

**KNOWLEDGE TRANSFER, INNOVATION,
CULTURAL INTELLIGENCE & FIRM
PERFORMANCE AMONG GERMAN MNCS
SUBSIDIARY IN MALAYSIA**

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CULTURAL INTELLIGENCE & FIRM
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SUBSIDIARY IN MALAYSIA**

by

OOI ZHENG YAO

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LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nation
CEO	Chief Executive Officer
COMAC	Commercial Aircraft Corporation of China
EPU	Economic Planning Unit
EUC	European Union Commission
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IATA	International Air Transport Association
MEA	Ministry of Economic Affairs
MIDA	Malaysian Investment Development Authority
MNC	Multinational Corporation
OECD	Organisation for Economic Cooperation and Development
SME	Small and Medium Enterprises
USD	United States Dollar

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**PEMINDAHAN ILMU, INOVASI, KECERDASAN BUDAYA & PRESTASI
FIRMA DALAM KALANGAN ANAK SYARIKAT MULTINASIONAL
JERMAN DI MALAYSIA**

ABSTRAK

Kajian ini menekankan kepentingan pemindahan pengetahuan dan inovasi sebagai sumber asas kelebihan saingan yang meningkatkan prestasi teguh anak syarikat bagi syarikat multinasional (MNCs) Jerman yang beroperasi di Malaysia. Peranan anak syarikat dalam multinasional telah berubah dari semasa ke semasa. Anak syarikat asing telah mendapat manfaat daripada inovasi dengan menjana sumber baharu atau memiliki aset yang dapat memberikan kelebihan saingan untuk mencapai prestasi firma yang disasarkan dan berjaya beroperasi di lokasi tertentu. Mengikuti literatur yang sedia ada, inovasi dikaji dalam pelbagai bentuknya seperti inovasi dalam pengurusan, organisasi, pemasaran, dan produk, manakala pemindahan pengetahuan terdiri daripada pemindahan pengetahuan yang dikodkan berbanding diperibadikan. Lebih penting lagi, hala tuju dan kekuatan hubungan ini diuji dengan menggunakan kecerdasan budaya sebagai pembolehubah penyederhana. Dalam kajian penyelidikan ini, kaedah persampelan bukan kebarangkalian dan teknik persampelan bertujuan digunakan untuk menganalisis data dan firma atau organisasi dianggap sebagai unik analisis. Menggunakan pemodelan persamaan struktur dalam SPSS-AMOS dan statistik deskriptif dalam Microsoft Excel, kertas kerja ini menguji secara empirik bagi hubungan antara pemindahan pengetahuan, inovasi, dan prestasi firma dengan dimediasi oleh kelebihan saingan dan disederhanakan oleh kecerdasan budaya. Penemuan ini menyokong hipotesis yang dicadangkan seperti

yang digunakan untuk anak syarikat multinasional Jerman dalam industry pembuatan di Malaysia. Kajian penyelidikan ini menambah nilai kepada literatur yang semakin berkembang tentang kecerdasan budaya dan teori pandangan berasaskan sumber dan mendedahkan keperluan untuk kelebihan saingan yang lebih khusus dan kecerdasan budaya untuk memudahkan syarikat mencapai prestasi firma yang disasarkan di lokasi asing.

**KNOWLEDGE TRANSFER, INNOVATION, CULTURAL INTELLIGENCE &
FIRM PERFORMANCE AMONG GERMAN MNCS SUBSIDIARY IN
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ABSTRACT

This study highlights the importance of knowledge transfer and innovation as fundamental sources of competitive advantage that improve the firm performance of subsidiaries of German multinational companies (MNCs) operating in Malaysia. The role of subsidiaries within the MNCs has changed from time to time. Foreign subsidiaries have benefited from innovation by generating new resources or owning assets that provide a competitive advantage to achieve targeted firm performance and successfully operate in specific locations. Following extant literature, innovation is studied in various forms, such as innovation in management, organization, marketing, and product, while knowledge transfer consists of codified versus personalized knowledge transfer. More importantly, the direction and strength of these relationships are tested using cultural intelligence as a moderating variable. In this research study, the non-probability sampling method and purposive sampling technique are applied to analyze the data, and the firm or organization is considered the unit of analysis. Using structural equation modeling in SPSS-AMOS and descriptive statistics in Microsoft Excel, this paper empirically tests the relationships between knowledge transfer, innovation, and firm performance as mediated by competitive advantage and moderated by cultural intelligence. The findings support the proposed hypotheses as applied to subsidiaries of German MNCs in the manufacturing

industry in Malaysia. This research study adds value to the growing literature on cultural intelligence and resources-based view theory. It exposes the need for more specific competitive advantages and cultural intelligence to facilitate firms to achieve targeted firm performance in foreign locations.

