



---

**E-Commerce Technology In International Trade**

**T Rohmawati<sup>1\*</sup>, H Amirul<sup>2</sup>**

<sup>1</sup>Departemen Ilmu Pemerintahan, Universitas Komputer Indonesia, Indonesia

<sup>2</sup>Departemen Ilmu Hubungan Internasional, Universitas Komputer Indonesia, Indonesia

E-mail: \*tatik.rohmawati@email.unikom.ac.id

---

**Article Info**

Article History:

Received: October 19, 2020

Revised: November 12, 2020

Published: December 2020

e-ISSN: 2654-2528

p-ISSN: 2623-2324

DOI: 10.5281/zenodo.4308123

---

**Abstract:**

The purpose of this research is to discover further the development of trade influenced by technology. This research used descriptive analysis method which is a method that aims to collect actual information in detail that describes the existing phenomena, identify problems, or check the conditions which then make the comparisons and evaluations, decide what others do in dealing with the same problem and learn from experience to set plans and decisions in the future. The results it show that e-Commerce does create opportunities for B2B businesses. In conclusion, with the continued growth of the Indonesian economy and the high level of confidence of small and medium businesses (SMEs), more and more SMEs can expand their businesses abroad.

**Keyword:** SMEs, *Develop, Technology, E-Commerce, Trade*

---

**INTRODUCTION**

International relations are in line with the rapid advancement of information technology that enables interaction between nations to be no longer as difficult as before. The development of technology lately is a union between computer technology and communication technology that transfers information in real time in large quantities. The application of information and communication technology Information and Communication Technology (ICT) in various aspects of human life is known as the digital era (Soegoto, 2014).

The development of information technology today has created new types and business opportunities in which business transactions are increasingly conducted electronically. In connection with the development of information technology, it is possible for everyone to easily buy and sell. The development of the internet is indeed fast and gives a significant influence in all aspects of life. The internet helps to be able to interact, communicate, even trade with many people from all corners of the world cheaply, quickly and easily. In recent years, the widespread media of the internet has caused many companies to try to offer a variety of products through electronic commerce. This widespread internet media causes many companies that start trying to offer a variety of products through Commerce and one of the benefits of its existence is as a media promotion of a product (Ghasemi, et al., 2011). E-commerce continues to experience rapid growth in the world of commerce. This is quite significant, among others, seen from the quality of transactions through this facility. E-Commerce technology enables commercial transactions across

cultural and national boundaries with higher convenience and more cost effective than a traditional trading system. But no doubt, traditional trade transactions are also still in demand because it has become a habit that has always existed. Another reason traditional trade transaction is in demand is the issue of mistrust which is the doubt about safety in transactions through e-Commerce. Not only because of mistrust, traditional commerce is popular because of the lack of knowledge about the internet and what e-Commerce really is (Kerber, 2016). International trade is one aspect that currently involves almost all countries in the world. This is in line with international trade law which develops rapidly along with the development of international trade itself. Trade relations that are crossing national borders have quite a lot of types, such as bartering, buying and selling, to complex commercial transactions (Gonzalez, 2014). By utilizing e-Commerce in its business operations, SMEs can gain wider market access and opportunities to attract new customers. On the other hand, customers can more easily get the information needed on-line. Various savings and efficiency can be achieved such as in terms of transportation costs, telephone or fax communication, shipping, documents, printing, time and labor (Gonzalez, 2015).

Until now, knowledge about all the opportunities and constraints of the digital era is still limited, while the digital era, which is also often called the New Economic Era, has become an unstoppable reality. Therefore, an explorative research is needed to get a more complete understanding of the opportunities and constraints created by the internet revolution so as to increase the competitiveness of Indonesian SMEs (Jaelani, 2017). The purpose of this research is to discover further the development of trade influenced by technology. This research used descriptive analysis method which is a method that aims to collect actual information in detail that describes the existing phenomena, identify problems, or check the conditions which then make the comparisons and evaluations, decide what others do in dealing with the same problem and learn from experience to set plans and decisions in the future. Economic progress and technological development can provide opportunities for SMEs. If the development of e-Commerce in international trade creates a more effective and competitive business environment. Then Indonesian SMEs have the opportunity to compete in the international market

