

BACHELOR OF COMPUTER APPLICATION (BCA)

CSB-1111 (Management Information System)

Block 4: Strategic Management of Information Systems

Unit 14: E-Business and E-Commerce

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14.0 Introduction

Within the dynamic field of business, the digital sphere has emerged as a crucial platform for trade, correspondence, and cooperation. The introduction of e-business and e-commerce has completely changed how companies interact with their clients, carry out transactions, and optimize their processes. This introduction explores the foundational ideas, historical development, and important factors related to e-business and e-commerce, illuminating their importance in the modern corporate environment.

E-business and e-commerce are dynamic fields that use digital technologies to support a range of company operations, such as supply chain management, customer service, and marketing. Understanding the principles of e-business and e-commerce is crucial for navigating the intricacies of the online marketplace and seizing new opportunities as organizations embrace digital transformation.

This introduction provides an overview of the evolution of e-business and e-commerce throughout history, clarifies important terms and concepts, looks at various e-commerce platforms and business models, and discusses the ethical and legal issues that arise with online transactions. Organizations can learn how to use digital technologies to propel innovation, promote expansion, and negotiate the complexities of the digital economy by exploring these aspects.

14.1 Objectives

After completion of this unit, you will be able to understand,

- ❖ **Historical Context:** Examine the historical development of E-Business and E-Commerce to understand their evolution and the factors that have shaped their growth over time.
- ❖ **Conceptual Understanding:** Clarify key concepts and terminology associated with E-Business and E-Commerce to provide a foundational understanding of these domains.
- ❖ **Platform Exploration:** Explore various E-Commerce platforms and business models to understand their functionalities, advantages, and applications in different business contexts.
- ❖ **Ethical Awareness:** Investigate the ethical issues inherent in E-Commerce and the importance of compliance with regulatory requirements to ensure ethical practices and protect consumer rights.
- ❖ **Knowledge Synthesis:** Summarize the key insights and learnings from the exploration of E-Business and E-Commerce to provide a comprehensive overview of their significance in the modern business landscape.

14.2 Fundamentals of E-Business and E-Commerce

The term "e-business," which stands for "electronic business," describes how commercial operations and transactions are carried out via digital technology, mostly over the internet or other electronic networks. It includes a wide range of tasks, such as supply chain management, customer support, sales, online marketing, and electronic transactions. E-business uses digital platforms and tools to increase productivity, cut expenses, and streamline processes. By utilizing digital platforms and technologies, it helps businesses to access a worldwide audience, generate new revenue streams, and enhance consumer experiences.

E-Commerce: Buying and selling products and services online is known as electronic commerce, or E-Commerce. It is a branch of e-business with a particular emphasis on online transactions. Digital payment methods, online marketplaces, electronic delivery of products and services, and online retail stores are all included in e-commerce. It helps companies to become global in their consumer base, have an online presence, and enable smooth transactions via digital platforms. E-commerce platforms and technologies are essential for businesses to establish and maintain online storefronts, securely handle payments, and ship goods and services to clients all over the world.

14.2.1 Historical Development of E-Business and E-Commerce

E-business and e-commerce have a long history that began with the development of computer networks and the internet, which resulted in important breakthroughs in digital technology and commercial procedures.

Early Beginnings (1960s–1970s): The creation of electronic data interchange (EDI) systems at this time can be linked to the origins of e-business and e-commerce. By enabling electronic business document interchange (EDI), companies can reduce paperwork and human processing by exchanging business documents like invoices and purchase orders. Unfortunately, EDI's broad acceptance was constrained by its use being restricted to major firms and its costly infrastructure requirements.

The Internet's Birth (1980s–1990s)

An important turning point in the growth of e-business and e-commerce occurred with the widespread use of the internet in the 1980s and 1990s. The way that information was accessed and shared online was completely transformed in 1989 when Tim Berners-Lee created the World Wide Web. As companies started looking into how they could use the internet for business, digital storefronts, electronic payment

methods, and online marketplaces started to appear. Online retailers like Amazon, eBay, and Dell pioneered online shopping and proved that e-commerce models were feasible and scalable.

Late 1990s–Early 2000s Dot-Com Boom and Bust

The dot-com boom, which was marked by an increase in investments and enterprises tied to the internet, occurred in the late 1990s. Fueled by hope about the internet's potential to change commerce, e-commerce startups sprung up everywhere. But in the early 2000s, the dot-com bubble burst, resulting in the demise of numerous online businesses and investor doubt regarding the sustainability of e-commerce. Lessons were learnt and stronger survivors emerged from the disaster, paving the way for the next stage of the evolution of e-business and e-commerce.

