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RISE OF E-COMMERCE IN INDIAN SCENARIO

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CERTIFICATE

This is to certify that the Project entitled **"E-COMMERCE-THE INDIAN SCENARIO** is genuine and bonafide work done by **P.J.N.SAINATH**, under my guidance and supervision for the submission to **St.Theresas College for Women**, Eluru under RUSA 2.0.

Project Guide

ACKNOWLEDGEMENTS

I am very much grateful to **St. Theresa's college** for Women Eluru for giving me this very inspirational opportunity to do my project under RUSA 2.0 Scheme.

I express my profound gratitude to our principal **Dr K.VENKAESWARLU** and RUSA coordinator **Smt.S.M. MAHESWARI** for their encouragement.

It is my profound duty to express my sincere thanks to Principal, SKVP & Dr KS Raju Arts & Science College, Penugonda and Principal, MVNJS & RVR College Malikipuram for their help and co-operation.

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I express my deep sense of gratitude to my project guide **Ms. R.VENKATA LAKSHMI DEVI,** Lecturer in Commerce for her valuable guidance and suggestions during this project. In also extend my thanks to all other faculty members for their suggestions.

I convey my sincere thanks to all the people concerned who have helped me directly or indirectly in successful completion of this project.

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DECLARATION BY THE CANDIDATE

I hereby declare that the project report entitled “**RISE OF “E-COMMERCE-THE INDIAN SCENARIO”** submitted by me to **St. Theresa’s College** for Women, Eluru under RUSA 2.0 Scheme is a bonifide project work carried out by me under the guidance of **Mr. SHAIK ALISHA**, Lecturer in Commerce, Department of Commerce. I further declare that the work reported in this project has not been submitted either in part or in full, for the award of any any degree in any other institute or university.

Narsapur

Date : Signature of Candidate

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E-BUSINESS AND E-COMMERCE

INTRODUCTION

Electronic Business

Electronic business (e-business) refers to the use of the Web, Internet, intranets, extranets or some combination thereof to conduct business. E-business is similar to e-commerce, but it goes beyond the simple buying and selling of products and services online. E-business includes a much wider range of businesses processes, such as supply chain management, electronic order processing and customer relationship management. E-business processes, therefore, can help companies to operate more effectively and efficiently.

E-business is any kind of business or commercial transaction that includes sharing information across the internet. Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses, while e-business refers to business with help of the internet.

The term "e-business" was coined by IBM's marketing and Internet team in 1996.

E-commerce

E-commerce (**electronic commerce**) is the activity of electronically buying or selling of products on online services or over the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. E-commerce is in turn driven by the technological advances of the semiconductor industry, and is the largest sector of the electronics industry.

Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail. Typical e-commerce transactions include the purchase of online books (such as Amazon) and music purchases (music download in the form of digital distribution such as iTunes Store), and to a less extent, customized/personalized online liquor store inventory services. There are three areas of e-commerce: online retailing, electronic markets, and online auctions. E-commerce is supported by electronic business. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail.

Objectives of the Study:

- To procure knowledge about Indian banking .
- To study the emerging technology in Indian Banking Sector.
- To know recent developments in Indian Banking.
- To explain the banking scenario in India.

Methodology of the Study

This study is based on the analysis E-commerce scenario in India and the recent trends and opportunities in the E-commerce with the help of secondary source of data.

The secondary source of data are...

- E-commerce books
- Research papers
- Journals and reports on trends
- News papers,Magazines
- Relevant websites

Frame work of the Study

- Chapter one comprises theoretical view of E-commerce, objectives of the study, Methodology, frame work and limitations.
- Chapter two consists of Traditional E-commerce.
- Chapter three includes Information Regarding E-business and E-commerce.
- Chapter four consists Importance of E-Commerce.
- Chapter five includes Rise of E-Commerce in India, Conclusion and Bibliography.

Limitations of the Study

Though the project is completed successfully but with a few limitations.

It is easy to collect secondary data, however we need to be aware of the limitations.

- The study is based on secondary data and secondary data can be general and vague.
- Limited knowledge about the E-commerce in the intial stage.
- Inability to get full information from the books.
- It might be orginally collected for other purpose.

TRADITIONAL COMMERCE

Commerce is the exchange of goods and services, especially on a large scale. It includes legal, economic, political, social, cultural and technological systems that operate in a country or in international trade.

In the economic sense, "commerce" refers to the conduct of trade among economic agents. Commerce generally affects the well-being and welfare of citizens and residents, as it is known to directly impact the money which people have and their job opportunities as well. The term "commerce" may also refer to the buying and selling of commodities globally or across borders - between governments and between business firms.

Many scholars and ancient philosophers have known to mix up the terms "trade" and "commerce". But in essence these two are distinct terms carrying different meanings:

- Trade, on the one hand, may mean the selling and buying of commodities for money or anything of value.
- Commerce covers a much broader field and includes trade, along with the services which facilitate such buying and selling of goods. These services may include insurance, warehousing, transporting and advertising.

Nevertheless, one can speak of "trade in goods and services".

Apart from traditional self-sufficiency, trading became a Principal facility of prehistoric people, who bartered what they had for goods and services from each other (the barter system was popular in ancient times where one could get goods and services by offering the other person some other good and service according to their need instead of paying with monetary systems, which developed later.

In historic times, the introduction of currency as a standardized money facilitated the wider exchange of goods and services. Numismatists have collections of tokens, which include coins from some Ancient-World large-scale societies, although initial usage involved unmarked lumps of precious metal.[7] This means that even if there were no notes or coins people used precious metal like Gold, Silver etc. attached a value to it and then use them for exchange in return for commodities.

The circulation of a standardized currency provides a method of overcoming the major disadvantage to commerce through use of a barter system, the "double coincidence of wants" (which means if someone wants something from a person, that person should also be in need of a thing or a service which they can provide), necessary for barter trades to occur. For example, if a person who makes pots for a living needs a new house, they may wish to hire someone to build it for them. But they cannot make an equivalent number of pots to equal this service done for them, because even if the builder could build the house, the builder might not want many or need any pots.

The barter system also has a major drawback in that whatever goods a person gets as payment may not necessarily store for long amounts of time. For example: if a person receives dozens of fruits as payment, the fruit may not store for long or may rot - which means that person will have to bear a loss.

Currency alleviated these problems by allowing a society as a whole to assign values and thus to collect goods and services effectively and to store them for later use, or to split them among minions.

During the Middle Ages, European commerce developed through the trading of luxury goods at trade fairs. Some wealth became converted into movable wealth or capital. Banking systems developed where money on account was transferred across national boundaries. Hand-to-hand markets became a feature of town life, and were regulated by town authorities.

Today commerce includes as a subset of itself a complex system of companies which try to maximize their profits by offering products and services to the market (which consists both of individuals and groups and other companies or institutions) at the lowest production cost. A system of international trade has helped to develop the world economy; but, in combination with bilateral or multilateral agreements to lower tariffs or to achieve free trade, has sometimes harmed third-world markets for local products (see Globalization).

History of Commerce

The history of commerce is the history of civilization. Commerce had its beginning when the first humans started trading goods. Commerce is concerned with the exchange of goods; with all that is involved in the buying and selling of goods at any stage in their progress from raw materials to finished goods in the consumers hands. It covers not only the functions of buying, selling and handling goods but also the many services which must be provided to finance, insure, store and transport goods in the course of these exchanges. These earliest exchanges took place by barter – i.e., direct exchange of goods against goods, without money being involved. This is a crude form of commerce which obviously cannot be carried far. An exchange can only take place if both parties to the exchange derive satisfaction from it. There is also another difficulty present in barter transactions, namely the difficulty of deciding what quantities of the two types of goods shall be exchanged for one another in order to satisfy both parties in the absence of any measure of value. Slowly the disadvantages of the barter system were realized by money. Money in its current form is only conventional and has no real value. In the past money was represented by grains, shells, metal coins or a piece of paper with an image on it. Money allows people to trade goods and services indirectly, understand the price of goods and gives us a way to save for larger purchases in the future. Money is valuable merely because everyone knows it will be accepted everywhere as a form of payment it represents. The transition of currency from precious metals to paper money increased the development of international trade.

