

# **Informative Industrial Analytic for Effective Retail Business Performance: A Case of Emerging Economy**

AHMAD LUTHFI KHAIRURRAHMAN<sup>1</sup>, LILIS SITI BADRIAH<sup>1</sup>, HERMAN SAMBODO<sup>1</sup>,  
DIJAN RAHAJUNI<sup>1</sup>, NUNIK KADARWATI<sup>1</sup>, HARY PUDJIARTO<sup>1</sup>, OKE SETIARSO<sup>1</sup>,  
DEDI SUPRIADI<sup>1</sup>, RAKHMAT PRIYONO<sup>1</sup>

<sup>1</sup>Department of Economics, Universitas Jenderal Soedirman,  
Profesor DR.HR. Boenjamin Street 708, Purwokerto, Central Java,  
INDONESIA

*Abstract:* - This study analyzed the Indonesian retail industry's structure, behavior, and performance in 2018-2020. It is essential because the potential of the retail industry in Indonesia is one of the most significant contributors to GDP and employment. Thus the retail industry has a very strategic role in the Indonesian economy. If a few companies dominate the market, it will become an obstacle for external companies to enter the retail industry, which can lead to a decline in the level of profits and the overall performance of the retail industry. This study aims to identify and analyze the structure, behavior, and industry performance of the retail industry in Indonesia in 2018-2020. This study uses data on public companies listed on the Indonesia Stock Exchange. The data were analyzed using CR<sub>4</sub>, industrial behavior, and Price Cost Margin analysis. The results show that the average value of CR<sub>4</sub> in the Indonesian retail industry in 2018-2020 is 60.276%. It means the structure of the Indonesian retail industry is a tight oligopoly. This condition has led to several behaviors carried out by industry players in the retail industry in Indonesia to increase profits and expand their market share. These behaviors include product strategy (product differentiation), price strategy (second and third-level price discrimination), and promotion strategy. The overall performance of the Indonesian retail industry still needs to improve because the PCM value of the Indonesian retail industry in 2018-2020 is less than 50%. This study recommends that companies pay attention to strategies to increase their competitiveness. Government supervision is needed on business activities that are indicated to be too dominant in their position and make it difficult for new entrants to the retail industry in Indonesia. Companies also need to pay attention to production efficiency in their business, not only focusing on controlling market share so that the strategy can effectively create higher profits.

*Key-Words:*- Retail Industry; structure-behavior-performance; industrial behavior; CR<sub>4</sub>; price cost margin.

Received: May 11, 2022. Revised: January 21, 2023. Accepted: February 19, 2023. Published: March 7, 2023.

## **1 Introduction**

Rapid technological developments create digitization in various fields of activity around the world. Current digital innovations are undergoing commercialization processes to serve emerging sectors, [1]. A country like Indonesia is starting to accelerate digitization in the industrial sector to promote economic development, [2]. The superiority of the industrial sector is caused by prominent capital factors, labor absorption, and the ability to create high-added value.

Digital transformation is changing the market context for almost all businesses. These changes alter various aspects of the business, not only business operating models but also how companies offer products, interact with customers, and obtain business service resources. Thus, companies must redesign their supply chain by building a more

connected supply chain network between the companies involved. Companies are consciously forced to use interconnected digital devices through complex websites, [3].

The retail sector undergoes digital transformation to remain competitive in the market. Retailers provide consumers with various digital products and services adapted to digital technology and are simultaneously influenced by the new forms of consumption associated with these digital technologies, [4]. Retail is an essential aspect of the distribution system of goods. The retail industry is an industry that offers products and services that have added value to meet the needs of the community. The products and services offered are generally intended to meet household needs.

The emergence of economic reforms has made globalization a critical matter. Globalization opens

up opportunities for free trade in goods and services, capital, intellectual skills, and knowledge among different countries. This condition offers a wide range of products and services to the global market. This market is becoming very heterogeneous and complex, making competition between global retailers increasingly fierce. Customer needs, tastes, and preferences are changing rapidly at a much faster rate. Producers must be more organized to survive and sustain a highly competitive market. Changing customer demands and lifestyles have given impetus to the globalization of the organized retail market, [5].

The effects of globalization provide opportunities for industry to expand its market by exchanging information, communication, and technology. This trend changes several aspects of society, including economic, cultural, social, political, and technological. In addition, it makes consumers start paying attention to global brands and products. This condition can be an opportunity for the industry, especially the retail industry, to start competing in the global market.

The consulting agency A.T Kearney released the 2019 Global Retail Development Index (GRDI) and explained that Indonesia's retailing industry positioned number five out of 30 developing countries, with a GRDI score of 58.7 out of 100, after China (70), India (69.2), Malaysia (61.9) and Ghana (59.2). In addition, the retail industry was also one of the most significant contributors to the Gross Domestic Product (GDP) in 2019, which is 13.01%, [6]. However, many sectors have been affected by the COVID-19 pandemic, especially the industrial sector and the retail industry, due to policies implemented by the government, such as the Large-Scale Social Restrictions (PSBB), which restrict people's movement. This condition can be seen in the retail industry's contribution to GDP, which decreased in 2020 to 12.84%, [7].

