# MODUL SITEM INFORMASI MANAGEMEN

**(MAN 611)**

## MODUL PERTEMUAN 12

## E-commerce: Digital Markets, Digital Goods

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**2019**

# E-COMMERCE: DIGITAL MARKETS, DIGITAL GOODS

## 1. Kemampuan Akhir Yang Diharapkan

After reading this session, you will be able to answer the following questions:

1. What are the unique features of e-commerce, digital markets, and digital goods?
2. What are the principal e-commerce business and revenue models?
3. How has e-commerce transformed marketing?
4. How has e-commerce affected business-to-business transactions?
5. What is the role of m-commerce in business, and what are the most important m-commerce applications?
6. What issues must be addressed when building an e-commerce presence?

## 2. Uraian dan Contoh

### 2.1. E-COMMERCE AND THE INTERNET

Bought an iTunes track lately, streamed a Netflix movie to your home TV, purchased a book at Amazon, or a diamond at Blue Nile? If so you've engaged in e-commerce. In 2012, an estimated 184 million Americans went shopping online, and 150 million purchased something online as did millions of others worldwide. And although most purchases still take place through traditional channels, e-commerce continues to grow rapidly and to transform the way many companies do business. In 2012, e-commerce consumer sales of goods, services, and content will reach $363 billion, about 9 percent of all retail sales, and it is growing at 15 per- cent annually (compared to 3.5 percent for traditional retailers) (eMarketer, 2012a). In just the past two years, e-commerce has expanded from the desk- top and home computer to mobile devices, from an isolated activity to a new social commerce, and from a Fortune 1000 commerce with a national audi- ence to local merchants and consumers whose location is known to mobile devices. The key words for understanding this new e-commerce in 2013 are "social, mobile, local."



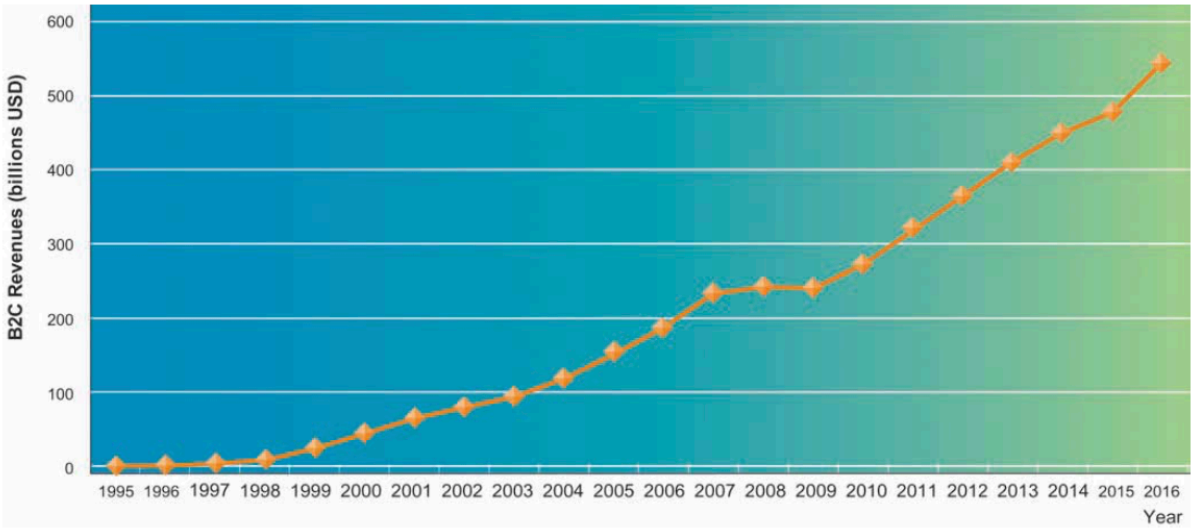
### A. E-COMMERCE TODAY

E-commerce refers to the use of the Internet and the Web to transact business. More formally, e-commerce is about digitally enabled commercial transac- tions between and among organizations and individuals. For the most part, this means transactions that occur over the Internet and the Web. Commercial transactions involve the exchange of value (e.g., money) across organizational or individual boundaries in return for products and services.

E-commerce began in 1995 when one of the first Internet portals, Netscape. com, accepted the first ads from major corporations and popularized the idea that the Web could be used as a new medium for advertising and sales. No one envisioned at the time what would turn out to be an exponential growth curve for e-commerce retail sales, which doubled and tripled in the early years. E-commerce grew at double-digit rates until the recession of 2008–2009 when growth slowed to a crawl. In 2009, e-commerce revenues were flat (Figure 10.1), not bad consid- ering that traditional retail sales were

shrinking by 5 percent annually. In fact, e-commerce during the recession was the only stable segment in retail. Some online retailers forged ahead at a record pace: Amazon's 2009 revenues were up 25 percent over 2008 sales. Despite the continuing slow growth in 2012, the number of online buyers increased by 5 percent to 150 million, and the number of online retail transactions was up 7 percent. Amazon's sales grew to $48 billion in 2011, up an incredible 41 percent from 2010!

**FIGURE 10.1 THE GROWTH OF E-COMMERCE**




Retail e-commerce revenues grew 15–25 percent per year until the recession of 2008–2009, when they slowed measurably. In 2012, e-commerce revenues are growing again at an estimated 15 percent annually.

Mirroring the history of many technological innovations, such as the telephone, radio, and television, the very rapid growth in e-commerce in the early years created a market bubble in e-commerce stocks. Like all bubbles, the "dot-com" bubble burst (in March 2001). A large number of e-commerce companies failed during this process. Yet for many others, such as Amazon, eBay, Expedia, and Google, the results have been more positive: soaring revenues, fine-tuned business models that produce profits, and rising stock prices. By 2006, e-commerce revenues returned to solid growth, and have continued to be the fastest growing form of retail trade in the United States, Europe, and Asia.



• Online consumer sales grew to an estimated $362 billion in 2012, an increase of more than 15 percent over 2010 (including travel services and digital downloads), with 150 million people purchasing online and an additional 34 million shopping and gathering information but not purchasing (eMarketer, 2012a).

• The number of individuals of all ages online in the United States expanded to 239 million in 2012, up from 147 million in 2004. In the world, over 2.3 billion people are now connected to the Internet. Growth in the overall Internet population has spurred growth in e-commerce (eMarketer, 2012b).