Growth of Commerce:

Global commerce as its known today had its beginnings in the 16th century, when large trading companies were formed in the UK, Spain, Portugal, and the Netherlands. These empires freely trade with each other, and as explorers met other civilizations in Asia and Africa, their trade routes expanded and connected to the trade routes already in place in those countries. By the 20th Century, trading and shopping malls developed. Sailing ships were replaced by steamships, then by railroad and finally by planes and large cargo vessels. With these changes, Commerce went from a slow process to the present heights. The creation of organizations such as the world trade organization was done to help control Commerce and to promote free trade and remove any barriers to trade. Commerce is a part of all countries and communities. Any time one person trades something they have found or made for something else, commerce is occurring on a very large scale. When done properly, Commerce can help improve the standards of living for a countries citizens and improve its relations with other countries.

Types of Commerce today:

Commerce has changed since the time of the large maritime trading companies. There are a number of different types of Commerce now in play. While trade between countries is still the main force of commerce, its done differently now- its much faster thanks to advances in Technology. Home trade, or trading by citizens of the same country, has also become a powerful type of commerce that drives a nations economy. Commerce has also grown to include auxiliary industries, too including advertising, warehousing, banking, transportation and insurance.

E-Commerce:

Electronic Commerce(E-Commerce) has become a buzzword for businesses over the past few years, with increased awareness about the use of computer and communications technologies to simplify business procedures and increase efficiency. Combining a range of processes, such as Electronic Data Interchange(EDI), electronic mail(e-mail), World Wide Web(WWW), and Internet applications, E-Commerce provides ways to exchange information between individuals, companies, and countries, but most important of all, between computers. More simply put, E-Commerce is the movement of business onto the World Wide Web. This movement has been broken up into two main sectors: business-to-business(B2B) and business-to-consumer(B2C). E-Commerce comprises core business processes of buying, selling goods, services, and information over the Internet. The E-Commerce information available on the Internet is huge and still growing.

M-Commerce:

But E-Commerce itself is being left behind. A new type of Commerce is mobile Commerce or M-Commerce. It encompasses any Commerce that is done through mobile devices such as smartphones or tablets. M-Commerce is sometimes called the next form of E-Commerce. M-Commerce is driven by the wireless application protocol technology that helps users access the internet securely. This technology is more prevalent in Europe, although its becoming more available around the world.

P-Commerce:

Then there's P-Commerce, which can either stand for pinterest Commerce or participatory Commerce. The second type is the more noteworthy. It's a new concept where consumers can participate in the funding, design, and selection of products. Crowd-sourcing is a type of P-Commerce that is becoming more and more popular.

E-COMMERCE AND E-BUSINESS

Some people use the terms "e-business" and "e-commerce" interchangeably, but they aren't synonymous. To put it simply, e-commerce refers to buying and selling online, while e-business encompasses all business conducted online. E-commerce can be viewed as a subset of e-business. If you plan on starting or working closely with an internet-based company, you should strive to understand all the ways these two concepts are unique.

Extranet, web, and intranet to conduct businesses. E-Business is quite similar to E-Commerce, but it is more than just a simple act of buying and selling products and services online.

In a tech-driven world, it might be tough to tell which businesses are truly e-businesses. Perhaps the best way to understand e-businesses is with the help of examples:

- Email marketing to existing and/or prospective customers is an e-business activity. It electronically conducts a business process—in this case, marketing.
- A company that builds and sells an online system that tracks inventory and triggers alerts at specific levels is an e-business. Inventory management is a business process, and when facilitated electronically, it becomes part of e-business.
- A content management system that manages the workflow between a content developer, editor, manager, and publisher is another example of an e-business. In the absence of an electronic workflow, the physical movement of paper files would conduct this process. By electronically enabling it, it becomes an e-business.
- Online tools for human resources can be produced by an e-business. These tools include online job boards, application processers, and systems that collect and maintain data about employees.

Many processes that are described as e-business might be handled in-house through a company's network, or it might be something the company outsources to a provider that specializes in whatever service is desired. By producing them in-house, standard businesses may incorporate some elements of e-business into their plan—the two types of businesses are not mutually exclusive.

Sometimes the difference between a standard business and an e-business is just a matter of how business is conducted. For example, if you are an advisory firm helping people choose the right furniture, then you are a business, but if you run a website where people can compare furniture options, then you are an e-business.

E-Business includes a wider kind of business processes, such as electronic ordering processing, supply chain management, customer relationship management, etc. So basically, E-Commerce is a part of E-Business.

There are two E-Business types:

1. Pure play

This refers to a company that focuses on one particular kind of product or service, instead of various kinds at once.

2. Brick and click

This term is suitable for a company that runs their business in both online and offline way. That is mean, while they have a website and offer their products or services online, at the same time they also have a physical store and sell their products or services there.

Electronic business

Online Business or **e-business** is any kind of business or commercial transaction that includes sharing information across the internet. Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses, while e-business refers to business with help of the internet. The term "e-business" was coined by IBM's marketing and Internet team in 1996.

History

In 1994, IBM, with its agency Ogilvy & Mather, began to use its foundation in IT solutions and expertise to market itself as a leader of conducting business on the Internet through the term "e-business." Then CEO Louis V. Gerstner, Jr. was prepared to invest $1 billion to market this new brand.

After conducting worldwide market research in October 1997, IBM began with an eight-page piece in the Wall Street Journal that would introduce the concept of "e-business" and advertise IBM's expertise in the new field. IBM decided not to trademark the term "e-business" in the hopes that other companies would use the term and create an entire new industry. However, this proved to be too successful and by 2000, to differentiate itself, IBM launched a $300 million campaign about its "e-business infrastructure" capabilities. Since that time, the terms, "e-business" and "e-commerce" have been loosely interchangeable and have become a part of the common vernacular.

Business model

When organizations go online, they have to decide which e-business models best suit their goals. A business model is defined as the organization of product, service and information flows, and the source of revenues and benefits for suppliers and customers. The concept of e-business model is the same but used in the online presence.

Revenue model

A key component of the business model is the revenue model or profit model, which is a framework for generating revenues. It identifies which revenue source to pursue, what value to offer, how to price the value, and who pays for the value. It is a key component of a company's business model. It primarily identifies what product or service will be created in order to generate revenues and the ways in which the product or service will be sold.

Without a well-defined revenue model, that is, a clear plan of how to generate revenues, new businesses will more likely struggle due to costs which they will not be able to sustain. By having a revenue model, a business can focus on a target audience, fund development plans for a product or service, establish marketing plans, begin a line of credit and raise capital.

Eletronic-Commerce

E-Commerce, or the short for "Electronic Commerce" is the process of selling and buying which done via the web or the internet. Unlike the physical store, in E-Commerce, there is no need for the buyer and the seller to meet with each other in order to do the whole selling and buying process.

There are several types of E-Commerce:

1. Business to Business (B2B)

Business to business E-Commerce is including all kind of electronic transactions of services or products that happened between two businesses or companies.

2. Business to Consumer (B2C)

Business to Consumer is the establishment of the electronic business relationship between the seller to final customers. This is probably the most common form of E-Commerce.

This kind of E-Commerce type usually more dynamic and easier to do. Due to the development of the internet and website, B2C has developed greatly too, and now you can easily find various kind of online store on the internet. They sell all kind of products, such as books, electronics, clothes, to digital products like music, movies, or e-books.

People like online shopping more than traditional one due to its simplicity and the price tends to be cheaper too (without including the shipping cost).

