



Lecture 1

The Revolution is Just Beginning

Learning Objectives

After the completion of the chapter, the students will be able to:



Identify why is it important to study e-commerce;



define e-commerce and state how it differs from e-business, identify the primary technological building blocks underlying e-commerce and recognize major current themes in e-commerce;



identify and describe the unique features of e-commerce technology and discuss their business significance;



describe the major types of e-commerce;



Discuss the evolution of e-commerce from its early years to today;



Describe the major themes underlying the study of e-commerce;



identify the major academic disciplines contributing to e-commerce.

- Have you used Uber or any other on-demand service companies?
- What is the appeal of these companies for users and providers?
- Are there any negative consequences to the increased use of on-demand services like Uber and Airbnb?

Uber:

The New Face of E-Commerce

THE FIRST 30 SECONDS

- ❑ First 2 years of e-commerce
 - Just the beginning
 - Rapid growth and change
- ❑ Technologies evolve at exponential rate
 - Disruptive business change
 - New opportunities
- ❑ Why study e-commerce?
 - Understand opportunities and risks
 - Analyze e-commerce ideas, models and issues

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

Internet

- a worldwide network of computer networks

Web

- is one of the Internet's most popular services, providing access to billions of Web pages

App

- short-hand for application) is a software application.
- is typically used when referring to mobile applications, although it is also sometimes used to refer to desktop computer applications as well

Mobile browser

- is a version of web browser software accessed via a mobile device

WHAT IS E-COMMERCE?

More Formal Definition

- **e-commerce** can be defined as ***digitally enabled*** commercial transactions between and among organizations and individuals.

Digitally enabled transactions

- include all transactions mediated by digital technology

Commercial transactions

- involve the exchange of value (e.g., money) across organizational or individual boundaries in return for products and services

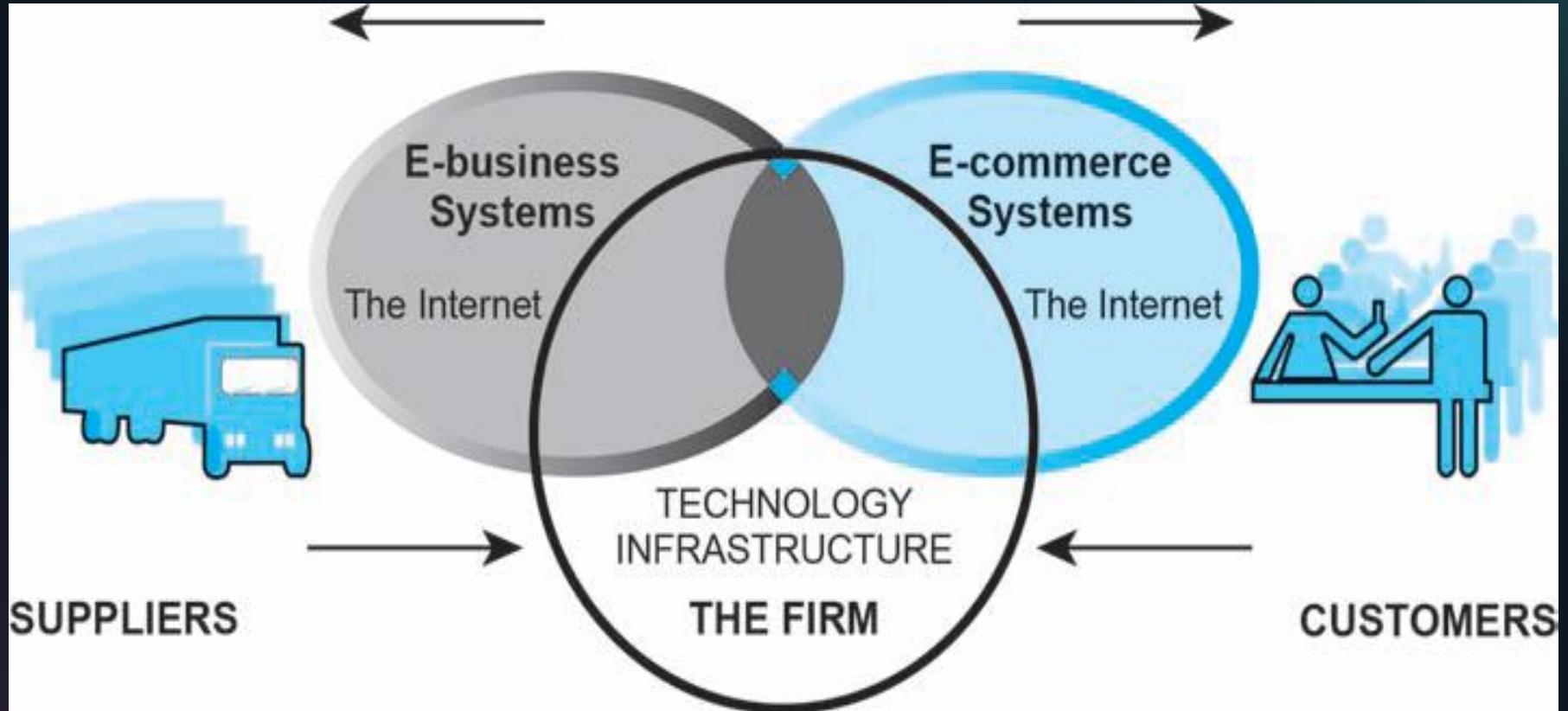
Exchange of value is important for understanding the limits of e-commerce