While digitization is unavoidable and will continue to advance, that is understood about its economic and financial consequences in industrial settings, [4], [1]. Based on the literature, few studies explore the effects of digitalization on the structure, behavior, and performance of the retail industry and the general economy. The analyses indicated that the triple disruptions could improve the performance of retail industries, stimulate economic activity, and increase GDP, [4], [8]. Even fewer studies assess its implication on retail industries' soundness in advanced and emerging economies. Most studies suggested that limited conclusions have been reached on the relationship between digitalization on the retail industries' performance, [4], [8].

The industry structure influences the behavior of every company in the industry. The company's behavior in taking action determines the company's strength in surviving in the industry. The actions taken include product strategy, price strategy, and promotion strategy. The relationship between industry structure and company behavior can determine the industry's performance. Researchers usually use the concentration ratio (CR4) in determining the market structure, which is more likely to be a monopoly when the CR4 value is high or close to 100%, implying that producers' market power is higher, [9].

The industry's performance can be determined by calculating the profit level through the Price Cost Profit Ratio (PCM). Price Cost Profit Ratio is obtained by dividing the value added by the output, [10]. If the industry is concentrated, the company will increase profits because the concentration of the industry becomes a barrier to entry for other companies. If market power is dominated by certain companies, this will hinder external business actors from entering and competing in the retail industry. These conditions will directly affect the performance of existing industries. The retail industry's structure, behavior, and performance usually use the structure, conduct, performance (SCP) method.

The purpose of the SCP approach to the analysis of industrial organizations is the existence of a hypothesis that states that the company's behavior influences the performance or existence of the market (or industry) in the market). At the same time, the company is also influenced by various variables that make up the market structure, [11].

There are many retail industries in Indonesia. The Indonesian Retailers Association (APRINDO) notes that 150 member companies, both local and national, have a total of 45,000 outlets used throughout Indonesia in 2021. It is interesting to study the structure, behavior, and performance of the retail industry in Indonesia. This study is essential because the potential of the retail industry in Indonesia is one of the most significant contributors to GDP and one of the largest contributors to employment. Based on [7] 2018 was the peak of the retail industry's contribution to GDP growth, which rose to 4.99% from 4.30% in 2017. Then it fell to 4.81% at the beginning of the 2019 pandemic, and the peak fell to -1.30% in 2020 due to the global economic recession caused by the prolonged pandemic. Then, the effects caused by the pandemic have changed the characteristics of various industries, including the retail industry in

Indonesia. Thus the retail industry has a very strategic role in the Indonesian economy. Suppose a few companies dominate the market. In that case, this will become an obstacle for external companies to enter the retail industry, which can lead to a decline in the level of profits and the overall performance of the retail industry. Therefore, this study aims to analyze the structure, behavior, and industry performance of the retail industry in Indonesia in 2018-2020. The findings of this study are expected to provide input for improving the performance of Indonesian retail.

Research on the Indonesian retail industry has been conducted by [12]. The difference between this research and current research is in analytical methods. The research uses a qualitative descriptive analysis, and the subject area of the research is an analysis of the driving forces of competition in the Indonesian retail industry. Then, research on the market structure has also been carried out in several previous studies but differs from current research. Some of these studies include research on market structure, conduct, and performance conducted by [13] in Ethiopia related to beef cattle. The analytical method used is the Concentration Ratio (CR4), Hirschman Herfindahl Index (HHI), and Gini-Coefficient. Furthermore, [14] examined the banking industry in Nigeria using ROA, CR4, and CR8 analysis, as well as the Herfindahl-Hirschman Index. Another research conducted by [15] examined the fertilizer market in East Java, using SCP analysis with a sub-sector commodity approach, and [16] examined the jasmine flower business in East Java, using an analysis of calculations of the Market Share, Concentration ratio-4 (CR4), and the Herfindahl-Hirschman Index. Thus, the difference between the current research and previous studies is in the subject area and some of the analytical methods used.

## 2 Problem Formulation

The Indonesian retail industry has a strategic role in supporting economic growth and employment in Indonesia. However, in its development, internal dynamics such as industrial competition and external conditions such as the occurrence of the Covid-19 pandemic can affect changes in industry characteristics, structure, behavior, and performance. This condition is reflected in indicators of changes in the retail industry's contribution to Indonesia's economic growth, especially in 2018-2020. Therefore, the research questions are:

1. How is the structure of the retail industry in Indonesia in 2018-2020?
2. How is the behavior of the retail industry in Indonesia in 2018-2020?
3. How is the performance of the retail industry in Indonesia in 2018-2020?

## 3 Problem Solution

The type of this research is descriptive quantitative research which is carried out by collecting and compiling data and then analyzing and interpreting the results of the analysis. The object of this research is a public company in the retail industry in Indonesia that was listed on the Indonesia Stock Exchange (IDX) in 2018-2020. This research uses descriptive quantitative research methods—the descriptive method is used to analyze the behavior of the retail industry. The quantitative method with the SCP approach was used to analyze the structure and performance of the retail industry in Indonesia. Data processing was carried out with Microsoft Office Excel.

