

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

AdWise Solutions (2022) declared that a nation's overall, and particularly its economic development, depends heavily on its manufacturing sector. A nation's economic strength is determined by the growth of its manufacturing sectors. Manufacturing still makes a huge contribution to the global economy. According to data published by the World Bank, world manufacturing output for 2021 was \$16,350.21B, a 20.21% increase from 2020 (Macrotrends,2022). The proportion of manufacturing output value in world GDP has continued to rise slightly in the last 3 years, from 15.94% in 2019 to 17.01% in 2021 (Figure 1.1).

World Manufacturing Output - Historical Data		
Year	Billions of US \$	% of GDP
2021	\$16,350.21B	17.01%
2020	\$13,600.88B	16.02%
2019	\$13,968.82B	15.94%
2018	\$14,125.25B	16.35%
2017	\$13,204.93B	16.22%

Figure 1. 1 World Manufacturing Output 2017-2021. Source: Macrotrends,2022.

In 2021, the manufacturing sector contributed approximately 19.25 percent to Indonesia's GDP (Figure 1.2). According to a report from Deloitte, Indonesian manufacturing will be rank number 15 in world manufacturing hubs by 2023. Statista (2022) described Indonesia is one of the world's largest manufacturing countries, and the industry is becoming increasingly important to the country's economy. Competition for manufacturing plants has intensified in recent years. E-

commerce technology is getting more and more attention from manufacturing enterprises. The wide application of e-commerce has enhanced the competitive advantages of factories, but also intensified the competition among factories (Ju & Tang, 2022).

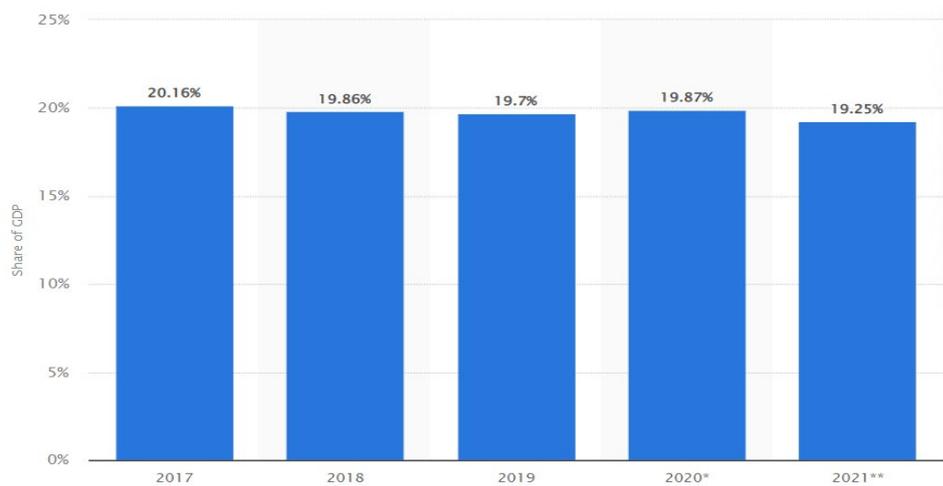


Figure 1.2. Manufacturing Contribution to GDP in Indonesia 2017-2021. Source: statista,2022

The COVID-19 pandemic has made life even harder for manufacturing companies. World manufacturing output for 2019 was \$13,968.82B, a 1.11% decline from 2018, and manufacturing output for 2020 was \$13,600.88B, a 2.63% decline from 2019 (Macrotrends,2022). A survey by The United Nations Industrial Development Organization in March 2021 shows that 81 per cent of firms expect a loss of revenue of more than 50 per cent in 2020 compared to 2019. More than 90% of surveyed companies of all sizes, types and technology levels report lower orders and shortfalls in cash flow. About 70% of companies reported input and worker shortages and facing bankruptcy.

During the epidemic, many other companies in the same industry are facing revenue decline, shortage of funds, layoffs and even bankruptcy, etc. As a segment

of manufacturing, the factories in the OEM (Original Equipment Manufacturer) industry have very low profit per unit and relies entirely on volume. Under the impact of the epidemic, the price of raw materials has risen, governments of various countries have blocked logistics, the price of containers has soared due to shortage of manpower, and customer demand has decreased, making it difficult for OEM companies to survive. However, in facing fierce competition, troubled external environment and low survival rate, PT UNIHAN can still maintain normal production, pay wages on time or even in advance, and ensure the welfare of employees.