CHAPTER 1

INTRODUCTION

1.1 Introduction of Chapter

This chapter starts with the background of the research by highlighting the overall scope of the study, and it acts as a foundation for this research study. It is followed by highlighting the importance of this research study with research problem statements, research questions, and research objectives.

The next section of this chapter illustrates the scope of the research, the significance of the study, and the impact of the research on the domestic development in Malaysia as well as on future research based in Malaysia. The definition of key terms and illustrations used in this research is summarized at the end of this chapter.

1.2 Research Background

This study explored the determinants of the firm performance of the subsidiaries of German MNCs operating in Malaysia in a perceptual environment. In this perceptual environment, knowledge transfer and innovation were studied to understand how these two elements affect the firm performance of the subsidiaries of German MNCs operating in Malaysia. Hence, the type of knowledge transfer and innovation of the subsidiaries of German MNCs operating in Malaysia to establish competitive advantage, which influences the firm performance of the subsidiaries of German MNCs operating in Malaysia, were being investigated.

1.2.1 Background of Malaysia and its Market

According to a survey conducted by the Institute of Chartered Accountants in England and Wales (ICAEW) in 2019, Malaysia's exports outperformed other ASEAN countries over the past three quarters under world business uncertainties (Anuar, 2019). Malaysia is a country in a very strategic location located in the heart of ASEAN, which offers many advantages like unparalleled connectivity, well-developed infrastructure, and business-friendly policies for foreign-based MNCs (HSBC Bank Malaysia Berhad, 2021).

Malaysia is a country highly dependent on the manufacturing industry. According to the Department of Statistics Malaysia in 2020, the manufacturing industry contributed to over 80% of Malaysia's export in 2019 (Matrade, 2020) (refer to Figure 1.1). In September 2019, the value of exports of manufactured goods was RM66.34 billion or 85.4% of total exports, which decreased by 5.8% compared to last year. This is because of the decrease in exports of electrical-related products, electronic-related products, petroleum products, and chemical-related products (Minister of International Trade and Industry Malaysia, 2019). However, increased exports of Malaysia's manufactured products were recorded in transport, optical, scientific, and machinery-related products (Minister of International Trade and Industry Malaysia, 2019).

Mining-related products amounted to RM5.69 billion for exports in Malaysia, which accounted for 7.3% of the total share, decreased by 15.2% on total exports due to a decrease in exports of crude petroleum in terms of lower volume and Average Unit Value (AUV) (Minister of International Trade and Industry Malaysia, 2019). Agriculture-related products amounted to a total of RM5.17 billion, which accounted for 6.7% of the total share, decreased by 8.3% due to a decline in palm oil-related products that registered a

decrease of 9.3% to RM3.05 billion, followed by lower volume and AUV (Minister of International Trade and Industry Malaysia, 2019).

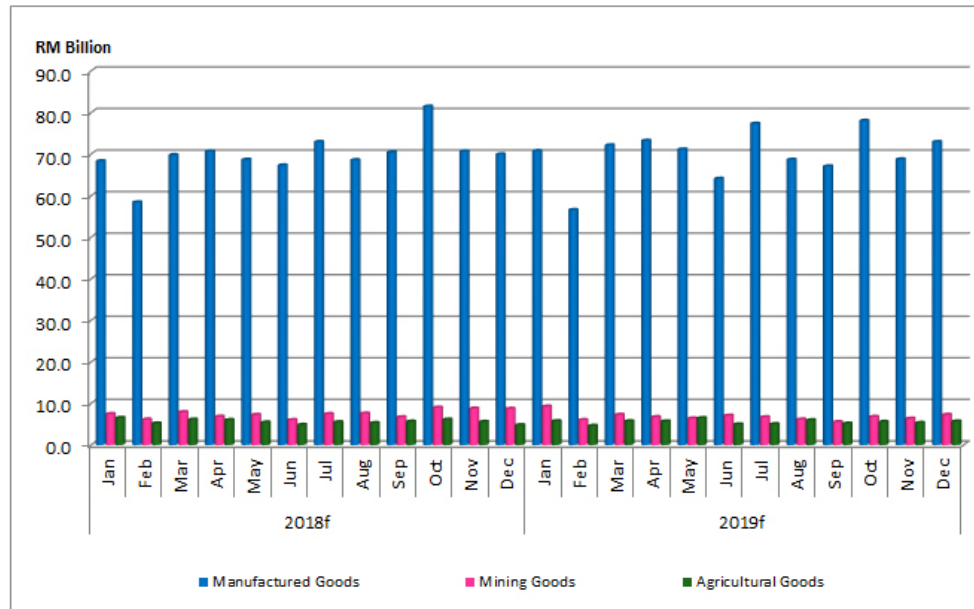


Figure 1.1 Malaysia’s Exports by Main Sectors, 2019

(Source: Adopted from Matrade (2020))

