

## SMEs in E-Commerce Market Structure

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### Abstract

This article discusses the structure of the e-commerce market in Indonesia with the Industrial Organization approach using Porter's Five Forces. The results of research on the structure of Indonesia's digital market e-commerce tend to be a contestable market with low barriers to entry, products and services sold must have sufficiently strong substitutes and costs (initial and sunk costs) to set up similar companies are not too high. The internet increases competition and the government's role is needed to avoid too high a market concentration.

**Keywords:** *e-commerce, industrial organization, Porter's five forces, SME'S*

### Abstrak

Artikel ini membahas mengenai struktur pasar e-commerce di Indonesia dengan pendekatan Industrial Organization menggunakan Porter Five Forces. Hasil penelitian struktur pasar digital Indonesia e-commerce cenderung contestable market dengan barrier to entry masuk pasar rendah, produk dan jasa yang dijual harus memiliki substitusi yang cukup kuat dan biaya (initial dan sunk cost) untuk mendirikan perusahaan sejenis tidak terlalu tinggi. Internet meningkatkan persaingan dan peran pemerintah diperlukan agar tidak terjadi konsentrasi pasar yang terlalu tinggi

**Kata kunci:** *e-commerce, industrial organization, Porter's five forces, UMKM*

## INTRODUCTION

Increased competitiveness in industry 4.0 through digitization which includes Internet and cellular technologies with high-speed connectivity helping to bring about changes in business functions and models (Roblek et al., 2013); Industry 4.0 is not limited to robotics technology and production automation, but also digitization of business processes as a whole, which includes the process of procuring raw materials to marketing processes. (Franks, 2019).

During the pandemic, human dependence on information technology in all fields has increased. Restrictions on physical activity encourage many activities using information technology, including business. Unctad report (2022), the pandemic has driven the global e-commerce market to increase by 14% to 17% during 2020 to 2021.

The term (E-Business) is described as electronic business where we use the internet network to empower business processes and other commercial activities, so as to provide added value to consumers. E-commerce is a form of e-business that has a huge competitive advantage because it helps marketers expand markets; they deliver, and the distribution channels will span the globe as well. (Country & Susilowati, 2016).

In Indonesia, e-commerce allows Micro, Small and Medium Enterprises (MSMEs) to expand their market share at a lower cost. According to the report from the Ministry of Cooperatives and SMEs, in 2021 there will be 16.4 million MSMEs that enter the digital ecosystem. It is targeted that by 2024 there will be 24 million MSMEs.

Based on the 2021 E-Commerce Survey report by the Central Bureau of Statistics (BPS) e-commerce in Indonesia in 2020 there were 2,361,423 businesses and only 25.92 percent used e-commerce. There are still many MSMEs that run business in the conventional way. Furthermore,

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the survey results noted that the majority of MSMEs who use e-commerce use short messages and social media, and have incomes below IDR 300 million, which means they are in the micro and small class. Therefore, the use of digital marketing and its integration with online marketplaces can be the main solution to revive MSMEs after the Covid-19 pandemic (Santoso, 2020).

E-commerce promises benefits for businesses in both developed and developing countries, such as the ability to reach new international markets. However, adopting e-commerce alone will not generate these benefits. Industry structure plays a strong role in determining the success or failure of an e-commerce endeavor. This article aims to determine the industrial structure of e-commerce in Indonesia and identify barriers for MSMEs to enter into the e-commerce industry structure. It is hoped that by answering these questions, this article can recommend policies in setting up e-commerce industry structures that are more friendly to MSMEs.

### **E-Commerce**

The Organization for Economic Cooperation and Development (OECD) 2009 defines e-commerce as the activity of selling or purchasing goods and services, which is carried out through computer networks with methods specifically designed for the purpose of receiving or placing orders, although payment and delivery of the main goods and services do not have to be done online. E-commerce transactions can be conducted between businesses, households, individuals, governments, and other private or public organizations. Including: ordering through web pages, extranets and Electronic Data Interchange (EDI), e-mail, social media (Facebook, Instagram, etc.), and instant messaging (Whatsapp, Line, etc.). Digital technology and e-commerce can be an effective way to collect large amounts of data about customers,

E-commerce builds on the traditional commerce structure by adding flexibility through digital technological innovation. This facilitates improvements in operations leading to substantial cost savings as well as increasing competitiveness and efficiency through the redesign of traditional businesses (Albăstroiu 2007). Furthermore, e-commerce can encourage companies to provide not only standard and traditional products, but also unique and limited editions, thereby further increasing the differentiation of their products from competitors as well as their overall level of innovation performance. (Koellinger, 2008); Macchion etl. all. 2017).

