

The Structure-Conduct-Performance Paradigm in the Indonesian Manufacturing Industry

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Abstract

This study examines the structure, conduct, and performance (SCP) of the Indonesian manufacturing industry, contributing the most to the national economy from 2017 to 2021. The research employed SCP analysis, which entails evaluating market concentration using the Herfindahl Hirschman Index (HHI) and analyzing market performance and industry behavior utilizing literature reviews. Based on Indonesian Central Statistics Agency groupings, the sample data covers 23 sub-sectors of the manufacturing industry. The results of the HHI calculations also show that the concentration of the manufacturing industry market is at a moderate level, mergers and acquisitions that result in moderate market concentration of HHI enhancements will raise anti-competitive concerns and will require further analysis and often require scrutiny. Hence, requiring proper supervision and strategy in developing competitiveness amidst global uncertainty. The conduct and performance of the manufacturing industry show an effort to grow better amid fairly tight global competition. Therefore, it is necessary for a number of parties to play a part in boosting productivity and the competitiveness of goods produced by the manufacturing sector. Governments should reduce their direct intervention in the market by implementing industrial policies and seeking market-oriented policy means to influence the economy.

Keywords: manufacturing industry; structure-conduct-performance; market share; trade

JEL classification: O04, L16, L1, F1

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1. Introduction

Since the agricultural sector's market share began to decline along with the market share of manufacturing and services, which continued to rise, the manufacturing sector has begun to become the engine of national economic growth, a phenomenon known as the Chenery-Syrquin phenomenon (Bappenas and Asian Development Bank, 2019; Tadjoeddin et al., 2017; Verico, 2021) According to (Behrens et al., 2012; Peres & Primi, 2009) the

manufacturing sector has a significant role in absorbing labor, supporting the quality of the output gap, and lowering unemployment. Theoretically, a region's numerous sectors will be able to have a significantly added value impact by creating jobs, lowering the unemployment rate, and raising people's income (Setiawan et al., 2021; Uddin, 2020). The government, however, must be cognizant of the economic tyranny that, if left unchecked, might result in a nation's economic collapse.

The vicious circle of the economy in question is low productivity, which causes foreign income to decline, resulting in a lack of financial strength, followed by high capital costs and limited sources of funds. Investment is therefore restricted as a result. Low national productivity is caused by a lack of investment in technology, human capital, and infrastructure (Kementerian Perindustrian, 2018). Thus, in order to increase the productivity of Indonesian manufacturing, market mechanisms and policy interventions must be combined, with each policy not creating discrimination among companies.

Based on the data presented in Figure 1, the export value of the Indonesian manufacturing industry dominates compared to the export value of other commodities. However, the export value growth of manufactured commodities decreased, where in January-December 2020 the composition of the export value reached 80.33%, higher than in the previous period, January-December 2021, which was 76.49% (BPS-Statistics Indonesia, 2022).

Indonesia's economic structure has been seen based on gross domestic product based on expenditure and business fields. Data shows that in 2019, the largest contributor to the national economy based on expenditure is household consumption expenditure of 56.62% (BPS-Statistics Indonesia, 2020). Meanwhile, the largest contributor to national income in terms of business fields is the processing industry with 19.70%. In the same year, the Indonesian economy grew 5.02% slower than in 2018 which reached 5.17% (BPS-Statistics Indonesia, 2020). Nonetheless, Indonesia's per capita national income has increased by 4.17% compared to 2018.

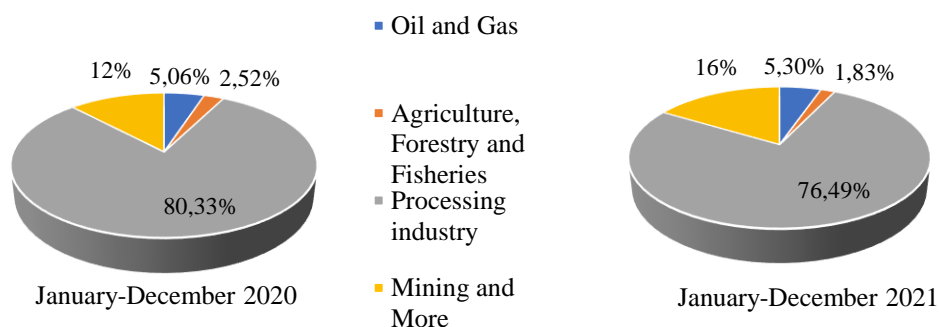


Figure 1. Indonesia's Export Value January-December 2020 and 2021

Source: (Statistics Indonesia, 2022)