Malaysia has been a famous and potential investment heaven for foreign-based MNCs, especially Japan and the United States of America (US), in the 80s and 90s. The potential locations for manufacturing are Bayan Lepas and Batu Kawan in Penang and Kulim High Tech Zone in Kedah, while locations for offices are in Kuala Lumpur, Petaling Jaya, and Damansara. Foreign-based MNCs such as Intel Technologies, Motorola, Seagate, Dell, Bosch, Osram, Sony, and Western Digital Corporation have heavily invested and expanded their manufacturing and production plants in Malaysia over the past decades for cost-saving and international growth. Knowledge transfer from foreign-based MNCs help to enhance domestic talents and their skills level, which further enhances our skills

employee's visibility to other potential foreign-based MNCs from both west and east (Yildiz, Murtic, Zander& Richtner, 2019).

However, in recent years, some foreign-based MNCs have moved from Malaysia to Thailand and Vietnam (Wong, 2017). According to Wong (2017) mentioned that about 40 foreign-based organizations have ceased operations in Malaysia and shifted to other countries since 2013. In addition, hard-disk maker, Seagate Technology Plc and computer data storage organization, Western Digital Corporation, would be relocating their major part of operations to Thailand for cost reduction (Wong, 2017). The action is due to non-sustainable competitive advantages, lack of human talents, and low level of knowledge among Malaysian employees. Knowledge is crucial for business sustainability, which can influence firm performance.

1.2.2 Competitive Ranking of Malaysia

The competitive ranking of Malaysia shows how competitive Malaysia is over its rival countries within the region or world. According to Tradingeconomics.com (2020), the most recent 2018 edition of the Global Competitiveness Report assessed the 98 factors of competitiveness of 140 economies worldwide. The report combined information from both international firms and the World Economic Forum's Executive Opinion Survey. In a report published in 2018, the World Economic Forum established a new technique that aimed to combine the 4th Industrial Revolution in evaluating and analyzing factors of competitiveness. Since the 4th Industrial Revolution integration, Malaysia has ranked as one of the top 30 countries among 140 countries.

According to Malaysia Productivity Corporation (2020), Malaysia is ranked No. 27 in 2019 in the Global Competitiveness Report 2019. It is two places lower than the Year 2018, which is ranked No. 25 amongst 140 countries (Malaysia Productivity Corporation, 2020). This means that Malaysia is less competitive compared to previous years. The higher the competitiveness ranking in the Global Competitiveness Report, the higher the potential for investors or foreign-based MNCs to invest in the country. Table 1.1 shows Malaysia ranked 18th out of 144 countries in 2014-2015. However, in 2015-2016, the ranking dropped to 25th out of 140 countries.

Furthermore, the drop in the competitiveness ranking is also influenced by the ease of doing business in Malaysia (Table 1.2). Malaysia’s ranking in ease of doing business in the evaluation has declined since 2014. This means that it is getting harder to do business in Malaysia. The ranking of ease of doing business in Malaysia is directly proportional to the global competitiveness ranking. The decrease in the global competitiveness ranking also means Malaysia is losing the high rank in ease of doing the business global ranking.

Table 1.1

Malaysia’s Performance in Global Competitiveness Report

Year	Rank	Total Country
2014 – 2015	18 th	144
2015 – 2016	25 th	140
2016 – 2017	23 rd	138
2017 – 2018	25 th	140

2018 – 2019	27 th	141
2019 – 2020	25 th	190

Note. From Malaysia Productivity Corporation, 2020, <http://www.mpc.gov.my/malaysia-competitiveness-performance/> and Malaysia Investment Development Authority, 2021, <https://www.mida.gov.my/mida-news/malaysia-rises-to-25th-place-in-world-competitiveness-yearbook-2021/>

1.2.3 Ease of Doing Business in Malaysia

According to Tradingeconomics.com (2020), the ease of doing business index ranked countries against each other based on how the regulatory environment is conducive to business operation-stronger property rights protections. From the description, the higher the rank of the country (between 1 and 20), the more straightforward and more friendly business regulations. Table 1.2 illustrates that Malaysia is ranked 12th in the ease of doing business. This ranking is based on World Bank annual ratings in 2019 and PWC Doing business in Malaysia 2021. Malaysia is one of the easiest countries to do business in, and it will attract more foreign-based MNCs and foreign investors to come and invest in Malaysia.