Technological Advancements and Mainstream Adoption (2000s–Present)

E-business and e-commerce became widely used in the 2000s as a result of increased internet infrastructure, shifting customer behavior, and technological improvements. Smartphones and other mobile devices completely changed how people could access the internet, which sparked the growth of mobile commerce (m-Commerce). Social media sites like Facebook and Instagram have become essential to e-commerce since they allow companies to interact with clients and increase revenue. Furthermore, developments in data analytics, logistics, and digital payment technology completely changed how companies ran their operations and completed online transactions. Presently, e-business and e-commerce are undergoing a swift evolution, with new technologies like augmented reality, blockchain, and artificial intelligence influencing the direction of digital commerce in the future.

14.2.2 Key Concepts and Terminology

- ❖ **Digital Transformation:** The process of leveraging digital technologies to fundamentally change business operations, processes, and customer experiences to adapt to the digital age.
- ❖ **Online Presence:** Refers to a business's visibility and accessibility on the internet through websites, social media profiles, and other digital channels.
- ❖ **Omnichannel:** An approach to sales and marketing that provides a seamless customer experience across multiple channels, including online and offline touchpoints.
- ❖ **Digital Marketing:** The use of digital channels such as social media, email, search engines, and websites to promote products and services and engage with customers.
- ❖ **E-Wallet:** A digital wallet or electronic payment system that allows users to store payment information securely and make transactions online.
- ❖ **Cloud Computing:** The delivery of computing services, including servers, storage, databases, networking, software, and analytics, over the internet (the cloud) to offer faster innovation, flexible resources, and economies of scale.

Difference between E-Commerce & E-Business

E-Business	E-Commerce
E-Business encompasses a broader range of activities than E-Commerce. It includes not only buying and selling goods and services online (which falls under E-Commerce) but also other business processes such as online marketing, customer relationship management (CRM), supply	E-Commerce, on the other hand, specifically refers to the buying and selling of goods and services over the internet. It is a subset of E-Business that deals specifically with commercial transactions conducted online.

chain management (SCM), electronic data interchange (EDI), and online collaboration.	
E-Business involves the use of digital technologies and the internet to conduct various business operations and interactions, including communication, collaboration, transaction processing, and information exchange, among others.	E-Commerce is primarily transactional in nature, involving the exchange of goods or services for money or other forms of value. It includes activities such as online retailing, online auctions, digital product downloads, and electronic ticketing.
E-Business activities can be both internal (within the organization) and external (with customers, suppliers, partners, etc.). It encompasses all digital interactions and transactions that support the overall business processes and operations.	E-Commerce is often more customer-facing and focuses on facilitating online transactions between businesses and consumers (B2C), between businesses (B2B), or between consumers (C2C).
Examples: Examples of E-Business activities include online marketing campaigns, customer support through web chat or email, electronic procurement systems, online banking, electronic fund transfers, and online booking systems, among others.	Examples: Examples of E-Commerce platforms and activities include online storefronts (e.g., Amazon, eBay), online marketplaces, digital payment systems (e.g., PayPal, Stripe), online banking, and digital subscription services.

14.3 E-Commerce Platforms and Business Models

Types of E-Commerce Platforms

- ❖ **Hosted E-Commerce Platforms:** Hosted platforms provide a complete solution for building and managing online stores, with hosting, security, and technical support included. Examples: Shopify, BigCommerce, Wix, Squarespace.
- ❖ **Self-Hosted E-Commerce Platforms:** Self-hosted platforms offer more flexibility and control over the website's design and functionality but require users to manage hosting, security, and updates independently. Examples: WooCommerce (WordPress plugin), Magento, OpenCart.
- ❖ **Open-Source E-Commerce Platforms:** Open-source platforms are freely available and customizable, allowing users to modify the codebase to meet their specific requirements. Examples: Magento (Community Edition), Presta Shop, OpenCart.
- ❖ **SaaS E-Commerce Platforms:** Software-as-a-Service (SaaS) platforms are cloud-based solutions that provide a subscription-based model, offering scalability, reliability, and ease of use. Examples: Shopify, BigCommerce, Squarespace, Wix.

E-Commerce Business Models: E-commerce business models specify how companies run and make money from internet sales. There are various kinds of E-Commerce business models, and each has unique traits and tactics:

- ❖ **Business-to-Consumer (B2C):** In the B2C model, businesses sell products or services directly to individual consumers through online storefronts or marketplaces. Examples include Amazon, eBay, and Walmart.