• Approximately 82.5 million households have broadband access to the Internet in 2012, representing about 69 percent of all households (96 percent of all Internet households have broadband).

• About 122 million Americans now access the Internet using a smartphone such as an iPhone, Droid, or BlackBerry. Mobile e-commerce has begun a rapid growth based on apps, ring tones, downloaded entertainment, and location-based services. Mobile commerce will add up to about $11.7 billion in 2012 (roughly double 2010's revenue). Amazon sold an estimated $1.5 billion in retail goods to mobile users in 2011. In a few years, mobile phones will be the most common Internet access device. Currently half of all mobile phone users access the Internet using their phones.

• On an average day, an estimated 158 million adult U.S. Internet users go online. About 114 million send e-mail, 114 million use a search engine, and 87 million get news. Around 93 million use a social network, 46 million do online banking, 54 million watch an online video, and 33 million look for information on Wikipedia (Pew Internet & American Life Project, 2012).

• B2B e-commerce-use of the Internet for business-to-business commerce and collaboration among business partners expanded to more than $4.1 trillion.

The e-commerce revolution is still unfolding. Individuals and businesses will increasingly use the Internet to conduct commerce as more products and services come online and households switch to broadband telecommu- nications. More industries will be transformed by e-commerce, including travel reservations, music and entertainment, news, software, education, and finance. Table 10.1 highlights these new e-commerce developments.

## B. WHY E-COMMERCE IS DIFFERENT

Why has e-commerce grown so rapidly? The answer lies in the unique nature of the Internet and the Web. Simply put, the Internet and e-commerce technologies are much more rich and powerful than previous technology revolutions like radio, television, and the telephone. Table 10.2 describes the unique features of the Internet and Web as a commercial medium. Let's explore each of these unique features in more detail.



### *Ubiquity*

In traditional commerce, a marketplace is a physical place, such as a retail store, that you visit to transact business. E-commerce is ubiquitous, meaning that is it available just about everywhere, at all times. It makes it possible to shop from your desktop, at home, at work, or even from your car, using smartphones. The result is called a marketspace—a marketplace extended beyond traditional boundaries and removed from a temporal and geographic location.

From a consumer point of view, ubiquity reduces transaction costs—the costs of participating in a market. To transact business, it is no longer necessary that you spend time or money traveling to a market, and much less mental effort is required to make a purchase.

### *Global Reach*

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

commerce. As a result, the potential market size for e-commerce merchants is roughly equal to the size of the world's online population (estimated to be more than 2 billion).

In contrast, most traditional commerce is local or regional—it involves local merchants or national merchants with local outlets. Television, radio stations and newspapers, for instance, are primarily local and regional institutions with limited, but powerful, national networks that can attract a national audience but not easily cross national boundaries to a global audience.

***Universal Standards***

One strikingly unusual feature of e-commerce technologies is that the technical standards of the Internet and, therefore, the technical standards for conducting e-commerce are universal standards. They are shared by all nations around the world and enable any computer to link with any other computer regardless of the technology platform each is using. In contrast, most traditional commerce technologies differ from one nation to the next. For instance, television and radio standards differ around the world, as does cell telephone technology. The universal technical standards of the Internet and e-commerce greatly lower market entry costs—the cost merchants must pay simply to bring their goods to market. At the same time, for consumers, universal standards reduce search costs—the effort required to find suitable products.

***Richness***

Information richness refers to the complexity and content of a message. Traditional markets, national sales forces, and small retail stores have great richness: They are able to provide personal, face-to-face service using aural and visual cues when making a sale. The richness of traditional markets makes them powerful selling or commercial environments. Prior to the development of the Web, there was a trade-off between richness and reach: The larger the audience reached, the less rich the message. The Web makes it possible to deliver rich messages with text, audio, and video simultaneously to large num- bers of people.



***Interactivity***

Unlike any of the commercial technologies of the twentieth century, with the pos- sible exception of the telephone, e-commerce technologies are interactive, mean- ing they allow for two-way communication between merchant and consumer. Television, for instance, cannot ask viewers any questions or enter into conversa- tions with them, and it cannot request that customer information be entered into a form. In contrast, all of these activities are possible on an e-commerce Web site. Interactivity allows an online merchant to engage a consumer in ways similar to a face-to-face experience but on a massive, global scale.

***Information Density***

The Internet and the Web vastly increase information density—the total amount and quality of information available to all market participants, consumers, and merchants alike. E-commerce technologies reduce information collection, storage, processing, and communication costs while greatly increas- ing the currency, accuracy, and timeliness of information.

Information density in e-commerce markets make prices and costs more transparent. Price transparency refers to the ease with which consumers can find out the variety of prices in a market; cost transparency refers to the ability of consumers to discover the actual costs merchants pay for products.

There are advantages for merchants as well. Online merchants can dis- cover much more about consumers than in the past. This allows merchants to segment the market into groups that are willing to pay different prices and permits the merchants to engage in price discrimination—selling the same goods, or nearly the same goods, to different targeted groups at different prices. For instance, an online merchant can discover a consumer's avid interest in expensive, exotic vacations and then pitch high-end vacation plans to that consumer at a premium price, knowing this person is willing to pay extra for such a vacation. At the same time, the online merchant can pitch the same vacation plan at a lower price to a more price-sensitive consumer. Information density also helps merchants differentiate their products in terms of cost, brand, and quality.

***Personalization/Customization***

E-commerce technologies permit personalization: Merchants can target their marketing messages to specific individuals by adjusting the message to a person's clickstream behavior, name, interests, and past purchases. The technology also permits customization—changing the delivered product or service based on a user's preferences or prior behavior. Given the interactive nature of e-commerce technology, much information about the consumer can be gathered in the marketplace at the moment of purchase. With the increase in information density, a great deal of information about the consumer's past purchases and behavior can be stored and used by online merchants.

The result is a level of personalization and customization unthinkable with traditional commerce technologies. For instance, you may be able to shape what you see on television by selecting a channel, but you cannot change the content of the channel you have chosen. In contrast, the Wall Street Journal Online allows you to select the type of news stories you want to see first and gives you the opportunity to be alerted when certain events happen.