Furthermore, foreign-based MNCs are interested in countries that are easy to do business. The ease of starting a subsidiary is part of the attractive point for foreign-based MNCs to come and invest in a country. Since Malaysia has a high ranking in ease of doing business, many foreign-based MNCs targeted Malaysia as part of the potential location to set up their subsidiaries or seek partners to manufacture or sell their products. According to Rosli (2018), InvestKL Corporation Sdn Bhd (InvestKL), a government agency, aims

to attract 100 foreign-based MNCs by 2020. InvestKL successfully attracted 12 new foreign-based MNCs in 2017, exceeding its annual target of 10, thus pushing the total to 73 foreign-based MNCs in seven years since the establishment of InvestKL (Rosli, 2018). According to InvestKL (2020), InvestKL achieved its target of attracting and facilitating 100 foreign MNCs to Malaysia ahead of the year-end of 2020.

Table 1.2

Ease of Doing Business in Malaysia

Year	Rank
2010	23 rd
2011	18 th
2012	8 th
2013	6 th
2014	17 th
2015	22 nd
2016	23 rd
2017	24 th
2018	15 th
2019	12 th
2020	12 th

Note. From “World Bank,” by Tradingeconomics.com, 2020, and Doing Business In Malaysia 2021 by PWC Malaysia.

In addition, the greater the number of foreign-based MNCs invested in Malaysia, the greater the number of knowledge transfer processes being carried out. These foreign-based MNCs will increase the percentage of employment and improve the quality of domestic employees. Indirectly, the foreign-based MNCs trained domestic employees to become skilled employees and employees with specialties. This helps attract foreign-based MNCs to come and invest in Malaysia as Malaysia can provide skilled and talented employees to them.

1.2.4 Productivity Level of Malaysia Labors

Workforce development is the primary challenge and issue in improving Malaysia's labor productivity (OECD, 2019). In 2019, Malaysia's industries are still highly dependent on semi-skilled and low-skilled employees as well as foreign employees (MEA, 2018; OECD, 2019). Even though the growth of skilled employees from 2016 to 2018 is at a constant rate of 3.9%, it outperforms semi – and low-skilled employees, which is at a constant rate of 0.9%. However, the total percentage of skilled employees to total employment is 27.2% which is 7.8% lower than the target number set by the Malaysian government (EPU, 2015a; OECD, 2019). Figure 1.2 illustrates that Malaysia's labor productivity level is still way behind advanced countries.

According to Ismail (2012), there is a positive relationship between foreign ownership and firm performance, specifically on the labor productivity level, and it varies in different regions and countries. Foreign MNCs operating in countries with high productivity tend to have good firm performance over in other countries. According to Figure 1.2, Malaysia is the potential investment country among all developing countries in Southeast Asia because Malaysia has a better productivity level per employee.

In comparison, Thailand and China had only half of Malaysia's productivity level per employee in 2018. Malaysia is catching up toward the productivity level per employee of the advanced economies, which include South Korea, Japan, the United States of America, and Singapore. Malaysia is just a little behind South Korea, where Malaysia has a 70,000 USD Productivity level per employee while South Korea has an 80,000 USD Productivity level per employee. Furthermore, Malaysia's productivity level per employee has increased to (RM322,554, approximately 80,000 USD) in 2021 (Department of Statistics Malaysia Official Portal, 2022).

Malaysia's labor productivity level is the highest among developing countries, which created a plus point for Malaysia to attract potential investors and foreign-based MNCs to invest in Malaysia. Those foreign-based MNCs will have better firm performance when they operate in Malaysia compared to other nearby countries in the same region. This helps to increase the number of skilled and knowledgeable employees in Malaysia to improve Malaysia's economy further.

Hence, Malaysia's labor productivity level will influence the knowledge transfer processes, indirectly affecting the firm performance in Malaysia. With a more significant number of skilled and knowledgeable employees in Malaysia, it helps to simultaneously improve the performance of Small and Medium Enterprises (SMEs) and other businesses. It also helps Malaysia to attract more foreign-based MNCs who need skilled and knowledgeable employees for their businesses.

