

## **Covid-19 And Its Impact In The Manufacturing Sector: A Case Study In the State of Perak, Malaysia**

### **Abstract**

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*COVID-19 has developed a new trade climate, which has resulted in a range of threats for many manufacturers. The effect of the COVID-19 outbreak on supply chains would have many effects for the manufacturing industry. Some of the consequences could not have been predicted, placing companies at greater risk than expected. The study is based on panel cases of monthly manufacturing survey for 2018 to 2020 in the state of Perak, Malaysia. The monthly manufacturing survey is important as it is used to provide statistics on the latest trends of the manufacturing sector and to measure the rate of change in the production of industrial commodities in real terms over time to assist users in the planning and formulation of policies and decision making. The objective of the study is to explore the impact of the COVID-19 pandemic on Perak's economy as manufacturing sector is the second largest contributor in the economy. The study therefore aims to determine the scope of the COVID-19 pandemic's economic impact in the manufacturing industry in Perak especially in terms of sales value based on short term survey conducted by Department of Statistics, Malaysia (DOSM).*

*Keywords: COVID-19, manufacturing sector, economic impact, Perak, sales*

### **1. Introduction**

The manufacturing sector has thrived in Perak for the past three decades as a result of the State Government's systematic planning, determination, and dedication. Perak also has a more diverse industrial portfolio, including electrical and electronic component manufacturing, non-metallic mineral product manufacturing, shipbuilding, machinery and foundry, automotive and transport equipment manufacturing, and oil and gas fabrication. Perak is also home to some of the world's largest multinational corporations (MNCs) (Invest Perak, 2021).

However, the COVID-19 pandemic has had a huge impact on the Malaysian economy, as well as the global economy. Malaysia has been hailed as one of the most promising countries in dealing with the COVID-19 pandemic's socioeconomic consequences. Malaysia's gross domestic product (GDP) contracted 5.6 percent in 2020 (DOSM, 2020<sup>b</sup>) before expected to recover to a growth rate of 6.5 percent to 7.5 percent in 2021, according to the Malaysian Ministry of Finance (Flanders Investment and Trade, 2021).

Manufacturing is an important industry in Malaysia, as it accounts for a significant portion of trade receipts and also contributes to the growth of GDP and employment. Malaysia attracts foreign direct

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investments in the manufacturing sector every year (The Star, 2020). In Perak, manufacturing sector continues to be an important part of the economy as the contribution of the manufacturing sector increased from 17.7 percent in 2015 to 18.0 percent in 2019 (DOSM, 2020<sup>b</sup>).

Due to the Covid 19 pandemic, the Malaysian government implemented Movement Control Order (MCO) which restricted any social and economic activities (except for essential services or industries) on the 18<sup>th</sup> March 2020 to 3<sup>rd</sup> May 2020. Only few manufacturing industries which were deemed to be essential were allowed to operate during the MCO. However the list of essential services /industries was gradually expanded and thus granted to be operational. After 3<sup>rd</sup> May 2020, most economic industries were allowed to be in business, but with strict Standard Operating Procedures.

The paper might provide some insight on the impact of COVID-19, especially with the implementation of MCO, particularly the sales values in the manufacturing sector in Perak.

## 2. Data Sources & Methodology

The study is based on panel cases of 352 establishments of various manufacturing industries selected for the monthly manufacturing survey for 2018 to 2020 in the state of Perak, Malaysia conducted by Department of Statistics Malaysia. These establishments have been in the samples since 2018. The sales values reported each month were then summed up to obtain quarterly sales. The classification of industry is based on the Malaysian Standard Industry Classification, 2008 (MSIC 2008). The study covers 142 manufacturing industries in Perak and then are aggregated into 24 main groups.

The sales values for 24 groups were deflated using Implicit Price Deflator to get to constant value (2015=100). The data in the paper were analyzed by comparing the changes of sales in **eight main sub-sectors which will be presented in the tables in the results section.**

The effect of the COVID-19 in the manufacturing industry in Perak is analyzed using descriptive analysis methods in this report. This technique was also used by Sulistiyani & Setyo Riyanto (2020), to comprehend and examine the spectrum of how to assess the COVID-19's effect on the manufacturing sectors.

This study only focuses on sales values and does not cover all establishments in the manufacturing sector, and thus might present the limitation of the study. Additional variables and full coverage of the sector are needed to better reflect the impact of the COVID-19 in the manufacturing industry in Perak.

## 3. Results

Graph 1: Year on Year Percentage Change, Manufacturing Sector at Constant 2015 Prices, Perak 1Q2019 – 4Q2020

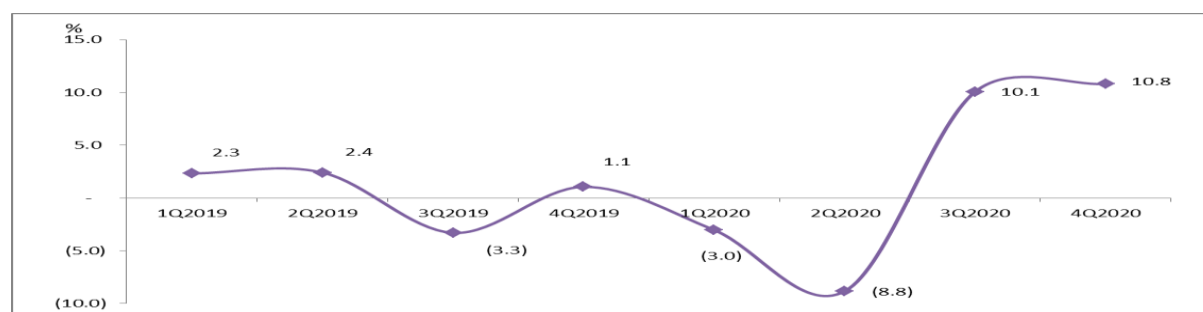


Table 3.1: Sales and YoY Percentage Sales of Manufacturing Sub Sectors at Constant 2015 Prices, Perak 1Q 2019 – 4Q2020