***Social Technology: User Content Generation and Social Networking***

In contrast to previous technologies, the Internet and e-commerce technologies have evolved to be much more social by allowing users to create and share with their personal friends (and a larger worldwide community) content in the form of text, videos, music, or photos. Using these forms of communication, users are able to create new social networks and strengthen existing ones.

All previous mass media in modern history, including the printing press, use a broadcast model (one-to-many) where content is created in a central location by experts (professional writers, editors, directors, and producers) and audiences are concentrated in huge numbers to consume a standardized product. The new Internet and e-commerce empower users to create and distribute content on a large scale, and permit users to program their own content consumption. The Internet provides a unique many-to-many model of mass communications.

## C. KEY CONCEPTS IN E-COMMERCE: DIGITAL MARKETS AND DIGITAL GOODS IN A GLOBAL MARKETPLACE

The location, timing, and revenue models of business are based in some part on the cost and distribution of information. The Internet has created a digital marketplace where millions of people all over the world are able to exchange massive amounts of information directly, instantly, and for free. As a result, the Internet has changed the way companies conduct business and increased their global reach.

The Internet reduces information asymmetry. An information asymmetry exists when one party in a transaction has more information that is impor- tant for the transaction than the other party. That information helps determine their relative bargaining power. In digital markets, consumers and suppliers can “see” the prices being charged for goods, and in that sense digital markets are said to be more “transparent” than traditional markets.

For example, before auto retailing sites appeared on the Web, there was a significant information asymmetry between auto dealers and customers. Only the auto dealers knew the manufacturers’ prices, and it was difficult for consumers to shop around for the best price. Auto dealers’ profit margins depended on this asymmetry of information. Today’s consumers have access to a legion of Web sites providing competitive pricing information, and three-fourths of U.S. auto buyers use the Internet to shop around for the best deal. Thus, the Web has reduced the information asymmetry surrounding an auto purchase. The Internet has also helped businesses seeking to purchase from other businesses reduce information asymmetries and locate better prices and terms.

Digital markets are very flexible and efficient because they operate with reduced search and transaction costs, lower menu costs (merchants’ costs of changing prices), greater price discrimination, and the ability to change prices dynamically based on market conditions. In dynamic pricing, the price of a product varies depending on the demand characteristics of the customer or the supply situation of the seller. For instance, online retailers from Amazon to Walmart change prices on many products based on time of day, demand for the product, and users’ prior visits to their sites.



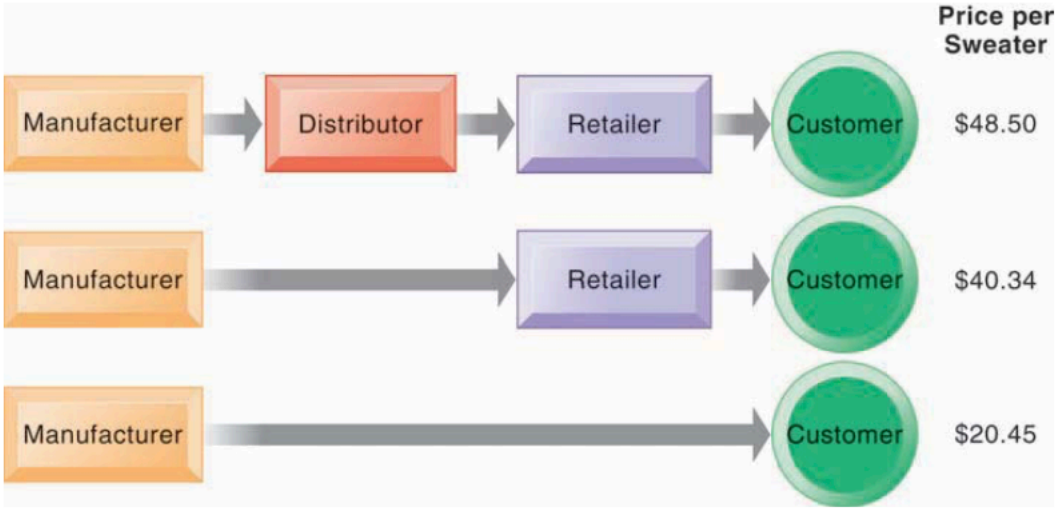
These new digital markets may either reduce or increase switching costs, depending on the nature of the product or service being sold, and they may cause some extra delay in gratification. Unlike a physical market, you can’t immediately consume a product such as clothing purchased over the Web (although immediate consumption is possible with digital music downloads and other digital products.)

Digital markets provide many opportunities to sell directly to the consumer, bypassing intermediaries, such as distributors or retail outlets. Eliminating inter- mediaries in the distribution channel can significantly lower purchase transac- tion costs. To pay for all the steps in a traditional distribution channel, a product may have to be priced as high as 135 percent of its original cost to manufacture.

Figure 10.2 illustrates how much savings result from eliminating each of these layers in the distribution process. By selling directly to consumers or reducing the number of intermediaries, companies are able to raise prof- its while charging lower prices. The removal of organizations or business process layers responsible for intermediary steps in a value chain is called disintermediation.

Disintermediation is affecting the market for services. Airlines and hotels operating their own reservation sites online earn more per ticket because they have eliminated travel agents as intermediaries. Table 10.3 summarizes the differences between digital markets and traditional markets.

**FIGURE 10.2 THE BENEFITS OF DISINTERMEDIATION TO THE CONSUMER**




The typical distribution channel has several intermediary layers, each of which adds to the final cost of a product, such as a sweater. Removing layers lowers the final cost to the consumer.

**TABLE 10.3 DIGITAL MARKETS COMPARED TO TRADITIONAL MARKETS**

| | DIGITAL MARKETS | TRADITIONAL MARKETS |
|---|---|---|
| Information asymmetry | Asymmetry reduced | Asymmetry high |
| Search costs | Low | High |
| Transaction costs | Low (sometimes virtually nothing) | High (time, travel) |
| Delayed gratification | High (or lower in the case of a digital good) | Lower: purchase now |
| Menu costs | Low | High |
| Dynamic pricing | Low cost, instant | High cost, delayed |
| Price discrimination | Low cost, instant | High cost, delayed |
| Market segmentation | Low cost, moderate precision | High cost, less precision |
| Switching costs | Higher/lower (depending on product characteristics) | High |
| Network effects | Strong | Weaker |
| Disintermediation | More possible/likely | Less possible/unlikely |

***Digital Goods***

The Internet digital marketplace has greatly expanded sales of digital goods. Digital goods are goods that can be delivered over a digital network. Music tracks, video, Hollywood movies, software, newspapers, magazines, and books can all be expressed, stored, delivered, and sold as purely digital products. Today, all these products are delivered as digital streams or downloads, while their physical counterparts decline in sales.