This study uses secondary data from the Central Statistics Agency (BPS) and the Indonesia Stock Exchange (IDX). Several variables used in this research are (1) industrial structure, which can be identified using the concentration ratio indicator (CR4). (2) Industry behavior can be identified using descriptive analysis of product differentiation, second and third-level price discrimination, and promotion strategies applied by companies in the industry. (3) Industry performance, which can be identified using the Price Cost Margin (PCM) indicator, and (4) Concentration Ratio (CR4), measured by adding up the market shares of the four most prominent companies. (5) Price Cost Margin (PCM) is measured by the added value ratio to total output.

### 3.1 Data Analysis Technique

#### 3.1.1 Industry Structure Analysis

To analyze the industry structure use the Concentration Ratio (CR4). The Concentration Ratio is the percentage of the total output of the largest company in the industry. The number of companies usually used as a calculation is four, known as CR4, [17]. The CR4 formula is:

$$CR_4 = MS_1 + MS_2 + MS_3 + MS_4 \quad (1)$$

Information:

MS = Company Market Share

According to [18] if  $CR4 = 0$ , the market is perfectly competitive. It is a monopolistic market if  $CR4$  ranges from 0-40 or ( $0 < CR4 < 40$ ). It is a tenuous oligopoly if the  $CR4$  number is between 40-60 or ( $40 < CR4 < 60$ ). If  $CR4$  is greater than or equal to 60 or ( $CR4 \geq 60$ ) is a tight oligopoly or dominant firm with a competitive fringe. The market is close to a monopoly if  $CR4$  is greater than or equal to 90 ( $CR \geq 90$ ). If  $CR4$  is 100%, the market is included in the monopoly category.

### 3.1.2 Industrial Behavior Analysis

According to [11] industrial behavior is a strategy and adjustment by industry players in a competition to achieve goals. The purpose of descriptive analysis of industrial behavior is to obtain information about the behavior of companies in the industry. Industry behavior analyzes the company's activities and implementation of strategies to expand market share, gain profits, and get rid of competitors. This analysis was conducted because behavior is qualitative and difficult to measure. Show behavior can be seen from the product strategy, such as (1) product differentiation. (2) price determination, whether second and third-level price discrimination is carried out. (3) promotion strategy, namely through advertising to increase or maintain market share.

### 3.1.3 Industrial Performance Analysis

According to [19] industrial performance results from industry reactions caused by competition between companies to dominate the market. To analyze the industry's performance using the calculation of Price Cost Margin (PCM), a rough estimate of industry profits to measure industry performance using the added value of companies in the industry. Therefore, higher added value will make industrial performance more efficient in minimizing production costs so that industrial profits will increase. The PCM formula is as follows, [10]:

$$PCM = \frac{\text{Value-Added}}{\text{Total Output}} \times 100\% \quad (2)$$

Price Cost Margin (PCM) criteria, namely, if the PCM value is below 50%, it is included in the low-profit level. It is included in a high-profit level if it is equal to or more than 50%, [16].

## 3.2 Results

### 3.2.1 Indonesian Retail Industry Structure

The retail industry that is the object of research is the modern retail industry with industry players,

namely, public companies listed on the Indonesia Stock Exchange. Overall, 25 modern retail public companies, and five of them are companies with the highest market share competing for the top four positions, namely:

1. P.T. Sumber Alfaria Trijaya Tbk is engaged in the retail of household materials.
2. PT Erajaya Swasembada Tbk is engaged in electronic retailing goods, especially gadgets.
3. PT Mitra Adiperkasa Tbk is engaged in various retail sectors, including household materials, food and beverages, fashion, and sports.
4. P.T. Hero Supermarket Tbk retails household materials, health, beauty, furniture, and electronics.
5. P.T. Midi Utama Indonesia Tbk is engaged in the retail of household materials.

The structure of the Indonesian retail industry can be calculated using the concentration ratio of the four largest companies ( $CR4$ ). Table 1 shows the result of the calculation of  $CR4$  in the Indonesian retail industry. Based on Table 1, the Indonesian retail industry from 2018 to 2020 has an average  $CR4$  value of 60.275%. The  $CR4$  value in 2018 was 60.2%. In 2019, it was 58.14%, and in 2020 it was 62.5%. In 2018 and 2019, the market share of P.T. Midi Utama Indonesia Tbk was not included in the four most prominent companies. However, in 2020 the company has a larger market share than P.T. Hero Supermarket Tbk, which is 4%. Thus, for 2020, P.T. Midi Utama Indonesia Tbk is included among the four most prominent companies.

Based on Table 1. it can be seen that P.T. Sumber Alfaria Trijaya has the highest market share consistently during the study period. This company has a business name Alfamart. The large market share owned by P.T. Sumber Alfaria Trijaya is because Alfamart sells many household products (daily necessities). Besides that, the company's marketing reach has almost spread to various regions in Indonesia. The location of Alfamart stores in each area is close to residential areas so that consumers can easily reach them. This explanation is also supported by data from the Indonesian Retailers Association (APRINDO), which shows that the number of Alfamart outlets throughout Indonesia in December 2020 was recorded at 15,102 units, an increase compared to January 2020 of 14,430 units. Alfamart is also one of the minimarket outlets that was relatively able to survive during the Covid-19 pandemic. Likewise, P.T. Midi Utama Indonesia Tbk, a subsidiary of P.T. Sumber Alfaria Trijaya, is engaged in relatively the same business sector. The company is also overgrowing, so in 2020 it has a relatively

increasing market share in line with the many minimarket outlets that were forced to close due to the impact of the Covid-19 pandemic. One of the businesses that closed due to the pandemic was PT Hero Supermarket Tbk, where the Giant hypermarket outlets were closed due to the pandemic.