The problem of possible disparities in the level of efficiency and productivity of each manufacturing industry subsector in Indonesia is an important issue related to the manufacturing industry sector in Indonesia. Indonesia needs to be aware of its economic potential and comparative advantage, as well as implement structural reforms and harmonization of global trade and investment rules. Indonesia requires economic transformation and integration into a global network of manufacturing and service centers (Bappenas and Asian Development Bank, 2019; Verico, 2021). The negative correlation between import intensity and technical inefficiency is consistent with the theory that states that access to international input markets helps the transfer of technology which in turn increases the efficiency and productivity of firms (Poloz, 2021).

According to article 1 paragraph 2 of Law No. 3 of 2014 concerning the industry, the industry is defined as all forms of economic activity that processes raw materials and/or utilizes industrial resources to produce goods with added value or higher benefits, including industrial services (Presiden Republik Indonesia, n.d.) Thus the meaning of industrial economy is to examine the market structure of companies in monopolistic and oligopolistic markets which empirically emphasizes the factors that influence the market structure, conduct and performance (Kofi Opoku et al., 2023; Resende, 2007).

The four main components of industrial policy are priorities, objectives, tools, and institutional responsibilities. In addition, the policy-making process comprises three stages—conception and design, implementation, and assessment, that are linked by feedback systems. Many factors, such as institutional capability, the tools used, and specific development plans and objectives, have an impact on the efficacy of policies. Industrial plans are typically developed and put into action within a larger development policy framework (Gatfield & Yang, 2006; Ghorbanpour et al., 2021). The public-private competitiveness council, the ministry responsible for industrial activity, the Ministry of Economy, and other state agencies are included in the institutional framework of reference for industrial policy.

This research uses the classical industrial science approach which is still applied by business or industry players, namely the SCP (structure-conduct-performance) paradigm. SCP is an approach used to analyze the relationship between the structure of the industrial market (based on the level of concentration) and the conduct of the industrial market that affects the performance (profit) of the industrial market (Ralston et al., 2015; Resende, 2007). The market structure determines the form of market competition, how the market behaves in facing the competition and then determines market performance. Researchers have widely used the SCP paradigm to assess market conditions or specific industries to make policy decisions. Setiawan et al. (2021) find that higher industrial concentration increases the percentage of research and development expenditure and research and development expenditure can be higher in the firms with market power. In the subsequent Uddin (2020) explains that promoting sectoral energy efficient policies, greener technologies and stringent regulation by the government can shield the environment from degradation. Kumar et al. (2022) collected data from 154 manufacturing industries and analyzed using Partial Least Quadratic Structural Equation Modeling (PLS-SEM) and the research results showed that there was a positive and significant influence of agile manufacturing attributes on the

business performance of the manufacturing industry. Karabulut (2015) finds that the innovation strategy explains financial performance more than other dimensions of firm performance and it can be concluded that the innovation strategy of Turkish manufacturing firms leads them to improve their financial performance. González et al. (2019) tested four related theories about the relationship between market structure, profitability, and efficiency using stochastic frontier analysis and dynamic panel data for 201 banks in the Middle East and North Africa (MENA) countries during the period 2005–2012. The results show that neither the structure-conduct-performance hypothesis nor the efficient structure hypothesis holds in MENA.

A case study was also conducted on the Agro-Food Industry by Utama & Abirfatin (2023). The results showed that the proposed framework could be implemented in the company and successfully improved the Manufacturing Sustainability Index (MSI) score from 88.78% to 93.80% and the implication of research shows the potential of using the SLSS framework in improving manufacturing sustainability performance in industrial sectors. Miao et al. (2023) finds that the elements of flexibility and dependability have a positive, direct and statistically significant influence on mitigating supply risk, thereby functioning to improve the supply chain performance of manufacturing companies, especially small and medium companies. Furthermore, Kofi Opoku et al. (2023) revealed that inventory and green manufacturing practices have a direct effect on sustainable performance (environmental, social and economic performances), while lean manufacturing practices have an insignificant effect on economic performance. On the contrary, supply management simply improves economic performance significantly.