Subsectors	2019								2020							
	1Q		2Q		3Q		4Q		1Q		2Q		3Q		4Q	
	RMbil	%	RMbil	%	RMbil	%	RMbil	%	RMbil	%	RMbil	%	RMbil	%	RMbil	%
Vegetable and animal oils & fats and Food processing	2.5	5.6	2.2	7.9	2.1	-7.9	2.0	-10.0	2.0	-18.4	2.2	-0.2	2.4	13.2	2.1	2.4
Beverages and Tobacco products	0.1	0.7	0.1	6.0	0.1	1.3	0.1	25.8	0.1	-2.9	0.1	-47.1	0.1	-14.6	0.1	-12.5
Textiles, wearing apparel, leather products	0.2	18.9	0.1	7.6	0.1	9.9	0.1	-1.7	0.1	-14.2	0.1	-54.8	0.1	-25.5	0.2	37.5
Wood products, furniture, paper products and printing	0.2	-23.7	0.2	-2.7	0.2	-0.5	0.3	24.8	0.2	0.1	0.2	-20.8	0.2	7.1	0.3	-10.2
Petroleum, chemical, rubber and plastic products	1.8	2.4	1.8	0.3	1.8	-13.1	1.8	4.8	2.4	32.3	2.0	8.6	2.4	35.1	2.8	52.0
Non-metallic mineral products, basic metal and fabricated metal products	0.9	4.0	0.9	7.0	1.0	10.6	1.1	19.3	0.8	-6.7	0.6	-33.5	1.0	1.7	1.1	1.8
Electrical & electronic and optical products	1.4	-13.4	1.3	-18.2	1.5	-7.1	1.5	-3.8	1.3	-4.5	1.3	-2.4	1.5	-3.7	1.5	-2.2
Transport equipment, other manufacturing and repair	0.3	173.7	0.3	218.1	0.4	125.3	0.3	9.3	0.1	-67.4	0.1	-77.1	0.3	-24.2	0.1	-63.9
<b>RM billion/ Year on Year % change</b>	<b>7.4</b>	<b>2.3</b>	<b>7.1</b>	<b>2.4</b>	<b>7.3</b>	<b>(3.3)</b>	<b>7.3</b>	<b>1.1</b>	<b>7.1</b>	<b>(3.0)</b>	<b>6.5</b>	<b>(8.8)</b>	<b>8.0</b>	<b>10.1</b>	<b>8.1</b>	<b>10.8</b>

*\*Derived from authors' own calculation based on panel data for 1Q2018 – 4Q2020*

Graph 3.1 shows the YoY growth for sales of manufacturing sector (based on the panel cases) in the state of Perak, Malaysia for the period of 1Q2019 to 4Q2020. The result shows a drop of 3.0% in 1Q2020 and further contraction of 8.8% in 2Q2020. The sales growth however increased in both 3Q2020 (+10.1%) and 4Q2020 (+10.8). All subsectors in 1Q2020 recorded a drop in sales except for petroleum, chemical, rubber and plastic products (+32.3%) and Wood products, furniture, paper products and printing (+0.1%) as shown in Table 1. The petroleum, chemical, rubber and plastic products registered positive growths since 1Q2020 with the highest growth of 52.0% in 4Q2020.

Meanwhile, the Transport equipment, other manufacturing and repair recorded the highest dip of 67.4% in 1Q2020 and 77.1% in 2Q2020. The subsector continued to register negative growth until 4Q2020. Other subsectors which recorded positive growths in both 3Q and 4Q2020 were Vegetable and animal oils & fats and Food processing (3Q:13.2% & 4Q: 2.4%) and Non-metallic mineral products, basic metals& fabricated metal products(3Q:1.7%&.4Q:1.8%).

#### 4. Discussions & Conclusion

The findings suggest, in the 1Q and 2Q2020 the sales of Petroleum, chemical, rubber and plastic products subsector were not affected during the COVID-19 pandemic and the MCO period in Malaysia. The increase in sales for both Rubber products and Plastics products was mainly due to the higher demands for Personal Protective Equipment (PPE) such as rubber gloves, protective shields and other related products mainly used for medical purposes. This was also reflected in the exports of Perak's rubber gloves. In 2020, rubber gloves contributed 22.3% of Perak's exports with a growth of 74.3% (2019: +8.9%) (DOSM, 2021). In addition, most of the industries in the subsector were essential industries and were allowed to operate during the MCO period.

Meanwhile, in the 2Q2020 other subsectors posted negative sales' growth with the highest decline in the Transport equipment, other manufacturing and repair subsector, which suggests the decline of sales in the Motor vehicles & transport equipment; and Other manufacturing and repair & installation of machinery & equipment industries. As most companies and establishments across sectors were given permission to operate in 3Q2020, the sales in these subsectors picked up and registered double digit growth in the third and fourth quarter of 2020.

Further quantitative analysis (which include other variables) is needed to better explain the impact of the Covid-19 pandemic on the manufacturing industry in the state of Perak.

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