

The Challenges and Security Issues Faced by E-Commerce in India: A Review

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Abstract— Information Technology plays an important role in the future improvement of financial sectors. The progression of Information and Communication technology has brought plenty of changes in all circles of the daily life of an individual. Electronic commerce, generally written as e-commerce includes an online transaction. E-commerce is purchasing and selling of items and services over the Internet by organizations and buyers. The various technologies that are drawn from E-commerce include Internet marketing, supply chain management, mobile commerce, online transaction processing, Electronic Data Interchange (EDI), mobile commerce and automated data collection systems. Due to the demand of e-commerce both globally and regionally, there is a huge increase in the exchange of products and services. The benefits of e-commerce have increased the value of consumer loyalty's regarding client comfort in any place and empowers the organization to acquire a more competitive advantage over alternate contenders. This paper attempts to describe the principal growth factors required for E-commerce and highlight the various challenges faced by e-commerce in India. This paper also describes the different security issues in E-commerce.

Keywords— E-Commerce, Electronic Data Interchange, Consumer, Challenges, Security.

I. INTRODUCTION

Electronic commerce may be defined as a type of business model that empowers an individual to conduct business over an electronic system, generally the Internet. E-commerce is a paradigm shift. It is a "disruptive" development that is profoundly changing the customary method of doing business [1]. The various business transactions in e-commerce are business-to-consumer, business-to-business, consumer-to-business or consumer-to-consumer. Electronic commerce (e-commerce) alludes to every business exchange of purchasing and selling items and services over electronic frameworks covering the different partner's viz., producers, advertisers, government, specialist organizations, and consumers.

For customers, it is a brand new engaging channel offered to transact online[2]. In addition, there is sufficient opportunity and in addition security in internet shopping. Clients can surf on the internet and search for items, make examinations of various models and assess their costs. They can likewise go to other online item survey destinations, and discuss in different social organization discussions. Once the client likes an item after all exploration, sitting in the solace of his home, he can arrange for it online. E-commerce has likewise made it simple to make payments utilizing different choices, for example, debit cards, credit cards, direct online money transfers and so forth. The dealer dispatches the item once

the payment is made which the client receives within few days

Section I contains the introduction of E-commerce, Section II describes the growth of E-commerce in India, In Section III the various challenges faced by E-commerce in India is described, Section IV contain the E-commerce security Issues followed by E-commerce security threats in Section V, and finally in section VI conclusion of paper is presented.

II. GROWTH OF E-COMMERCE IN INDIA

India is among the fasting developing economies of the world as per the reports distributed by Central Statistics Office (CSO) and International Monetary Fund (IMF). The two factors that have added to the remarkable development of e-commerce in India are cognizant patronization of online business and a rise of retail as an overwhelming business sector portion. As assessed by Morgan Stanley, E-commerce deals achieved the US \$16 billion with a projection of a seven- fold development among the subsequent two fiscals for the budgetary year 2016-17 [3]. It is predicted that online business deals will cross \$120 billion by 2020.

The three central driving factors for the development of e-commerce in India are:

A. Participation of niche organizations in online business:

There has been a critical ascent in interest in e-commerce business due to the expansion in awareness about the advantages of internet trading. In today's business, Internet retailing is the 'in-thing'. In the online retail section, each and every other day, another organization is being set. The two underlining highlights of online trading are specialization and customization. Online business organizations are having some expertise in elite things and have intentionally moved far from the 'One for all' idea.

B. Implementation of Goods and Services Tax:

Goods and Services Tax is a uniform tax collection structure, which would add to the achievement of e-commerce in India. Goods and Service Tax structure makes estimations less demanding and uniform. Across Indian Territory, same tax is applied for same product or service thus, maintaining price uniformity.

C. Role of Foreign Direct Investment:

Foreign direct investments were not permitted for the single brand or multi-mark retail organizations in e-commerce. It was earlier allowed for only Business to Business organizations. Now, FDI is permitted in situations where an association is constrained to the utilization of innovation stage or in instances of wholesale business.

III. CHALLENGES IN E-COMMERCE

The various challenges faced by e-commerce in India are:

A. Poor Infrastructure Facility:

The backbone of e-commerce is Internet. Infrastructure is the greatest bottleneck in India. Contrasted with different nations, web infiltration in India is still exceptionally low that is 34.8%. In few areas, the network quality is also poor. Thus, poor infrastructure facility is the genuine threat for the development of E-commerce market in India.