One component of the SCP is government policies covering government regulations, antitrust, tariff and non-tariff barriers, liberalization of foreign investment regulations, financial sector reform, taxes and subsidies, investment incentives, work incentives, macroeconomic policies (Nikensari, 2018; Puspitawati, 2021). In a rapidly changing economic landscape, sometimes the government has difficulty identifying which industries have high growth potential in the future which can result in the government supporting the wrong industry. For example, tax holiday facilities and tax allowances are only available for companies that invest in certain industries so targeting tax incentives for industry requires identifying which sectors are eligible for special treatment. Thus the provision of incentives can be based on the company's performance such as the amount invested, the number of jobs created, the total amount of wages paid, the amount of exports or research and development (R&D) expenditures (Bappenas and Asian Development Bank, 2019; Kementerian Perindustrian, 2018).

This research aims to apply the SCP paradigm to the manufacturing industry. The novelty of this research is that it focuses on the Indonesian manufacturing industry sector by considering the impact of the COVID-19 pandemic using SCP analysis, namely market structure as measured by the Herfindahl Hirschman Index and entry-exit; market behavior is measured by the capital to labor ratio; and analysis of manufacturing industry performance using Revealed Comparative Advantage. The pandemic phenomenon background is chosen because the national economic condition experienced an economic contraction due to the COVID-19 pandemic, causing the international trade cycle to decline. Furthermore, the formulation of policy strategies is based on empirical study analysis and data analysis supported by the phenomena that occur.

This study aims to apply the SCP paradigm to the manufacturing industry. The novelty of this research lies in its focus on the Indonesian manufacturing industry sector by considering the impact of the COVID-19 pandemic using SCP analysis, market structure measured by the Herfindahl Hirschman Index and entry-exit; market conduct measured by the capital to labor ratio; and analysis of manufacturing industry performance using Revealed Comparative Advantage. The pandemic phenomenon has caused the national economic condition to experience contraction, causing the international trade cycle to decline. Furthermore, the study contributes to the policy formulation strategies based on the analysis of empirical studies and data analysis.

2. Research Method

This study uses data analysis methods with statistical calculations and literature studies. The research data is secondary data sourced from the Central Statistics Agency, the Ministry of Trade, the Ministry of Industry and trade-related institutions. The object of the research is the Indonesian manufacturing industry by considering variables related to market share, market concentration, market conduct and industry performance. Market concentration, also often referred to as industry concentration, refers to the degree to which the largest firm's market share in a market (industry) account for a large part of economic activity such as sales, assets, or employment (Babic et al., 2014; Kv, 2018).

The ratio of industrial export value to total industrial export value represents each industry's market share.

$$MS = \frac{TE_{ij}}{TE_j} \quad (1)$$

MS is market share, TE is total exports, i is the country's industrial sub-sector (j).

Measurement of industry structure involves market share analysis and market concentration as measured by the Herfindahl Hirschman Index (HHI). The formula for measuring the HHI index is as follows:

$$HHI = \sum_{i=1}^N Si^2 \quad (2)$$

Si is the market share (output) of business actors where a perfectly competitive market will have an HHI value close to zero (0), while the monopoly market structure will approach a value of 10,000.

Furthermore, the conduct and performance of the manufacturing industry have been observed from a literature study based on existing data and previous studies.

3. RESULT AND DISCUSSION

3.1 Result

The index used for the analysis of this study is the Herfindahl Hirschman Index (HHI). The calculation of the Herfindahl Hirschman Index is based on the sum of market share (industrial output). The processing/manufacturing industry Based on

data from the Central Statistics Agency, there are 23 sub-sectors which can be seen in Figure 2.