- ❖ **Business-to-Business (B2B):** B2B businesses sell products or services to other businesses through online portals or procurement systems. They cater to the needs of corporate clients and focus on building long-term partnerships. Examples include Alibaba, Global Sources, and Grainger.
- ❖ **Consumer-to-Consumer (C2C):** C2C businesses facilitate transactions between individual consumers through online marketplaces or classified ads platforms. Examples include eBay, Craigslist, and Facebook Marketplace.
- ❖ **Consumer-to-Business (C2B):** C2B businesses enable individual consumers to sell products or services to businesses, often through freelance platforms or crowdsourcing platforms. Examples include Upwork, Fiverr, and Shutterstock.

Emerging E-Commerce Models

- ❖ **Subscription-Based E-Commerce:** Subscription-based E-Commerce models offer products or services to customers on a recurring basis, typically through subscription plans or memberships. This model provides convenience and value to customers by offering recurring access to products or services, such as subscription boxes, streaming services, or software subscriptions. Businesses benefit from predictable revenue streams, customer loyalty, and opportunities for upselling and cross-selling additional products or features. Subscription-based E-Commerce fosters long-term relationships with customers, encourages repeat purchases, and provides businesses with valuable insights into customer preferences and behavior.
- ❖ **Dropshipping:** Dropshipping is a retail fulfillment method where businesses sell products to customers without holding inventory. Instead, when a customer places an order, the business purchases the product from a third-party supplier who then ships it directly to the customer. Dropshipping eliminates the need for inventory management, storage, and fulfillment, reducing upfront costs and operational complexities for businesses. This model offers flexibility, scalability, and low entry barriers, making it attractive to entrepreneurs and small businesses. However, businesses must carefully select reliable suppliers, manage customer expectations regarding shipping times and product quality, and differentiate themselves in a competitive market to succeed in dropshipping.
- ❖ **Social Commerce:** Social commerce integrates social media platforms with E-Commerce, allowing businesses to sell products directly through social media channels. This model leverages the social networks of users to facilitate product discovery, recommendations, and purchases within the social media environment. Social commerce platforms offer features such as shoppable posts, buy buttons, and in-app checkout, enabling seamless shopping experiences for users. Businesses can engage with customers, build brand awareness, and drive sales through targeted advertising, influencer partnerships, and user-generated content. Social commerce blurs the lines between social interaction and commercial transactions, offering new opportunities for businesses to reach and engage with customers in a personalized and interactive manner.
- ❖ **Mobile Commerce (m-Commerce):** Mobile commerce, or m-Commerce, refers to E-Commerce transactions conducted through mobile devices such as smartphones and tablets. With the widespread adoption of mobile technology and the increasing use of mobile apps and mobile-optimized websites, m-Commerce has become a significant driver of online sales. Mobile commerce offers convenience, accessibility, and on-the-go shopping experiences for consumers, enabling them to browse, shop, and make purchases anytime and anywhere. Businesses must prioritize mobile-friendly design, seamless navigation, and secure payment options to optimize the mobile shopping experience and capitalize on the growing trend of mobile commerce. As mobile

devices continue to dominate online traffic and consumer behavior, businesses must adapt their E-Commerce strategies to meet the evolving needs and preferences of mobile shoppers.

14.4 Legal and Ethical Issues in E-Commerce

E-Commerce operates within a complex legal landscape shaped by international agreements, national regulations, and industry-specific laws. Understanding the legal framework is crucial for businesses to ensure compliance, protect consumer rights, and mitigate legal risks in online transactions.

- ❖ **International Laws and Regulations:** E-Commerce transcends national borders, making it subject to international laws and agreements governing trade and digital commerce. Key international bodies, such as the World Trade Organization (WTO) and the United Nations Commission on International Trade Law (UNCITRAL), play a role in shaping global trade rules and standards applicable to E-Commerce.
- ❖ **Data Protection and Privacy Laws:** Data protection and privacy laws regulate the collection, processing, and storage of personal data by businesses engaged in E-Commerce. Examples include the General Data Protection Regulation (GDPR) in the European Union, the California Consumer Privacy Act (CCPA) in the United States, and the Personal Information Protection and Electronic Documents Act (PIPEDA) in Canada. These laws require businesses to obtain consent for data collection, protect sensitive information, and provide individuals with rights over their personal data.
- ❖ **Consumer Protection Laws:** Consumer protection laws aim to safeguard consumers' rights and interests in E-Commerce transactions. They govern various aspects of online commerce, including product quality, pricing transparency, advertising practices, and dispute resolution mechanisms. Examples include the Consumer Rights Directive in the European Union, the Consumer Protection Act in the United States, and the Consumer Rights Act in the United Kingdom. These laws ensure that consumers are informed, protected, and empowered to make confident purchasing decisions in the digital marketplace.
- ❖ **Intellectual Property Rights:** Intellectual property laws protect the rights of creators and innovators in E-Commerce, including copyrights, trademarks, patents, and trade secrets. Businesses must respect intellectual property rights and avoid infringing on the rights of others when selling products or services online. Examples include the Digital Millennium Copyright Act (DMCA) in the United States, which provides mechanisms for addressing online copyright infringement, and the European Union Intellectual Property Office (EUIPO), which registers trademarks and designs in the EU.
- ❖ **Electronic Contracts and Signatures:** Electronic contracts and signatures are legally recognized in many jurisdictions, enabling businesses to conduct transactions electronically. Laws such as the Uniform Electronic Transactions Act (UETA) and the Electronic Signatures in Global and National Commerce Act (ESIGN) in the United States establish the legal validity of electronic contracts and signatures. Businesses must ensure that electronic transactions comply with applicable laws and regulations, including requirements for consent, authentication, and recordkeeping.