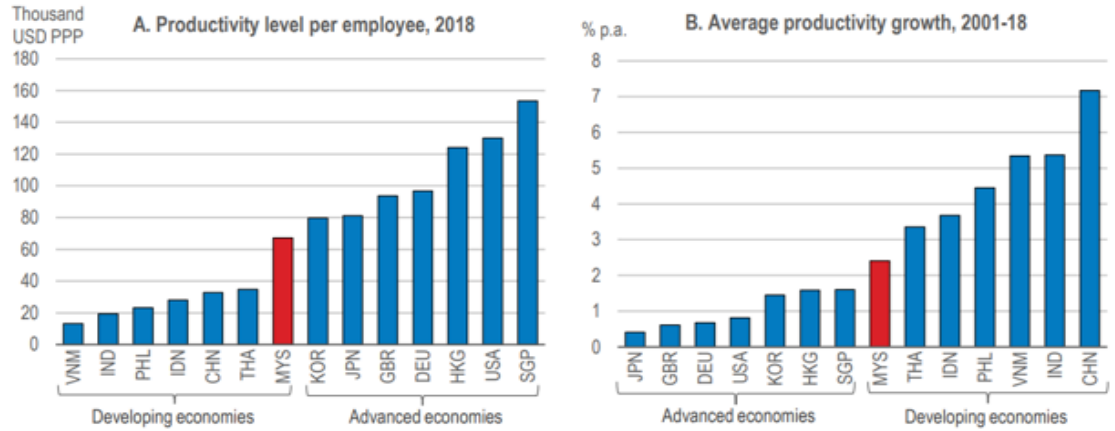


Figure 1.2 Labor Productivity Level

(Source: adopted from OECD in The Conference Board (2019), Total Economy Database)

1.2.5 Level of Innovation and knowledge transfer in Malaysia

Innovation is the most frequently used word in the world, especially in business and management (Abidin, Suradi, Shahabuddin, Mustafa, & Ismail, 2014). Many people in business and management agree that innovation is the primary determinant in securing their long-term business success and business sustainability; however, many businesses are struggling with the word “Innovation,” especially in understanding how the innovation work (Abidin et al., 2014). The innovations index can measure the level of innovativeness. Malaysia received a minimum of 41.9 points in 2021, which is the lowest since 2013. The world average is 34.30 points based on 132 countries. Malaysia is still above the world average (Wipo, 2022).

According to Firdaus, Mohamad, Mohammad, and Gunaratne (2020), knowledge transfer provides a platform for optimizing the research outputs and inputs for further development to enhance knowledge for communities, firms, and employees to improve

living standards. There are significantly fewer studies conducted over for knowledge transfer as most of the research studies only focus on general knowledge management (Meddour, Majid, & Yusoff, 2016).

1.3 German – Malaysia Relationship

Malaysia and Germany have had bilateral relations for many years. Political relations between Malaysia and Germany are primarily based on the economic relations of both countries since the subsidiaries of the German MNCs entered Malaysia (German Federal Foreign Office, 2020). The German government and MNCs viewed Malaysia as an important, stable, and potential economy in the Southeast Asian region (German Federal Foreign Office, 2020). Besides, Malaysia is a leading member of the Association of Southeast Asian Nations (ASEAN) in technology and agriculture. In addition, Malaysia is a moderate representative of the Islamic world, where Malaysia's Prime Ministers used to be the Chairman of the International Islamic Association.

The Malaysian - German Chamber of Commerce and Industry is the largest European Union Chamber, founded in 1991 (German Federal Foreign Office, 2020). Germany and Malaysia have had very close economic ties over the past years (German Federal Foreign Office, 2020). Malaysia and Singapore have been the primary economic teammates for Germany among the ASEAN countries (German Federal Foreign Office, 2020). The bilateral trade between Malaysia and Germany amounted to 14.2 billion Euros in 2019 (German Federal Foreign Office, 2020).

German MNCs increased the potential of Malaysia as a regional hub for Southeast Asia and the rest of the countries worldwide (German Federal Foreign Office, 2020). There

were about 400 subsidiaries of German MNCs in Malaysia in 2020, and the number will increase to 700 in 2021 (German Federal Foreign Office, 2021). These 700 subsidiaries of the German MNCs have increased the employment rate in Malaysia and the number of talented employees who specialize in specific industries. This increases the number of knowledge transfer processes from German parent organizations to its subsidiaries in Malaysia and its manufacturing and economic partners.

Cultural cooperation between Germany and Malaysian focused on educational-related services such as German language classes (German Federal Foreign Office, 2021). About 50 secondary schools in Malaysia are currently conducting German language classes (German Federal Foreign Office, 2021). Moreover, more than a hundred commercial agreements have been signed between public and private universities from Germany and Malaysia (German Federal Foreign Office, 2021). Besides, the German government offered full or partial scholarships to Malaysian students to continue their studies in Germany. Besides that, the Malaysian government also offers many international scholarships, especially for German universities.

Over the years, over 1,000 young Malaysians received Malaysian government scholarships to continue their study at German universities (German Federal Foreign Office, 2021). Furthermore, the double-degree programs recognized by the German and Malaysian governments are increasing rapidly (German Federal Foreign Office, 2021). Germany – Malaysia Technology Institute is one of the leading higher education institutes that provides technology, technical knowledge, and education to Malaysian students who want to work in German MNCs or their related manufacturing partners. In addition, this action has led to the number of German guest students in Malaysia, and the number of

German students exchanged to Malaysia increased rapidly (German Federal Foreign Office, 2021).