Without an exchange of value, no commerce occurs.

The Difference Between E-Commerce and E-Business

- ✓ E-commerce is not “anything digital” that a firm does.
- ✓ E-business primarily refers to the digital enabling of transactions and processes within a firm, involving information systems under the control of the firm.
- ✓ E-business does not include commercial transactions involving an exchange of value across organizational boundaries.

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

Technological Building Blocks Underlying E-Commerce

- **Internet**

- is a worldwide network of computer networks built on common standards

- **World Wide Web / Web**

- is an information system that runs on the Internet infrastructure.
- provides access to billions of web pages

- Deep Web**

- contains databases and other content that is not routinely indexed by search engines

- **Mobile platform**

- provides the ability to access the Internet from a variety of mobile devices such as smartphones, tablets, and other ultra-lightweight laptop computers.

Major Trends in E-Commerce

BUSINESS

- Retail e-commerce continues double-digit growth (over 15%), with global growth rates
- A new “social e-commerce” platform, based on social networks and supported by advertising, emerges.
- Mobile retail e-commerce explodes
- A new app-based online economy grows alongside traditional Internet e-commerce
- Local e-commerce, the third dimension of the social, mobile, local e-commerce wave, also is growing
- Facebook and Twitter continue to grow

Major Trends in E-Commerce

BUSINESS

- Search engine marketing continues to challenge traditional marketing and advertising media.
- Social and mobile advertising platforms show strong growth and begin to challenge search engine marketing.
- The number of people of all ages online continues to increase
- The global population using the Internet continues to expand
- • Online businesses continue to strengthen profitability by refining their business models and leveraging the capabilities of the Internet.
- • The breadth of e-commerce offerings grows, especially in entertainment, retail apparel, luxury goods, appliances, and home furnishings.

Major Trends in E-Commerce

BUSINESS

- 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.
- Brand extension through the Internet continues to grow as large firms such as Walmart and Target pursue integrated, multi-channel bricks-and-clicks strategies.
- B2B e-commerce continues to strengthen and grow

Major Trends in E-Commerce

TECHNOLOGY

- A mobile computing and communications platform based on smartphones and tablet computers (the “new client”) becomes a reality and begins to rival the PC platform.
- More than 1.5 million apps in Apple’s and Google’s app stores create a new platform for online transactions, marketing, and advertising.
- Computing and networking component prices continue to fall dramatically.
- 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.

Major Trends in E-Commerce

TECHNOLOGY

- 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
- Cloud computing completes the transformation of the mobile platform by storing consumer content and software on Internet servers and making it available to any consumer-connected device from the desktop to a smartphone.