The average CR4 value of 60.276% means that the Indonesian retail industry from 2018 to 2020 has a tight oligopoly industrial structure because the CR4 results of the retail industry from 2018-2020 are more than 60%. According to [18], if the CR4 value is between 60-100%, then the industrial structure is a strict oligopoly.

There is an inverse relationship between competition and the level of concentration. If the concentration level is high, the competition will decrease. In this condition, it is difficult for competitors to enter the Indonesian retail industry because of the high CR4 value and forming a tight oligopoly industry structure.

Table 1. CR4 Calculation Results for the Indonesian Retail Industry, 2018-2020

Company	Market Share (%)		
	2018	2019	2020
PT Sumber Alfaria Trijaya	30,2	30,4	34,5
PT Erajaya Swasembada Tbk	15,7	13,7	15,5
PT Mitra Adiperkasa Tbk	8,5	9	6,8
PT Hero Supermarket Tbk	5,9	5,1	-
PT Midi Utama Indonesia Tbk	-	-	5,8
CR <sub>4</sub>	60,3	58,1	62,5

Source: IDX processed data

### 3.2.2 Indonesian Retail Industry Behavior

The market structure in the retail industry in Indonesia, which is a tight oligopoly, has led to several behaviors carried out by industry players in the retail industry in Indonesia to increase profits and expand their market share. These behaviors include product strategy (product differentiation), price strategy (second and third-level price discrimination), and promotion strategies.

The product differentiation strategy is carried out through the variety of products offered. Apart from their primary product offering, they also sell other products. Retail industry players include P.T. Sumber Alfaria Trijaya Tbk (Alfamart); apart from selling household products, they also offer a

payment system for electricity tokens, pulses, and transportation tickets. Then, PT Mitra Adiperkasa Tbk, apart from selling household products through department stores (Debenhams, Louts, Seibu, and Sogo), is also engaged in food and beverage (Starbucks, Burger King, Cold Stone, Domino's Pizza), Fashion (Calvin Klein, Giorgio Armani, Dr. Martens, Zara), Kids (Kidz Station, Barbie), and Sports (Adidas, Planet Sports, Planer Station). P.T. Hero Supermarket Tbk, apart from selling premium and imported household products (Hero and Giant), also offers Health and beauty products (Guardian) as well as furniture and household electronics (IKEA). P.T. Midi Utama Indonesia Tbk (Alfamidi) sells household products and fresh fruit, and they also offer a payment system for electricity tokens, credit, and transportation tickets. In addition, PT Erajaya Swasembada Tbk is engaged in electronics and gadgets (Erafone, IBox).

Another strategy carried out by Indonesian retail industry players is a pricing strategy. In setting prices, industry players apply second and third-level price discrimination. Companies as "price makers" in a tight oligopoly market need to consider doing second and third-level price discrimination to get higher profits.

By implementing price discrimination, companies can maintain consumer loyalty to the products they sell and take some consumer surplus into producer surplus. According to [20] second-degree price discrimination or non-linear pricing is different pricing by companies for consumers who buy similar products with different volumes. The company will lower the price to consumers who buy a larger volume and charge a product unit price to consumers who buy a smaller volume. Meanwhile, third-degree price discrimination is setting different prices for various consumers for the same goods. One group of customers is charged a higher price, while another is charged a lower price.

Meanwhile, to increase company sales, it is necessary to carry out promotions to create brand awareness in the community. Promotions carried out in the retail industry use print and electronic media. Print media can be in the form of brochures, advertisements in newspapers or magazines, banners, and others, meanwhile, through electronics, namely social media, online shopping applications, and others. In addition, the company does big-day promotions, procuring memberships, and shopping vouchers.

### 3.2.3 Indonesian Retail Industry Performance

This study uses Price Cost Margin (PCM) to analyze industrial performance in Indonesia. The PCM value is obtained by comparing the added value with the total output. Table 2 shows the results of PCM calculations.

Table 2. Indonesian Industrial PCM Value in 2018-2020

Year	PCM (%)
2018	24
2019	23
2020	21

Source: IDX Processed data

The average PCM value during the 2018 to 2020 research period continued to decline, namely by 24% in 2018, 23% in 2019, and 21% in 2020. World oil prices can explain this condition. The highest increase in oil prices in 2019 increased input costs for the production process. This condition affects the production process of retail industry players, which results in a decrease in the ability to create added value and a decrease in efficiency. In addition, in 2020, there was a Covid-19 pandemic which caused a decrease in the level of public consumption due to mass layoffs and government policies to suppress the spread of the virus through the Large-Scale Social Restrictions policy. Market performance is at a low level if the PCM value is <50% and is at a high level or has a relatively high profit if the PCM value is  $\geq 50\%$ , [16]. Because, based on the calculation results, the average PCM value of the retail industry is less than 50 percent, the retail industry's performance is still at a low level.