1.3.1 German Exports to Malaysia

The German economy was highly affected by Covid-19 pandemic in 2020. According to the Federal Statistical Office (2021), there was a drop of 5.0% in the price-adjusted gross domestic product (GDP) of Germany in 2020 compared to 2019. Besides, the press release by the Federal Statistical Office in 2021 that Covid-19 pandemic ended the ten-year growth period of the German economy, and now the German economy suffered a deep recession. 2019-2020 is similar to the 2008-2009 financial and economic crisis.

According to research conducted by the German Institute of Economic Research (DIW) in the year 2020 that of all industrialized countries, Germany was ranked second in the machine-tool and engineering industry and was the second largest. Germany is ranked fifth in total global value-added in the manufacturing and industrial sector (Hancke & Coulter, 2013). The econometric analysis concluded the rapid recovery in Germany's export market share after the year 2000 due to the combination of success in creating trade relationships with emerging economies; but also, an extended effort in reducing costs through wage moderation negotiated through Germany's coordinated wage bargaining system (Danninger & Joutz, 2007; Hancke & Coulter, 2013). The German manufacturing sector created employment domestically (Hancke & Coulter, 2013).



Figure 1.3 German Exports to Malaysia (2017)

(Source: adopted from ASEAN Briefing (2019))

German MNCs exported US\$6.11 billion of items to Malaysia in 2018, and the value maintained over the past few years (Flintrop, 2019). On the other hand, Germany imported US\$10.6 billion of products from Malaysia in 2018, a steady increase compared to the past few years (Flintrop, 2019). Germany primarily imports fully assembled products such as electronics, electrical and electronic equipment (33.0%), made by the subsidiaries of the German MNCs operating in Malaysia (refer to Figure 1.3).

According to Flintrop (2019), Malaysia is highly dependent on medical equipment imports. This opens excellent chances for German MNCs operating in Malaysia to import from Malaysia, build factories, or contribute the technologies for independent production

in Malaysia. This is why Germany's primary import goods or products are electronics, electrical and electronic equipment. Besides, the initiative by the Malaysian government to make Malaysia a regional medical tourism hub has become an advantage for Malaysia to attract German importers to export products from Malaysia or settle down in Malaysia (Flintrop, 2019).

According to Flintrop (2019), several German MNCs have already established business operations in Malaysia, including Siemens, Audi, BMW, and MAN. Malaysia is especially attractive for foreign-based MNCs such as Bavaria, one of Germany's leading high-tech producing areas. Malaysia's government initiated the signing of a Memorandum of Understanding (MoU) with Bavarian international to improve collaboration in technology (Flintrop, 2019). Bavarian is the main shareholder of BMW. The reason behind the signing of the MoU is that Malaysia, with its strategic location, allows foreign-based MNCs such as Bavarian International access to the ASEAN market. In addition, Malaysia is the desired country for future technologies, and industry 4.0 has been an attractive destination for German technology firms.

1.4 Focus Group Interview

To understand the current issue of the subsidiaries of German MNCs operating in Malaysia in terms of firm performance and other related factors such as knowledge transfer and innovation, a focus group interview was conducted to interview the senior management members of the subsidiaries of German MNCs operating in Malaysia. In the interview, several questions related to firm performance with knowledge transfer and innovation were asked, and the responses from the senior management members were recorded. Throughout the interview, ten questions related to firm performance with

knowledge transfer and innovation and other factors such as cultural issues and other activities that can improve firm performance were asked. The responses from the senior management members of the subsidiaries of German MNCs operating in Malaysia have been analyzed and concluded below.

After contacting fifteen senior management members, six senior management individuals responded, and interviews were conducted. Five of the senior management members are from the manufacturing industry, and one of the senior management members is from the service industry. The six senior management members include three Chief Operating Officers (COOs), one Chief Engineering Officer, one Chief Executive Officer (CEO), and one Chief Accounting Officer (CAO). The respondents were selected based on the manufacturing industry of the subsidiaries of German MNCs operating in Malaysia. Ten respondents from German MNCs were initially targeted, but only six were involved in the focus group interview. Out of the six respondents, five respondents were directly from the manufacturing industry, and the other respondent was from the service side of the manufacturing firm of a German MNC.

Even though six of the senior management members cannot represent all the subsidiaries of German MNCs operating in Malaysia, their answers can help to understand the importance of firm performance, how knowledge transfer influences firm performance, how innovation can influence firm performance, and what other factors influenced firm performance. However, the six senior management members are from two different industries, but their concerns regarding issues and factors influencing firm performance might be similar across different industries.