Major Trends in E-Commerce

SOCIETY

- Consumer- and user-generated content, and syndication in the form of social networks, tweets, blogs, and wikis, continue to grow and provide an entirely new self-publishing forum that engages millions of consumers
- The amount of data the average American consumes (estimated to be more than 34 gigabytes per day) continues to increase.
- Social networks encourage self-revelation, while threatening privacy.
- Participation by adults in social networks on the Internet increases; Facebook becomes ever more popular in all demographic categories..

Major Trends in E-Commerce

SOCIETY

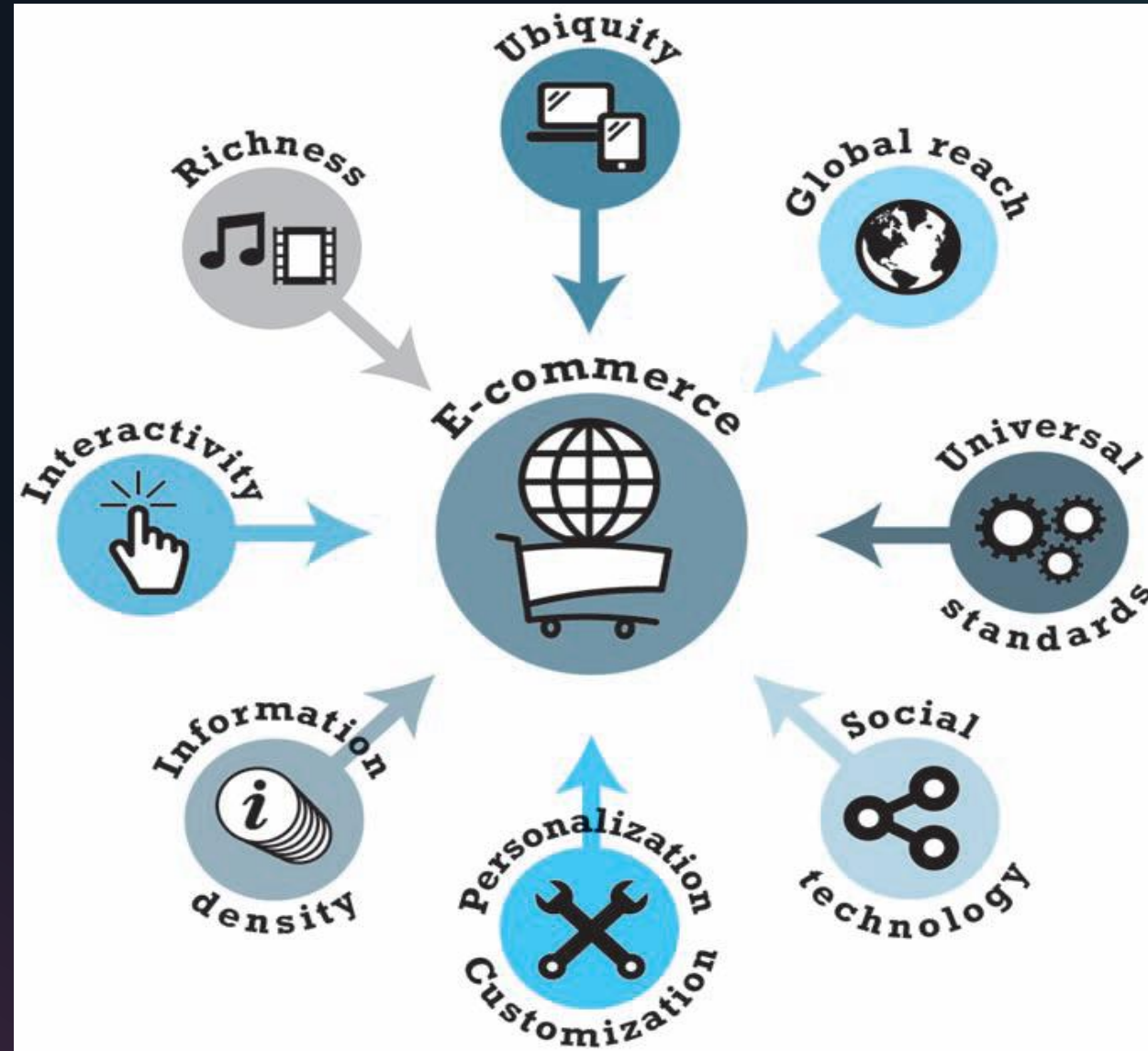
- E-books finally gain wide acceptance and today account for about half of all book sales.
- Conflicts over copyright management and control continue, but there is substantial agreement among Internet distributors and copyright owners that they need one another.
- Explosive growth continues in online and mobile viewing of video and television programs.
- Surveillance of Internet communications by both repressive regimes and Western democracies grows.
- Concerns over commercial and governmental privacy invasion increase as firms provide government agencies with access to private personal information.