## **1.2 Research Gap**

Existing literatures focus on supply chain resilience (Dubey et al., 2021; Queiroz et al., 2020; Chowdhury et al., 2021) or technology domains (Wang & Wang, 2021), while from an operations management perspective, OEM manufacturing specifics still underexplored. Dynamics within individual firms are also ignored. Ahmadi-Gh and Bello-Pintado (2022) proposed that follow-up researchers can longitudinally research the positive correlation between sustainable practices and competitive advantages.

## **1.3 Research Problem**

PT UNIHAN is a Fortune 500 Taiwanese company established on January 1, 2008. The main business is to develop computer peripherals, communication technology and consumer electronics products to brand suppliers, and engage in the development, design and manufacture of computer peripherals and components. Its

products are roughly divided into Computer Products, Consumer Electronics, Communication Products, Car Electronics, and Smart Electronics. Communication products include Cable modem, Smartphone, Set-top box (STB), and Network switch. PT UNIHAN established a new factory in Indonesia in 2019, mainly producing Cable modem and STB as OEMs and some ODMs.

Affected by the pandemic, PT UNIHAN's revenue in December 2022 is 112.769 billion, a monthly decrease of 0.62%, and an annual decrease of 27.61%; the fourth quarter revenue is 358.03 billion, a quarterly increase of 1.5%, and an annual decrease of 20.8%. Communication products are still the pillar category, accounting for around 60% (Yang, 2023). According to Taipei real-time report (2022), PT UNIHAN pointed out that the annual revenue decline in the fourth quarter 2022 was mainly due to the decline in shipments of the three major businesses of information products (laptops, desktops), consumer products, and communication products.

According to the 2022 financial statements issued by PT UNIHAN, Consolidated revenue totaled 353 billion in 3Q2022, increased by 24% QoQ, mainly attributable to better demand from Communication Segments (Figure 1.3). From the Figure, we can see that communication products contributes significantly to its revenue.

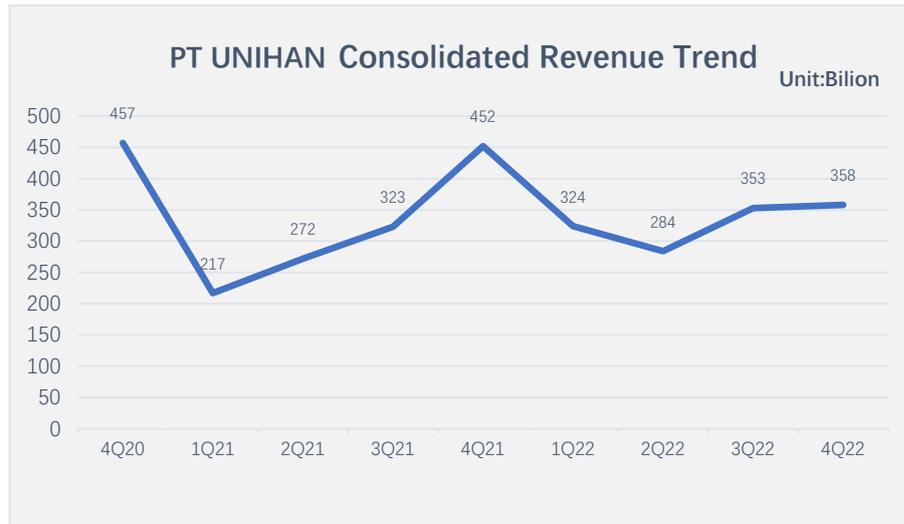


Figure 1.3 . PT UNIHAN Consolidated Revenue Trend. Source: PT UNIHAN 2022

financial statements

Thanks to better product mix, revenue from Consumer and Communication Segments were up by 18% and 8% YoY respectively (Figure 1.4).