There are different ways of measuring their firm performance from different perspectives. From the financial perspective, the overall firm performance is considered, where all the accounting and financial data are counted for firm performance. However, from the technical perspective, efficiency, effectiveness, and cost reduction in the department are considered in technical department performance. There are different measures of firm performance in different departments. Besides, all the senior management members agreed that the firm performance is influenced by knowledge transfer, innovation, and other factors.

In the manufacturing industry, all senior management members have different views on firm performance with different factors. Several similar factors included German parent firms transferring knowledge to their subsidiaries operating in Malaysia, and the knowledge transfer significantly influenced their firm performance. In addition, the senior management member from the service industry (COO) also mentioned that their firm performance in Malaysia is influenced by knowledge transfer from the German parent's firm.

Besides, all the senior management members also mentioned that only some knowledge is transferred from German parent firms. However, there are many knowledge transfer processes within the team or department, from the senior employees to the junior employees, which has significantly impacted the overall firm performance. The knowledge transfer within the team or from the employees helps enhance the operational processes in terms of effectiveness and efficiency.

Moreover, all six senior management members also agreed that innovation has significantly impacted the firm performance. Product innovation has the most significant

impact on their sales performance, but management or operation innovation impacts their overall firm performance. From the finance department's perspective, the Covid-19 pandemic forced the firm to allow employees to work from home. The interaction between employees has reduced, but the firm is saving money in terms of saving petrol reimbursement, electricity, tax reduction, and other office miscellaneous expenses. Working from home is the management and organizational innovation forced by the Covid-19 pandemic.

In addition, product innovation helps to increase the sales of their products and helps to improve the firm image. No matter the manufacturing or service industry, product innovation helps increase firm profits even during the Covid-19 pandemic. Two senior management members mentioned that their firm had better firm performance in 2020 compared to 2019 due to their product innovation. The other four senior management members said their firm performance was terrible in 2020 compared to 2019 and 2018. They tried to develop innovative products, but they considered them want rather than need during the Covid-19 pandemic. On the other hand, their firm is making gains as working from home helps it save tons of fixed costs such as electricity, rental, etc.

However, from the interview, many senior management members mentioned that not all employees are willing to share their knowledge and skills. This forces the firm to record all the knowledge needed to perform the tasks and allows the receiver to learn extra from the self-paced learning to enhance their skills and knowledge in the related field for improving the workflow, further improving firm performance. For the firm to have better performance, the firm allows its employees to take several hours off from work and contribute to enrolling in self-learning courses or sessions.

Besides, even though innovation improves firm performance significantly, firms need help implementing innovation in management and operational processes due to cultural issues and other related regulations and policies. Three senior management members mentioned that due to some senior employees needing to accept the change in the management and operational process, the firm has been unable to achieve its expected performance after implementing the innovation process.

Other factors or activities that might affect firm performance other than knowledge transfer and innovation are the country's economy. All six senior management members mentioned that the country's economy is the main factor that affected their firm performance, primarily due to the Covid-19 pandemic. Consumers tend to reduce their spending during the Covid-19 pandemic. Besides, government policies such as movement control order, conditional movement control order, and enhanced movement control order during the Covid-19 pandemic have influenced their firm performance.

In addition, government initiatives also serve as a factor in influencing the firm performance of the subsidiaries of German MNCs operating in Malaysia. According to MITI (2017), MIDA approved 21 manufacturing projects with German MNCs' participation worth RM2.65 billion investments. Moreover, in recognizing the importance of Industry 4.0, MITI and MIDA are aggressively leveraging on the presence of German investors or German MNCs in Malaysia that already have a strong foothold and capabilities in the space of Smart Manufacturing or Industry 4.0 technologies (MITI, 2017). Germany pioneered the concept of Industry 4.0 in European Union countries, and Germany started to set new standards around the European Union countries to ensure the smooth growth of Industry 4.0.

The sustained inflows of German investments, especially from those German MNCs like Bayer, Bosch, Osram, Siemens, etc., into Malaysia, some incorporating the latest technology and high value-added activities, reflect Malaysia's continued competitiveness for global businesses. German investors and firms have very high trust and confidence in Malaysia's business environment, despite current challenges in the global economy. Many German firms are already well established in Malaysia, and there are still more business opportunities available for German firms in various sectors in Malaysia (MITI, 2017).

In conclusion, the current firm performance of the German firms' subsidiaries in Malaysia has positively influenced knowledge transfer and innovation. Knowledge transfer is able to increase the productivity and effectiveness of the operational process, while innovation increases the sales of the products and improves the traditional workflow. However, several other factors will impact the firm performance other than knowledge transfer and innovation, which are cultural issues, the economy of the country, and the government's regulations and policies. In addition, government initiative is another factor that highly impacts the continuous investment of German firms in return for better firm performance.