14.4.1 Ethical Issues in E-Commerce

E-Commerce presents various ethical challenges that businesses must navigate to maintain trust, fairness, and social responsibility in the digital marketplace.

Data Privacy and Security

- ❖ **Concern:** E-Commerce involves the collection, processing, and storage of vast amounts of personal data, raising concerns about privacy breaches and unauthorized access.
- ❖ **Ethical Consideration:** Businesses have a responsibility to protect customer data from unauthorized access, breaches, and misuse. They must prioritize data security, transparency, and user consent to uphold privacy rights and maintain trust with consumers.

Ethical Marketing Practices

- ❖ **Concern:** E-Commerce relies heavily on digital marketing tactics to promote products and drive sales, leading to ethical concerns about deceptive advertising, manipulative techniques, and invasion of consumer privacy.
- ❖ **Ethical Consideration:** Businesses should engage in honest and transparent marketing practices, avoiding misleading advertisements, spamming, and intrusive targeting. Respecting consumer preferences, providing accurate information, and seeking informed consent are essential for building trust and credibility.

Customer Trust and Transparency

- ❖ **Concern:** Trust is paramount in E-Commerce transactions, but issues such as counterfeit products, fake reviews, and undisclosed affiliations can erode consumer trust and undermine the integrity of online commerce.
- ❖ **Ethical Consideration:** Businesses must prioritize honesty, transparency, and accountability in their interactions with customers. Providing accurate product descriptions, authentic customer reviews, and clear terms and conditions fosters trust and strengthens relationships with consumers.

Environmental Impact and Sustainability

- ❖ **Concern:** E-Commerce operations, including packaging, shipping, and energy consumption, contribute to environmental degradation and carbon emissions, exacerbating climate change and resource depletion.
- ❖ **Ethical Consideration:** Businesses should adopt sustainable practices throughout the E-Commerce supply chain, from sourcing materials and manufacturing to packaging and logistics. Embracing eco-friendly alternatives, minimizing waste, and reducing carbon footprint demonstrate a commitment to environmental stewardship and corporate social responsibility.

Digital Divide and Access Inequality

- ❖ **Concern:** Socioeconomic disparities and digital divide issues contribute to unequal access to online resources, technology, and E-Commerce opportunities, exacerbating social and economic inequality.
- ❖ **Ethical Consideration:** Businesses should strive to bridge the digital divide by promoting digital inclusion initiatives, providing affordable access to technology and internet connectivity, and offering accessible E-Commerce platforms and services. Ensuring equal access and opportunities for all individuals promotes fairness, diversity, and inclusion in the digital economy.

14.4.2 Compliance and Regulatory Requirements

Compliance with relevant laws and regulations is essential for businesses engaged in E-Commerce to protect consumer rights, ensure data security, and mitigate legal risks. Several key regulations govern different aspects of E-Commerce operations, including data protection, payment security, consumer protection, and healthcare information privacy.

General Data Protection Regulation (GDPR)

- ❖ **Purpose:** The GDPR is a comprehensive data protection regulation enacted by the European Union (EU) to safeguard the privacy and personal data of EU residents.
- ❖ **Scope:** The GDPR applies to businesses that process personal data of individuals located in the EU, regardless of the business's location. It regulates data collection, processing, storage, and transfer, requiring businesses to obtain explicit consent for data processing, implement data protection measures, and notify authorities of data breaches.
- ❖ **Compliance Requirements:** Businesses subject to the GDPR must appoint a data protection officer (DPO), conduct data protection impact assessments (DPIAs), and adhere to principles such as data minimization, purpose limitation, and accountability.