### **E-Commerce and Structure Industry**

The structure of the e-commerce industry in developing countries has almost the same constraints as; poor physical infrastructure, inadequate telecommunication infrastructure ((Okoli & Mbarika, 2016), ; Molla and Licker, 2005), underdeveloped technical and managerial skills (UNCTAD, 2002;(Travica, n.d., 2007); Wresch and Fraser, 2006), legal and tax protection ((Taaffe et al., 2001)and cyber security.

E-commerce that gathers various companies in different business scales and different types of industries in the same space. The market structure in e-commerce applies equally to all scales and all types of industries. So it is worth asking whether e-commerce can be said to be an organizational industry?

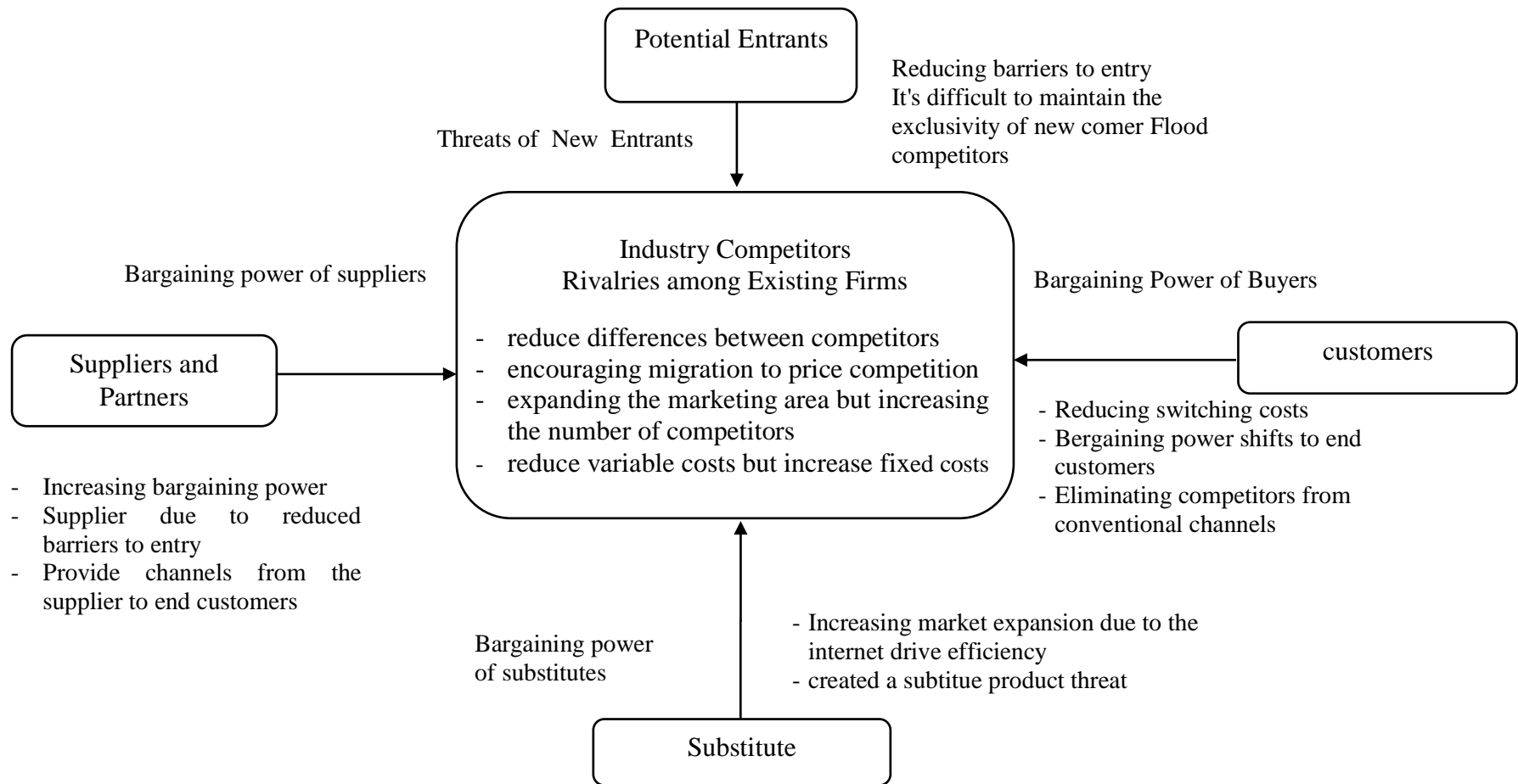
The Industrial Organization (IO) theory paradigm first appeared in 1971, by Learned, Christensen, Andrews, and Guth (LCAG). LCAG is defined as a company's competitive strategy in an environment constrained by economic and non-economic factors. The success of the company is greatly influenced by the ability and consistency in combining internal competencies with opportunities, challenges and obstacles that arise from the internal and external environment (Michael E Porter, 2008). IO theory was developed by Porter based on Hunt's research (1972). Hunt coined the term "strategic group" to describe a group of companies within an industry that have high alignment in terms of cost structure, degree of vertical integration, and degree of product differentiation, formal organization, control systems, management of