1.5 Problem Statement

Knowledge transfer and innovation are critical tools in achieving better firm performance. It is very hard to determine or examine firm performance as different industries measure firm performance differently. Several factors influence the firm performance of the subsidiaries of German MNCs operating in Malaysia, such as knowledge transfer and innovation. For the firm to survive or sustain in the dynamic

business environment, many subsidiaries of German MNCs operating in Malaysia had laid off employees. According to Mariadas, Murthy, Subramaniam, Selvanathan, and Lun (2021), foreign MNCs that invested in and operated in Malaysia faced negative financial performance.

Besides, the subsidiaries of German MNCs operating in Malaysia faced bad firm performance from sales of products and poor operational management. Many firms have produced new products (product innovation). However, it does not help the firm in their performance due to poor management where production costs increase and productivity decreases. From the focus group interview, two of the six senior management members mentioned that they have better firm performance than in previous years. Four of the six senior management members reported that their firm performance was worse than in previous years.

According to Calantone, Cavusgil & Zhao (2002), innovation is the key for firms to survive in a dynamic change environment (Ortiz-Villajos & Sotoca, 2018). Innovation and firm performance relationship and knowledge transfer and firm performance relationship are frequently presented in many empirical studies worldwide. Many studies presented positive and negative implications for innovation and firm performance relationships. Furthermore, some researchers found that innovation does not influence firm performance (Birley & Westhead, 1990). However, some researchers found that innovation influences firm performance (Vermeulen, 2005). According to Li and Atuahene-Gima (2001), there is a positive relationship between innovation and firm performance. However, Vermeulen (2005) found a negative relationship between

innovation and firm performance. Hence, there is a mixed and inconclusive relationship between innovation and firm performance.

Competitive advantage is the most critical strategy many foreign MNCs use to sustain their business and operation in foreign countries (Novita & Husna, 2020). According to Ceglinski (2017), the competitive advantage becomes more complex, and the relationships between resources and firm performance get more noticeable in the markets. Foreign MNCs attained a competitive advantage from knowledge transfer and innovation as the strategy to operate in any country, but only some strategies are suitable for use. Attainment of competitive advantage is the extent to which the firm creates a defensible position over its rivals (Novita & Husna, 2020).

Besides, knowledge transfer in different countries has different impacts on firm performance. There are many studies conducted on the subsidiaries of US-based firms, Japanese-based firms, and German firms; however, there need to be more studies on firm performance with knowledge transfer and innovation as the factors. Besides, previous studies did not include cultural issues that might influence the model's accuracy, as Malaysia is a multiracial country. Employees from different cultures might perceive the efficiency of the operation process differently and/or perceive knowledge and innovation differently.

After a thorough review of previous studies, limited studies found on firm performance with knowledge transfer and innovation as factors have been conducted over the subsidiaries of German MNCs operating in Malaysia. There were many studies on foreign MNCs operating in Malaysia, but limited studies focused on knowledge transfer and innovation toward firm performance. There are many subsidiaries of German MNCs

operating in Malaysia and especially in the manufacturing industry (the manufacturing industry contributed to significant income for Malaysia). However, many manufacturing firms, especially foreign MNCs, moved out of Malaysia, but at the same time, the Malaysian government is encouraging foreign MNCs to come in for investment. This research study aimed to resolve the firm performance of German MNCs in perceptual conditions with elements including knowledge transfer, innovation, competitive advantage, and cultural intelligence.

1.6 Research Objectives

Based on the research background and problem statement explained, this research study has seven research objectives, which are:

1. To examine the relationship between knowledge transfer and the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia
2. To examine the relationship between innovation and the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia
3. To examine the mediating effect of the attainment of competitive advantage between knowledge transfer and firm performance
4. To examine the mediating effect of the competitive advantage between attainment innovation and firm performance

5. To examine the relationship between the attainment of competitive advantage and firm performance
6. To examine the moderating effect of cultural intelligence on knowledge transfer and the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia
7. To examine the moderating effect of cultural intelligence on innovation and the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia

1.7 Research Questions

From the research background and problem statement, the present study has seven research questions, which are:

1. Is knowledge transfer positively related to the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia?
2. Is innovation positively related to the attainment of competitive advantage among the subsidiaries of German MNCs operating in Malaysia?
3. Is the attainment of competitive advantage mediate the relationship between knowledge transfer and firm performance?
4. Is the attainment of competitive advantage mediate the relationship between innovation and firm performance?
5. Is the attainment of competitive advantage positively related to firm performance?