3. Consumer to Consumer (C2C)

This kind of E-Commerce includes all electronic transactions of products or services between the customer and another customer. Usually, this can happen with the third party helps, for example, eBay as a marketplace for online action.

4. Consumer to Business (C2B)

Consumer to business is a kind of business model where the final users or the customers create a product or service that a company uses to complete their business process or gain competitive advantage.

For example, sites where freelance designers offer their service for logo creation, and any company is free to use their service if they need it.

5. Business to Administration (B2A)

Business to Administration or B2A covers any kind of transactions that carry out between business and government with the internet as their medium. It includes a large variety of services, such as social security, fiscal, legal documents, employments, etc.

6. Consumer to Administration (C2A)

Consumer to Administration includes all kind of transactions that happen between the consumer with the government.

Examples:

- ✓ Education
- ✓ Taxes

- ✓ Social security
- ✓ Health

The Differences Between E-Commerce and E-Business

Buying and selling things via the internet is known as E-Commerce. On the other hand, E-Business isn’t limited to just buying and selling activities. All the business activities that conducted via the internet will be considered as E-Businesses. For example, the information and computing technologies used to enhance one’s business.

E-Commerce is a main part of E-Business

Some people agreed that when business is completely carried through an electronic medium, then it can be referenced as E-Business. There is no need for an E-Business to has a physical presence in the market. If a company owns an office, and along with physical presence carries out their business activities via the internet, then it can be referred as E-Commerce.

E-Commerce includes any kind of business transaction which related to money, but E-Business includes monetary and allied activities.

E-Commerce needs the internet to be able to connect with the rest of the world. E-Business can use more than that. Other than the internet, it also can take advantages of intranet and extranet to be able to connect with the parties.

The Advantages of E-Commerce & E-Business

E-Commerce and E-Business have really changed the way of shopping. As customers, you probably have tasted some of their benefits, but what you can get from them as a business owner?

Reduce money and time spent for your business

Having a physical store means that there would be several kinds of costs that you need to pay, like rent, electricity, telephone bill, etc.By taking your business online, you can reduce or even eliminate those costs.

Turn your business into E-Business also can help make the tasks simpler. For example, sending bulk promotional E-mail via online surely much easier rather than print 100 brochures and sending them via post, right?

Flexible business hours

The Internet is available for 24 hours. An E-Business can literally make money even when you are fast asleep.

The internet is not only able to spans all time zones, but it also can reach across the world. With a physical store, customers will be limited on how close the store from their home, and also your hours of operation.

Not to mention, with the hype of m-commerce, now your store is accessible from smartphone and other mobile devices. That is mean, your customers can do business with you on the go.

Easily track your business growth

In E-Business, there are several tools that you can use to track your business development and learns more about your customers. Do you want to know which product is the best seller for the past three months? How about the amount of returning customers?

Unless you do an extra record-keeping task, it will be hard to track those data in brick and mortar store.

Reach your customer faster

The sooner you can reach your customers when they need you, the better. With E-mail and chat features, it will be easier for your E-Business to fulfill that need.

When it comes to E-Commerce and E-Business, both you as the business owner and the customers can reap all the benefits.

E-Commerce is a major part of E-Business. It also can be said that E-Commerce is E-Business, but E-Business isn’t necessarily E-Commerce.

E-commerce

E-commerce (short for "electronic commerce") is trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply in chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail.

Concerns

While much has been written of the economic advantages of Internet-enabled commerce, there is also evidence that some aspects of the internet such as maps and location-aware services may serve to reinforce economic inequality and the digital divide. Electronic commerce may be responsible for consolidation and the decline of mom-and-pop, brick and mortar businesses resulting in increases in income inequality. Author Andrew Keen, a long-time critic of the social transformations caused by the Internet, has recently focused on the economic effects of consolidation from Internet businesses, since these businesses employ much fewer people per dollar of sales than traditional retailers.

Security

E-business systems naturally have greater security risks than traditional business systems, therefore it is important for e-business systems to be fully protected against these risks. A far greater number of people have access to e-businesses through the internet than would have access to a traditional business. Customers, suppliers, employees, and numerous other people use any particular e-business system daily and expect their confidential information to stay secure. Hackers are one of the great threats to the security of e-businesses. Some common security concerns for e-Businesses include keeping business and customer information private and confidential, authenticity of data, and data integrity. Some of the methods of protecting e-business security and keeping information secure include physical security measures as well as data storage, data transmission, anti-virus software, firewalls, and encryption to list a few.

Privacy and confidentiality

Confidentiality is the extent to which businesses makes personal information available to other businesses and individuals. With any business, confidential information must remain secure and only be accessible to the intended recipient. However, this becomes even more difficult when dealing with e-businesses specifically. To keep such information secure means protecting any electronic records and files from unauthorized access, as well as ensuring safe transmission and data storage of such information. Tools such as encryption and firewalls manage this specific concern within e-business.

Authenticity

E-business transactions pose greater challenges for establishing authenticity due to the ease with which electronic information may be altered and copied. Both parties in an e-business transaction want to have the assurance that the other party is who they claim to be, especially when a customer places an order and then submits a payment electronically. One common way to ensure this is to limit access to a network or trusted parties by using a virtual private network (VPN) technology. The establishment of authenticity is even greater when a combination of techniques are used, and such techniques involve checking "something you know" (i.e. password or PIN), "something you need" (i.e. credit card), or "something you are" (i.e. digital signatures or voice recognition methods). Many times in e-business, however, "something you are" is pretty strongly verified by checking the purchaser's "something you have" (i.e. credit card) and "something you know" (i.e. card number).

Data integrity

Data integrity answers the question "Can the information be changed or corrupted in any way?" This leads to the assurance that the message received is identical to the message sent. A business needs to be confident that data is not changed in transit, whether deliberately or by accident. To help with data integrity, firewalls protect stored data against unauthorized access, while simply backing up data allows recovery should the data or equipment be damaged.

Non-repudiation

This concern deals with the existence of proof in a transaction. A business must have assurance that the receiving party or purchaser cannot deny that a transaction has occurred, and this means having sufficient evidence to prove the transaction. One way to address non-repudiation is using digital signatures.[13] A digital signature not only ensures that a message or document has been electronically signed by the person, but since a digital signature can only be created by one person, it also ensures that this person cannot later deny that they provided their signature.[15]

Access control

When certain electronic resources and information is limited to only a few authorized individuals, a business and its customers must have the assurance that no one else can access the systems or information. There are a variety of techniques to address this concern including firewalls, access privileges, user identification and authentication techniques (such as passwords and digital certificates), Virtual Private Networks (VPN), and much more.

Availability

This concern is specifically pertinent to a business' customers as certain information must be available when customers need it. Messages must be delivered in a reliable and timely fashion, and information must be stored and retrieved as required. Because availability of service is important for all e-business websites, steps must be taken to prevent disruption of service by events such as power outages and damage to physical infrastructure. Examples to address this include data backup, fire-suppression systems, Uninterrupted Power Supply (UPS) systems, virus protection, as well as making sure that there is sufficient capacity to handle the demands posed by heavy network traffic.

Cost

The business internet which supports e-business has a cost to maintain of about $2 trillion in outsourced IT dollars just in the United States alone. With each website custom crafted and maintained in code, the maintenance burden is enormous. In the twenty-first century, look for new businesses that will help standardize the look and feel of the internet presence of a business to be more uniform in nature to help reduce the cost of maintenance.

Security solutions

When it comes to security solutions, sustainable electronic business requires support for data integrity, strong authentication, and privacy.