## **RESEARCH METHOD**

This research used descriptive analysis method. Descriptive analysis method is a method aims to collect actual information in detail that describes the symptoms that exist, identify problems or check the conditions and practices that apply, make comparisons and evaluations, decide what others do in dealing with the same problem and learn from experience to set plans and decisions in the future. Descriptive analysis of the study seeks and implements what is there, opinions that are arising, processes that are underway, the effects or effects that occur or trends that are developing. Descriptive studies, especially those relating to the present, although not infrequently also take into account past events and their effects on present conditions. In the era of advancement in information technology, it is necessary to utilize small and medium-sized businesses (SMEs) to develop their business through e-Commerce. With the use of e-Commerce in its business operations can get wider market access in the country and abroad and e-Commerce is useful to support customer transactions that are cross-island or country. Trade relations that are crossing national borders are of quite a number of types to complex transactions.

## **RESEARCH RESULTS AND DISCUSSION**

The development of information technology today, has created new types and business opportunities in which business transactions are increasingly conducted electronically. In connection with the development of information technology, it is possible for everyone to easily buy and sell. The development of the internet is indeed fast and gives a significant influence in all aspects of life. The internet helps to be able to interact, communicate, even trade with many people from all corners of the world cheaply, quickly and easily. In the last few years, the spread of internet media has caused many companies to start trying to offer a variety of products through e-Commerce and one of the benefits of being as a product promotion media (Choshin and Ghaffari, 2017).

E-commerce continues to experience rapid growth in the world of commerce. This is quite significant, among others, seen from the quantity of transactions through this facility. E-Commerce technology enables commercial transactions across cultural and national boundaries with higher convenience and more cost effective than in a traditional trading system. But no doubt, traditional trade transactions are also still in demand because it has become a habit that has always

existed. Another reason traditional trade transactions are still in demand is the issue of mistrust which is still doubtful about safety in transactions through e-Commerce. Not only because of the problem of mistrust, traditional commerce is popular because of lack of knowledge about the internet and what e-Commerce really is (Havinga, et al., 2016). In this case e-Commerce can not be separated from the name of the internet, because it is very sustainable to facilitate the activities of services and goods that can be transacted. Therefore the internet is a global connection of thousands of networks that are managed freely. The internet has become popular because it is the right way to get the latest information with various variations quickly. Besides that, the internet guarantees the speed of data and information distribution in accordance with the speed of the telecommunications channel used. Telephone lines with copper wire. For example, it has a speed of 9,600 bps (around 1,200 characters per second), while fiber optic cables can reach 100 Mbps (around 12,500,000 characters per second), or frequency waves that reach 128 Kbps (around 16,000 characters per second) (Jugend and da Silva, 2014).

The speed and connection between networks on the internet is what makes it possible to do long-distance business transactions, and improve the performance of business companies that have various branches in this hemisphere. The rapid development of science and technology has an impact on the progress of the fields of communication, transportation, and information. Along with these conditions the world population continues to grow while natural resources or factors of production tend to be limited. Each country has its advantages and limitations so that it encourages a country to conduct international relations such as existing business activities in a country to expand overseas, including in the form of international business. International business, namely "Concerning all kinds of business transactions between two or more countries, by including both intergovernmental activities and private companies" (Harms, 2014).

- Factors supporting the growth of the e-Commerce industry

At this time e-Commerce in Indonesia is practically just beginning and is still classified as very small, with an estimated market size of under USD 3 billion in 2014 or contributing less than 1% of total retail sales in Indonesia. Internet penetration in Indonesia is also considered quite low at around 17% and only a small number shop online. This is what makes this industry arguably still lagging behind and actually has room to grow in the future. In addition, the fact is that the average Indonesian uses the internet only for social networks, not yet using it like other countries, for example in shopping online. In recent years, this sector has begun to attract a lot of investor attention lately. Given that Indonesia has a large population base of 250 million people and is the country with the fourth most population in the world with favorable demographics (Shams, et al.,2015) (See Figure 1).



