

# CHAPTER 6 e-Commerce

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## 6.1 Overview

In this chapter, we cover electronic commerce (e-commerce) activities via the Internet that involve end-users such as Business-to-Customer (B-to-C) and Customer-to-Customer (C-to-C). “Digital commerce” and “online commerce” are other terms used to refer to e-commerce activities.

Amazon and eBay, the first major e-commerce companies were launched in 1994 and 1995, respectively [Amazon 2020; eBay 2020]. Most major e-commerce companies are in China and the USA now [E-Commerce 2020]. Table 2.1 provides a list of the top 30 out of the 57 Internet companies with annual revenue of 1 billion USD or more in 2018. The list also includes market capitalization and locations as well as the revenue in billions of USD.

Rank	Company	Revenue (\$B)	Market Capitalization (\$B)	Headquarter
1	Amazon	253.9	972.34	USA
2	Google	120.8	791.01	USA
3	JD.com	67.2	41.99	China
4	Alibaba	56.15	432.12	China
5	Facebook	55.01	575.43	USA
6	Tencent	44.67	434.66	China
7	Netflix	15.8	140.45	USA
8	PayPal	15.4	100.4	USA
9	Booking	12.7	92.94	USA
10	Baidu	12.40	88.11	China
11	eBay	10.75	34.45	USA
12	Salesforce	10.5	120.66	USA
13	Expedia	10.1	16.17	USA
14	Bloomberg	9.6	-	USA
15	Adobe	9.4	131.8	USA
16	Uber	7.5	74.23	USA
17	ByteDance	7.2	78.0	USA
18	Wayfair	6.7	10.4	USA
19	Rakuten	6.3	12.28	Japan
20	Zalando	5.55	13.5	Germany
21	MeituanDianping	5.4	30.0	China
22	Naver	3.65	21.44	South Korea

23	NetEase	3.63	38.80	China
24	Sabre	3.8	5.38	USA
25	Tesla	3.62	2.44	USA
26	Bet365	3.51	-	UK
27	Chewy	3.5	9.68	USA
28	The Stars Group	3.1	7.5	Canada
29	Spotify	3.1	33.38	Sweden
30	Flipkart	3.0	-	India

**Table 2.1 List of Largest Internet Companies [Largest 2020; Top 30 out of 57 companies]**

Table 2.2 list shows the top 10 of the 100 most valuable brands in the world in 2020 [Visual 2020]. Most of them belong to the e-commerce industry.

Rank	Brand	2020 Brand Value	Country
1	Amazon	\$220B	USA
2	Google	\$160B	USA
3	Apple	\$140B	USA
4	Microsoft	\$117B	USA
5	Samsung	\$94B	South Korea
6	ICBC	\$80B	China
7	Facebook	\$79B	USA
8	Walmart	\$77B	USA
9	Ping An	\$69B	China
10	Huawei	\$65B	China

**Table 2.2 10 Most Valuable Brands in the World**

## 6.2 Retail Commerce

Another notable development lately is that online shopping which is increasingly dominating over traditional non-online shopping, particularly in the USA and China where e-commerce companies account for a substantial proportion of all retail activities. Amazon in the USA, and Jindong and Alibaba in China are such companies. Other countries with good infrastructures, such as Japan and South Korea in Asia follow with extensive online retail commerce activities. The infrastructure includes good Internet payment systems, typically based on credit cards or online payment systems such as Alipay, JDpay, and WeChatPay in China, and good merchandize delivery systems. We will discuss payment systems in the next section. These online retail activities have been transforming the retail systems in many countries among developed countries now. Many traditional stores were forced to close down, or change their retail schemes by covering both online and non-online retail activities, as was the case with Home Depot in the USA. The South Korean government reported that online commerce in South Korea exceeded

traditional commerce in 2020, partly due to COVID-19; this data is based on the top 14 online retail companies, and the top 14 offline retail companies [Korean 2020].

Many of the leading online retail companies, such as Amazon, Jindong, Alibaba, and Rakuten, cover many kinds of merchandize, far more than what traditional department stores cover. This is because online retailers are not limited in terms of the types of products they can provide as long as the products can be handled profitably. There are also stores that offer both online shops and offline shops such as Home Depot and Walmart in the USA. On the other hand, there are successful stores and companies covering specific areas such as travel, and room rental services. Expedia and Booking in the USA, and Ctrip in China are notable examples of online travel companies. Airbnb is a notable example of room rental providers. Airbnb provides extensive coverage and tends to dominate the relevant markets in many countries. Google and Facebook among other web services, generate income primarily through online advertisement, and we may consider them as special cases of e-commerce. These companies and major e-commerce companies such as Amazon, Alibaba, and eBay ranked highly among the top 100 global companies [Corporate 2020].

### 6.3 E-Payment

E-commerce requires electronic payments. Credit cards were generally used for early e-commerce. Digital payments appeared in the 1990s and the 2000s to compliment credit cards, personal checks, and wired transfer. Please refer Gensler's class, Blockchain and Money for the overview [Gensler 2018]. Notable examples include PayPal and M-Pesa [PayPal 1998; M-Pesa 2007]. PayPal is an online payments system that allows customers to pay and receive money without credit cards or bank accounts. M-Pesa is a mobile money transfer service that uses mobile phones. One does not have to have a bank account or a credit card to use M-Pesa services.

Later, new mobile and online payment platforms based on the Internet appeared in the 2000s. Alipay was introduced in 2004 [Alipay 2020; Gensler 2018]. WeChatpay and JDpay followed in China in the 2000s. They became dominant payment schemes in China, surpassing other payment methods such as cash, check, and credit cards. Japan and South Korea followed China with similar schemes such as RakutenPay and SamsungPay, which are typically offered by online market websites or smartphone manufacturers. These payment systems in countries other than China are not so popular.

Credit cards dominate payments in South Korea, and cash dominates payments in Japan. In North America and Europe people use credit cards and personal checks as primary payment methods. However, there are new developments in the payment systems in Europe, too. Sweden is leading in digital payment systems toward a cashless society in Europe now [European 2019].

Cryptocurrencies such as Bitcoin have been used as e-payment systems in the 21<sup>st</sup> Century. Cryptocurrencies backed by nation states such as China are expected for introduction in the 2020s [Boxmining 2020; Gensler 2018].

## 6.4 Sharing Economy

Special segments on the e-commerce were introduced in the 2000s to share cars and rooms among others [Airbnb 2020; Uber 2020; Didi 2020]. Airbnb is an online market place to offer lodging; however, Airbnb does not own any lodging facility. Similarly, Uber and Didi Chuxing are two leading ride sharing companies in the world, but these companies do not own any cars. Similar sharing businesses for bicycles, kickboards, and other vehicles are offered in China and many other countries.

## 6.5 Delivery Systems

These e-commerce market naturally requires more extensive merchandise delivery systems than post offices, and traditional package delivery companies such as UPS in the USA and Japan Express in Japan. FedEx and DHL joined the delivery systems in the 20<sup>th</sup> Century to offer delivery with global airplane networks. In the 21<sup>st</sup> Century, e-commerce and other companies joined the delivery business. For example, Amazon has its own delivery system, but also uses other delivery systems, too. Coupang in South Korea is a delivery company, but does e-commerce, too.

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