rewards/punishments, and personal views and preferences for various possible outcomes so that the idea of grouping company actions and the same strategic dimensions within the industry (Porter, 1981) emerges, leading to the similarity of the idea of Industrial Organization, with the main focus on industry. Hunt observes that there are 3 sources of asymmetry between companies in the industry, namely (1) the extent of vertical integration, (2) the degree of product diversification and (3) product differentiation. This asymmetry produces 4 strategic groups, namely: (1) full line national manufacturers' brand products, (2) part line national manufacturers' brand products, (3) private brand producers and (4) national retailers. Hunt's reason for grouping is to minimize asymmetry. By minimizing the asymmetries of the group, it can inhibit the entry of potential entrance. According to Bain and Mason, this industry structure determines how companies in strategic groups react and behave, which in turn will determine the company's performance in the market. Hunt's reason for grouping is to minimize asymmetry. By minimizing the asymmetries of the group, it can inhibit the entry of potential entrance. According to Bain and Mason, this industry structure determines how companies in strategic groups react and behave, which in turn will determine the company's performance in the market. Hunt's reason for grouping is to minimize asymmetry. By minimizing the asymmetries of the group, it can inhibit the entry of potential entrance. According to Bain and Mason, this industry structure determines how companies in strategic groups react and behave, which in turn will determine the company's performance in the market. (Carlton & Perloff, 2005).

The Porter's Five Forces framework model consisting of the threat of new entrants, the bargaining power of buyers, the threat of substitute products, the bargaining power of suppliers, and the intensity of competition - is considered the best construct in the context of industrial factor analysis which is seen as capable of assisting companies in evaluating the external environment and understanding their competitive position. company owned (Michael Eugene Porter & Caves, 1977). This is also supported by (Klemperer, 1995) who stated that studying these strengths is very important because it allows a company to evaluate its competitive position.

The influence of the internet on the structure of the e-commerce industry is explained in this study (Elbeltagi, 2007); (Boateng et al., 2008); (Poon and Joseph, 2000) has a positive impact on small and medium enterprises, especially in developing countries. The Internet helps companies reduce transaction costs and sell to new markets (Mustaffa and Beaumont, 2004; UNCTAD, 2002). But instead, the research was conducted (Michael E. Porter, 1981) found that the Internet can weaken industry profitability by reducing barriers to entry and by reducing switching costs.