Major Trends in E-Commerce

SOCIETY

- Internet security continues to decline as major sites are hacked and lose control over customer information.
- Spam remains a significant problem despite legislation and promised technology fixes.
- Invasion of personal privacy expands as marketers extend their capabilities to track users.

Eight Unique Features of E-Commerce Today



Eight Unique Features of E-Commerce Today

1. Ubiquity

- available just about everywhere, at all times
- liberates the market from being restricted to a physical space and makes it possible to shop from your desktop, at home, at work, or even from your car, using mobile e-commerce.
- ✓ **Marketplace** - is a physical place you visit in order to transact.
- ✓ **Marketspace** - marketplace extended beyond traditional boundaries and removed from a temporal and geographic location

Eight Unique Features of E-Commerce Today

2. Global Reach

- technology permits commercial transactions to cross cultural, regional, and national boundaries far more conveniently and cost-effectively than is true in traditional commerce

The total number of users or customers an e-commerce business can obtain is a measure of its *reach*.

Eight Unique Features of E-Commerce Today

3. Universal Standards

- the technical standards of the Internet, and the technical standards for conducting e-commerce
- lower market entry cost – the cost merchants must pay just to bring their goods to market
- reduce search costs – the effort required to find suitable products
- price discovery becomes simpler, faster and more accurate
- possible to easily find many suppliers, prices and deliver terms of a specific product anywhere in the world

Eight Unique Features of E-Commerce Today

4. Information Richness

- refers to the complexity and content of a message
- the Internet has the potential for offering considerably more information richness than traditional media such as printing presses, radio, and television because it is interactive and can adjust the message to individual users
- richness enabled by the Internet allows retail and service merchants to market and sell “complex” goods and services that heretofore required a face-to-face presentation by a sales force to a much larger audience

Eight Unique Features of E-Commerce Today

5. Interactivity

- enables two-way communication between merchant and consumer and among consumers
- allows an online merchant to engage a consumer in ways similar to a face-to-face experience.
- Comment features, community forums, and social networks with social sharing functionality such as Like and Share buttons all enable consumers to actively interact with the merchant and the users

Eight Unique Features of E-Commerce Today

6. Information Density

- the total amount and quality of information available to all market participants, consumers, and merchants alike
- information becomes more plentiful, less expensive and of higher quality
- reduction in information asymmetry among market participants (consumers and merchants)
- more **price transparency** – the ease with which consumers find out the variety of prices in the market
- more **cost transparency** – the ability of consumer to discover the actual costs merchants pay for products
- allows for **greater market segmentation** and **price discrimination** – selling of same goods of nearly the same goods , to different targeted groups at different prices

Eight Unique Features of E-Commerce Today

7. Personalization / Customization

- **Personalization** - merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases
- **Customization** — changing the delivered product or service based on a user's preferences or prior behavior

Eight Unique Features of E-Commerce Today

8. Social Technology

- much more social by allowing users to create and share content with a worldwide community
- E-commerce technologies provide a unique, many-to-many model of mass customization

Eight Unique Features of E-Commerce Today

E - Commerce Technology

Business Significance

Dimension

Ubiquity— Internet/Web 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.

Eight Unique Features of E-Commerce Today

E - Commerce Technology

Business Significance

Dimension

Universal standards—There is one set of technology standards, namely Internet 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..