However, when viewed based on individual company data, the average value of PCM is relatively varied. This condition can be seen in Table 3. Based on the PCM value between companies, the two companies have a PCM value of more than 50 percent, even though these companies are not included in the four companies with the largest market share.

For a company that offers daily necessities, P.T. Sumber Alfaria Trijaya Tbk has a PCM value of 20%. This condition happened because of the difficulty of increasing profits from selling necessities. The product categories have many substitutes, so the company cannot influence the

selling price. P.T. Midi Utama Indonesia Tbk, also engaged in the same field, has a higher PCM value of 25%. The difference is due to differences in product qualifications; they sell products with imported quality and target middle and upper-class people. The location of this company is in a relatively large city, so the community's reach is relatively limited, even though, according to consumption theory, middle and upper-class people have a smaller marginal propensity to consume compared to people with limited income, [21]. Even though the consumers are middle- and upper-class, the PCM is similar to PT Alfaria Trijaya because basic household goods have an inelastic demand.

For companies that offer clothing products, P.T. Matahari Department Store Tbk has a PCM value of 62% in 2018, 58% in 2019, and 60% in 2020. Such conditions also occur in P.T. Ramayana Lestari Sentosa Tbk, with a PCM value of 44 % in 2018, 45% in 2019, and 43% in 2020. This value is higher than other companies operating in the same field and controlling a larger market share, such as PT Mitra Adiperkasa Tbk, which controlled a market share of 8.5% in 2018, 9% in 2019, and 6.7% in 2020. Meanwhile, P.T. Matahari Department Store Tbk only controlled a market share of 4.6% in 2018, 4.3% in 2019, and 2.2% in 2020. The difference in the target market, brand awareness, and the ability to reduce production costs cause PCM's high value.

In electronics and gadgets, PT Erajaya Swasembada Tbk had a PCM value of 9% in 2018 and 2019, then increased to 10% in 2020. The difficulty of increasing profits is also due to the high production cost of gadgets, which makes selling prices high. P.T. Electronic City Indonesia Tbk has a higher PCM value, which was 16% in 2018, 18% in 2019, and 17% in 2020, even though P.T. Electronic City Indonesia Tbk has less market share than PT Erajaya Swasembada Tbk. These phenomena prove that the large market share owned by a company differs from the level of profit obtained.

Table 3. PCM Value among Indonesian Retail Industry Companies in 2018-2020

IDX Company	PCM (%)		
	2018	2019	2020
PT Sumber Alfaria Trijaya Tbk	20	20	20
PT Erajaya Swasembada Tbk	9	9	10
PT Mitra Adiperkasa Tbk	48	48	42
PT Hero Supermarket Tbk	28	28	27
PT Midi Utama Indonesia Tbk	25	25	25
PT Matahari Department Store Tbk	62	60	58
PT MAP Aktif Adiperkasa Tbk	45	45	40
PT Ace Hardware Indonesia Tbk	48	48	49
PT Ramayana Lestari Sentosa Tbk	44	45	43
PT Electronic City Indonesia Tbk	16	18	17
PT Sona Topas Tourism Indonesia Tbk	59	60	57
PT Matahari Putra Prima Tbk	14	18	19
PT Supra Boga Lestari Tbk	25	27	26
PT Catur Sentosa Adiprana Tbk	15	16	16
PT Duta Intidaya Tbk	45	34	37
PT Kokoh Inti Arebama Tbk	14	11	11
PT Optima Prima Metal Sinergi Tbk	14	10	12
PT Distribusi Voucher Nusantara Tbk	4	3	2
PT Global Teleshop Tbk	7	5	7
PT Trikonsel Oke Tbk	7	8	6
PT M Cash Integrasi Tbk	3	2	2
PT NFC Indonesia Tbk	2	2	1
PT Mitra Komunikasi Nusantara Tbk	3	2	2
PT Kioson Komersial Indonesia Tbk	2	2	1
PT Damai Sejahtera Abadi Tbk	-	8	9

Source: IDX processed data

### 3.3 Discussion

Based on the results of the CR4 analysis, it is known that the market structure of the Indonesian retail industry is a tight oligopoly. This condition means

four Indonesian retail industries have joined and control a more than 60% market share. Following Microeconomic theory, if there is a merger of companies, the company can determine the selling price of the product, and demand is inelastic. This condition can cause economic distortion [22], so the government needs supervision.

Another research finding is an inverse relationship between competition and concentration level. If the concentration level is high, the competition will decrease. In this condition, it is difficult for competitors to enter the Indonesian retail industry because of the high CR4 value and forming a tight oligopoly industry structure. This result is in line with [23] regarding the beverage industry in Indonesia in 2006-2009, which explains that a high CR4 level above 60% or a tight oligopoly will make competition less competitive. [24] research on the structure of the airline industry in Indonesia from 2007 to 2011 also found a tight oligopoly market structure with a CR4 value of more than 60%.

