Lesson 10

eBusiness/eCommerce Systems

Introduction to eBusiness & eCommerce

•1994 e-commerce as we now know it did not exist

•Purchasing goods, services, and digital content via a desktop computer or mobile device in 2018:

- $1 trillion - 190 million American consumers
- $6.1 trillion - businesses

Introduction to eBusiness & eCommerce

- **2000 - 2001** - Stock market crashed
- **2002 - 2007** - Retail e-commerce grew at more than 25% per year
- **2007**, Apple introduced the first iPhone - New era in e-commerce

In the last ten years, mobile devices, such as smartphones and tablet computers, and mobile apps have supplanted the traditional desktop/laptop platform and web browser as the most common method for consumers to access the Internet. Facilitated by technologies such as cellular networks, Wi-Fi, and cloud computing, mobile devices have become advertising, shopping, reading, and media viewing machines, and in the process, have transformed consumer behavior yet again.

The Impact of E-Commerce on Society

Positive Impact: Growth, innovation, job creation

Challenges:

- Privacy invasion
- Spread of misinformation
- Security threats
- Market dominance by tech giants (Amazon, Google, Facebook)

Regulation: Increasing oversight on digital businesses

The Future of E-Commerce

Continued Growth:

- $1.5 trillion in consumer spending by 2022
- $7.3 trillion in business spending by 2022

Technological Advancements:

- AI, cloud computing, blockchain
- Evolution of mobile and digital platforms

E-Commerce Dominance: Most commerce expected to be digital by 2050

Why Study E-Commerce

- **Understanding Trends & Business Models**
- **Learning Technological Foundations:** Internet, Web, mobile platforms
- **Security & Ethical Considerations**
- **Marketing Strategies:** Social, mobile, local marketing

What is E-Commerce?

E-commerce involves the use of the Internet, the World Wide Web (Web), and mobile apps and browsers running on mobile devices to transact business

Definition: Digitally enabled commercial transactions between organizations and individuals.

Involves:

- **Internet** – Global network of computer networks.
- **Web** – A major service of the Internet, providing web pages.
- **Mobile Apps & Browsers** – Enable transactions on mobile devices.

Exchange of Value: Essential for commerce to occur.

Key Components of E-Commerce

Digitally Enabled Transactions:

- Conducted via the Internet, Web, or mobile devices.

Commercial Transactions:

- Exchange of money, products, or services.

E-Commerce vs. Digital Commerce:

- Used interchangeably but mean the same thing.

E-Commerce vs. E-Business

E-Commerce:

- Digital transactions involving external customers or partners.
- Example: Online shopping, digital payments.