Access and data integrity

There are several different ways to prevent access to the data that is kept online. One way is to use anti-virus software. This is something that most people use to protect their networks regardless of the data they have. **E-businesses** should use this because they can then be sure that the information sent and received to their system is clean. A second way to protect the data is to use firewalls and network protection. A firewall is used to restrict access to private networks, as well as public networks that a company may use. The firewall also has the ability to log attempts into the network and provide warnings as it is happening. They are very beneficial to keep third-parties out of the network. Businesses that use Wi-Fi need to consider different forms of protection because these networks are easier for someone to access. They should look into protected access, virtual private networks, or internet protocol security. Another option they have is an intrusion detection system. This system alerts when there are possible intrusions. Some companies set up traps or "hot spots" to attract people and are then able to know when someone is trying to hack into that area.

Encryption

Encryption, which is actually a part of cryptography, involves transforming texts or messages into a code which is unreadable. These messages have to be decrypted in order to be understandable or usable for someone. There is a key that identifies the data to a certain person or company. With public key encryption, there are actually two keys used. One is public and one is private. The public one is used for encryption, and the private for decryption. The level of the actual encryption can be adjusted and should be based on the information. The key can be just a simple slide of letters or a completely random mix-up of letters. This is relatively easy to implement because there is software that a company can purchase. A company needs to be sure that their keys are registered with a certificate authority.

Digital certificates

The point of a digital certificate is to identify the owner of a document. This way the receiver knows that it is an authentic document.

Companies can use these certificates in several different ways. They can be used as a replacement for user names and passwords. Each employee can be given these to access the documents that they need from wherever they are. These certificates also use encryption. They are a little more complicated than normal encryption however. They actually used important information within the code. They do this in order to assure authenticity of the documents as well as confidentiality and data integrity which always accompany encryption.[13] Digital certificates are not commonly used because they are confusing for people to implement. There can be complications when using different browsers, which means they need to use multiple certificates. The process is being adjusted so that it is easier to use.

Digital signatures

A final way to secure information online would be to use a digital signature. If a document has a digital signature on it, no one else is able to edit the information without being detected. That way if it is edited, it may be adjusted for reliability after the fact. In order to use a digital signature, one must use a combination of cryptography and a message digest. A message digest is used to give the document a unique value. That value is then encrypted with the sender's private key

Governmental regulation

In the United States, certain electronic commerce activities are regulated by the Federal Trade Commission (FTC). These activities include the use of commercial e-mails, online advertising and consumer privacy. The CAN-SPAM Act of 2003 establishes national standards for direct marketing over e-mail. The Federal Trade Commission Act regulates all forms of advertising, including online advertising, and states that advertising must be truthful and non-deceptive.[29] Using its authority under Section 5 of the FTC Act, which prohibits unfair or deceptive practices, the FTC has brought a number of cases to enforce the promises in corporate privacy statements, including promises about the security of consumers' personal information.[30] As a result, any corporate privacy policy related to e-commerce activity may be subject to enforcement by the FTC.

The Ryan Haight Online Pharmacy Consumer Protection Act of 2008, which came into law in 2008, amends the Controlled Substances Act to address online pharmacies.

Conflict of laws in cyberspace is a major hurdle for harmonization of legal framework for e-commerce around the world. In order to give a uniformity to e-commerce law around the world, many countries adopted the UNCITRAL Model Law on Electronic Commerce (1996).

Internationally there is the International Consumer Protection and Enforcement Network (ICPEN), which was formed in 1991 from an informal network of government customer fair trade organisations. The purpose was stated as being to find ways of co-operating on tackling consumer problems connected with cross-border transactions in both goods and services, and to help ensure exchanges of information among the participants for mutual benefit and understanding. From this came Econsumer.gov, an ICPEN initiative since April 2001. It is a portal to report complaints about online and related transactions with foreign companies.

There is also **Asia Pacific Economic Cooperation** (APEC) was established in 1989 with the vision of achieving stability, security and prosperity for the region through free and open trade and investment. APEC has an Electronic Commerce Steering Group as well as working on common privacy regulations throughout the APEC region.

In **Australia**, Trade is covered under Australian Treasury Guidelines for electronic commerce and the Australian Competition and

Consumer Commission regulates and offers advice on how to deal with businesses online, and offers specific advice on what happens if things go wrong.

In **the United Kingdom**, The Financial Services Authority (FSA) was formerly the regulating authority for most aspects of the EU's Payment Services Directive (PSD), until its replacement in 2013 by the Prudential Regulation Authority and the Financial Conduct Authority. The UK implemented the PSD through the Payment Services Regulations 2009 (PSRs), which came into effect on 1 November 2009. The PSR affects firms providing payment services and their customers. These firms include banks, non-bank credit card issuers and non-bank merchant acquirers, e-money issuers, etc. The PSRs created a new class of regulated firms known as payment institutions (PIs), who are subject to prudential requirements. Article 87 of the PSD requires the European Commission to report on the implementation and impact of the PSD by 1 November 2012.

In **India**, the Information Technology Act 2000 governs the basic applicability of e-commerce.

In **China**, the Telecommunications Regulations of the People's Republic of China (promulgated on 25 September 2000), stipulated the Ministry of Industry and Information Technology (MIIT) as the government department regulating all telecommunications related activities, including electronic commerce.[39] On the same day, The Administrative Measures on Internet Information Services released, is the first administrative regulation to address profit-generating activities conducted through the Internet, and lay the foundation for future regulations governing e-commerce in China.[40] On 28 August 2004, the eleventh session of the tenth NPC Standing Committee adopted The Electronic Signature Law, which regulates data message, electronic signature authentication and legal liability issues. It is considered the first law in China's e-commerce legislation. It was a milestone in the course of improving China's electronic commerce legislation, and also marks the entering of China's rapid development stage for electronic commerce legislation.

Forms

Contemporary electronic commerce can be classified into two categories. The first category is business based on types of goods sold (involves everything from ordering "digital" content for immediate online consumption, to ordering conventional goods and services, to "meta" services to facilitate other types of electronic commerce). The second category is based on the nature of the participant (B2B, B2C, C2B and C2C);

On the institutional level, big corporations and financial institutions use the internet to exchange financial data to facilitate domestic and international business. Data integrity and security are pressing issues for electronic commerce.

Aside from traditional e-commerce, the terms m-Commerce (mobile commerce) as well (around 2013) t-Commerce have also been used.

Global trends

In 2010, the United Kingdom had the highest per capita e-commerce spending in the world.[44] As of 2013, the Czech Republic was the European country where e-commerce delivers the biggest contribution to the enterprises´ total revenue. Almost a quarter (24%) of the country's total turnover is generated via the online channel.

Among emerging economies, China's e-commerce presence continues to expand every year. With 668 million Internet users, China's online shopping sales reached $253 billion in the first half of 2015, accounting for 10% of total Chinese consumer retail sales in that period. The Chinese retailers have been able to help consumers feel more comfortable shopping online. e-commerce transactions between China and other countries increased 32% to 2.3 trillion yuan ($375.8 billion) in 2012 and accounted for 9.6% of China's total international trade. In 2013, Alibaba had an e-commerce market share of 80% in China. In 2014, there were 600 million Internet users in China (twice as many as in the US), making it the world's biggest online market.[50] China is also the largest e-commerce market in the world by value of sales, with an estimated US$899 billion in 2016.

Recent research clearly indicates that electronic commerce, commonly referred to as e-commerce, presently shapes the manner in which people shop for products. The GCC countries have a rapidly growing market and are characterized by a population that becomes wealthier (Yuldashev). As such, retailers have launched Arabic-language websites as a means to target this population. Secondly, there are predictions of increased mobile purchases and an expanding internet audience (Yuldashev). The growth and development of the two aspects make the GCC countries to become larger players in the electronic commerce market with time progress. Specifically, research shows that e-commerce market is expected to grow to over $20 billion by the year 2020 among these GCC countries (Yuldashev). The e-commerce market has also gained much popularity among the western countries, and in particular Europe and the U.S. These countries have been highly characterized with consumer-packaged-goods (CPG) (Geisler, 34). However, trends show that there are future signs of a reverse. Similar to the GCC countries, there has been increased purchase of goods and services in online channels rather than offline channels. Activist investors are trying hard to consolidate and slash their overall cost and the governments in western countries continue to impose more regulation on CPG manufacturers (Geisler, 36). In these senses, CPG investors are being forced to adapt e-commerce as it is effective as a well as a means for them to thrive.

