E-Commerce

In our busy twenty-first-century world very few people grow their own food, sew their own clothes, or make their own furniture. We can hardly imagine paying a doctor in freshly laid chicken eggs or a home-baked pie as may have been common a century ago. We rarely trade goods for services. Instead, we shop! And shopping online has become as pervasive today as spending time in shopping malls was, not so long ago. Nowadays people can—and do—buy everything, from a bag of potato chips to a new car, online.

Today it has become imperative that businesses afford customers the ability to buy and pay for goods and services online through a multitude of devices. This module is about how the e-commerce landscape affects—and will affect—the business model throughout the world now and in the future.

After completing this section, you will be able to:

- Define key areas of the e-commerce landscape.
- Define e-commerce ubiquity.
- Explain the importance of personalization and customization in e-commerce.
- Define various types of e-commerce transactions.
- Identify key organizations in the global e-commerce marketplace.
- Define m-commerce and identify how its key components differ from traditional e-commerce.
- Describe e-commerce security and ethical issues.
- Describe the use of a cost-benefit analysis of an e-commerce presence.

NOTES

The Evolution of E-Commerce

E-commerce has grown from obscurity to a multitrillion-dollar manner of conducting business in a relatively short time frame. A few of the highlights of this evolution are:

- 1979: The first e-commerce company, CompuServe, was founded.
- 1994: Pizza.Net, offered by Pizza Hut, was one of the first e-commerce transactions on the web.
- 1998: PayPal is founded.
- 2005: The term "Cyber Monday" is first used.
- 2009: Square Inc. offers mobile transaction processing.
- 2017: Instagram launches shoppable posts.

NOTES

The E-Commerce Landscape, Today and Future

Today, e-commerce focuses on the Internet of Things (IoT), location, various types of shopping experiences, mobile commerce, and the effects of artificial intelligence.

Internet of Things

The IoT has allowed for advances in supply chain management, different methods of package delivery, and an increase in customer engagement and experiences.

Location Independence

Cross-border e-commerce allows organizations to sell internationally by providing information in different languages, multiple currency pricing, and multiple delivery and pickup options.

Integrated Shopping

Consumers expect purchase opportunities to be available in multiple channels such as social media sites, traditional websites, and various retail options.

M-Commerce

M-commerce includes shopping on various mobile devices.

AI/Machine Learning

Machine learning and AI provide for e-commerce systems that can automatically learn instead of being programmed.

Recommerce

Recommerce is the practice of selling used, old, or obsolete products via the Internet in exchange for a new product or a cash payout.

NOTES

E-Commerce Ubiquity

Ubiquity is the ability to have a presence in many places simultaneously; **e-commerce ubiquity** is the ability of an organization to create a strong presence among consumers in many places, with minimal time constraints, and to sell the products and services they offer. It means customers can buy online whenever and however they want, anytime and anywhere, thus increasing the likelihood of product or service adoption.

NOTES

The Global Reach of E-Commerce and Information Density

The Global Marketplace

E-commerce technology creates a global marketplace across cultural and national boundaries far more effectively than traditional commerce options. Of Internet users, 90 percent are between the ages of 16 and 64; across the world, they have visited an online retail site on the web, and 74 percent have made an online purchase.

Information Density

Information density is the total amount of information and the quality of information available to all individuals in a market, including customers and stakeholders.

Price Transparency

The ability to allow consumers to easily find prices for goods or services is known as price transparency.

Cost Transparency

The actual costs a seller paid to acquire the goods or services is known as cost transparency.

NOTES

E-Commerce Personalization and Customization

The ability to create and send marketing messages with a user's name, interests, and purchasing behavior directed toward specific target markets is known as **personalization.**

When an organization adjusts its product or service offerings based on an individual's preferences or past buying behavior, this is known as **customization.**

NOTES

User-Generated Content and Social Networking

Online content that has been created and posted by unpaid contributors such as customers or fans of a product or service is known as **user-generated content (UGC)**. These contributors help to promote a brand or image without any direct influence by an organization. Users feel empowered to share their stories through websites, blogs, and social media sites. Most organizations using e-commerce now allow users to post ratings, questions, and comments about products or services.

NOTES

Types of E-Commerce Transactions

Business-to-business (B2B) transactions are between two businesses as, for example, when a business orders its necessary parts for a product from another business.

Business-to-consumer (B2C) transactions are the common form of online shopping where a user buys or contracts for a product or service from a business.

Business-to-government (B2G) transactions are also known as **business-to-administration (B2A)** transactions. These take place when the selling of goods or services from a business to a governmental organization occurs through an online platform. This can include such things as prenegotiated contracts or proposals.

Consumer-to-consumer (C2C) transactions exist when one consumer sells to another consumer, as on sites such as eBay or Craigslist.

Consumer-to-business (C2B) transactions exist when consumers provide services to businesses, often accomplished through a bidding or auction, as with Freelancer or Shutterstock.

Consumer-to-administration transactions are those where consumers interact with the government for things such as paying taxes or securing permits.

NOTES

Key Organizations in the Global E-Commerce Marketplace

Global retail e-commerce sales are expected to be over $4.2 trillion in 2020. There are a few key players in the global e-commerce marketplace.

Amazon has a revenue of over $280 billion, sells over 120 million products, and has over 150 million customers access their mobile app every month. Amazon also includes amazon.com, Amazon Web Services (AWS), Audible, and Whole Foods.

Alibaba has a revenue of over $56 billion, with more than 60 percent of the Chinese e-commerce market share and over 634 million active mobile users. Alibaba also includes AllExpress, TMALL, ALIPAY, and taobao.com. Alibaba is often referred to as the Amazon of China.