The condition of a tight oligopoly market structure will encourage the behavior of companies in the retail industry to maintain and even expand their market share so that it will have an impact on increasing company profits.

Product differentiation is one of the behaviors of the retail industry. Product differentiation can be said for a new product. [25] found a significant positive relationship between the success rate of new products and product differentiation measures. The entry of new products into the market will shift customer choices from old products to new products. [26] examined the influence of new products on the impact of choosing behavior. The entry of a new product with specific characteristics (new brand entry) has a specific impact.

This behavior will benefit the company, including maintaining consumer loyalty so that it can also determine the selling price of the product and increase its profit. This condition is in line with [27] which stated that the pricing of the bank products influences achieving competitive and product cost differentiation significantly influences achieving competitive advantage.

The company's behavior is also in the form of a pricing strategy. In conducting price discrimination, companies must consider some internal and external factors, [28]. Internal factors include (1) marketing goals, generally, survival, maximizing current profits, market share leadership, and product quality leadership; (2) marketing mix strategy, the company will pay attention to price along with all other marketing mix elements when developing marketing

programs; (3) cost, the company will set a price that covers all costs incurred to produce, distribute and sell the product and return the effort and risk it bears at a moderate level. Total costs consist of fixed and variable costs; (4) organizational considerations. Management must decide who in the organization should set the price. For small companies, it is usually determined by top management from the marketing and sales department. In large companies, pricing is done by divisional or product line managers. In industrial markets, salespeople may be authorized to negotiate with customers within a specific price range. External factors include: (1) the nature of the market and demand. This factor depends on the type of market for the product to be marketed and the law of price on supply and demand, as well as the price elasticity on demand. Suppose the product is unique, high quality, and difficult to find substitutes. In that case, the demand will be more inelastic to price changes and the more excellent the opportunity for sellers to increase prices. (2) Competition and other environmental factors (economy, traders, government).

According to [20] price discrimination is two- or second-degree, or non-linear pricing, a different price-setting made by companies for consumers who buy similar products with different volumes. The company will lower prices for consumers who buy in greater volume and charge the product's unit price to consumers who buy in less volume. Meanwhile, third-degree price discrimination is setting different prices for different groups of consumers for the same goods. One group of customers is charged a higher price, while another is charged a lower price. That is price discrimination. Price discrimination often occurs in household goods, such as sugar, oil, milk, coffee, and others. This condition is in line with the results of research by [29] and [30] that consumers have a perception of value reflected in the prices of products. It also shows that competitors' prices affect the purchase of products and that online pricing informs and affects purchase decisions.

The subsequent behavior is promotion. Intensive action in promotion taken by companies in a tight oligopoly market is product marketing that raises the advantages of each product and reduces the price war strategy. Companies must be more sensitive in reacting to the strategies of their competitors. This study's results align with research by ([31] and [32] that in a tight oligopoly market structure, several dominant companies apply efficient strategies to determine prices other companies then follow. The benefits of promotion strategies are also confirmed by [33], that export promotion increases sales,

value-added, employment, and added value per worker. For small firms, summing expenditures on export promotion, subsidies, and tax distortions, the gain in added value is roughly three times higher than the direct costs of export promotion.

Based on PCM calculation results, the retail industry's performance is still low. Companies will tend to ignore efficiency in conditions of low competition, such as in a tight oligopoly structure, [22]. In other words, production costs become relatively higher, affecting the company's profit value. This condition is in line with the results of research by [13], who examined the Market Structure, Conduct, and Performance of Beef Cattle in Ethiopia. Their research results show that the commodity market structure is a tight oligopoly, indicating that the commodity market is uncompetitive and inefficient.

However, based on individual company data (Table 3), the average value of PCM is relatively varied. Two companies have a PCM value of more than 50 percent, even though these companies are not included in the four companies with the largest market share. P.T. Matahari Department Store is engaged in the retail business for several types of products such as clothing, accessories, bags, shoes, cosmetics, household appliances, and management consulting services. The products traded by the company include normal goods that are elastic to changes in income. Matahari Department store also offers product differentiation which is an attraction for consumers. Besides that, the company is also very aggressively promoting price discrimination policies. The two combinations of these behaviors attract consumers at relatively affordable prices to provide large profits for the company. Furthermore, PT Sona Topas Tourism Indonesia is engaged in selling airplane tickets, especially domestic ones, travel documents, hotels and tours, and operating duty-free shops (luxury goods). In developing its business, they are implementing a cost-efficiency strategy of all operational costs, both marketing and general company costs, diversifying products, and improving the quality of service to customers.

This condition shows that the company's performance differs from the dominance of a significant market share. This study is in line with the hypothesis of [15] that company profits are not only influenced by market share control. There is no guarantee that a business with a large market share will also get a large profit. However, benefits can also be obtained from reducing production costs such as raw materials, rental/electricity, and labor costs. Thus, to achieve higher profits, companies



must pay attention to aspects of production efficiency and control a larger market share.