Porter draws five forces with the internet as a factor that plays an important role in influencing competition in the chart below:



**Figure 1.** Porter's five forces (adapted from Porter, 2001)

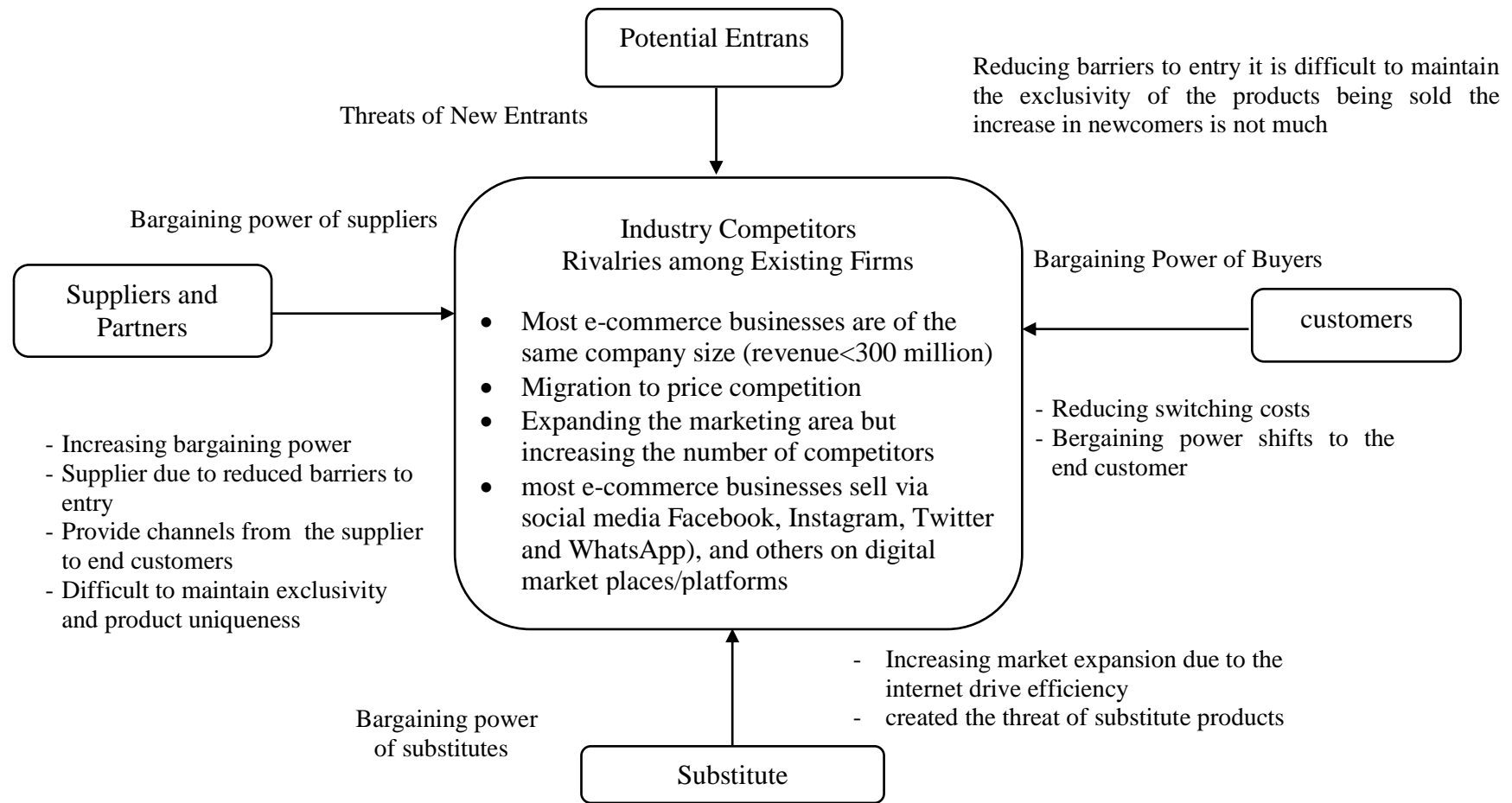
### Indonesia E-Commerce and Structure Industry

The profile of the structure of the Indonesian e-commerce industry which will be explained below, is based on data from the Central Statistics Agency for 2021 which was published under the title E-Commerce Statistics 2021. The survey was conducted in 34 provinces in Indonesia. The characteristics of business units in Indonesia that sell through e-commerce are presented in the table below:

**Table 1.** Characteristics of Indonesian e-commerce

Categories	Survey Results
Income	The average income value of sellers is under three hundred million rupiah
The most common payment method	Cash On Delivery / Cash
Age of business owner	The largest age group of owners is 35-44 years old with the most education being SMA/SMK
The business unit started e-commerce activities	50.71 percent of businesses directly carry out E-Commerce activities when they just start operating. Then as much as 22.04 percent of new businesses started e-commerce activities more than 5 years after operational activities began
Seller Type	<i>E-Commerce</i> dominated by sellers (79.91 percent), then followed by resellers (13.09 percent) and the smallest is intermediary sellers and buyers (dropshipper) of 7.00 percent
Internet use by business owners	As much as 63.52 percent use the internet to do marketing. Ordering raw materials from suppliers occupies the second position, amounting to 44.48 percent.
Obstacles encountered	The low demand for goods and services is 48.74 percent. Then followed by the lack of capital constraints experienced by 37.51 percent, 5.79 percent due to lack of skilled personnel, 3.8% due to limited delivery services, 2.87 percent due to internet access and 1.91 percent due to fraud in the buying and selling process
E-commerce Business Units that carry out exports	The e-commerce business unit that exports 1.85 percent

Using Porter's five forces, the industrial structure in Indonesian e-commerce is further explained in the following figure;



**Figure 2.** Porter's Five Forces (adapted form Porter, 2001)

## METHODOLOGY

This study uses a case study design to find out in depth the phenomena in this study. The case study method using qualitative analysis was chosen as the most relevant approach in theory development through observing the constructs that develop in the real field.

### Case Study Companies

The research was conducted on four SMEs that produce various types of products, with the criteria 1) SMEs have used e-commerce and/or digital as a sales tool even though they have different levels of digital maturity, 2) SMEs have used digital for at least 1 year.

### Data Collection

Collection, presentation and analysis of data is iterative in addition to prior empirical findings used as a priori constructs. Interviews were conducted semi-structured, as well as conducting observations and field visits. The profiles of SMEs who were respondents are presented in the table below:

**Table 2.** Profile of SMEs

Criteria	Cikoko	Clanting Robbani	Doctor Shop	Jama Jaghi
Product	Home Decor	Food and Beverage	Home Accessories, decor and clothes	Traditional Tapis
Number of employees	2	15	4	15
Since	2018	2010	2014	2010
Annual Sales	Rp. 495,000,000	Rp. 1,500,000,000	Rp. 800,000,000	Rp. 700,000,000
Digital Technology Adopted	e-commerce (sophee, tokopedia, Padi, BukaLapak), instagram, WA business, TikTok	e-commerce (sophee), Instagram, WA Business TikTok	Instagram, Tiktok, WA Business	e-commerce (sophee, tokopedia, Padi, BukaLapak), instagram, WA business, TikTok
Informant	owner	owner	owner	owner

### Data Analysis

In this study, data analysis was carried out in three stages, namely 1) conducting open coding, in which all codes relevant to the research topic were documented. 2). carry out axial coding by identifying digital actions carried out by SMEs in the digital market and grouping them into digital levels namely not using, orientation, preparation, testing, routine, refinement and integration. The action list includes not only activities related to applied technology, but also supporting factors, such as technology investment, allocation of human resources, learning processes etc. The end result of the second stage is the identification of the relationship between emerging themes and the context, consequences, and interactions between codes. 3). Identification of challenge and problem when SMEs jump into digital market

## DISCUSSION

The industrial structure of the Indonesian e-commerce market has a different characteristic from what is described by (Michael Eugene Porter & Caves, 2001) including the characteristics of business actors and the level of competition. The following are the peculiarities of the structure of the Indonesian e-commerce industry.

### **Money Burn**

Money Burn is a term that appears when a business actor spends a lot of money in order to assert his existence. The amount of money used is sometimes irrational and not proportional to current income. Business actors who carry out this practice in the long term are those who have strong capital. This action departs from strengthening capital, not because of competitiveness and can lead to market consolidation and make the market more concentrated (Liu, 2021).

### **Opportunity For The Emergence Of A Predatory Price**

The strategy is carried out by selling its products below production costs. This opportunity is supported by the condition that the company has data centric to be able to control the data of its users. Many predatory prices are found in goods imported from China. The increase in the number of imports of goods from China is inseparable from the convenience for consumers to shop online. Imported products have a dominance of 90 percent in e-commerce platforms, while the remaining 10 percent are domestic products (Rised, 2021), (Prahmana & Wiradiputra, 2022).