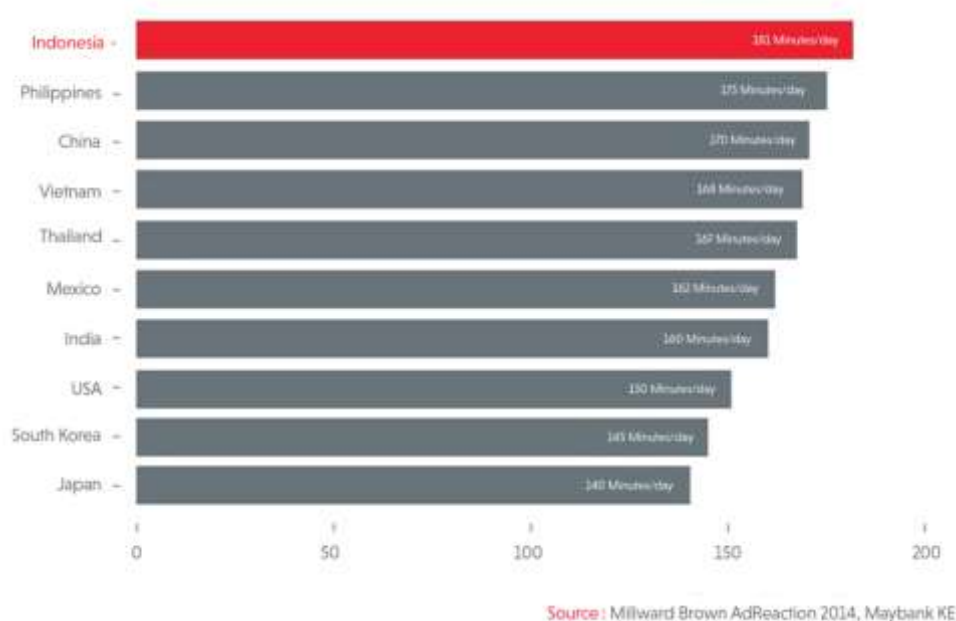
Source : Frost & Sullivan, A. T. Kearney, Maquarie Research

**Figure 1.** Online Retail Sales% of Total Retail Sales (2011-2016)

- Time Spent using a Smartphone

This is supported by interesting facts too, that Indonesia is reported as the nation that

spends the most time in using smartphones, on average three hours per day (181 minutes), after the Philippines in second place and China in third place, based on Millward Brown AdReaction data. No wonder some smartphone applications such as Gojek, Grab Taxi Indonesia, which have developed quite rapidly (Kriyantono, 2015) (See Figure 2).



**Figure 2.** Time Spent Using a Smartphone

- Total Population

In addition, there are other things that support the growth of the e-Commerce industry in Indonesia. Regarding the population, according to AC Nielsen, Millennials (aged 21-34) have the highest proportion to browse and shop online, followed by Generation X (ages 35-49). At present, around 46% of Indonesia's population, or 115 million people, are in the Millennials and Generation X age groups. It is not surprising that Indonesia has the fourth highest number of active Facebook users in the world of 64 million, the fifth largest Google+ user 612 thousand and the second highest Twitter account penetration of 19% in the world. According to Euromonitor also, the composition of the population aged under 30 years is as much as 50% and is one of the countries with the highest youth composition in the world. Revenues are also expected to increase as the portion of the middle income population rises from 30% of the current population to 52% in 2020 based on the projections of the Boston Consulting Group (Hua, et al., 2013). (See Figure 3).

	Doing online Browsing	Doing online Shopping	Indonesian Population (Million)	% of Total Population
Generation Z (under 20)	6-9%	3-9%	90	36%
Millenials (21-34)	49-59%	52-63%	61	24%
Generation X (35-49)	25-33%	25-30%	54	22%
Baby Boomers (50-65)	7-13%	6-13%	33	13%
Silent Generation (65+)	1-3%	1-3%	14	6%