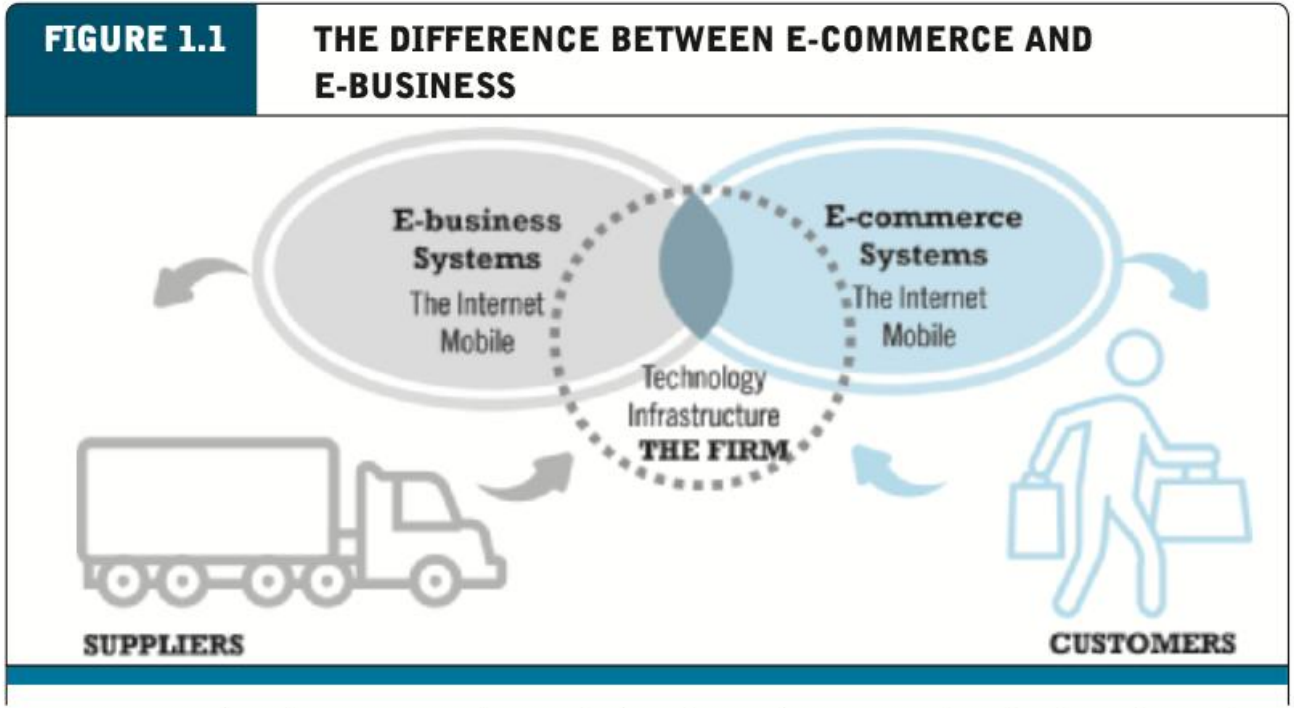
E-Business:

- Internal digital processes that support business functions.
- Example: Inventory control, internal data systems.

Key Distinction: E-Commerce involves an **exchange of value** across organizational boundaries.

E-Commerce vs. E-Business

FIGURE 1.1 THE DIFFERENCE BETWEEN E-COMMERCE AND E-BUSINESS



E-commerce primarily involves transactions that cross firm boundaries. E-business primarily involves the application of digital technologies to business processes within the firm.

Major trends in e- commerce (business)

BUSINESS

- Retail e-commerce in the United States continues double-digit growth (over 15%), with global growth rates even higher in emerging markets in Asia-Pacific, the Middle East, and Africa.
- Mobile e-commerce (both retail and travel sales) explodes and is estimated to reach almost $280 billion in the United States in 2018.
- The mobile app ecosystem continues to grow, with over 220 million Americans using smartphone apps and about 140 million using tablet computer apps in 2018.
- Social e-commerce, based on social networks and supported by advertising, emerges and continues to grow, with the top 500 retailers generating an estimated $6.5 billion from social commerce in 2017.
- Local e-commerce, the third dimension of the mobile, social, local e-commerce wave, also is growing in the United States, fueled by an explosion of interest in on-demand services such as Uber, to around $115 billion in 2018.
- B2B e-commerce revenues in the United States are expected to reach $6.1 trillion.
- On-demand service firms like Uber and Airbnb attract billions in capital, garner multi-billion dollar valuations, and show explosive growth.
- Mobile advertising continues growing at astronomical rates, accounting for over 70% of all digital ad spending.
- Small businesses and entrepreneurs continue to flood into the e-commerce marketplace, often riding on the infrastructures created by industry giants such as Apple, Facebook, Amazon, Google, and eBay.