Eight Unique Features of E-Commerce Today

E - Commerce Technology

Business Significance

Dimension

Information density—The technology reduces information costs and raises quality.

There is a common, inexpensive, global technology foundation for businesses to use.

Personalization/Customization—The technology allows personalized messages to be delivered to individuals as well as groups.

Video, audio, and text marketing messages are integrated into a single marketing message and consuming experience.

Social technology— User content generation and social networks

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..

Types of E-Commerce

- ❑ **Business-to-Consumer (B2C)**
- ❑ **Business-to-Business (B2B)**
- ❑ **Consumer-to-Consumer (C2C)**
- ❑ **Mobile e-Commerce**
- ❑ **Social e-Commerce**
- ❑ **Local e-Commerce**

Types of E-Commerce

□ Business-to-Consumer (B2C)

- e-commerce, in which online businesses attempt to reach individual consumers.
- includes purchases of retail goods, travel services, and online content.

Types of E-Commerce

❑ Business-to-Business (B2B)

- businesses focus on selling to other businesses and is the largest form of e-commerce.
- focuses on online business selling to other businesses.

Two primary business models used within the B2B arena: **Net marketplaces**, which include e-distributors, e-procurement companies, exchanges and industry consortia, and **private industrial networks**.

Types of E-Commerce

❑ Consumer-to-Consumer (C2C)

- provides a way for consumers to sell to each other, with the help of an online market maker
- focus on consumers selling to other consumers
- the consumer prepares the product for market, places the product for auction or sale, and relies on the market maker to provide catalog, search engine, and transaction-clearing capabilities so that products can be easily displayed, discovered, and paid for

Types of E-Commerce

❑ Mobile E-Commerce (M-Commerce)

- refers to the use of mobile devices to enable online transactions.
- M-commerce involves the use of cellular and wireless networks to connect smartphones and tablet computers to the Internet. Once connected, mobile consumers can purchase products and services, make travel reservations, use an expanding variety of financial services, access online content, and much more

Types of E-Commerce

❑ Social E-Commerce

- enabled by social networks and online social relationships
- The growth of social e-commerce is being driven by a number of factors, including the increasing popularity of social sign-on (signing onto websites using your Facebook or other social network ID), network notification (the sharing of approval or disapproval of products, services, and content), online collaborative shopping tools, social search (recommendations from online trusted friends), and the increasing prevalence of integrated social commerce tools such as Buy buttons, Shopping tabs, and virtual shops on Facebook, Instagram, Pinterest, YouTube, and other social network sites.

Types of E-Commerce

❑ Local E-Commerce

- a form of e-commerce that is focused on engaging the consumer based on his or her current geographic location.
- Local merchants use a variety of online marketing techniques to drive consumers to their stores

E-Commerce: A Brief History

The Period of Invention (1995-2000)

During this Invention period, e-commerce meant selling retail goods, usually quite simple goods, on the Internet. There simply was not enough bandwidth for more complex products. Marketing was limited to unsophisticated static display ads and not very powerful search engines. The web policy of most large firms, if they had one at all, was to have a basic static website depicting their brands.

E-Commerce: A Brief History

The Period of Invention (1995-2000)

Disintermediation - displacement of market middlemen who traditionally are intermediaries between producers and consumers by a new direct relationship between producers and consumers

Friction-free commerce - a vision of commerce in which information is equally distributed, transaction costs are low, prices can be dynamically adjusted to reflect actual demand, intermediaries decline, and unfair competitive advantages are eliminated

First mover - a firm that is first to market in a particular area and that moves quickly to gather market share

Network effect - occurs where users receive value from the fact that everyone else uses the same tool or product

E-Commerce: A Brief History

The Period of Consolidation (2001-2006)

Emphasis shifted to a more “business-driven” approach rather than being technology driven; large traditional firms learned how to use the Web to strengthen their market positions; brand extension and strengthening became more important than creating new brands; financing shrunk as capital markets shunned start-up firms; and traditional bank financing based on profitability returned. During this period of consolidation, e-commerce changed to include not just retail products but also more complex services such as travel and financial services.