In general, for digital goods, the marginal cost of producing another unit is about zero (it costs nothing to make a copy of a music file). However, the cost of producing the original first unit is relatively high—in fact, it is nearly the total cost of the product because there are few other costs of inventory and distribu- tion. Costs of delivery over the Internet are very low, marketing costs often remain the same, and pricing can be highly variable. (On the Internet, the mer- chant can change prices as often as desired because of low menu costs.)

The impact of the Internet on the market for these kinds of digital goods is nothing short of revolutionary, and we see the results around us every day. Businesses dependent on physical products for sales—such as bookstores, music stores, book publishers, music labels, and film studios—face the possibil- ity of declining sales and even destruction of their businesses. Newspapers and magazines subscriptions to hard copies are declining, while online readership and subscriptions are expanding.

Total record label industry revenues have fallen from $14 billion in 1999, to $5.4 billion estimated in 2012, a drop of 61 percent, due almost entirely to the decline in CD album sales, and the growth of digital music services (both legal and illegal music piracy). On the plus side, the Apple iTunes Store has sold 16 billion songs for 99 cents each since opening in 2001, providing the industry with a digital distribution model that has restored some of the revenues lost to digital music channels. Since iTunes, illegal downloading has been cut in half, and legitimate online music sales are estimated to be approximately $4 billion in 2012. As cloud streaming services expand, illegal downloading will decline further. In that sense, Apple, along with other Internet distributors, saved the record labels from extinction. In 2012, digital music sales accounted for over 50 percent of all music revenues for the first time. Yet the music labels make only about 32 cents from a single track download or from a streamed track.



Hollywood has not been similarly disrupted by digital distribution platforms, in part because it is more difficult to download high-quality, pirated copies of full-length movies. To avoid the fate of the music industry, Hollywood has struck lucrative distribution deals with Netflix, Google, Amazon, and Apple. Nevertheless, these arrangements are not enough to compensate entirely for the loss in DVD sales, which fell 50 percent from 2006 to 2012, although this is changing rapidly as the online distributors like Netflix are forced to pay billions for high-quality Hollywood content. In 2012, for the first time, consumers will view more and pay more for Web-based movie downloads, rentals, and streams than for DVDs or related physical products. As with television, the demand for feature-length Hollywood movies appears to be expanding in part because of the growth of smartphones and tablets. In addition, the surprising resurgence of music videos, led by the Web site VEVO, is attracting millions of younger view- ers on smartphones and tablets. Online movies began a growth spurt in 2010 as broadband services spread throughout the country. In 2011, movie viewing doubled in

a single year. In 2012, about 60 million Internet users are expected to view movies, about one-third of the adult Internet audience. Online movie view- ing is growing faster than all video viewing (which includes TV shows). While this rapid growth will not continue forever, there is little doubt that the Internet is becoming a movie distribution channel that rivals cable television. Table 10.4 describes digital goods and how they differ from traditional physical goods.

## 2.2. E-COMMERCE: BUSINESS AND TECHNOLOGY

E-commerce has grown from a few advertisements on early Web portals in 1995 to over 9 percent of all retail sales in 2012 (an estimated $362 billion), surpassing the mail order catalog business. E-commerce is a fascinating combi- nation of business models and new information technologies. Let's start with a basic understanding of the types of e-commerce, and then describe e-commerce business and revenue models. We'll also cover new technologies that help com- panies reach over 184 million online consumers in the United States, and an estimated 2 billion more worldwide.

**TABLE 10.4 HOW THE INTERNET CHANGES THE MARKETS FOR DIGITAL GOODS**

| | DIGITAL GOODS | TRADITIONAL GOODS |
|---|---|---|
| Marginal cost/unit | Zero | Greater than zero , high |
| Cost of production | High (most of the cost) | Variable |
| Copying cost | Approximately zero | Greater than zero, high |
| Distributed delivery cost | Low | High |
| Inventory cost | Low | High |
| Marketing cost | Variable | Variable |
| Pricing | More variable (bundling, random pricing games) | Fixed, based on unit costs |



### A. TYPES OF E-COMMERCE

There are many ways to classify electronic commerce transactions—one is by looking at the nature of the participants. The three major electronic commerce categories are business-to-consumer (B2C) e-commerce, business-to-business (B2B) e-commerce, and consumer-to-consumer (C2C) e-commerce.

• Business-to-consumer (B2C) electronic commerce involves retailing products and services to individual shoppers. BarnesandNoble.com, which sells books, software, and music to individual consumers, is an example of B2C e-commerce.

• Business-to-business (B2B) electronic commerce involves sales of goods and services among businesses. ChemConnect's Web site for buying and selling chemicals and plastics is an example of B2B e-commerce.

• Consumer-to-consumer (C2C) electronic commerce involves consumers selling directly to consumers. For example, eBay, the giant Web auction site, enables people

to sell their goods to other consumers by auctioning their merchandise off to the highest bidder, or for a fixed price. Craigslist is the most widely used platform used by consumers to buy from and sell directly to others.

Another way of classifying electronic commerce transactions is in terms of the platforms used by participants in a transaction. Until recently, most e-commerce transactions took place using a personal computer connected to the Internet over wired networks. Several wireless mobile alternatives have emerged: smartphones, tablet computers like iPads, and dedicated e-readers like the Kindle using cellular networks, and smartphones and small tablet computers using Wi-Fi wireless networks. The use of handheld wireless devices for purchasing goods and services from any location is termed mobile commerce or m-commerce. Both business-to-business and business-to-consumer e-commerce transactions can take place using m-commerce technology, which we discuss in detail in Section 10.3.

## B. E-COMMERCE BUSINESS MODELS

Changes in the economics of information described earlier have created the conditions for entirely new business models to appear, while destroying older business models. Table 10.5 describes some of the most important Internet business models that have emerged. All, in one way or another, use the Internet to add extra value to existing products and services or to provide the foundation for new products and services.