## 4 Conclusion

The conclusions of this research are as follows. First, the structure of the Indonesian retail industry in 2018-2020 is a tight oligopoly, so it is not competitive. Second, the behavior of companies in the Indonesian retail industry is related to the industry's structure and can be demonstrated through product differentiation, second and third-level price discrimination, and promotions. Third, the retail industry performance still needs to improve. Company performance is not necessarily in line with market share control.

Based on the conclusions, the implication of this research is as follows. Retail market conditions in Indonesia (based on public companies) are increasingly concentrated or uncompetitive. In this condition, government supervision is needed for business activities that are indicated to have too dominant a position and make it difficult for new entrants to the retail industry in Indonesia. Companies need to pay attention to production efficiency in conducting their business, not only focusing on controlling market share so that the company's strategy will effectively achieve higher profits.

This study has limitations: the company data used are only from publicly traded companies, and research data in 2020 is data from the COVID-19 pandemic. Therefore, for further research, using broader data from retail industry companies, not only those that go public, and using a more extended year, as well as adding other variables as calculation components to increase validity in determining the SCP of the Indonesian retail industry.

### References:

- [1] Y. Shi, Y. Gao, Y. Luo, and J. Hu, "Fusions of industrialisation and digitalisation (FID) in the digital economy: Industrial system digitalisation, digital technology industrialisation, and beyond," *J. Digit. Econ.*, vol. 1, no. 1, pp. 73–88, 2022, doi: 10.1016/j.jdec.2022.08.005.
- [2] R. A. Kasri, B. S. Indrastomo, N. D. Hendranastiti, and M. B. Prasetyo, "Digital payment and banking stability in emerging economy with dual banking system," *Heliyon*, vol. 8, no. 11, p. e11198, 2022, doi: 10.1016/j.heliyon.2022.e11198.
- [3] E. Raza, L. O. Sabaruddin, and A. L. & Komala, "Manfaat dan Dampak Digitalisasi Di Era Industri 4.0.," *J. Logistik Indones.*, vol. 4, no. 1, pp. 49–63, 2020.
- [4] C. Papanagnou, A. Seiler, K. Spanaki, T. Papadopoulos, and M. Bourlakis, "Data-driven digital transformation for emergency situations: The case of the UK retail sector," *Int. J. Prod. Econ.*, vol. 250, no. April, p. 108628, 2022, doi: 10.1016/j.ijpe.2022.108628.
- [5] M. A. Saifi and D. K. & Nabi, "Globalization of Organized Retail Markets: Emerging Challenges and Future Prospects," *IJRAR- Int. J. Res. Anal. Rev.*, vol. 5, no. 3, pp. 893z-900z, 2018.
- [6] Badan Pusat Statistik, "PDB Indonesia Triwulanan 2016-2020," in *Statistik Indonesia*, Jakarta: BPS, 2020.
- [7] Badan Pusat Statistik, *Statistik Indonesia 2020*. Jakarta: BPS, 2021.
- [8] A. Ziaie, M. ShamiZanjani, and A. Manian, "Systematic review of digital value propositions in the retail sector: New approach for digital experience study," *Electron. Commer. Res. Appl.*, vol. 47, no. March 2020, p. 101053, 2021, doi: 10.1016/j.elerap.2021.101053.
- [9] M. Buzzelli, "Firm size structure in North American housebuilding: persistent deconcentration, 1945-98," *Environ. Plan. A Econ. Sp.*, vol. 33, no. 3, pp. 533–550, 2001.
- [10] J. Lipczynski, J., Wilson, J.O.S., and Goddard, *Industrial Organization: Competition, Strategy, & Policy*, 4th ed. United Kingdom: Pearson Education, 2013.
- [11] M. Kuncoro, *Ekonomika Industri Indonesia, Menuju Negara Industri Baru 2030*. Yogyakarta: ANDI, 2007.
- [12] E. Soliha, "Analisis Industri Ritel Di Indonesia," *J. Bisnis dan Ekon.*, vol. 15, no. 2, pp. 128–142, 2008.
- [13] S. Ayele, L. Zemedu, and B. Gebremdhin, "Analysis of market structure, conduct and performance of Beef Cattle: the case of Dugda district, East Shoa zone, Oromia regional state, Ethiopia," *J. Biol. Agric. Healthc.*, vol. 7, no. 5, pp. 5–11, 2017.
- [14] M. Bello and W. A. Isola, "Empirical analysis of structure-conduct-performance paradigm on Nigerian banking industry," *Empir. Econom. Quant. Econ. Lett.*, vol. 3, no. 3, pp. 24–34, 2014.
- [15] M. U. Burhan, A. Suman, N. Soetjipto, and M. Pudjiharjo, "Pasar Pupuk di Jawa Timur (Kasus di Kabupaten Lumajang dan Kabupaten Ngawi)," *J. Indones. Appl. Econ.*, vol. 5, no. 1, pp. 68–92, 2011.
- [16] M. Sari and N. D. B. Tamami, "Struktur, Perilaku, Dan Kinerja Usaha Ronce Melati Rato Ebhu Di Desa Tunjung Kecamatan Burneh Kabupaten Bangkalan," *Agriscience*, vol. 1, no. 1, pp. 292–307, 2020, doi: 10.21107/agriscience.v1i1.8018.
- [17] E. Rekart and Nurhayati, "Analisis Structure Conduct Performance (SCP) Jika Terjadi Merger Bank Pembangunan Daerah Dan," *Ilm. Manaj.*