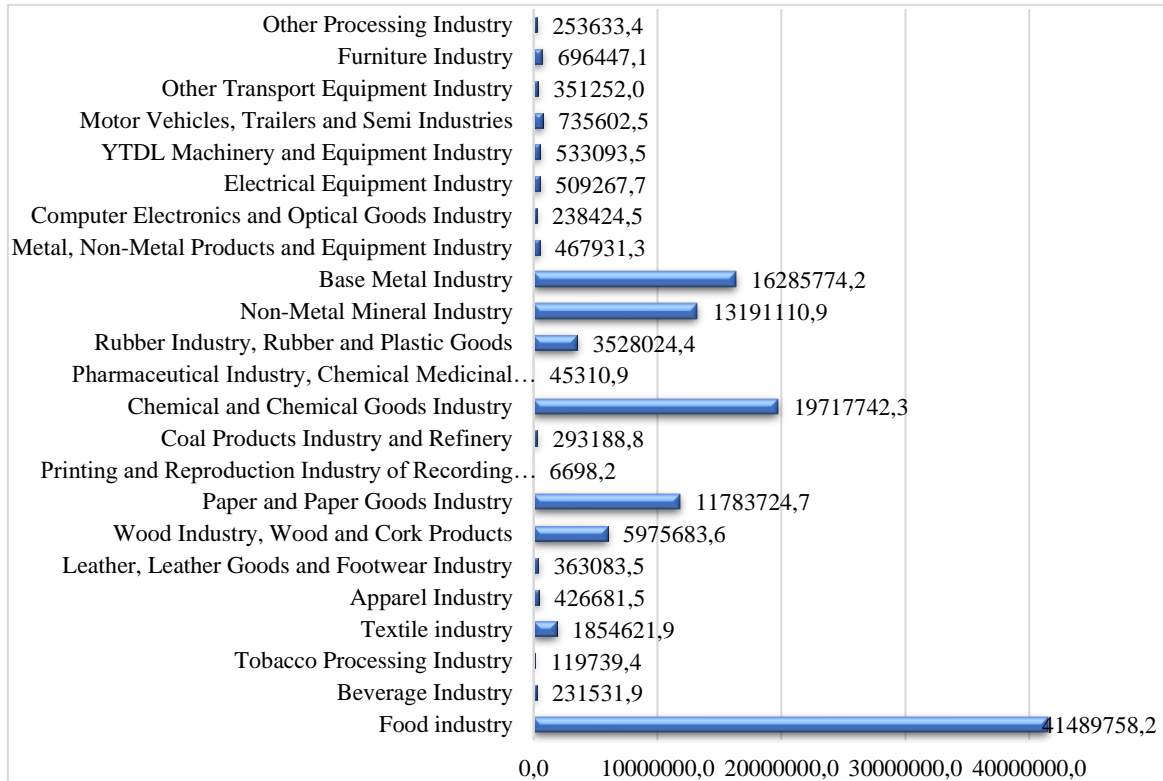


Figure 2. Export Value of Processing Industry Commodities January-December 2021 (Net Weight in Tons).

Source: (Statistics Indonesia, 2022)

Indonesia's manufacturing sector is one of the main sectors supporting the country's economy, which has sub-sectors that have varied growth rates. The Indonesian manufacturing industry sub-sector, which has a higher export value than other sub-sectors, is the food industry, which reached 41.5 million tons. Based on the results of the market share analysis presented in Table 1 explains that if the index value of the sub-sector is close to 0 (zero), it indicates a perfectly competitive market structure, whereas if the index value is close to 10,000, it indicates a monopoly market structure.

The market structure analysis in this study uses the research period from January-December 2017 to January-December 2021. The research period was chosen to examine how the manufacturing sector's market structure changed before and during the pandemic. In general, a disaster such as a pandemic will indirectly affect economic activity, including international trade. The research data is to see market share and the Herfindahl-Hirschman Index (HHI), namely the value of output or sales from the processing or manufacturing industry in the form of the composition of the volume of commodity exports in tons.