### *Portal*

Portals are gateways to the Web, and are often defined as those sites which users set as their home page. Some definitions of a portal include search engines like Google and Bing even if few make these sites their home page. Portals such as Yahoo, Facebook, MSN, and AOL offer powerful Web search tools as well as an integrated package of content and services, such as news, e-mail, instant messaging, maps, calendars, shopping, music downloads, video stream- ing, and more, all in one place. Initially, portals were primarily “gateways” to he Internet. Today, however, the portal business model provides a destination site where users start their Web searching and linger to read news, find enter- tainment, meet other people, and be exposed to advertising. Portals generate revenue primarily by attracting very large audiences, charging advertisers for ad placement, collecting referral fees for steering customers to other sites, and charging for premium services. In 2012, portals (not including Google or Bing) generated an estimated $8.5 billion in revenues. Although there are hundreds of portal/search engine sites, the top four portals (Yahoo, Facebook, MSN, and AOL) gather more than 95 percent of the Internet portal traffic because of their superior brand recognition (eMarketer, 2012).

### *E-tailer*

Online retail stores, often called e-tailers, come in all sizes, from giant Amazon with 2011 revenues of more than $48 billion, to tiny local stores that have Web sites. An e-tailer is similar to the typical bricks-and-mortar storefront, except that customers only need to connect to the Internet to check their inventory and place an order. Altogether, online retail will generate about $224 billion in revenues for 2012. The value proposition of e-tailers is to provide conve- nient, low-cost shopping 24/7, offering large selections and consumer choice. Some e-tailers, such as Walmart.com or Staples.com, referred

to as “bricks- and-clicks,” are subsidiaries or divisions of existing physical stores and carry the same products. Others, however, operate only in the virtual world, without any ties to physical locations. Amazon, BlueNile.com, and Drugstore.com are examples of this type of e-tailer. Several other variations of e-tailers—such as online versions of direct mail catalogs, online malls, and manufacturer-direct online sales—also exist.

***Content Provider***

While e-commerce began as a retail product channel, it has increasingly turned into a global content channel. “Content” is defined broadly to include all forms of intellectual property. Intellectual property refers to all forms of human expression that can be put into a tangible medium such as text, CDs, or DVDs, or stored on any digital (or other) media, including the Web. Content providers distribute information content, such as digital video, music, photos, text, and artwork, over the Web. The value proposition of online content providers is that consumers can find a wide range of content online, conveniently, and purchase this content inexpensively, to be played, or viewed, on multiple computer devices or smartphones.

Providers do not have to be the creators of the content (although sometimes they are, like Disney.com), and are more likely to be Internet-based distribu- tors of content produced and created by others. For example, Apple sells music tracks at its iTunes Store, but it does not create or commission new music.

The phenomenal popularity of the iTunes Store, and Apple’s Internet- connected devices like the iPhone, iPod, and iPad, have enabled new forms of digital content delivery from podcasting to mobile streaming. Podcasting is a method of publishing audio or video broadcasts via the Internet, allowing subscribing users to download audio or video files onto their personal computers or portable music players. Streaming is a publishing method for music and video files that flows a continuous stream of content to a user’s device without being stored locally on the device.



Estimates vary, but total download, streaming, and subscription media revenues for 2012 are estimated at $19 billion annually. They are the fastest growing segment within e-commerce, growing at an estimated 20 percent annual rate.

***Transaction Broker***

Sites that process transactions for consumers normally handled in person, by phone, or by mail are transaction brokers. The largest industries using this model are financial services and travel services. The online transaction broker’s primary value propositions are savings of money and time, as well as providing an extraordinary inventory of financial products and travel packages, in a single location. Online stock brokers and travel booking services charge fees that are considerably less than traditional versions of these services.

***Market Creator***

Market creators build a digital environment in which buyers and sellers can meet, display products, search for products, and establish prices. The value proposition of online market creators is that they provide a platform where sellers can easily display

their wares and where purchasers can buy directly from sellers. Online auction markets like eBay and Priceline are good examples of the market creator business model. Another example is Amazon's Merchants platform (and similar programs at eBay) where merchants are allowed to set up stores on Amazon's Web site and sell goods at fixed prices to consumers. This is reminiscent of open air markets where the market creator operates a facility (a town square) where merchants and consumers meet. Online market creators will generate about $18 billion in revenues for 2012.

***Service Provider***

While e-tailers sell products online, service providers offer services online. There's been an explosion in online services. Web 2.0 applications, photo sharing, and online sites for data backup and storage all use a service provider business model. Software is no longer a physical product with a CD in a box, but increasingly software as a service (SaaS) that you subscribe to online rather than purchase from a retailer, or an app that you download. Google has led the way in developing online software service applications such as Google Apps, Google Sites, Gmail, and online data storage services.

***Community Provider***

Community providers are sites that create a digital online environment where people with similar interests can transact (buy and sell goods); share interests, photos, videos; communicate with like-minded people; receive interest-related information; and even play out fantasies by adopting online personalities called avatars. The social networking sites Facebook, Google+, Tumblr, LinkedIn, and Twitter; online communities such as iVillage; and hundreds of other smaller, niche sites such as Doostang and Sportsvite all offer users community-building tools and services. Social networking sites have been the fastest growing Web sites in recent years, often doubling their audience size in a year. However, they are struggling to achieve profitability.



**C. E-COMMERCE REVENUE MODELS**

A firm's revenue model describes how the firm will earn revenue, gener- ate profits, and produce a superior return on investment. Although there are many different e-commerce revenue models that have been developed, most companies rely on one, or some combination, of the following six revenue models: advertising, sales, subscription, free/freemium, transaction fee, and affiliate.

***Advertising Revenue Model***

In the advertising revenue model, a Web site generates revenue by attracting a large audience of visitors who can then be exposed to advertise- ments. The advertising model is the most widely used revenue model in e-commerce, and arguably, without advertising revenues, the Web would be a vastly different experience from what it is now. Content on the Web— everything from news to videos and opinions—is "free" to visitors because advertisers pay the production and distribution costs in return for the right to expose visitors to ads. Companies will spend an estimated $166 billion on online advertising in 2012, and an estimated $39.5 billion of that amount on online advertising (in the form of a paid message on a Web site, paid search listing, video,

app, game, or other online medium, such as instant messag- ing). In the last five years, advertisers have increased online spending and cut outlays on traditional channels such as radio and newspapers. In 2012, online advertising will grow at 15 percent and constitute about 30 percent of all advertising in the United States. Television advertising has also expanded along with online advertising revenues.