In 2013, Brazil's e-commerce was growing quickly with retail e-commerce sales expected to grow at a double-digit pace through 2014. By 2016, eMarketer expected retail e-commerce sales in Brazil to reach $17.3 billion.[52] India has an Internet user base of about 460 million as of December 2017.[53] Despite being third largest user base in world, the penetration of Internet is low compared to markets like the United States, United Kingdom or France but is growing at a much faster rate, adding around 6 million new entrants every month. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. The India retail market is expected to rise from 2.5% in 2016 to 5% in 2020.

The future trends in the GCC countries will be similar with that of the western countries. Despite the forces that push business to adapt e-commerce as a means to sell goods and products, the manner in which customers make purchases is similar in countries from these two regions. For instance, there has been an increased usage of smartphones which comes in conjunction with an increase in the overall internet audience from the regions. Yuldashev writes that consumers are scaling up to more modern technology that allows for mobile marketing. However, the percentage of smartphone and internet users who make online purchases is expected to vary in the first few years. It will be independent on the willingness of the people to adopt this new trend (The Statistics Portal). For example, UAE has the greatest smartphone penetration of 73.8 percent and has 91.9 percent of its population has access to the internet. On the other hand, smartphone penetration in Europe has been reported to be at 64.7 percent (The Statistics Portal). Regardless, the disparity in percentage between these regions is expected to level out in future because e-commerce technology is expected to grow allowing for more users. The e-commerce business within these two regions will result in a competition. Government bodies at country level will enhance their measures and strategies to ensure sustainability and consumer protection (Krings, et al.). These increased measures will raise the environmental and social standards in the countries, factors that will determine the success of e-commerce market in these countries. For example, an adoption of tough sanctions will make it difficult for companies to enter the e-commerce market while lenient sanctions will allow ease of companies. As such, the future trends between GCC countries and the Western countries will be independent of these sanctions (Krings, et al.). These countries need to make rational conclusions in coming up with effective sanctions.

The rate of growth of the number of internet users in the Arab countries has been rapid – 13.1% in 2015. A significant portion of the e-commerce market in the Middle East comprises people in the 30–34 year age group. Egypt has the largest number of internet users in the region, followed by Saudi Arabia and Morocco; these constitute 3/4th of the region's share. Yet, internet penetration is low: 35% in Egypt and 65% in Saudi Arabia.

E-commerce has become an important tool for small and large businesses worldwide, not only to sell to customers, but also to engage them.In 2012, e-commerce sales topped $1 trillion for the first time in history.

Mobile devices are playing an increasing role in the mix of e-commerce, this is also commonly called mobile commerce, or m-commerce. In 2014, one estimate saw purchases made on mobile devices making up 25% of the market by 2017.

For traditional businesses, one research stated that information technology and cross-border e-commerce is a good opportunity for the rapid development and growth of enterprises. Many companies have invested enormous volume of investment in mobile applications. The DeLone and McLean Model stated that three perspectives contribute to a successful e-business: information system quality, service quality and users' satisfaction.[61] There is no limit of time and space, there are more opportunities to reach out to customers around the world, and to cut down unnecessary intermediate links, thereby reducing the cost price, and can benefit from one on one large customer data analysis, to achieve a high degree of personal customization strategic plan, in order to fully enhance the core competitiveness of the products in company.

Modern 3D graphics technologies, such as Facebook 3D Posts, are considered by some social media marketers and advertisers as a preferable way to promote consumer goods than static photos, and some brands like Sony are already paving the way for augmented reality commerce. Wayfair now lets you inspect a 3D version of its furniture in a home setting before buying.

Logistics

Logistics in e-commerce mainly concerns fulfillment. Online markets and retailers have to find the best possible way to fill orders and deliver products. Small companies usually control their own logistic operation because they do not have the ability to hire an outside company. Most large companies hire a fulfillment service that takes care of a company's logistic needs. Contrary to common misconception, there are significant barriers to entry in e-commerce.

Impact on markets and retailers

E-commerce markets are growing at noticeable rates. The online market is expected to grow by 56% in 2015–2020. In 2017, retail e-commerce sales worldwide amounted to 2.3 trillion US dollars and e-retail revenues are projected to grow to 4.88 trillion US dollars in 2021.[66] Traditional markets are only expected 2% growth during the same time. Brick and mortar retailers are struggling because of online retailer's ability to offer lower prices and higher efficiency. Many larger retailers are able to maintain a presence offline and online by linking physical and online offerings.

E-commerce allows customers to overcome geographical barriers and allows them to purchase products anytime and from anywhere. Online and traditional markets have different strategies for conducting business. Traditional retailers offer fewer assortment of products because of shelf space where, online retailers often hold no inventory but send customer orders directly to the manufacture. The pricing strategies are also different for traditional and online retailers. Traditional retailers base their prices on store traffic and the cost to keep inventory. Online retailers base prices on the speed of delivery.

There are two ways for marketers to conduct business through e-commerce: fully online or online along with a brick and mortar store. Online marketers can offer lower prices, greater product selection, and high efficiency rates. Many customers prefer online markets if the products can be delivered quickly at relatively low price. However, online retailers cannot offer the physical experience that traditional retailers can. It can be difficult to judge the quality of a product without the physical experience, which may cause customers to experience product or seller uncertainty. Another issue regarding the online market is concerns about the security of online transactions. Many customers remain loyal to well-known retailers because of this issue.

Security is a primary problem for e-commerce in developed and developing countries. E-commerce security is protecting business' websites and costumers from unauthorized access, use, alteration, or destruction. The type of threats include: malicious codes, unwanted programs (ad ware, spyware), phishing, hacking, and cyber vandalism. E-commerce websites use different tools to avert security threats. These tools include firewalls, encryption software, digital certificates, and passwords.

Impact on supply chain management

For a long time, companies had been troubled by the gap between the benefits which supply chain technology has and the solutions to deliver those benefits. However, the emergence of e-commerce has provided a more practical and effective way of delivering the benefits of the new supply chain technologies.

E-commerce has the capability to integrate all inter-company and intra-company functions, meaning that the three flows (physical flow, financial flow and information flow) of the supply chain could be also affected by e-commerce. The affections on physical flows improved the way of product and inventory movement level for companies. For the information flows, e-commerce optimised the capacity of information processing than companies used to have, and for the financial flows, e-commerce allows companies to have more efficient payment and settlement solutions.

In addition, e-commerce has a more sophisticated level of impact on supply chains: Firstly, the performance gap will be eliminated since companies can identify gaps between different levels of supply chains by electronic means of solutions; Secondly, as a result of e-commerce emergence, new capabilities such implementing ERP systems, like SAP ERP, Xero, or Megaventory, have helped companies to manage operations with customers and suppliers. Yet these new capabilities are still not fully exploited. Thirdly, technology companies would keep investing on new e-commerce software solutions as they are expecting investment return. Fourthly, e-commerce would help to solve many aspects of issues that companies may feel difficult to cope with, such as political barriers or cross-country changes. Finally, e-commerce provides companies a more efficient and effective way to collaborate with each other within the supply chain.

Impact on employment

E-commerce helps create new job opportunities due to information related services, software app and digital products. It also causes job losses. The areas with the greatest predicted job-loss are retail, postal, and travel agencies. The development of e-commerce will create jobs that require highly skilled workers to manage large amounts of information, customer demands, and production processes. In contrast, people with poor technical skills cannot enjoy the wages welfare. On the other hand, because e-commerce requires sufficient stocks that could be delivered to customers in time, the warehouse becomes an important element. Warehouse needs more staff to manage, supervise and organize, thus the condition of warehouse environment will be concerned by employees.

