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COMMERCE AND TECHNOLOGY (A FRUITFUL INVENTION)

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Abstract :-

Commerce drives economic growth, development and prosperity, promotes regional and international interdependence, fosters cultural exchange, creates jobs, improves people's standard of living by giving them access to a wider variety of goods and services, and encourages innovation and competition for better products.With the right technology, companies can streamline operations, make better decisions, deliver a better customer experience, and maximise returns. The role of technology in business is to enable companies to operate more efficiently, effectively, and competitively.

E-commerce :-

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

The terms e-commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to the transactional processes that make up online retail shopping.

In the last two decades, widespread use of e-commerce platforms such as Amazon and eBay has contributed to substantial growth in online retail. In 2011, e-commerce accounted for 5% of total retail sales, according to the U.S. Census Bureau. By 2020, with the start of the COVID-19 pandemic, it had risen to over 16% of retail sales.

How does e-commerce work :-

E-commerce is powered by the internet. Customers access an online store to browse through and place orders for products or services via their own devices.

As the order is placed, the customer's web browser will communicate back and forth with the server hosting the e-commerce website. Data pertaining to the order will be relayed to a central computer known as the order manager. It will then be forwarded to databases that manage inventory levels; a merchant system that manages payment information, using applications such as PayPal; and a bank computer. Finally, it will circle back to the order manager. This is to make sure that store inventory and customer funds are sufficient for the order to be processed.

After the order is validated, the order manager will notify the store's web server. It will display a message notifying the customer that their order has been successfully processed. The order manager will then send order data to the warehouse or fulfillment department, letting it know the product or service can be dispatched to the customer. At this point tangible or digital products may be shipped to a customer, or access to a service may be granted.

Platforms that host e-commerce transactions include online marketplaces that sellers sign up for, such as Amazon; software as a service (SaaS) tools that allow customers to "rent" online store infrastructures; or open source tools that companies manage using their in-house developers.

Types of e-commerce :-

Business-to-business (B2B) e-commerce refers to the electronic exchange of products, services or information between businesses rather than between businesses and consumers. Examples include online directories and product and supply exchange websites that let businesses search for products, services and information and initiate transactions through e-procurement interfaces. A Forrester report published in 2018 predicted that by 2023, B2B e-commerce will reach $1.8 trillion dollars and account for 17% of U.S. B2B sales.

Business-to-consumer (B2C) is the retail part of e-commerce on the internet. It is when businesses sell products, services or information directly to consumers. The term was popular during the dot-com boom of the late 1990s, when online retailers and sellers of goods were a novelty.

Today, there are innumerable virtual stores and malls on the internet selling all types of consumer goods. Amazon is the most recognized example of these sites. It dominates the B2C market.

Consumer-to-consumer (C2C) is a type of e-commerce in which consumers trade products, services and information with each other online. These transactions are generally conducted through a third party that provides an online platform on which the transactions are carried out.

Online auctions and classified advertisements are two examples of C2C platforms. EBay and Craigslist are two well-known examples of these platforms. Because eBay is a business, this form of e-commerce could also be called C2B2C -- consumer-to-business-to-consumer. Platforms like Facebook marketplace and Depop -- a fashion reselling platform -- also enable C2C transactions.

Consumer-to-business (C2B) is a type of e-commerce in which consumers make their products and services available online for companies to bid on and purchase. This is the opposite of the traditional commerce model of B2C.

A popular example of a C2B platform is a market that sells royalty-free photographs, images, media and design elements, such as iStock. Another example would be a job board.

Business-to-administration (B2A) refers to transactions conducted online between companies and public administration or government bodies. Many branches of government are dependent on various types of e-services or products. These products and services often pertain to legal documents, registers, social security, fiscal data and employment. Businesses can supply these electronically. B2A services have grown considerably in recent years as investments have been made in e-government capabilities.