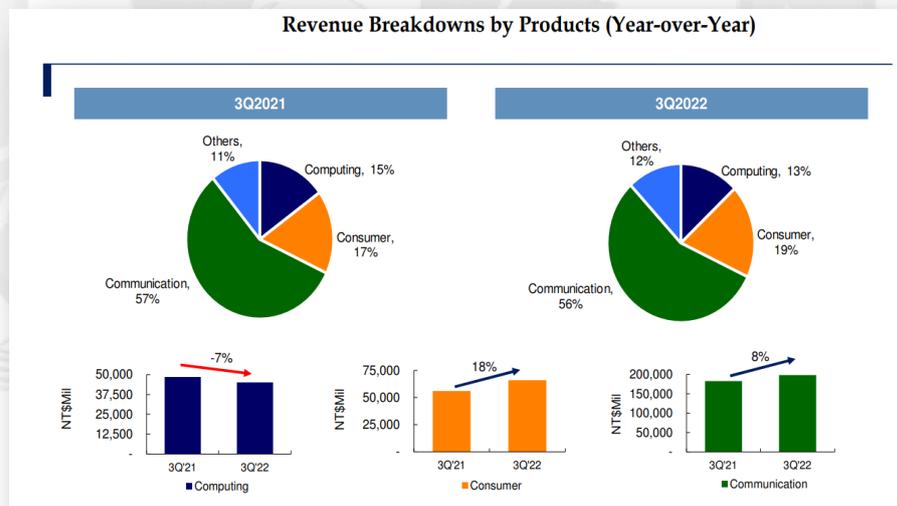


Figure 1.4 . PT UNIHAN Revenue Breakdowns by Products YoY. Source: PT UNIHAN 2022

financial statements

Driven by demand recovery, revenue from Communication segments were

up by 41% QoQ respectively, while Consumer Segment maintained as flattish (Figure 1.5).

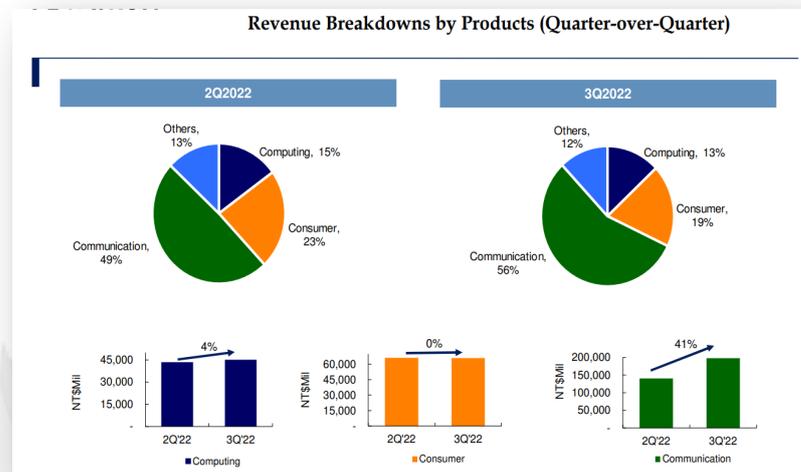


Figure 1.5 . PT UNIHAN Revenue Breakdowns by Products QoQ. Source: PT UNIHAN 2022 financial statements

PT UNIHAN 2022 annual revenue was 1,318.379 billion, an cumulative annual increase of 4.33%, and it has firmly established the trillion-dollar threshold for 9 consecutive years (Yang, 2023) . The year 2020 and 2021 epidemic has had a huge impact on the manufacturing industry, and PT UNIHAN's revenue has also decreased substantially. Despite of the significant recovery in 2022, PT UNIHAN's revenue in December is 112.769 billion, a monthly decrease of 0.62%, and an annual decrease of 27.61%.

Unlike most of its peers who are bearish on this year's operations, PT UNIHAN expects that 2023 year's overall performance will be flat or slightly increased with the support of its automotive electronics and communication businesses. According to Ijiwei (2023) report, PT UNIHAN Chairman T said that

the situation in the whole world is treacherous, and the economic development is ups and downs. After the Sino-U.S. trade war broke out, epidemics continued to occur around the world, especially from the Russo-Ukraine war last year to 2022. The location of the PT UNIHAN factory and many cities were closed due to the epidemic, causing major changes in the global economic situation.

Electronic Manufacturing Services (referred to as EMS) companies are constantly adjusting and optimizing their strategies in order to improve their competitive advantages. In recent years, Many EMS research focus on improving the competitive advantage of the industry (Fang et al., 2020). The research will explore the competitive advantage with communication products, which are the pillars of PT UNIHAN. We hope to provide some references for the disadvantaged factories to enhance their competitive advantages. As a member of PT's grassroots managers, the researcher can gain further understanding of the company's strategy and competitive advantages through this research.

#### **1.4 Research Questions**

Based on the research problems above, below are the research questions:

1. What are the strategic factors that contribute to the competitive advantage of PT UNIHAN?
2. How are the strategic factors applied/implemented to contribute to the competitive advantage of PT UNIHAN?