Web sites with the largest viewership or that attract a highly specialized, differentiated viewership and are able to retain user attention ("stickiness") are able to charge higher advertising rates. Yahoo, for instance, derives nearly all its revenue from display ads (banner ads) and to a lesser extent search engine text ads. Ninety-five percent of Google's revenue derives from advertising, including selling keywords (AdWord), selling ad spaces (AdSense), and selling display ad spaces to advertisers (DoubleClick). Facebook will display one-third of the trillion display ads shown on all sites in 2012. Facebook's users spend an average of over 8 hours a week on the site, far longer than any of the other portal sites.

***Sales Revenue Model***

In the sales revenue model, companies derive revenue by selling goods, information, or services to customers. Companies such as Amazon (which sells books, music, and other products), LLBean.com, and Gap.com, all have sales revenue models. Content providers make money by charging for downloads of entire files such as music tracks (iTunes Store) or books or for downloading music and/or video streams (Hulu.com TV shows). Apple has pioneered and strengthened the acceptance of micropayments. Micropayment systems pro- vide content providers with a cost-effective method for processing high volumes of very small monetary transactions (anywhere from $.25 to $5.00 per transac- tion). The largest micropayment system on the Web is Apple's iTunes Store, which has more than 250 million credit customers who frequently purchase individual music tracks for 99 cents. MyMISlab has a Learning Track with more detail on micropayment and other e-commerce payment systems.

***Subscription Revenue Model***



In the subscription revenue model, a Web site offering content or services charges a subscription fee for access to some or all of its offerings on an ongo- ing basis. Content providers often use this revenue model. For instance, the online version of Consumer Reports provides access to premium content, such as detailed ratings, reviews, and recommendations, only to subscribers, who have a choice of paying a $5.95 monthly subscription fee or a $26.00 annual fee. Netflix is one of the most successful subscriber sites with more that 25 million subscribers in September 2012. The Wall Street Journal has the largest online subscription newspaper with more than 1 million online subscribers. To be successful, the subscription model requires that the content be perceived as having high added value, differentiated, and not readily available elsewhere nor easily replicated. Companies successfully offering content or services online on a subscription basis include Match.com and eHarmony (dating services), Ancestry.com and Genealogy.com (genealogy research), Microsoft's Xboxlive. com (video games), and Pandora.com (music).

***Free/Freemium Revenue Model***

In the free/freemium revenue model, firms offer basic services or content for free, while charging a premium for advanced or special features. For example, Google offers free applications but charges for premium services. Pandora, the subscription radio service, offers a free service with limited play time and advertising, and a premium service with unlimited play. The Flickr photo-sharing service offers free basic services for sharing photos with friends and family, and also sells a $24.95 “premium” package that provides users unlimited storage, high-definition video storage and playback, and freedom from display advertising. The idea is to attract very large audiences with free services, and then to convert some of this audience to pay a subscription for premium services. One problem with this model is converting people from being “free loaders” into paying customers. “Free” can be a powerful model for losing money.

***Transaction Fee Revenue Model***

In the transaction fee revenue model, a company receives a fee for enabling or executing a transaction. For example, eBay provides an online auction marketplace and receives a small transaction fee from a seller if the seller is successful in selling an item. E*Trade, an online stockbroker, receives transac- tion fees each time it executes a stock transaction on behalf of a customer. The transaction revenue model enjoys wide acceptance in part because the true cost of using the platform is not immediately apparent to the user.

***Affiliate Revenue Model***

In the affiliate revenue model, Web sites (called “affiliate Web sites”) send visitors to other Web sites in return for a referral fee or percentage of the revenue from any resulting sales. For example, MyPoints makes money by connecting companies to potential customers by offering special deals to its members. When members take advantage of an offer and make a purchase, they earn “points” they can redeem for free products and services, and MyPoints receives a refer- ral fee. Community feedback sites such as Epinions and Yelp receive much of their revenue from steering potential customers to Web sites where they make a purchase. Amazon uses affiliates who steer business to the Amazon Web site by placing the Amazon logo on their blogs. Personal blogs often contain display ads as a part of affiliate programs. Some bloggers are paid directly by manufac- turers, or receive free products, for speaking highly of products and providing links to sales channels.



## D. SOCIAL NETWORKING AND THE WISDOM OF CROWDS

One of the fastest growing areas of e-commerce revenues are Web 2.0 online services, which we described in Chapter 7. The most popular Web 2.0 service is social networking, online meeting places where people can meet their friends and their friends’ friends. Every day over 93 million Internet users in the United States visit a social networking site like Facebook, Google+, Tumblr, MySpace, LinkedIn, and hundreds of others.

Social networking sites link people through their mutual business or personal connections, enabling them to mine their friends (and their friends’ friends) for sales leads, job-hunting tips, or new friends. Google+, MySpace, Facebook, and Friendster appeal to people who are primarily interested in extending their friendships, while LinkedIn focuses on job networking for professionals.

At social shopping sites like Pinterest, Kaboodle, ThisNext, and Stylehive, you can swap shopping ideas with friends. Facebook offers the Like button and Google the +1 button to let your friends know you admire something, and in some cases, purchase something online. Online communities are also ideal venues to employ viral marketing techniques. Online viral marketing is like traditional word-of-mouth marketing except that the word can spread across an online community at the speed of light, and go much further geographically than a small network of friends.

***The Wisdom of Crowds***

Creating sites where thousands, even millions, of people can interact offers business firms new ways to market and advertise, to discover who likes (or hates) their products. In a phenomenon called "the wisdom of crowds," some argue that large numbers of people can make better decisions about a wide range of topics or products than a single person or even a small committee of experts (Surowiecki, 2004).

Obviously this is not always the case, but it can happen in interesting ways. In marketing, the wisdom of crowds concept suggests that firms should consult with thousands of their customers first as a way of establishing a relationship with them, and second, to better understand how their products and services are used and appreciated (or rejected). Actively soliciting the comments of your customers builds trust and sends the message to your customers that you care what they are thinking, and that you need their advice.