Table 1. Results of Market Share (MS) Analysis

Processing industry	Jan-Dec 2017	Jan-Dec 2018	Jan-Dec 2019	Jan-Dec 2020	Jan-Dec 2021	MS Growth Average for 5 years
Food industry	43.48652	29.186	40.88276	36.9015	34.83656	-0.020%
Beverage Industry	0.256857	0.170409	0.248106	0.174664	0.194404	-0.016%
Tobacco Processing Industry	0.140011	0.091062	0.125069	0.116216	0.100538	-0.045%
Textile industry	1.965759	1.240165	1.901125	1.578195	1.557219	-0.005%
Apparel Industry	0.493503	0.315074	0.402285	0.358493	0.35826	-0.049%
Leather, Leather Goods and Footwear Industry	0.303061	0.207659	0.253712	0.254582	0.30486	0.027%
Wood Industry, Wood and Cork Products	5.751472	33.99479	4.47402	4.558392	5.017437	1.040%
Paper and Paper Goods Industry	10.39418	6.740065	10.46115	11.59709	9.894114	0.041%
Printing and Reproduction Industry of Recording Media	0.008259	0.005306	0.00839	0.007147	0.005624	-0.034%
Coal Products Industry and Refinery	0.000316	0.065584	0.211546	0.487942	0.246174	52.332%
Chemical and Chemical Goods Industry	15.89615	12.14962	17.96617	17.43678	16.55585	0.041%
Pharmaceutical Industry, Chemical Medicinal Products and Traditional Medicine	0.08091	0.037396	0.047063	0.042304	0.038045	-0.120%

Processing industry	Jan-Dec 2017	Jan-Dec 2018	Jan-Dec 2019	Jan-Dec 2020	Jan-Dec 2021	MS Growth Average for 5 years
Rubber Industry, Rubber and Plastic Goods	4.550824	2.804494	3.500931	3.179341	2.962279	-0.074%
Non-Metal Mineral Industry	5.42758	5.533645	8.387229	10.0932	11.07582	0.209%
Base Metal Industry	6.727837	5.08393	7.875425	10.19764	13.67423	0.235%
Metal, Non-Metal Products and Equipment Industry	0.401293	0.376927	0.401737	0.356119	0.392895	-0.001%
Computer Electronics and Optical Goods Industry	0.225262	0.13972	0.168318	0.18517	0.200191	0.002%
Electrical Equipment Industry	0.524004	0.332539	0.444646	0.434989	0.427603	-0.017%
YTDL Machinery and Equipment Industry	0.466748	0.312223	0.396945	0.340721	0.447608	0.028%
Motor Vehicles, Trailers and Semi Industries	0.769877	0.52499	0.750282	0.567235	0.617643	-0.011%
Other Transport Equipment Industry	0.361884	0.206104	0.376746	0.364277	0.294926	0.043%
Furniture Industry	0.509147	0.322655	0.499725	0.550741	0.584766	0.087%
Other Processing Industry	1.258541	0.159644	0.216626	0.217258	0.212961	-0.133%
Average market share growth of the processing/manufacturing industry for 5 years						53,559%

Source: Authors calculations, 2022

Furthermore, after conducting a market share analysis, which is to see the concentration of the market with the market using the Herfindahl-Hirschman Index (HHI) analysis. The concentration of sellers/industries can be seen from the market share or market share of the industries concerned (Gavurova et al., 2017; Kulshreshtha & Nayak, 2021; Nikensari, 2018). The market share of a certain industry can be used to calculate how much concentration the industry has in a certain market structure (Nikensari, 2018). If a Herfindahl-Hirschman Index (HHI) of less than 1,500 is considered a competitive market, an HHI of 1,500 to 2,500 is moderately concentrated, and an HHI of 2,500 or higher is considered highly concentrated. As a general rule, mergers that increase HHI by more than 200 points in highly concentrated markets raise antitrust concerns, as they are thought to increase market power. The results of the HHI analysis of this study can be seen in Table 2.

Table 2 Results of Herfindahl Hirschman Index (HHI) analysis

		Jan-Dec 2017	Jan-Dec 2018	Jan-Dec 2019	Jan-Dec 2020	Jan-Dec 2021
Processing/ Manufacturing Industry	$HHI = \sum_{i=1}^N S_i^2$	2387.878793	2267,384	2273,771	2041,246	1933,373

Source: Authors calculations, 2022

3.2 Discussions

The purpose of this study is to examine the structure of the Indonesian manufacturing market and also to analyze the conduct and market performance of manufactured commodities. This study's analysis of market structure takes into account the market share of a certain sub-sector of Indonesia's processing and manufacturing sector. The market share growth of the 23 sub-sectors of the processing/manufacturing industry shows varying values. Manufacturing industry sub-sectors that had market growth rates over the last 5 years are the Food Industry, Beverage Industry, Tobacco Processing Industry, Textile Industry, Apparel Industry, Printing and Recording Media Reproduction Industry, Pharmaceutical Industry, Chemical and Traditional Medicine Products, Rubber Industry, Rubber and Plastic Goods Metal, Non-Metal Goods and Equipment Industry, Electrical Equipment Industry, Motor Vehicles, Trailers and Semi Industries, and Other Processing Industries. Meanwhile, the manufacturing industry sub-sectors that have a positive market share growth rate consist of the Leather Industry, Leather Goods and Footwear, Wood Industry, Wood and Cork Products, Paper and Paper Goods Industry, Coal Products and Refinery Industries, Industry of Chemicals and Chemical Goods, Industry of Non-Metal Minerals, Industry of Basic Metals, Industry of Computers for Electronic and Optical Goods, Industry of YTDL Machinery and Equipment, Industry of Other Transport Equipment, and Furniture Industry.

