Using the Internet. The interactions of four identified e-business techniques with auxiliary variables and supply chain integration techniques have been studied. Given that there is a direct association between the use of Internet tools and the level of integration with customers and suppliers, the results emphasise the need for developing e-business strategies that are consistent with the usage of traditional integration mechanisms.

Research gap:

These gaps have been discovered based on the observations/conclusion of the literature review:

1. 1. More information does not reduce perceived ambiguity; rather, it increases it.
2. The web is altering how businesses connect with their suppliers and customers.
3. Businesses that have adopted e-commerce report a moderate amount of benefit

RESEARCH METHODOLOGY

Research Approach

The purpose of this study is to look into a vast array of facts, ideas, examples, and legal issues. As the adage goes, "Research might mean different things to different businesses." Research methodology is referred to as "the operational framework within which the research is conducted." The two more comprehensive and distinct methodologies of social research include both qualitative and quantitative methods of inquiry.

Primary Data- Primary data for this study is gathered via a carefully constructed, organised questionnaire. The respondents are asked to select the option that best fits them out of a list of quantitative and qualitative choices in the questionnaire.

Secondary Data- Secondary data refers to all information obtained for the reason of other than concluding a report and is used to create a preliminary grasp of the research problem. Secondary data can be found online, in libraries, company reports, newspapers, etc. Data was gathered from many publications to support the research.

Sample Technique

Convenience sampling is the sample technique utilised in this investigation. 30 people make up the sample.

Observations

The purpose of the project was to ascertain how e-commerce adoption has impacted the supply chain's expenses and the rate at which goods are moved through it. Survey methods have included using convenience surveys. The questionnaire method was used to collect primary data, and a range of periodicals, books, and earlier research papers were used to collect secondary data. Based on the results of a questionnaire survey, the following conclusions were drawn:

- 96% of stores utilise online means for procurement, 10% use telephones, while 8% of respondents use both.
- 73.66% of respondents say they prefer selling their goods face-to-face or through a physical store, compared to 23.33% who say they prefer selling their goods online, 10% who prefer selling their goods over the phone.
- The replies have shown that online purchasing is the best method procurement.
- The majority of retailers believe that interacting with customers directly is the best way to promote their products.
- Of the study's respondents, 53.0% claimed that e-commerce had enhanced how they deal with customers, while 46.0% disagreed.
- It is clear from the statements of the respondents that e-commerce has helped retailers implement JIT in their actual stores.
- Aside from fast food restaurants, it has been noted that every other merchant tracks their in-store inventory using an internet tracking system.
- Any store that has an online tracking system in place uses barcodes to track items.
- Approximately 67% of businesses with an online tracking system say it speeds up business operations.
- E-commerce has contributed to increased supply chain productivity.

FINDINGS:

The vast amounts of data that have been obtained and their analysis have yielded a wealth of information. The following finding are provided:

- Approximately 90% of all global e-commerce transactions are reportedly B2B, with only 10% being B2C.

- More than any other type of business, e-commerce has been substantially adopted in the tickets and hotel booking industries.

- The supply chain's responsiveness and efficiency can be improved with the deployment of e-commerce.

- A key tool for the adoption of JIT in any commercial organisation is e-commerce.

- The majority of retailers place a strong emphasis on online purchasing, but when it comes to selling their goods, they prefer that customers come into their actual store.

- It was estimated that by 2020, the inventory-based consumer e-commerce model will have produced one million direct employment and an additional half million indirect ones. Currently, it directly employs roughly 40,000 people.

- According to industry studies, the GDP contribution of the e-commerce sector is predicted to be over 4% by 2020.

- E-commerce companies are being forced to rely on more expensive payment solutions like Cash on Delivery (COD) because of the lack of consumer believe and very less users of online payments.

SUGGESSTIONS:

This research paper responds to each question posed in the introduction. Even if every one of the aforementioned problems has been attempted to be solved, there are still certain areas where this study work can be strengthened. Readers of research papers can concentrate on the following areas for development:

- Although the implications of online shopping on B2B SCM are the recent topic of this research piece, more study in this area is necessary considering how quickly e-commerce is gaining ground in the B2C market.
- It's conceivable that this study's statistics don't accurately represent the total population because it was only collected in Bangalore's Bell Road and area. As a result, if the data had been taken from a different area, the results might have been different.
- New technologies are occasionally developed to support the supply chain; as a result, the result could vary if one or more of these technologies materially affect how the component supply chain operates.

CONCLUSION:

The following conclusions have been reached from study on the topic "Ecommerce's Impact on SCM":

Objective 1:

As e-commerce is adopted, the cost of supply chain management will decline:

E-commerce will help to increase of demand and to lower the cost incurred in supply chain, according to tests done during the research period, which supports this research goal.

Objective 2:

The rate at which products or services move through the distribution quickens when online shopping also called e-commerce is used:

The research project's findings also produced the following conclusions in addition to the objective indicated below:

- If all locations have high-quality internet connection, supply chain infrastructure may rely solely on e-commerce infrastructure.
- E-commerce can help the supply chain become more flexible.
- Thanks to e-commerce, the supply chain is now more responsive and efficient.
- Ecommerce usage has improved the supply chain's ability to provide services.
- E-commerce will have a substantial impact on India's GDP by the year 2020.The only thing that has made this possible is ecommerce, which has helped physical stores manage their customers by enhancing their responsiveness and guaranteeing that products are constantly available.

As a result, it can be argued that e-commerce significantly contributes to increasing the responsiveness and efficiency of the supply chain of any commercial operation.

REFERENCE:

1. Susan L. Golicic & Donna F. Davis, Information and Ecommerce Uncertainty,2000

2. JOHNSON M. E. and WHANG, S., Web is changing supply chain management, 2003

3. Simon R. Croom, E-Business systems and Processes, 2005

4. HL Lee, S Whang   E-business and Supply Chain Integration, 2004

5. Arun Rai   Role of Digital Platforms in Supply Chain Management, 1999

6. Pathak, R.; Joshi, S   Implication of RFID on Supply Chain Management, 2002

7. A Gunasekarana, E.W.T Ngaib   Application of IT in SCM, 2004

8. Samuel Fosso Wamba, Electronic Product Code, 2001

9. Sarv Devaraj, Lee Krajewski Benefit of E-Business technologies on Performance, 2001

10. Aysegul Sarac and Nabil Absi,RFID and Inventory, 2006

11. Zillur Rahman Use of Internet in supply chain management,2000

12. Jaana Auramo,Benefits of IT in supply chain management,2005

13. Werner Delfmann,   The impact of electronic commerce on logistics service providers2002

14. C. Patel, E. Tirtiroglu,Performance measures and metrics in a supply chain environment 2001

15. Martin Grieger,Internet-based Electronic Marketplaces,2002

16. Lisa R. Williams,The Electronic Supply Chain, 2002

17. Jayashankar M. Swaminathan,Supply Chain in E-business Environment, 2003

18. Hau L. Lee and Seungjin Whang, Use of Internet-based Computing and Communications,2004

19. Andrew J. Berger, E-commerce Solutions for the Supply chain, 2003

20. Danny C.K. Ho, K.F. Au, Edward Newton, The Process and Consequences of Supply Chain Virtualization, 2000

21. Raffaella Cagliano and Federico,E-business strategy: Shaping Supply Chain, 2007