Consumer-to-administration (C2A) refers to transactions conducted online between consumers and public administration or government bodies. The government rarely buys products or services from individuals, but individuals frequently use electronic means in the following areas:

Social security :

Distributing information and making payments.

Taxes :

Filing tax returns and making payments.

Health :

making appointments, providing test results and information about health conditions.

Platforms that host e-commerce transactions include online marketplaces that sellers sign up for, such as Amazon; software as a service (SaaS) tools that allow customers to "rent" online store infrastructures; or open source tools that companies manage using their in-house developers.

Mobile e-commerce :-

(m-commerce) refers to online sales transactions using mobile devices, such as smartphones and tablets. It includes mobile shopping, banking and payments. Mobile chatbots facilitate m-commerce, letting consumers complete transactions via voice or text conversations.

Advantages and disadvantages of e-commerce :-

Benefits of e-commerce include its around-the-clock availability, the speed of access, the wide availability of goods and services, easy accessibility and international reach.

Availability :-Aside from outages and scheduled maintenance, e-commerce sites are available 24/7, enabling visitors to browse and shop at any time. Brick-and-mortar businesses tend to open for a fixed number of hours and may even close entirely on certain days.

Speed of access :- While shoppers in a physical store can be slowed by crowds, e-commerce sites run quickly, which is determined by compute and bandwidth considerations on both the consumer device and the e-commerce site. Product and shopping cart pages load in a few seconds or less. An e-commerce transaction can comprise a few clicks and take less than five minutes.

Wide availability :-Amazon's first slogan was "Earth's Biggest Bookstore." It could make this claim because it was an e-commerce site and not a physical store that had to stock each book on its shelves. E-commerce enables brands to make a wide array of products available, which are then shipped from a warehouse or various warehouses after a purchase is made. Customers will likely have more success finding what they want.

Easy accessibility :- Customers shopping a physical store may have difficulty locating a particular product. Website visitors can browse product category pages in real time and use the site's search feature to find the product immediately.

International reach :- Brick-and-mortar businesses sell to customers who physically visit their stores. With e-commerce, businesses can sell to anyone who can access the web. E-commerce has the potential to extend a business's customer base.

Lower cost :- Pure play e-commerce businesses avoid the costs of running physical stores, such as rent, inventory and cashiers. They may incur shipping and warehouse costs, however.

Personalization and product recommendations :- E-commerce sites can track a visitor's browse, search and purchase history. They can use this data to present personalized product recommendations and obtain insights about target markets. Examples include the sections of Amazon product pages labeled "Frequently bought together" and "Customers who viewed this item also viewed."

The perceived disadvantages of e-commerce :- include sometimes limited customer service, consumers not being able to see or touch a product prior to purchase and the wait time for product shipping.

Limited customer service :-If customers have a question or issue in a physical store, they can see a clerk, cashier or store manager for help. In an e-commerce store, customer service can be limited: The site may only provide support during certain hours, and its online service options may be difficult to navigate or not answer a specific question.

Limited product experience :- Viewing images on a webpage can provide a good sense about a product, but it's different from experiencing the product directly, such as playing a guitar, assessing the picture quality of a television or trying on a shirt or dress. E-commerce consumers can end up buying products that differ from their expectations and have to be returned. In some cases, the customer must pay to ship a returned item back to the retailer. Augmented reality technology is expected to improve customers' ability to examine and test e-commerce products.

Wait time :-In a store, customers pay for a product and go home with it. With e-commerce, customers must wait for the product to be shipped to them. Although shipping windows are decreasing as next-day and even same-day delivery becomes common, it's not instantaneous.

Security :- Skilled hackers can create authentic-looking websites that claim to sell well-known products. Instead, the site sends customers fake or imitation versions of those products -- or simply steals credit card information. Legitimate e-commerce sites also carry risk, especially when customers store their credit card information with the retailer to make future purchases easier. If the retailer's site is hacked, threat actors may steal that credit card information. A data breach can also lead to a damaged retailer reputation.