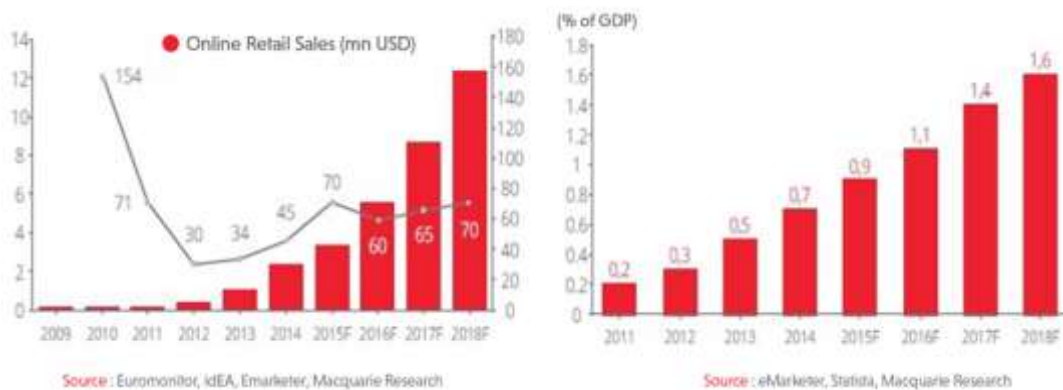
Source: AC Nielsen, Macquarie Research

**Figure 3.** Indonesian Population Details

- Industry prospects and factors that need to be developed

Figure 4 is the growing number of internet users can potentially increase online shopping. The market estimates that online retail sales in Indonesia could grow more than four times from 2014 to 2020 to USD 10 billion, equivalent to 2.3% of total retail sales that year. China itself with an already large enough e-Commerce market, is estimated to still be able to double online sales in 2017, according to e-Marketer Indonesia's e-commerce sector should also be able

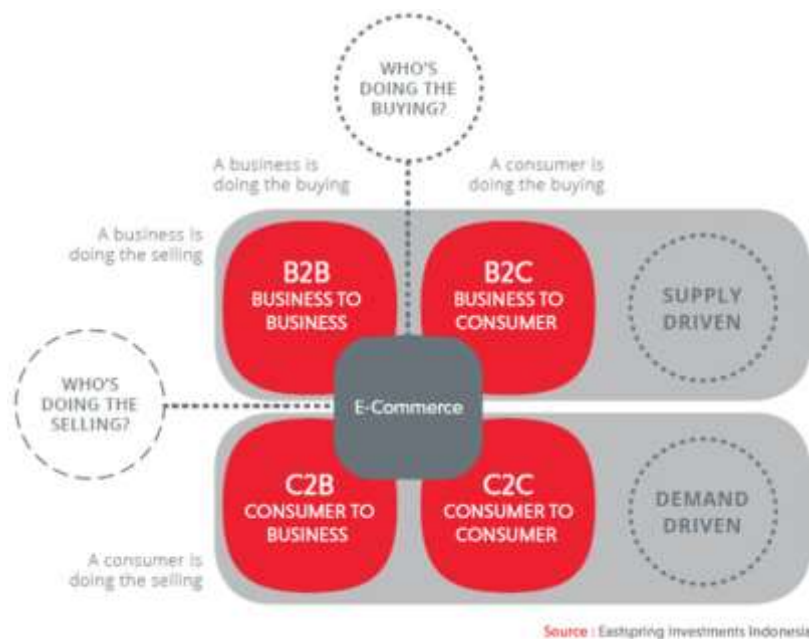
to benefit from a large population of internet users, favorable population demographics and increased income from middle class (Martani and Fitriyani, 2014).



**Figure 4.** Online Retail Sales and Annual Growth and Online Retail Sales

- Indonesian companies engaged in e-Commerce

At this time, in fact many Indonesian companies have started e-Commerce in Indonesia, especially in the last three to five years. Like some of the big OLX e-Commerce companies, Kaskus fjb, Lazada which are used by big retailers have also come down to e-Commerce to prepare for a new era of e-Commerce such as Matahari Group (Lippogroup) which introduces [www.mataharimall.com](http://www.mataharimall.com), Mitra Adi Perkasa (MAP) with planetsport via [www.mapemall.com](http://www.mapemall.com), and retail players such as Alfamart and Indomaret with [www.alfaonline.com](http://www.alfaonline.com) and [www.clickindomaret.com](http://www.clickindomaret.com) (See Figure 5).



**Figure 5.** e-Commerce Platform Matrix

There are four main categories of e-Commerce:

- (1) (Business to Business) B2B describes trade transactions between companies, such as between producers to distributors, or wholesalers to retailers.
- (2) (Business to Consumer) B2C describes business activities related to serving end consumers (individuals).
- (3) (Consumer to Business) C2B describes a trading model in which consumers (individuals) offer products and services to companies and companies pay them.
- (4) (Consumer to Consumer) C2C describes electronic commerce involving electronic transactions that facilitate inter-consumers through third parties (Heitor, 2015).