The results of the market share analysis in Table 1 can be interpreted based on the group or characteristics of the market structure and its main conditions described as follows: a. Pure monopoly: a company/industry that has 100% of the market share; b. Dominant firm: a company/industry that has 50-100% market share and without strong competitors; c. Strict

oligopoly: Merger of 4 leading companies/industry having 60-100% market share. The agreement between them to set the price is relatively easy; c. Loose oligopoly: Merger of 4 leading companies/industries which have 40% market share or less, and agreement between them to set actual price is impossible. Thus, the results of the market share calculation show that industries that are classified as loose oligopolies are the food industry, the chemical industry and goods made of chemicals, the wood industry, wood, and cork goods (in 2018), the basic metal industry (in 2020 and 2021), the industry non-metallic minerals (in 2021) and the paper and paper products industry (in 2017, 2019, 2020, and 2022); d. Monopolistic competition: Many effective competitors, none of which has more than 10% market share. Thus, the results of market share calculations show that industries classified as monopolistic competition are the textile industry, the wood industry, wood and cork goods (2017 2019, 2020, and 2021), the paper and paper goods industry (2018 and 2022), Rubber Industry, Rubber and Plastic Goods; e. Pure competition: More than 50 competitors of which none have significant market share. Thus, the results of the market share calculation show that many sub-sectors of the manufacturing industry during the last five years have a market share value of less than 1.00, which means they have quite a lot of competitors. The sub-sectors in question are the beverage industry, tobacco processing industry, apparel industry, leather industry, leather goods and footwear, recording media printing and reproduction industry, coal and refinery product industry, pharmaceutical industry, chemical medicinal products and traditional medicines, Metal, Non-metallic and Equipment Industry, Computer Industry, Electronic and Optical Goods, Electrical Equipment Industry, YTDL Machinery and Equipment Industry, Motor Vehicles, Trailers and Semi Industries, Other Transport Equipment Industry, Furniture Industry, and Other Processing Industries.

The results of the market share analysis show that the sub-sector or manufacturing commodity that has a high market share is the food industry commodity which had a market share of 43.47% in 2017 and experienced an average growth of -0.020% over the last five years wherein 2021 the market share the subsector market accounted for 34.84% of the total manufacturing industry. These results indicate that the commodities produced by the food industry are experiencing a decline in competitiveness in the international market, thus requiring product innovation by prioritizing quality and also the right marketing strategy. Furthermore, the market share of the chemical industry and chemical goods also has a high market share of around 15.9% in 2017 and 16.56% in 2021 with an average market share growth of 0.041% in the last five years. Meanwhile, some commodities have a low market share compared to other industries but can show significant growth with 51.22% in the last five years, namely commodities from the coal and refining industries.

The market share of the entire manufacturing industry shows dynamic growth, which means that every year the market share of manufactured commodities has decreased and increased. This may occur from the internal side of the company or industry concerned but also from global factors such as the pandemic disaster and also global economic uncertainty, which has an impact on import demand from importing countries. Circumstances that are meant to have an indirect effect on domestic economic activity have the potential to both stimulate and restrain the expansion of the national economy. The logic of industrial

strategies is mediated by changes in uncertainty, which have a significant impact on the reliability of analyst forecasts and the level of uncertainty in markets with high levels of competition (Poloz, 2021; Wang et al., 2021).