Beyond merely soliciting advice, firms can be actively helped in solving some business problems using what is called crowdsourcing. For instance, in 2006, Netflix announced a contest in which it offered to pay $1 million to the person or team who comes up with a method for improving by 10 percent Netflix's prediction of what movies customers would like as measured against their actual choices. By 2009, Netflix received 44,014 entries from 5,169 teams in 186 countries. The winning team improved a key part of Netflix's business: a recommender system that recommends to its customers what new movies to order based on their personal past movie choices and the choices of millions of other customers who are like them (Howe, 2008; Resnick and Varian, 1997). In 2012, BMW launched a crowdsourcing project to enlist the aid of customers in designing an urban vehicle for 2025. Kickstarter.com is arguably one of the most famous e-commerce crowd funding sites where visitors invest in start-up companies.



Firms can also use the wisdom of crowds in the form of prediction markets. Prediction markets are established as peer-to-peer betting markets where participants make bets on specific outcomes of, say, quarterly sales of a new product, designs for new products, or political elections. The world's larg- est commercial prediction market is Betfair, founded in 2000, where you bet for or against specific outcomes on football games, horse races, and whether or not the Dow Jones will go up or down in a single day. Iowa Electronic Markets (IEM) is an academic market focused on elections. You can place bets on the outcome of local and national elections. In the United States, the largest prediction market is Intrade.com where users can buy or sell shares in predictions.

**E. E-COMMERCE MARKETING**

While e-commerce and the Internet have changed entire industries and enabled new business models, no industry has been more affected than marketing and marketing communications. The Internet provides marketers with new ways of identifying and communicating with millions of potential customers at costs far lower than traditional media, including search engine marketing, data mining, recommender systems, and targeted e-mail. The Internet enables long tail marketing. Before the Internet, reaching a large audience was very expensive, and marketers had to focus on attracting the largest number of consumers with popular hit products, whether music, Hollywood movies, books, or cars. In contrast, the Internet allows marketers to inexpensively find potential customers for products where demand is very low. For instance, the Internet makes it possible to sell independent music profitably to very small audiences. There's always some demand for almost any product. Put a string of such long tail sales together and you have a profitable business.

The Internet also provides new ways—often instantaneous and spontane- ous—to gather information from customers, adjust product offerings, and increase customer value. Table 10.6 describes the leading marketing and advertising formats used in e-commerce.

Many e-commerce marketing firms use behavioral targeting techniques to increase the effectiveness of banner, rich media, and video ads. Behavioral targeting refers to tracking the clickstreams (history of clicking behavior) of individuals on thousands of Web sites for the purpose of understanding their interests and intentions, and exposing them to advertisements that are uniquely suited to their behavior. Proponents believe this more precise understanding of the customer leads to more efficient marketing (the firm pays for ads only to those shoppers who are most interested in their products) and larger sales and revenues. Unfortunately, behavioral targeting of millions of Web users also leads to the invasion of personal privacy without user consent. When consum- ers lose trust in their Web experience, they tend not to purchase anything.

Behavioral targeting takes place at two levels: at individual Web sites and on various advertising networks that track users across thousands of Web sites. All Web sites collect data on visitor browser activity and store it in a database. They have tools to record the site that users visited prior to coming to the Web site, where these users go when they leave that site, the type of operat- ing system they use, browser information, and even some location data. They also record the specific pages visited on the particular site, the time spent on each page of the site, the types of pages visited, and what the visitors purchased (see Figure 10.3). Firms analyze this information about customer interests and behavior to develop precise profiles of existing and potential customers. In addition, most major Web sites have hundreds of tracking programs on their home pages, which track your clickstream behavior across the Web by following you from site to site and re-target ads to you by showing you the same ads on different sites. The leading online advertising networks are Google's DoubleClick, Yahoo's RightMedia, and AOL's Ad Network. Ad networks represent publishers who have space to sell, and advertisers who want to market online. The lubricant of this trade is information on millions of Web shoppers, which helps advertisers target their ads to precisely the groups and individuals they desire.

This information enables firms to understand how well their Web site is working, create unique personalized Web pages that display content or ads for products or services of special interest to each user, improve the customer's experience, and create additional

value through a better understanding of the shopper (see Figure 10.4). By using personalization technology to modify the Web pages presented to each customer, marketers achieve some of the benefits of using individual salespeople at dramatically lower costs. For instance, General Motors will show a Chevrolet banner ad to women empha- sizing safety and utility, while men will receive different ads emphasizing power and ruggedness.

What if you are a large national advertising company with many different clients trying to reach millions of consumers? What if you were a large global manufacturer trying to reach potential consumers for your products? With millions of Web sites, working with each one would be impractical. Advertising networks solve this problem by creating a network of several thousand of the most popular Web sites visited by millions of people, tracking the behavior of these users across the entire network, building profiles of each user, and then selling these profiles to advertisers. Popular Web sites download dozens of Web tracking cookies, bugs, and beacons, which report user online behavior to remote servers without the users' knowledge. Looking for young, single consumers, with college degrees, living in the Northeast, in the 18–34 age range who are interested purchasing a European car? Not a problem. Advertising networks can identify and deliver hundreds of thousands of people who fit this profile and expose them to ads for European cars as they move from one Web site to another. Estimates vary, but behaviorally targeted ads are generally 10 times more likely to produce a consumer response than a randomly chosen banner or video ad (see Figure 10.5). So-called advertising exchanges use this same technology to auction access to people with very specific profiles to advertisers in a few milliseconds. In 2012, about 20 percent of online display ads are targeted, and the rest depend on the context of the pages shoppers visit, the estimated demographics of visitors, or so-called "blast and scatter" advertis- ing, which is placed randomly on any available page with minimal targeting, such as time of day or season.

Social E-commerce and Social Network Marketing

Social e-commerce is commerce based on the idea of the digital social graph. The digital social graph is a mapping of all significant online social relation- ships. The social graph is synonymous with the idea of a "social network" used to describe offline relationships. You can map your own social graph (network) by drawing lines from yourself to the 10 closest people you know. If they know one another, draw lines between these people. If you are ambitious, ask these 10 friends to list and draw in the names of the 10 people closest to them. What emerges from this exercise is a preliminary map of your social network. Now imagine if everyone on the Internet did the same, and posted the results to a very large database with a Web site. Ultimately, you would end up with Facebook or a site like it. The collection of all these personal social networks is called "the social graph."