B. Lack of Technology:

Many states are falling behind in innovation. In rural areas many people are illiterate. They don't know about e-commerce. It is hard to make them aware of the significance of E-commerce. Thus, illiterate people are not able to do the transaction through the internet.

C. Shipping Challenges:

Issues identified with an absence of supply chain management, delay in delivery, high delivery charges for items, and lack of legitimate courier services in a few regions likewise make clients disappointed.

D. Cash On Delivery:

In India, customers usually prefer cash on delivery payment mode because of the low trust in online transactions and low

credit card dissemination. Dislike electronic payments, manual cash collection is very risky, costly and difficult.

E. Privacy and Security Concern:

Business proprietors neglect to find a way to secure and ensure their online business through the establishment of authentic protection services like antivirus and firewall security, which for sure is an essential advance for successful online business players. Utilization of unauthorized software will not protect the client [4].

F. Touch and Feel factors:

Indian clients are more agreeable in purchasing items physically. They have a tendency to pick the item by touching the item straightforwardly. In this way, Indian purchasers are more slanted to do ticketing and booking on the web in travel sectors and gadgets. Organizations managing items like clothing, crafted works need to confront difficulties to sell their items as the purchasers want to see and touch before they purchase these stuff.

G. Incorrect postal address:

After placing an online request by the client, the client will get a call from the organization, asking about the correct address. There is always a little standardization while composing post addresses as sometimes the given address isn't sufficient. Incorrect postal address is also one of the greatest challenges faced by E-commerce in India.

H. Product Return, Refund:

The product which is not satisfactory for the clients has a tendency to get returned. This is another significant issue which leads into the general loss of shipment expenses and loss in revenue.

I. Customer Service:

E-Marketers centers on the website execution overlooking client relationship and in-individual assistance [5].

IV. E-COMMERCE SECURITY ISSUES

E-commerce security is the assurance of e-commerce assets from an unauthorized access, alteration, or destruction or use, [6].

Security features have four classifications:

A. Authentication: It verifies the identity of a user.

- B. Authorization:* It allows a user to control assets in a particular way.
- C. Encryption:* It deals with the hiding of information. It guarantees one can't keep an eye on others during Internet banking transactions.
- D. Auditing:* It keeps a record of tasks. Traders utilize auditing to demonstrate that an individual purchased a particular stock.
- E. Integrity:* It is prevention against unauthorized modification of data.
- F. Nonrepudiation:* It is the assurance that someone cannot deny something.
- G. Availability:* It is prevention against information delay or removal.

V. E-COMMERCE SECURITY THREATS

There are three types of security threats in E-commerce:

A. Denial of Service (DOS):

The two essential kinds of DOS attacks are spam and viruses.

- **Spam:**

Spam is sending undesirable commercial emails to individuals. E-mail bombing caused by a hacker focusing on one PC or on the other hand system, and sending many email messages to it.

- **Viruses:**

Virus is a self-repeating PC programs intended to perform undesirable events. Worm is a special virus that spread utilizing direct Internet Connections. Trojan Horses are masked as real software and trap clients into running the program

B. Unauthorized access:

It is Illegal access to frameworks, applications or information.

- **Passive unauthorized access:**

It is used to find out secrets by listening to communications channel. It may utilize content for damaging purposes.

- **Active unauthorized access:**

It is modifying framework or information. It includes modification of messages.

- **Spoofing or Masquerading:**

It is sending message that appears to be from another person.

- **Sniffers:**

It is a software that tries to access the data illegally across the network.

C. Theft and Fraud:

It includes theft of data, theft of software through illicit replicating from organization's servers and theft of equipment, particularly workstations. Fraud happens when the stolen information is utilized or changed.

VI. CONCLUSION

E-Commerce is broadly viewed as purchasing and selling items and services over electronic frameworks. E-commerce plays an important in online business. E-commerce is constantly advancing and is getting to be essential to organizations as innovation keeps on progressing and is something that should be taken advantage of and implemented. For the development of e-commerce, there are various factors responsible. There are some of the genuine difficulties to be looked by the e-commerce. In this universe of new innovation, organizations need to accommodate to the new kinds of customer patterns and needs since it will turn out to be indispensable to their business' prosperity and survival. Business will thrive in an e-commerce, setting with much achievement and profitability, if the correct techniques and practices are taken.

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