E-commerce applications

Many retail e-commerce apps use online marketing techniques to get customers to use the platform. These include email, online catalogs and shopping carts, Electronic Data Interchange (EDI), file transfer protocol, web services and mobile applications.

These approaches are used in B2C and B2B activities, as well as other types of outreach. They include emailing targeted ads and e-newsletters to subscribers and sending SMS texts to mobile devices. Sending unsolicited emails and texts is generally considered spam. More companies now try to entice consumers online, using tools such as digital coupons, social media marketing and targeted advertisements.

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Another area of focus for e-commerce companies is security. Developers and admins should consider consumer data privacy and security, data governance-related regulatory compliance mandates, personally identifiable information privacy rules and information protection protocols when developing e-commerce systems and applications. Some security features are added during the design of an application, while others must be continually updated to address evolving threats and new vulnerabilities.

Government regulations for e-commerce :-

In the United States, the Federal Trade Commission (FTC) and the Payment Card Industry (PCI) Security Standards Council are among the primary agencies that regulate e-commerce activities. The FTC monitors activities such as online advertising, content marketing and customer privacy. The PCI Security Standards Council develops standards and rules, including PCI Data Security Standard compliance, which outlines procedures for the proper handling and storage of consumers' financial data.

To ensure the security, privacy and effectiveness of e-commerce, businesses should authenticate business transactions, control access to resources such as webpages for registered or selected users, encrypt communications and implement security technologies, such as Secure Sockets Layer and two-factor authentication.

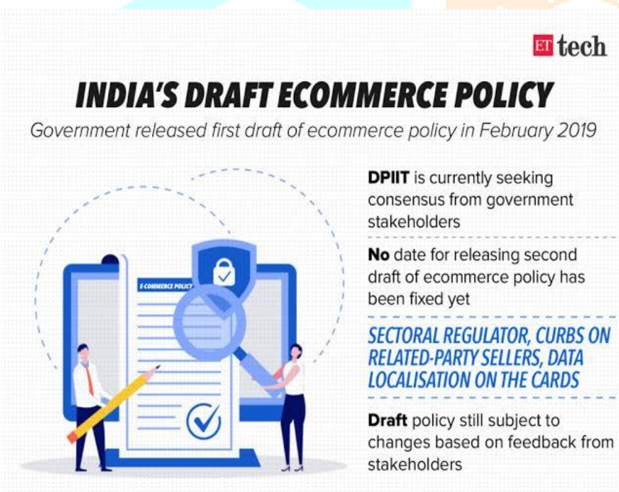
The COVID-19 pandemic of 2020 caused e-commerce to spike significantly. With shoppers confined to their homes for an extended period of time, e-commerce jumped to a record high of 16.4% in the second quarter of 2020, according to the U.S. Census Bureau.

The Census Bureau keeps a record of quarterly e-commerce data dating back to 1999.

Data from the U.S. Census Bureau and Federal Reserve Economic Data shows the increasing importance of e-commerce in the retail market. The percent of total U.S. sales from e-commerce has consistently grown since 1999, peaking at 16.4% in Q2 2020. In Q1 2022, e-commerce accounted for 14.3% of total sales, several percentage points higher than the pre-pandemic level in Q4 2019 of 11.1%.

E-commerce retail sales as a percentage of total salesE-commerce sales have risen steadily since 1999 and peaked in 2020, early in the pandemic.

India's Draft Of E-commerce :-



Conclusion:-

Adoption of new tech also plays a part in the growth of online retail. A 2021 study from Juniper Research predicted e-commerce transactions made via voice assistant will grow by more than 320% to $19.4 billion by 2023 from $4.6 billion in 2021.

Despite the growth of online retail, many shoppers still prefer brick-and-mortar. Forrester projected that most retail sales will continue to come from physical stores, estimating that they will still account for 72% of U.S. retail sales in 2024.