According to small world theory, you are only six links away from any other person on earth. If you entered your personal address book, say 100 names, on to a list and sent it to your friends, and they in turn entered 50 new names of their friends, and so on, six times, the social network created would encompass 31 billion people! The social graph is therefore a collection of millions of per- sonal social graphs (and all the people in them). So it's a small world indeed, and we are all more closely linked than we ever thought.

Ultimately, you will find that you are directly connected to many friends and rel- atives, and indirectly connected to an even larger universe of indirect friends and relatives (your distant second and third cousins, and their friends). Theoretically, it takes six links for any one person to find another person anywhere on earth.

If you understand the inter-connectedness of people, you will see just how important this concept is to e-commerce: The products and services you buy will influence the decisions of your friends, and their decisions will in turn influence you. If you are a marketer trying to build and strengthen a brand, the implication is clear: Take advantage of the fact that people are enmeshed in social networks, share interests and values, and communicate and influence one another. As a marketer, your target audience is not a million isolated people watching a TV show, but the social network of people who watch the show, and the viewers' personal networks. Table 10.7 describes four features of social com- merce that are driving its growth.

In 2012 and 2013, one of the fastest growing media for branding and market- ing is social media. Expenditures for social media marketing are much smaller than television, magazines, and even newspapers, but this will change in the future. Social networks in the offline world are collections of people who volun- tarily communicate with one another over an extended period of time. Online social networks, such as Facebook, MySpace, LinkedIn, Twitter, Tumblr, and Google+, along with tens of other sites with social components, are Web sites that enable users to communicate with one another, form group and individ- ual relationships, and share interests, values, and ideas. Individuals establish online profiles with text and photos, creating an online profile of how they want others to see them, and then invite their friends to link to their profile. The network grows by word of mouth and through e-mail links. One of the most ubiquitous graphical elements on Web sites in 2012 is Facebook's Like button, which allows users to tell their friends they like a product, service, or content. Facebook processes around 50 million Likes a day, or 1.5 billion a year.

While Facebook, with 150 million U.S. monthly visitors, receives most of the public attention given to social networking, the other top four social sites are growing very rapidly with the exception of MySpace. LinkedIn has grown 58 percent in 2012 to reach 40 million monthly visitors; Twitter grew 13 percent in 2012 to reach 37 million; and the social blogging site Tumblr reached 27 million people a month, growing 166 percent that year. MySpace, in contrast, has been shrinking but nevertheless attracted 28 million visitors a month in 2012. According to ComScore, about 20 percent of the total time spent online in the United States was spent on social network sites, up from around 8 percent in 2007 (ComScore, 2012). The fastest growing smartphone applications are social network apps: about 30 percent of smartphone users use their phones to visit social sites. Half of all visits to Facebook in 2012 come from smartphones.

Marketers cannot ignore these huge audiences which rival television and radio in size. In 2012, 72 percent of the U.S. Fortune 500 companies had a Twitter account, 66 percent had a Facebook account, 62 percent had a YouTube account, and 28 percent had a corporate blog. Marketers will spend over $3 billion on social network marketing in 2012 (twice the level of 2010), about 9 percent of all online marketing (eMarketer Inc., 2012).

Marketing via social media is still in its early stages, and companies are experimenting in hopes of finding a winning formula. Social interactions and customer sentiment are not always easy to manage, presenting new challenges for companies eager to protect their brands. The Interactive Session on Management provides specific examples of companies' social marketing efforts using Facebook and Twitter.

## 3. Latihan dan Jawaban

1) What are the unique features of e-commerce, digital markets, and digital goods?

   E-commerce involves digitally enabled commercial transactions between and among organizations and individuals. Unique features of e-commerce technology include ubiquity, global reach, universal technology standards, richness, interactivity, information density, capabilities for personalization and customization, and social technology.

   Digital markets are said to be more "transparent" than traditional markets, with reduced informa- tion asymmetry, search costs, transaction costs, and menu costs, along with the ability to change prices dynamically based on market conditions. Digital goods, such as music, video, software, and books, can be delivered over a digital network. Once a digital product has been produced, the cost of delivering that product digitally is extremely low.

2) What are the principal e-commerce business and revenue models?

   E-commerce business models are e-tailers, transaction brokers, market creators, content providers, community providers, service providers, and portals. The principal e-commerce revenue models are advertising, sales, subscription, free/freemium, transaction fee, and affiliate.

3) How has e-commerce transformed marketing?

   The Internet provides marketers with new ways of identifying and communicating with millions of potential customers at costs far lower than traditional media. Crowdsourcing utilizing the "wisdom of crowds" helps companies learn from customers in order to improve product offerings and increase customer value. Behavioral targeting techniques increase the effectiveness of banner, rich media, and video ads. Social commerce uses social networks and social network sites to improve targeting of products and services.

4) How has e-commerce affected business-to-business transactions?

   B2B e-commerce generates efficiencies by enabling companies to locate suppliers, solicit bids, place orders, and track shipments in transit electronically. Net marketplaces provide a single, digital market- place for many buyers and sellers. Private industrial networks link a firm with its suppliers and other strategic business partners to develop highly efficient and responsive supply chains.

5) What is the role of m-commerce in business, and what are the most important m-commerce applications?

   M-commerce is especially well-suited for location-based applications, such as finding local hotels and restaurants, monitoring local traffic and weather, and providing personalized location-based marketing. Mobile phones and handhelds are being used for mobile bill payment, banking, securities trading, transportation schedule updates, and downloads of digital content, such as music, games, and video clips. M-commerce requires wireless portals and special digital payment systems that can handle micropayments. The GPS capabilities of smartphones make possible geoadvertising, geosocial, and geoinformation services.

6) What issues must be addressed when building an e-commerce presence?

   Building a successful e-commerce site requires a clear understanding of the business objectives to be achieved by the site and selection of the right technology to achieve those objectives. E-commerce sites can be built and hosted in-house or partially or fully outsourced to external service providers.

## 4. Daftar Pustaka


1. Management Information Systems, Managing Digital Firm, 11th Ed, Kenneth C. Laudon, Jane. P. Laudon. (L&L)
2. Management Information Systems With Misource 2007, 8th Ed James A. O'brien, And George Marakas
3. Managing Information Technology 5th Edition Martin, Brown, Dehayes