The World Economic Forum (WEF) identified that there are important factors that lead to a decline in the competitiveness of Indonesia's manufacturing commodities from the macro and micro sides. Factors from the macro side that cause manufacturing competitiveness to decline are non-conducive macroeconomic conditions, poor quality of public institutions in carrying out their functions as facilitators and service centers, and slow technology development, especially in increasing production productivity (Nikensari, 2018). On the micro side, the factors that cause the decline in the competitiveness of Indonesian manufacturing are low business efficiency at the level of company operations and the weak business competition climate. Other factors such as the implementation of domestic business policies and international trade policies also play a role in increasing business competitiveness (Nikensari, 2018). The conditions experienced by the manufacturing industry indicate the need for optimizing the export of these commodities to maintain the competitiveness of the market share of export commodities.

The calculation results of the Herfindahl-Hirschman Index (HHI) in Table 2 show that the HHI value is in the range of 1500 to 2500. These results indicate that the Indonesian manufacturing industry has a moderate market concentration. Mergers and acquisitions that result in moderate market concentration of HHI enhancements will raise anti-competitive concerns and will require further analysis and often require oversight (The United State Departement of Justice, 2010) The calculation of market concentration allows parties involved in industrial activities to be more accurate in making strategies for developing the competitiveness of export products because they are already aware of the level of the competition or the market structure being observed.

The next analysis is related to the conduct and performance of the manufacturing industry in the market which can be seen from the dynamics and strategies carried out in increasing competitiveness in the market. The Indonesian manufacturing industry is currently experiencing shocks, one of which is due to the impact of the COVID-19 pandemic. The main factor that causes contraction in the manufacturing industry is the decline in domestic demand which has been able to absorb up to 70 percent of the total domestic manufacturing industry (Kementerian Perindustrian RI, 2020)

The volatile manufacturing conditions caused the value of Indonesia's Manufacturing *Purchasing Manager's Index* (PMI) to fall in April 2020 to touch 27.5. Meanwhile, to provide impetus to maintain and develop competitiveness and demand for purchasing power for the manufacturing industry amid economic turmoil, the government has mapped the industries affected by the crisis. The results of the mapping are divided into three major groups, namely industries that suffer, moderate, and high demand. The grouping is intended to establish the right strategy for each industry group. Industries with high demand need further supervision, apart from fulfilling the number of requests, they must also prioritize quality and be able to give a good image to export products. The stability of market prices is one of the factors that is the goal of achieving sustainability of the economic

activity. Therefore, the integration of various parties needs to be strengthened, both from the central government, regional governments, and private sector, and the flow of product supply chains from producers to consumers to achieve healthy business competition and be able to develop competitiveness and add business partners in various countries.

4. CONCLUSIONS

The results show that the manufacturing sub-sectors that are classified as loose oligopolies are the food industry, the chemical industry and goods made from chemicals, the wood industry, wood and cork goods (in 2018), the base metal industry (in 2020 and 2021), the non-metallic mineral industry (in 2021) and the paper and paper goods industry (in 2017, 2019, 2020, and 2022). The results of market share calculations show that industries classified as monopolistic competition are the textile industry, the wood industry, wood, and cork goods (2017, 2019, 2020, and 2021), the paper and paper goods industry (2018 and 2022), the rubber industry, Goods from Rubber and Plastics, the market share of the entire manufacturing industry shows dynamic growth, which means that every year the market share of manufactured commodities has decreased and increased. This can happen from the internal side of the company or industry concerned but also from global factors such as the pandemic disaster and global economic uncertainty, which has an impact on import demand from importing countries. According to the calculation results, the Herfindahl-Hierschman Index (HHI) shows that the HHI value is in the range of 1500 to 2500.

These results indicate that the Indonesian manufacturing industry has a moderate market concentration. Mergers and acquisitions that result in moderate market concentration of HHI enhancements will raise anti-competitive concerns and will require further analysis and often require scrutiny. Meanwhile, it is related to the behavior and performance of the manufacturing industry in the market which can be seen from the dynamics and strategies carried out in increasing competitiveness in the market. The Indonesian manufacturing industry is currently experiencing shocks, one of which is due to the impact of the COVID-19 pandemic. The fall in domestic demand was the main cause of the contraction in the manufacturing industry. The integration of various parties needs to be strengthened by the central government, regional governments, and the private sector, and the flow of product supply chains from producers to consumers to achieve healthy business competition and be able to develop competitiveness and add business partners in various countries. Thus, further studies need to be carried out to identify the existing problems and then be able to provide a strategic design for Indonesia's international trade activities.

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