Impact on customers

E-commerce brings convenience for customers as they do not have to leave home and only need to browse website online, especially for buying the products which are not sold in nearby shops. It could help customers buy wider range of products and save customers' time. Consumers also gain power through online shopping. They are able to research products and compare prices among retailers. Also, online shopping often provides sales promotion or discounts code, thus it is more price effective for customers. Moreover, e-commerce provides products' detailed information; even the in-store staff cannot offer such detailed explanation. Customers can also review and track the order history online.

E-commerce technologies cut transaction costs by allowing both manufactures and consumers to skip through the intermediaries. This is achieved through by extending the search area best price deals and by group purchase. The success of e-commerce in urban and regional levels depend on how the local firms and consumers have adopted to e-commerce.

However, e-commerce lacks human interaction for customers, especially who prefer face-to-face connection. Customers are also concerned with the security of online transactions and tend to remain loyal to well-known retailers. In recent years, clothing retailers such as Tommy Hilfiger have started adding Virtual Fit platforms to their e-commerce sites to reduce the risk of customers buying the wrong sized clothes, although these vary greatly in their fit for purpose. When the customer regret the purchase of a product, it involves returning goods and refunding process. This process is inconvenient as customers need to pack and post the goods. If the products are expensive, large or fragile, it refers to safety issues.

Impact on the environment

In 2018, E-commerce generated 1.3 million tons of container cardboard in North America, an increase from 1.1 million in 2017. Only 35 percent of North American cardboard manufacturing capacity is from recycled content. The recycling rate in Europe is 80 percent and Asia is 93 percent. Amazon, the largest user of boxes, has a strategy to cut back on packing material and has reduced packaging material used by 19 percent by weight since 2016. Amazon is requiring retailers to manufacture their product packaging in a way that doesn't require additional shipping packaging. Amazon also has an 85-person team researching ways to reduce and improve their packaging and shipping materials.

Impact on traditional retail

E-commerce has been cited as a major force for the failure of major U.S. retailers in a trend frequently referred to as a "retail apocalypse." The rise of e-commerce outlets like Amazon has made it harder for traditional retailers to attract customers to their stores and forced companies to change their sales strategies. Many companies have turned to sales promotions and increased digital efforts to lure shoppers while shutting down brick-and-mortar locations. The trend has forced some traditional retailers to shutter its brick and mortar operations.

Distribution channels

E-commerce has grown in importance as companies have adopted pure-click and brick-and-click channel systems. We can distinguish pure-click and brick-and-click channel system adopted by companies.

- Pure-click or pure-play companies are those that have launched a website without any previous existence as a firm.
- Bricks-and-clicks companies are those existing companies that have added an online site for e-commerce.
- Click-to-brick online retailers that later open physical locations to supplement their online efforts.

RISE OF E-COMMERCE IN INDIA

The development of e-commerce in India on the basis of qualitative research methodology. The enhanced need for greater attention and management bandwidth to these critical functions has been realized by the stakeholders of e-commerce in India. India has shown a commendable increase in the ecommerce industry in the last couple of years, there by hitting the market with a boom. The e-commerce is poised for continued growth in India in the coming years. The growth is expected to be led by increased consumer-led purchases in durables and electronics, apparels and accessories, besides traditional products such as books and audio-visuals. The emergence of e-commerce has placed an enormous pressure on the supporting logistics functions. The inventory led e-retailing model cannot attract FDI whereas market-place based e-retailing model can still attract FDI in the present times. The economic potential has increased over a period of time due to the rise of e-commerce logistics in India. The evolution of logistics landscape, long term profitability of the e-retailing industry, increase in FDI in the inventory-led retail, better infrastructure and robust supply chains, new taxation policies in the country, entry of more players in the 3PL domain and rationalization of delivery costs will lead to substantial investments in supporting infrastructure and innovative and game changing business models.

India’s first online B2B directory was launched in 1996. Trade through B2B portals increased the visibility of MSMEs in the market place and helped them overcome the barriers of time, communication and geography. B2B activities include purchasing and procurement, supplier management, inventory management, payment management, and service and support amongst the organizations as also between organizations and retailers.

India has an internet users base of about 475 million as of July 2019, about 40% of the population. This number is expected to be 627 million by the end of 2019. Despite being the second-largest user base in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 million, 84%), or France (54 M, 81%), but is growing, adding around 6 million new entrants every month.[4] The industry consensus is that growth is at an inflection point.

In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities.[6] Demand for international consumer products (including long-tail items) is growing faster than in-country supply from authorised distributors and e-commerce offerings.

E-COMMERCE IN INDIA

E-commerce can be divided into three broad categories which include physical services, physical goods and virtual goods. The e-commerce platforms maximize its

reach to the potential customers and provide them with a convenient, satisfying & secure shopping experience. The factors responsible for the development of e-commerce in India include - customer convenience, replacement guarantee, wider reach, location based services, multiple payment option, right content, price comparison, shipment option logistical challenges legal challenges quick service, terms and condition, quality of service and customer care centre. The future of e-commerce in India would be bright in the upcoming years if all essential factors would be implemented.

The e-commerce story in India would surely witness a new world of digitalization in the coming decade, with a host of start-ups emerging to compete with existing players in order to draw benefits from the new and existing markets. The sector is classified into four major types, based on the parties involved in the transactions – Business-to-business (B2B), business-to-customer (B2C), customer-to-business (C2B) and customer-to-customer (C2C). The changing consumer lifestyles, supported by the younger population base of India, have given a boost to the e-commerce business. The current penetration rate in India is at 10.1 percent penetration rate, India has a huge Internet consumer base of around 125.0 million (as of 2011), the third largest in the world after US and China. The changing consumer lifestyles, supported by the younger population base of India, have given a boost to the e-commerce business. It has been observed that Indian consumers have matured over the years and increased their acceptance for various payment approaches such as net banking and prepaid wallets. E-commerce horizon as thus widened owing to acceptance of online shopping as a safe shopping medium. The e-commerce sector in India is estimated to have hundreds of players.

India's consumer-facing e-Commerce market (B2C-C2C) grew at a whopping CAGR of 49.1% from 2007 to 2011 to reach a market size of US$9. 9 billion. On the other hand, the B2B market is a small contributor to the overall domestic e-Commerce market, and it was estimated atUS$50.37 million in 2011 e-Commerce players are banking on the Indian internet growth story. The fact that an average online user is spending more time online gives these players the opportunity to draw more users to their websites through innovative marketing strategies such as those revolving around social media. Furthermore, to fully utilize the opportunity, players need to leverage the growing number of mobile devices in the country. They should focus on developing mobile-compatible websites and applications. This would allow

customers to log on to easy-to-access platforms and browse e-Commerce websites on their mobile devices. E-commerce players also need to focus on innovation to tackle challenge sarising from low credit and debit card penetration. They could consider working with financial intermediaries to develop payment systems, such as escrow services, for resolving issuesaround security and product delivery.

India is developing rapidly and if development is to be measured, how can we ignore the role of ecommerce in it. The internet user base in India might still be a mere 151 million which is much less when compared to its penetration in theUS or UK but it's surely expanding at an alarming rate. At 151 million total Internet users, the Internet penetration in India remains at 12.6% India now has the 3rd largest Internet population with 151 million in the world after China at 568 million and USA at 254 million (in 2013).

The e-commerce is heavily leaning on the Internet and mobile phone revolution to fundamentally alter the way businesses reach their customers. In India, e-commerce is still at its infancy. In India e-commerce has taken the world of retail by storm and captivated the imagination of an entire generation of entrepreneurs. The e-commerce ventures have changed the commercial models. There is an explosive growth during the last decade which has already catapulted the biggest firms among these ventures past the billion-dollar territory.