Major trends in e- commerce (technology)

TECHNOLOGY
• A mobile computing and communications platform based on smartphones, tablet computers, wearable devices, and mobile apps becomes a reality, creating an alternative platform for online transactions, marketing, advertising, and media viewing. The use of mobile messaging services such as Facebook Messenger, WhatsApp, and Snapchat continues to expand, and these services are now used by almost two-thirds of smartphone users. • Smart speakers such as Amazon Echo and Google Home become increasingly popular, providing an additional platform for e-commerce. • Cloud computing completes the transformation of the mobile platform by storing consumer content and software on "cloud" (Internet-based) servers and making it available to any consumer-connected device from the desktop to a smartphone. • The Internet of Things (IoT), comprised of billions of Internet-connected devices, continues to grow exponentially. • As firms track the trillions of online interactions that occur each day, a flood of data, typically referred to as big data, is being produced. • In order to make sense out of big data, firms turn to sophisticated software called business analytics (or web analytics) that can identify purchase patterns as well as consumer interests and intentions in milliseconds.

Major trends in e- commerce (society)

SOCIETY
• User-generated content, published online as social network posts, tweets, blogs, and pins, as well as video and photo-sharing, continues to grow and provides a method of self-publishing that engages millions. • Social networks encourage self-revelation, while threatening privacy, as Facebook comes under fire for allowing third parties such as Cambridge Analytica to mine its database of user information without user consent. • Concerns increase about increasing market dominance of Facebook, Amazon, and Google, leading to calls for government regulation. • Conflicts over copyright management and control continue, but there is substantial agreement among online distributors and copyright owners that they need one another. • The U.S. Supreme Court rules that online businesses must collect state sales tax, raising costs for individuals and small businesses that sell online. • Surveillance of online communications by both repressive regimes and Western democracies grows. • Concerns over commercial and governmental privacy invasion increase. • Online security continues to decline as major companies are hacked and lose control over customer information. • Spam remains a significant problem despite legislation and promised technology fixes. • On-demand service e-commerce produces a flood of temporary, poorly paid jobs without benefits.

Business significance of the eight unique features of e-commerce technology

E-COMMERCE TECHNOLOGY DIMENSION	BUSINESS SIGNIFICANCE
Ubiquity—E-commerce technology is available everywhere: at work, at home, and elsewhere via mobile devices, anytime.	The marketplace is extended beyond traditional boundaries and is removed from a temporal and geographic location. "Marketspace" is created; shopping can take place anywhere. Customer convenience is enhanced, and shopping costs are reduced.
Global reach—The technology reaches across national boundaries, around the earth.	Commerce is enabled across cultural and national boundaries seamlessly and without modification. "Marketspace" includes potentially billions of consumers and millions of businesses worldwide.
Universal standards—There is one set of technology standards.	There is a common, inexpensive, global technology foundation for businesses to use.
Richness—Video, audio, and text messages are possible.	Video, audio, and text marketing messages are integrated into a single marketing message and consuming experience.
Interactivity—The technology works through interaction with the user.	Consumers are engaged in a dialog that dynamically adjusts the experience to the individual and makes the consumer a co-participant in the process of delivering goods to the market.
Information density—The technology reduces information costs and raises quality.	Information processing, storage, and communication costs drop dramatically, while currency, accuracy, and timeliness improve greatly. Information becomes plentiful, cheap, and accurate.
Personalization/Customization—The technology allows personalized messages to be delivered to individuals as well as groups.	Enables personalization of marketing messages and customization of products and services based on individual characteristics.
Social technology—User-generated content and social networks.	Enables user content creation and distribution and supports development of social networks.

Types of e-commerce

There are several different types of e-commerce and many ways to characterize them. For the most part, we distinguish different types of e-commerce by nature of the market relationship—**who is selling to whom**.

Mobile, social, and local e-commerce can be looked at as subsets of these types of e-commerce.

- **B2C** (Business-to-Consumer)
- **B2B** (Business-to-Business)
- **C2C** (Consumer-to-Consumer)
- **C2B** (Consumer-to-Business)
- **G2B & G2C** (Government models)

- **Mobile e-commerce**
- **Social e-commerce**
- **Local e-commerce**

B2C (Business-to-Consumer)

- Most common type of e-commerce.
- Businesses sell directly to **individual consumers**.
- Includes **retail goods, travel, financial services, real estate, and online content**.
- B2C e-commerce has grown **exponentially since 1995**.
- Expected to **continue growing 10% annually** over the next five years.