## ACKNOWLEDGMENTS

The author would like to thank the Rector of Universitas Komputer Indonesia, and all the parties who's involved in this research, who helped in the distribution of ideas so that the authors can complete the writing of this research well.

## CONCLUSION

With the continued growth of the Indonesian economy and the high level of confidence of small and medium businesses (SMEs), more and more SMEs can expand their business units abroad. The destination countries for expansion are China and Southeast Asia, Indonesia claims to make China a major expansion destination, then Southeast Asia and the rest are America, India, Western Europe, Australia and the Middle East. Policies that can encourage the training and skills development of SME owners and help create an environment that allows the development of technology that can ultimately change the business processes of major industries. In addition, the government must also be able to ensure that the quality of goods and services produced meets international standards. This can encourage innovation and product development for the domestic and export markets. An increase in the quality and quality of SME management can increase competitiveness domestically or internationally. Globalization presents a good shift in the interconnectivity of various regions in the world contributing to the rapid growth of international trade. In addition to facilitating consumers, this phenomenon also makes it easier for business behavior such as Indonesian SMEs and business practitioners or major companies abroad. however, e-Commerce also faces its own challenges. The gap in internet usage in international trade has led to digital divide. In conclusion, e-Commerce does create opportunities for businesses to B2B businesses.

## BIBLIOGRAPHY

- Choshin, M., & Ghaffari, A. 2017. An investigation of the impact of effective factors on the success of e-commerce in small-and medium-sized companies. *Computers in Human Behavior*, **66**, pp.67-74.
- Ghasemi, Maziyar, et al. 2011. The impact of information Technology (IT) on modern accounting system. *Procedia-Social and Behavioral Sciences* **28**,pp. 112-16.
- Gonzalez, C. G. 2014. International economic law and the right to food. In *Rethinking Food Systems* pp. 165-193. Springer, Dordrecht.
- Gonzalez, C. G. 2015. Bridging the North-South Divide: International Environmental Law in the Anthropocene. *Pace Env'tl. L. Rev.*, **32**, pp.407.
- Havinga, M., Hoving, M., & Swagemakers, V. 2016. Alibaba: a case study on building an international imperium on information and E-Commerce. In *Multinational Management* pp. 13-32. Springer, Cham.
- Harms, H. 2014. Review of family business definitions: cluster approach and implications of heterogeneous application for family business research. *International Journal of Financial Studies*, **2**(3), pp.280-314.
- Hua, N., Morosan, C., & DeFranco, A. 2015. The other side of technology adoption: examining the relationships between e-commerce expenses and hotel performance. *International Journal of Hospitality Management*, **45**, pp.109-120.
- Heitor, M. 2015. How university global partnerships may facilitate a new era of international affairs and foster political and economic relations. *Technological Forecasting and Social Change*, **95**, pp.276-293.
- Jaelani, A. 2017. Fiscal policy in Indonesia: Analysis of state budget 2017 in Islamic economic perspective. *International Journal of Economics and Financial Issues*, **7**(5),pp. 14-24.
- Jugend, D., & da Silva, S. L. 2014. Product-portfolio management: A framework based on Methods, Organization, and Strategy. *Concurrent Engineering*, **22**(1), pp.17-28.
- Kriyantono, R. 2015. Public relations and corporate social responsibility in mandatory approach

- era in Indonesia. *Procedia-Social and Behavioral Sciences*, **211**, pp.320-327.
- Kerber, W. 2016. Digital markets, data, and privacy: competition law, consumer law and data protection. *Journal of Intellectual Property Law & Practice*, **11**(11), pp.856-866.
- Martani, D., & Fitriasaki, D. 2014. Financial and Performance Transparency on the Local Government Websites in Indonesia. *Journal of Theoretical & Applied Information Technology*, **60**(3), pp. 15-26.
- Shams, R., Alpert, F., & Brown, M. 2015. Consumer perceived brand innovativeness: Conceptualization and operationalization. *European Journal of Marketing*, **49**(9/10), pp.1589-1615.
- Soegoto, E. S. 2014. Entrepreneurship Menjadi Pebisnis Ulung. PT. Elex Media Komputindo Kompas Gramedia, **12**, pp.234-345.