The e-commerce is likely to grow five to seven times over then ext four to five years in India. It is also the most challenging in fulfilling its fundamental proposition of transcending physical boundaries to deliver a variety of products to the customer's doorstep. The logistics and infrastructure in e-retailing has become the backbone of the fulfillment network.

The enhanced need for greater attention and management bandwidth to these critical functions has been realized by the stakeholders of e-commerce in India. India has shown a commendable increase in the ecommerce industry in the last couple of years, thereby hitting the market with a boom. The key drivers of e-commerce in India include - increasing broadband Internet and 3G penetration, growing living standards, availability of much wider product range, busy lifestyles and lack of time for offline shopping, increased usage of online categorized sites and evolution of the online marketplace model with websites. The social media revolution has also contributed significantly towards the development of e-commerce in India.

Evolution and Growth of e-Commerce in India

India, emerging economic superpower and the third largest internet market in term of users, has opened up huge opportunities for the growth of e-Commerce. The country has seen a great transformation in this market with the increasing number of internet users. E-Commerce is growing at a fast track rate whereas the Internet and Mobile Association of India (IMAI) expects e-commerce to grow double this year 2012. Further, the new trends coupled with changes in urban lifestyle is fueling the growth of e-Commerce in India.

More and more organizations in India are joining the digital market bandwagon these days. The rising literacy rate and huge adoption of internet in India has tremendously raised the growth of e-Commerce. And, with the much westernized generation exploring the new potentials and prospects, a huge success rate of e-commerce industry has caught up.

E-commerce is probably the best thing that has happened to the changing middle class population with higher aspiration and lesser time. As a business model too, it appeals both the value-minded Indian consumer as well as Small business owners. Around the world, e-Commerce has brought in bargain hunting – which is quite beneficial for the middle-classes. The huge adoption rate of Flipkart and Snapdeal have proved that e-commerce in India will go a long way.

Presently, shoppers in metropolitan India are driving e-Commerce. These consumers are primarily buying consumer electronics and books online. But, if you look at business transactions, it’s the online ticket booking, which is leading the e-Commerce adoption. However, other segments such as matrimonial, classifieds, jobs all are making good progress.

opting for e-Commerce in recent years. Major portals are shifting towards e-commerce instead of relying on online advertising. And the list covers a wide array of products and services ranging from movie tickets and flowers to electronics and insurance. Thus, e-commerce India is invariably growing and is a boon to consumers, e-Business individuals, online marketers and retailers.

India, rising economic superpower and the third biggest internet market in term of clients, has opened up enormous opportunities for the development of e-commerce. Through the decades, India has seen a great transformation in this market from print literate workforce to the telephone, radio, television to Internet communication and mobile phone applications.

While in countries like China and US, e-commerce has taken significant strides to accomplish sales of over 150 billion USD in revenue, the industry in India is, still at its outset. However, the sector has witnessed the growth of almost 35% in 2014.

E-commerce is most likely the best thing that has happened to the middle class population with higher ambitions and lesser time. Not only it appeals to middle class, e-commerce advances both quality-minded Indian consumer as well as small entrepreneurs. Around the world, **e-commerce** has gotten a deal chasing– which is quite beneficial for the middle-classes. The huge adoption rates of Snapdeal and Flipkart have proved that in India, e-commerce will go far.

Currently, Indian customers are driving e-commerce through online shopping by buying electronics, clothes and books. But, if we look at business transactions, it's the online ticket booking, which is driving the e-commerce adoption. Though, other segments such as classifieds, matrimonial, jobs all are making good progress. Given the E-business scenario, there has been an enduring climb in the number of organizations choosing on e-commerce in recent years. Even the major portals are moving towards e-commerce as opposed to depending on the web promoting.

Also the list covers a wide show of services and products from picture tickets to gadgets. In this way, e-commerce India is perpetually developing and is a shelter to buyers, e-business people, online advertisers and retailers.

The e-commerce has transformed the way business is done in India. The Indian e-commerce market is expected to grow to US$ 200 billion by 2026 from US$ 38.5 billion as of 2017. Much growth of the industry has been triggered by increasing internet and smartphone penetration. The ongoing digital transformation in the country is expected to increase India's total internet user base to 829 million by 2021 from 636.73 million in FY19. India's internet economy is expected to double from US$ 125 billion as of April 2017 to US$ 250 billion by 2020, majorly backed by ecommerce. India's E-commerce revenue is expected to jump from US$ 39 billion in 2017 to US$ 120 billion in 2020, growing at an annual rate of 51 per cent, the highest in the world.

Market Size

Propelled by rising smartphone penetration, the launch of 4G networks and increasing consumer wealth, the Indian e-commerce market is expected to grow to US$ 200 billion by 2026 from US$ 38.5 billion in 2017 Online retail sales in India are expected to grow by 31 per cent to touch US$ 32.70 billion in 2018, led by Flipkart, Amazon India and Paytm Mall.

During April-June quarter 2019, smartphone shipment in India grew 9.9 per cent year-on-year to 36.9 million shipments. It is expected to reach 160 million in 2019.

During 2018, electronics is currently the biggest contributor to online retail sales in India with a share of 48 per cent, followed closely by apparel at 29 per cent.

Investments/ Developments

Some of the major developments in the Indian e-commerce sector are as follows:

- In August 2019, Amazon acquired 49 per cent stake in a unit of Future Group.
- Reliance to invest Rs 20,0000 crore (US$ 2.86 billion) in its telecom business to expand its broadband and E-commerce presence and to offer 5G services.
- In September 2019, PhonePe launched super-app platform 'Switch' to provide a one stop solution for customers integrating several other merchants apps.
- In November 2019, Nykaa opened its 55th offline store marking success in tier II and tier III cities.
- Flipkart, after getting acquired by Walmart for US$ 16 billion, is expected to launch more offline retail stores in India to promote private labels in segments such as fashion and electronics. In September 2018, Flipkart acquired Israel based analytics start-up Upstream Commerce that will help the firm to price and position its products in an efficient way.

- As of March 2019, Flipkart launched its internal fund of about US$ 60-100 million to invest from early stage to seed innovations related to e-commerce industry.
- Paytm has launched its bank - Paytm Payment Bank. Paytm bank is India's first bank with zero charges on online transactions, no minimum balance requirement and free virtual debit card
- As of June 2018, Google is also planning to enter into the E-commerce space by November 2018. India is expected to be its first market.
- Reliance retail is going to launch online retail this year. It has already launched its food and grocery app for beta testing among its employees.
- E-commerce industry in India witnessed 21 private equity and venture capital deals worth US$ 2.1 billion in 2017 and 40 deals worth US$ 1,129 million in the first half of 2018.
- Google and Tata Trust have collaborated for the project ‘Internet Saathi’ to improve internet penetration among rural women in India.

Government initiatives

Since 2014, the Government of India has announced various initiatives namely, Digital India, Make in India, Start-up India, Skill India and Innovation Fund. The timely and effective implementation of such programs will likely support the e-commerce growth in the country. Some of the major initiatives taken by the government to promote the e-commerce sector in India are as follows:

- Government e-Marketplace (GeM) signed a Memorandum of Understanding (MoU) with Union Bank of India to facilitate a cashless, paperless and transparent payment system for an array of services in October 2019.

- In February 2019, the Government of India released the Draft National e-Commerce Policy which encourages FDI in the marketplace model of e-commerce
- In order to increase the participation of foreign players in the e-commerce field, the Indian Government hiked the limit of foreign direct investment (FDI) in the E-commerce marketplace model for up to 100 per cent (in B2B models).
- The heavy investment of Government of India in rolling out the fiber network for 5G will help boost ecommerce in India
- In the Union Budget of 2018-19, government has allocated Rs 8,000 crore (US$ 1.24 billion) to BharatNet Project, to provide broadband services to 150,000 gram panchayats
- As of August 2018, the government is working on the second draft of e-commerce policy, incorporating inputs from various industry stakeholders.