- dan Bisnis*, vol. 2, pp. 36–50, 2016.
- [18] W. K. Jaya, *Ekonomi Industri: Konsep Dasar, Struktur, Perilaku, dan Kinerja Pasar*, 2nd ed. Yogyakarta: BPFE, 2001.
- [19] M. Teguh, *Ekonomi Industri*. Jakarta: PT RajaGrafindo Persada, 2010.
- [20] K. Kotler, P., Lane, *Marketing Management*, 12th ed. New Jersey: Pearson International Edition, 2006.
- [21] N. G. Mankiw, *Macroeconomics.*, 9th ed. New York: Worth Publishers, 2016.
- [22] C. M. Nicholson, W. & Snyder, *Microeconomic theory: Basic principles and extensions*. United States: Cengage Learning, 2012.
- [23] B. Mahesa, “Analisis Struktur, Perilaku dan Kinerja Industri Minuman di Indonesia Periode 2006-2009,” *Media Ekon.*, vol. 18, no. 3, pp. 1–18, 2010.
- [24] I. N. A. P. Pidada, “Analisis Struktur Pasar, Perilaku dan Kinerja Industri Maskapai Penerbangan di Indonesia Tahun 2007-2011,” *Media Ekon.*, vol. 20, no. 1, pp. 1–26, 2012.
- [25] X. M. Song and M. E. Parry, “A Cross-National Comparative Study of New Product Development Processes: Japan and the United States,” *J. Mark.*, vol. 61, no. 2, pp. 1–18, 1997, doi: 10.1177/002224299706100201.
- [26] S. M. Nowlis and I. & Simonson, “The Effect of New Product Features on Brand Choice,” *J. Mark. Res.*, vol. 33, no. 1, pp. 36–46, 1996.
- [27] J. N. Kireru, K. Ombui, and J. Omwenga, “Influence Of Product Differentiation Strategy In Achieving Competitive Advantage In Commercial Banks : A Case Of Equity Bank Limited,” *Int. J. Bus. Law Res.*, vol. 4, no. 2, pp. 40–52, 2016.
- [28] G. Kotler, P., & Armstrong, *Prinsip-prinsip Pemasaran*. Jakarta: Erlangga, 2008.
- [29] B. J. Ali and G. Anwar, “Marketing Strategy: Pricing strategies and its influence on consumer purchasing decision,” *Int. J. Rural Dev. Environ. Heal. Res.*, vol. 5, no. 2, pp. 26–39, 2021, doi: 10.22161/ijreh.5.2.4.
- [30] D. O. Faith and A. M. Edwin, “A Review of The Effect of Pricing Strategies on The Purchase of Consumer Goods,” *Int. J. Res. Manag. Sci. Technol.*, vol. 2, no. 2, pp. 2321–3264, 2014.
- [31] L. S. W. Nugroho and Y. S. & Susilo, “Struktur Pasar dan Perilaku Industri Semen di Indonesia Tahun 2004-2005,” *J. Ekon. dan Bisnis Indones.*, vol. 22, no. 1, pp. 23–42, 2007.
- [32] A. Azizah, “Analisis Structure Conduct Performance Pada PT. Telekomunikasi Indonesia, Tbk.,” *Perspektif*, vol. 15, no. 1, p. 96913, 2017.
- [33] J. Munch and G. Schaur, “The effect of export promotion on firm- level performance,” *Am. Econ. J. Econ. Policy*, vol. 10, no. 1, pp. 357–387, 2018, doi: 10.1257/pol.20150410.

### **Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)**

Ahmad Luthfi Khairurrahman, Lilis Siti Badriah, Herman Sambodo has created the conceptualization of the topic research and responsible for the methodology used

Ahmad Luthfi Khairurrahman was responsible for the statistics

Lilis Siti Badriah, Herman Sambodo was responsible for the validation of the research

Hary Pudjianto, Dijan Rahajuni has conducted the formal analysis

Herman Sambodo, Nunik Kadarwati has conducted the investigation

Dijan Rahajuni, Rakhmat Priyono has provided the research resources

Herman Sambodo, Rakhmat Priyono has conducted the data curation

Ahmad Luthfi Khairurrahman has prepared the draft Lilis Siti Badriah, Dedi Supriadi has review and edited the finished paper

Oke Setiarso, Nunik Kadarwati has visualized the table and graph of the paper

Lilis Siti Badriah, Herman Sambodo” Hary Pudjianto has supervised the writing process of the paper

Dijan Rahajuni, Kadarwati was responsible for the project administration

Oke Setiarso has contributed for the funding acquisition.

### **Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself**

No funding was received for conducting this study.

### **Conflict of Interest**

The authors have no conflicts of interest to declare that are relevant to the content of this article.

### **Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)**

This article is published under the terms of the Creative Commons Attribution License 4.0

[https://creativecommons.org/licenses/by/4.0/deed.en\\_US](https://creativecommons.org/licenses/by/4.0/deed.en_US)