### **Bargaining Power of Suppliers**

One of the survey results from BPS regarding Indonesian e-commerce in 2021 is the use of the internet by e-commerce actors. The biggest use is used for marketing, and the second order is used to contact suppliers. E-Commerce is dominated by sellers (79.91 percent), then followed by resellers (13.09 percent) and the smallest is the intermediary seller and buyer (dropshipper) of 7.00 percent (BPS, 2021)

This condition shows that digital cuts the communication chain from producers - distributors - customers to producers to end customers directly. Suppliers have access to contact suppliers directly.

### **Barriers To Entry**

The results of the BPS Survey on E-Commerce Indonesia in 2021 show that of all the businesses that collected data, up to 31 December 2020, 25.25 percent were carrying out E-Commerce activities, while up to 30 June 2021, 25.92 percent were recorded. This shows that even though there is an increase, businesses that accept orders or sell goods/services via the internet in Indonesia are still relatively low, and are still dominated by conventional types of businesses. The survey also asked about the obstacles faced by business actors in e-commerce. Their answers sequentially were low demand for goods and services, lack of capital, lack of skilled personnel, limited delivery services, internet access and 1.91 percent due to fraudulent buying and selling processes.

An interesting phenomenon, especially in digital platforms, is 50.71 percent of businesses directly carry out E-Commerce activities when they just start operating. As many as 15.98 percent of new businesses start e-commerce activities 1-2 years after operating and the rest are more than 2 years after operating. This represents a barrier to entry in the small e-commerce market as new companies can enter the market directly.

### **Bargaining Power Customers**

Bargaining power of consumers increases because producers can sell directly to consumers. There is no switching cost to move to another store. The 'Burn Money' action on digital platforms benefits consumers because they get goods at lower prices. Consumers can easily switch to another store.



On non-platform e-commerce, namely using social media (Facebook, Instagram and WhatsApp) most E-Commerce businesses (78.72 percent) in almost all business fields, use the Cash on Delivery (COD) payment method. Consumers ask for goods and services to be delivered directly to their homes and make payments in cash.

### **Competition Between Business Units In E-Commerce**

The distribution of e-commerce business units in Indonesia is still centered on the island of Java, accounting for 75.15 percent of the total e-commerce business in Indonesia, which is 2,361,423 businesses.

The products that sold the most were the food, beverage and groceries group with 40.86 and the second order was fashion with 20.71 percent. In third place, are the types of goods/services needed by the household, as much as 10.30 percent of businesses.

The survey results confirm that more than half (54.66 percent) of E-Commerce businesses sell online through social media, such as Facebook, Instagram, Twitter, and so on. Furthermore, only 21.64 percent of businesses have sales accounts on digital marketplaces/platforms

### **Market Structure**

Based on the theory of structure, conduct, and performance (SCP). it is stated that if the market is structured as perfectly non-competitive, then the government should intervene in the industry to change the structure to a competitive one through anti-monopoly laws. This argument is based on the theory that a non-perfectly competitive market structure will result in a welfare loss.

Based on research conducted by Sri Adiningsih et al (2021), the structure of the Indonesian digital market is contestable market. The characteristics of a contestable market are: a low barrier to entry to enter the market, the products and services sold must have sufficiently strong substitutes and the costs (initial and sunk costs) to set up a similar company are not too high. The emergence of a dominant e-commerce in the market. This is due to the lack of adequate competition. In Indonesia, the market is still a contestable market, so even though companies have market power, they still have to work hard to meet consumer expectations. However, this research limits the market structure in digital platforms and not for social media.

### **The Existence of Substitutes**

E-commerce provides substitute products and can be found easily. There is no switching cost so consumers can compare one product with another.

### **CONCLUSION**

E-commerce is a modern industrial organization with technology as a driving force. The structure of the Indonesian e-commerce market is unique compared to the market structure introduced by Porter, even though it includes the internet as a determining factor. In Indonesia, the structure of the Indonesian e-commerce digital market tends to be a contestable market with low barriers to entry, products and services sold must have sufficiently strong substitutes and costs (initial and sunk costs) to set up a similar company are not too high. However, the government needs to be wary of money burning which is carried out especially on digital platforms which can lead to an overly concentrated market. The government also needs to increase the growth of business actors (MSMEs) who play on digital platforms because most of them still use social media. The export market is also still minimally utilized in e-commerce.

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