Achievements

Following are the achievements of the government in the past four years:

- Internet subscribers in India stood at 665.31 million in June 2019.
- In the festive sale (September 29-October 4, 2019), the e-tailers in India achieved US$ 3 billion of Gross Merchandise Value (GMV).
- Amazon India launched the Amazon Marketplace Appstore which will provide solutions to sellers .
- Value of Unified Payments Interface (UPI) transactions recorded 1.15 billion transaction worth more than Rs 1.913 trillion (US$ 27 billion) in October 2019.
- Under Internet Saathi project over 26 million women were benefitted in India and it reached 2.6 lakh villages and reached 20 states.
- Under the Digital India movement, government launched various initiatives like Udaan, Umang, Start-up India Portal etc.

- Under the project 'Internet Saathi', the government has influenced over 16 million women in India and reached 166,000 villages
- Udaan, a B2B online trade platform that connect small and medium size manufacturers and wholesalers with online retailers and also provide them logistics, payments and technology support, has sellers in over 80 cities of India and delivers to over 500 cities.
- According to the UN's eGovernance index, India has jumped 11 positions to 107 in 2016 from 2018 in 2014.
- The government introduced Bharat Interface for Money (BHIM), a simple mobile based platform for digital payments.

Road Ahead

The e-commerce industry been directly impacting the micro, small & medium enterprises (MSME) in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well. The Indian e-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest e-commerce market in the world by 2034. Technology enabled innovations like digital payments, hyper-local logistics, analytics driven customer engagement and digital advertisements will likely support the growth in the sector. The growth in e-commerce sector will also boost employment, increase revenues from export, increase tax collection by ex-chequers, and provide better products and services to customers in the long-term.

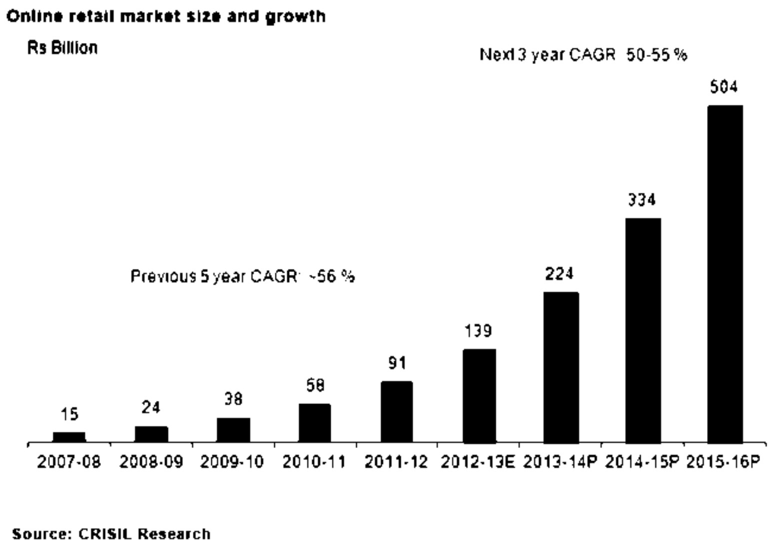
E-retail market is expected to continue its strong growth, by registering a CAGR of over 35 per cent and to reach Rs 1.8 trillion (US$ 25.75 billion) by FY20.

Note: Conversion rate used as on September 2019, Re 1 = US$ 0.014019

India’s e-commerce industry, the times are changing. The e-commerce penetration in India may be comparatively lower than the US and other European markets, but it continues to grow at a rapid rate with many new entrants. Currently, e-commerce is heavily dependent on the web and smartphone revolution that has essentially altered the way businesses interact with customers.

The Rapid Growth of E-Commerce in India

In 2009, the e-commerce market in this country was worth around US$2.5 billion, in 2011 it was US$6.3 billion and in 2012, $14 billion. This number is expected to reach $15 billion by 2016, up from $35 million in 2014, according to a new report by Google and Forrester Research.



With millions of Indians shopping online, the e-commerce industry is witnessing a massive boom and will continue to see exponential growth. The number of online shoppers in India is expected to reach 100 million by the end of 2016, and the number of Internet users is set to reach 300 million by the end of 2014. A recent report by Juniper Research revealed that over two billion users of smartphones or tablets will be making at least one or more e-commerce transactions through mobile before 2017 comes to an end. Payments made through mobile in 2015 are expected to grow at a rate of 60.8 percent, another report revealed.

The Driving Force Behind E-commerce

The growing population and demographics of India will probably be the major driving force behind the explosion of e-commerce in the near future. According to the IAMAI, India had 213 million internet users in 2013 – which was projected to reach the 300 million mark by end of 2014. With this projection, India will attain the position of the second-largest internet base in the world after China (600 million. Although internet users in India may not log on very frequently, you may want to believe that this scenario will change soon with the increase in the usage of smartphones and tablets, and 3G and 4G broadband coverage expansion.

Nearly 65 percent of respondents indulge in online shopping simply for the convenience. However, 62 percent reported displeasure with an online shopping experience. So, there might have been some apparent deterrents of shopping online, but e-commerce has its own charm.

Chief Characteristics of E-Commerce That Influence Purchase Decision

Streamlining the entire purchase and delivery process is what pushed the growth of e-commerce in India. For instance, factors that influence the purchase decision of the customer are many. These factors may also depend on the category of products one intends to buy. The pricing and availability of products also play a very critical role in making this decision. Also, images of the product and the richness of the product information and reviews have a noticeable role to play. Besides, the option for cash-on-delivery, free home delivery and easy return policy helps in building trust and confidence amongst customers resulting in successive purchases and positive word-of mouths support.

The most preferred payment method while shopping online is cash-on-delivery. Almost, 80 percent of e-commerce transactions in India is through cash-on-delivery. This is one major driver that influences the purchase decision. Also, users find it easier to buy international products online, which are either not available in India.

Women shoppers play a key role in the rise of ecommerce segment in India. Women in Tier 1 cities spend two times more as compared to men, while shopping online. It is expected that the number of women online shoppers in India is set to reach the 40 million mark by 2016. Looking at this trend, 2015 is expected to be a more fruitful year for online players who intend to build on categories such as apparels, accessories, baby products, home furnishings, and health.

A major growth in online shopping was witnessed since the introduction of Cash on Delivery (COD) and free return options. The price war among sites also brought another feature of comparison to customers where they could review product characteristics and prices featured on different sites.

The rate of growth of e-commerce is so rapid that the prevailing view is that the industry would reach a size of $20 billion by 2020.

The factors fueling this rapid growth are

· Increasing broadband Internet and 3 Generation

· Rising standards of living and a burgeoning, upwardly mobile middle class with high disposable incomes.

· Payment gateways such as net banking and cash on delivery

CONCLUSION

The greater Internet penetration and Smartphone application would boost e-commerce by 2020 and ensure the growth of Indian commerce to \$12.6 billion by the end of 2016. The e-commerce will spawn several investments in logistics infrastructure including large fulfillment centers and warehouses, downstream parcel and sortation centers. The whole transportation paradigm of the future may evolve around a judicious mix of rail, road and air transport modes. The economic potential has increased over a period of time due to the rise of e-commerce logistics in India. There will beadditional central fulfillment centers which will ensure efficiency improvements in individual performance and productivity (IPPs) in the delivery networks by 2020. The evolution of logistics landscape, long term profitability of the e-retailing industry, increase in FDI in the inventory-led retail, better infrastructure and robust supply chains, new taxation policies in the country, entry of more players in the 3PL domain and rationalization of delivery costs will lead to substantial investments in supporting infrastructure and innovative and game changing business models.

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