Payment Card Industry Data Security Standard (PCI DSS)

- ❖ **Purpose:** PCI DSS is a set of security standards developed by the Payment Card Industry Security Standards Council (PCI SSC) to protect payment card data and prevent fraud in E-Commerce transactions.
- ❖ **Scope:** PCI DSS applies to businesses that accept, process, store, or transmit payment card data, including merchants, service providers, and payment processors. It establishes requirements for secure handling of cardholder information, including encryption, access controls, network security, and regular security assessments.
- ❖ **Compliance Requirements:** Businesses must comply with PCI DSS requirements, such as maintaining a secure network, protecting cardholder data, implementing access controls, conducting regular security testing, and maintaining a vulnerability management program.

Federal Trade Commission (FTC) Regulations

- ❖ **Purpose:** The FTC regulates consumer protection, privacy, and antitrust issues in the United States, including deceptive advertising, unfair trade practices, and data privacy breaches.
- ❖ **Scope:** The FTC Act grants the FTC authority to enforce laws related to consumer protection and unfair competition, including deceptive or misleading advertising, online privacy, and data security breaches.
- ❖ **Compliance Requirements:** Businesses must comply with FTC regulations by ensuring transparency, honesty, and fairness in their marketing practices, protecting consumer privacy, and promptly addressing consumer complaints and concerns. Non-compliance with FTC regulations may result in penalties, fines, and legal consequences.

Health Insurance Portability and Accountability Act (HIPAA)

- ❖ **Purpose:** HIPAA is a federal law in the United States that establishes privacy and security standards for protecting sensitive healthcare information, known as protected health information (PHI).
- ❖ **Scope:** HIPAA applies to healthcare providers, health plans, and healthcare clearinghouses, as well as their business associates who handle PHI. It regulates the use, disclosure, and safeguarding of PHI to ensure patient privacy and confidentiality.
- ❖ **Compliance Requirements:** Covered entities and business associates must comply with HIPAA requirements, such as implementing safeguards to protect PHI, providing individuals with rights over their health information, and maintaining HIPAA-compliant policies and procedures.

14.5 Summary

Important insights into the ever-changing world of digital commerce have been gained from the investigation of e-business and e-commerce. We started with a historical synopsis and then followed these domains' development to see how they have changed business practices throughout time. We defined the fundamentals of e-business and e-commerce by delving into important terms and concepts, setting the stage for further investigation.

We also looked at the wide range of E-Commerce platforms and business strategies, shedding light on the features and apps that power online sales and customer relations. We also talked about the important legal and moral issues that are inherent in e-commerce, highlighting how crucial it is to abide by legal obligations and moral standards in order to defend consumer rights and promote confidence in the online marketplace.

This investigation concludes by highlighting the importance of e-business and e-commerce in contemporary corporate operations and by providing chances for innovation, expansion, and connection in a world that is becoming more and more digital. Organizations may confidently negotiate the complexity of the digital economy by combining historical insights, conceptual frameworks, and pragmatic considerations. This allows them to leverage digital technology to produce value and accomplish strategic goals.

14.6 Questions and Answers

1. What is the difference between E-Business and E-Commerce?

Answer: E-Business encompasses a broader range of activities beyond buying and selling, including online marketing, customer relationship management, and supply chain management. E-Commerce, on the other hand, specifically refers to the buying and selling of goods and services over the internet.

2. What are some examples of E-Commerce platforms?

Answer: Examples of E-Commerce platforms include Amazon, eBay, Shopify, WooCommerce, and Alibaba. These platforms provide online marketplaces, storefronts, and payment processing solutions for businesses to sell products and services online.

3. What are the key ethical issues in E-Commerce?

Answer: Some key ethical issues in E-Commerce include data privacy and security, ethical marketing practices, customer trust and transparency, environmental impact and sustainability, and digital divide and access inequality.

4. How do businesses ensure compliance with regulatory requirements in E-Commerce?

Answer: Businesses ensure compliance with regulatory requirements in E-Commerce by understanding and adhering to relevant laws and regulations such as the General Data Protection Regulation (GDPR), Payment Card Industry Data Security Standard (PCI DSS), Federal Trade Commission (FTC) regulations, and Health Insurance Portability and Accountability Act (HIPAA) where applicable.

5. What are some emerging E-Commerce models?

Answer: Emerging E-Commerce models include subscription-based E-Commerce, dropshipping, social commerce, and mobile commerce (m-Commerce). These models offer new opportunities for businesses to innovate, engage with customers, and drive sales in the digital marketplace.

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