Seven major B2C models:

- **Online retailers** (Amazon, Walmart.com)
- **Service providers** (Netflix, Uber)
- **Transaction brokers** (Expedia, PayPal)
- **Content providers** (YouTube, Spotify)
- **Community providers/Social networks** (Facebook, Twitter)
- **Market creators** (eBay, Airbnb)
- **Portals** (Yahoo, Google News)

B2B (Business-to-Business)

- **Largest form of e-commerce**:
  - $6.1 trillion in U.S. transactions in 2018
- Involves businesses selling to **other businesses** (not individual consumers).
- Represents a **significant portion of global trade**:
  - $13.2 trillion in total B2B exchanges in 2018
  - $21.1 trillion in total B2B exchanges in 2024
  - Expectations to grow at a compound annual growth rate (CAGR) of 18.2% from 2024 to 2030.
- Has **huge growth potential** as more businesses adopt online procurement.

C2C (Consumer-to-Consumer)

- **C2C e-commerce** allows consumers to **sell to each other** with the help of an **online market maker** (platform provider).
- The consumer prepares the product and lists it for auction or sale, while the market maker provides catalog, search engine, and transaction capabilities.
- **Platform providers**: eBay, Craigslist, Etsy, Amazon third-party sales, Facebook Marketplace, Letgo, Offerup, Poshmark, ThredUp, Kidizen.
- **Estimated U.S. C2C market size** in 2018: **over $100 billion** (excluding on-demand services).

C2B (Consumer-to-Business)

Consumers offer products or services to businesses.

Common Platforms:

- **Freelance platforms**: Fiverr, Upwork

Characteristics:

- Businesses purchase services or products from individuals.
- Freelancers or individual entrepreneurs provide services like design, writing, and consulting.

Growth: With the rise of the gig economy, C2B platforms have become increasingly popular for businesses to access talent on-demand.

G2B (Government-to-Business) & G2C (Government-to-Consumer)

G2B: Governments offering online services to businesses.

- **Examples**: Online tax filing, business permits, digital public services.

G2C: Governments offering digital services directly to citizens.

- **Examples**: Online tax filing, healthcare registration, government benefit services.

Features:

- Streamlined processes for citizens and businesses to interact with government services.
- Increased efficiency through digital tools and platforms.

Mobile e-commerce (M-commerce)

- **M-commerce** enables online transactions via **mobile devices** (smartphones, tablets).
- **Growth**:
  - **$280 billion** in 2018
  - **$2.07 trillion** in 2024
- **Key Drivers**:
  - Increased **mobile usage** and **larger screens**.
  - **Mobile-optimized websites** and enhanced **mobile payment**.
  - Growth of **conversational commerce** through **chatbots** on apps like **Facebook Messenger** and **WhatsApp**.

Social e-commerce

E-commerce enabled by **social networks** and online relationships.

Growth Drivers:

- **Social sign-on** (logging in via social network IDs).
- **Network notifications**: Sharing product/service approval.
- **Collaborative shopping tools** & **social search**.
- Integrated tools like **Buy buttons**, **Shopping tabs**, and **marketplace groups** on platforms like **Facebook**, **Instagram**, **Pinterest**, and **YouTube**.

Growth:

- **$6.5 billion** in 2017.
- **$10 billion** in 2018
- **$571 billion** in 2023

Local e-commerce

E-commerce that targets consumers based on their **geographic location**.

Key Features:

- Local merchants use **online marketing** to drive foot traffic to stores.
- Often integrated with **on-demand services** (e.g., **Uber**).

Growth: **$115 billion** in the U.S. in 2018.

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Q&A