E-Commerce: A Brief History

The Period of Reinvention (2007-present)

The defining characteristics of this period are often characterized as the “social, mobile, local” online world. In this period, entertainment content begins to develop as a major source of e-commerce revenues and mobile devices become entertainment centers, as well as on-the-go shopping devices for retail goods and services. Marketing is transformed by the increasing use of social networks, word-of-mouth, viral marketing, and much more powerful data repositories and analytic tools for truly personal marketing

E-Commerce Evolution

1995–2000 INVENTION	2001–2006 CONSOLIDATION	2007–PRESENT RE-INVENTION
Technology driven	Business driven	Mobile technology enables social, local, and mobile commerce
Revenue growth emphasis	Earnings and profits emphasis	Audience and social network connections emphasis
Venture capital financing	Traditional financing	Smaller VC investments; early small-firm buyouts by large online players
Ungoverned	Stronger regulation and governance	Extensive government surveillance
Entrepreneurial	Large traditional firms	Entrepreneurial social and local firms
Disintermediation	Strengthening intermediaries	Proliferation of small online intermediaries renting business processes of larger firms
Perfect markets	Imperfect markets, brands, and network effects	Continuation of online market imperfections; commodity competition in select markets
Pure online strategies	Mixed “bricks-and-clicks” strategies	Return of pure online strategies in new markets; extension of bricks-and-clicks in traditional retail markets
First-mover advantages	Strategic-follower strength; complementary assets	First-mover advantages return in new markets as traditional Web players catch up
Low-complexity retail products	High-complexity retail products and services	Retail, services, and content

Assessing E-Commerce

- ❑ Stunning technological success
- ❑ Early years a mixed business success
 - Few early dot-coms have survives
 - Online sales growing rapidly
 - Thousand of firms have failed and those few that survived dominate the market
 - The idea od thousands of suppliers competing on price have been replaced by a market dominated by giant films
 - Consumers use the web as a powerful source of information about products they often actually purchase through other channels like the traditional store

Assessing E-Commerce

❑ Many early visions not fulfilled

Price dispersion: Prices are sometimes lower online but the low prices are sometimes a function of entrepreneurs selling products below their costs. In some cases, online prices are higher, as consumers are willing to pay a small premium for the convenience of buying online.

The concept of one world, one market, one price, has not occurred in reality as entrepreneurs discover new ways to differentiate their products and services.

Merchants have adjusted to the competitive internet environment by engaging in hit-and-run pricing or changing prices everyday or hour using flash pricing/sales so competitors never know what they are charging by making their prices hard to discover and sowing confusion to customers.

Assessing E-Commerce

❑ Many early visions not fulfilled

Brands remain very important in e-commerce – consumers trust some firms more than others to deliver a high quality product on time and they are willing to pay for it

The perfect competition model of extreme market efficiency has not come to pass

E-commerce has created many opportunities for middlemen to aggregate content, products and services and thereby introduce themselves as the “new “ intermediaries

Assessing E-Commerce

❑ Other surprises

First-mover advantage appears to have succeeded only for a very small group of companies

Fast-follower advantage: firms with the right complement of financial, marketing, legal and production assets needed develop mature markets and this has proved true for e-commerce as well

Start-up costs

Impact of mobile platform

Emergence of on-demand e-commerce: enables people to use their mobile devices to order up everything from taxi, to grocery, to laundry service

Understanding E-Commerce: Organizing Themes

❑ Technology: Infrastructure

- development and mastery of digital computing and communications technology is at the heart of the newly emerging global digital economy

❑ Business: Basic Concepts

- New technologies present businesses with new ways of organizing production and transacting business

❑ Society: Taming the Juggernaut

- Intellectual property, individual privacy, public welfare policy

Academic Disciplines Concerned with E-Commerce

❑ Technical Approaches

Computer Scientists

Management Scientists

Information Systems Professionals

Economists

❑ Behavioral Approaches

Sociologists

Finance and Accounting Scholars

Management Scholars

Marketing Scholars

THANK YOU