JD.com is China's largest online retailer and China's largest Internet company by revenue, with a 2019 revenue of $70 billion.

NOTES

The Global E-Commerce Landscape and the Current U.S. Landscape

The global e-commerce economy will continue an upward trajectory into the future. China has the world's most e-commerce sales with almost $2 trillion in 2019. U.S. e-commerce sales are expected to reach $600 billion in 2020. Other countries with impressive e-commerce sales in 2019 include the United Kingdom ($142 billion), Japan ($115 billion), and South Korea ($104 billion).

In the United States, Amazon controls about 47 percent of market share as a percentage of e-commerce sales. Other top-ranking companies include eBay with 6.1 percent, Apple with 3.8 percent, Home Depot with 1.7 percent, and Costco with 1.3 percent.

NOTES

M-Commerce

M-commerce, or mobile commerce, is a subset of e-commerce and refers to e-commerce transactions that are executed using wireless mobile devices, including smartphones and tablets. It includes mobile banking, mobile application e-commerce sites such as Amazon and eBay, digital wallet services such as Apple Pay and Android Pay, and in-app purchases such as those made when using a gaming app. In 2019, it was reported that 49.2 percent of retail e-commerce sales were m-commerce related, and this is expected to grow to 54 percent by 2020.

NOTES

Location-Based Services and Applications

Widely used in m-commerce and built on real-time geodata and information provided from wireless mobile devices, **location-based services (LBS)** use geodata to get information about geographic locations. This information is stored in a **geographic information system (GIS)**.

LBS includes geosocial applications, geoadvertising, and geoinformation. **Geosocial applications** include social networking sites that use GPS and GIS. **Geoadvertising** (also known as geotargeting) delivers advertisements based on a user's geographic location as determined by the IP address, device ID, or through GPS signals. **Geoinformation** is based on GPS and provides users with information on places, such as an historic site close to a user's current location or the price of homes in the area.

NOTES

Mobile Commerce Services

M-commerce continues to expand and has had the biggest impact on financial payment services, healthcare, and retail sales.

M-commerce financial payment services allow for mobile payment using a smartphone.

M-commerce has revolutionized the healthcare industry. Many pharmacies have apps that allow users to fill prescriptions using mobile devices. Healthcare applications have been developed that allow users to meet with physicians virtually.

Retail sales have been influenced in many ways. One example is IKEA, which offers an augmented reality app so customers can take pictures of their rooms or homes and the app can superimpose furniture and fixtures into the space.

NOTES

E-Commerce Issues

Because of the online nature of e-commerce, data theft and threats to customer data are major concerns. It has been estimated that the average cost of a data breach on an organization is $3.9 million, and a data breach takes an average of 279 days to identify and contain.

There are also ethical issues that must be addressed. Companies must ensure that product listings are accurate, are in accordance with online selling laws, and websites must remain accessible to persons with disabilities.

Maintaining customer loyalty is important, as it is estimated to cost up to five times more to acquire a new customer than it costs to retain an existing customer. The success rate of selling to an existing customer is 60 percent to 70 percent versus only 5 percent to 15 percent for a new customer.

NOTES

E-Commerce Presence Maps

An **e-commerce presence map** is an illustration of the various touchpoints where current customers, potential customers, and stakeholders can be influenced by e-commerce activities. It outlines the type of presence, the platform, and the activity conducted on the platform. This type of analysis can provide an organization the ability to analyze various activities needed to reach specific targets.

This type of map presence includes websites, email, social media sites, and offline media. The platform refers to how stakeholders and customers are reached (e.g., by laptop, smartphone) as well as which social media sites and other media (e.g., blogs, magazines, radio stations, TV stations) are used.

Presence maps can be used to analyze what can be delivered through each specific platform.

NOTES

E-Commerce Timelines

The strategy for developing an e-commerce presence consists of the following six phases:

1. *Planning:* The vision for the web presence, including the platform to be used, necessary personnel, and cost factors, is developed and presented.

2. *Web development:* In this phase a storyboard is created, design strategies presented, hosting needs are discussed, and the site is built.

3. *Implementation:* Search engine optimization (SEO) strategy is identified along with potential advertisers and sponsors. Keywords and tags are developed.

4. *Social media plan:* Research is done to identify which social media platforms are best suited to reach the target audience(s). Both the content and the design of posts are developed.

5. *Social media implementation:* The social media presence is developed with content for the chosen social media sites.

6. *Mobile platform planning and implementation:* A plan for deploying content and e-commerce activities via mobile platforms is developed.

NOTES

Cost-Benefit Analysis of an E-Commerce Presence

A **cost-benefit analysis** is used to analyze the costs associated with implementing a project, along with the benefits that can be achieved as a result.

In an e-commerce context, a cost-benefit analysis is the examination of the costs associated with undertaking e-commerce activities weighed against the benefits to be gained from involvement in e-commerce activities. Before an organization decides to enter into e-commerce activities, it is important to conduct a thorough analysis of what costs will be incurred measured against potential benefits to be gained.

NOTES

Customer Acquisition Costs

A metric that is used by e-commerce companies to assess the costs associated with convincing a potential customer to purchase a service or product is known as the **customer acquisition cost (CAC)**.

Customer acquisition costs associated with e-commerce activities include all of the sales and marketing costs associated with reaching and engaging potential customers and encouraging these customers to make an initial purchase. This also includes how much is spent on advertising and marketing, commissions and bonuses, salaries of marketing personnel associated with the product or service, and overhead costs related to marketing.

NOTES