

**International Study Tour**  
**Trip to University of Southampton Malaysia**



By

Muhammet Yasir Bahcivan

Registration No: 00000363088

Supervised By

Dr. Farasat Ali Shah Bukhari

Executive MBA

NUST Business School (NBS)

National University of Sciences and Technology (NUST)

Islamabad

(2024)

# **International Study Tour**

## **Trip to University of Southampton Malaysia**



By

**Muhammet Yasir Bahcivan**

Registration No: 00000363088

**Supervised By**

Dr. Farasat Ali Shah Bukhari

Executive MBA

NUST Business School (NBS)

National University of Sciences and Technology (NUST)

Islamabad

(2024)

## BUSINESS PROJECT ACCEPTANCE CERTIFICATE

It is Certified that final copy of EMBA Business Project written by Muhammad Yasir Bahcivan Registration No. 363088 of EMBA 2K21 has been vetted by undersigned, found complete in all aspects as per NUST Statutes/Regulations/MS Policy, is free of errors, and mistakes and is accepted as fulfillment for award of EMBA degree. It is further certified that necessary amendments as pointed out by GEC members of the scholar have also been incorporated in the said business project.

Signature of Supervisor with stamp: Dr. Farasat Ali Shah Bukhari

Date: \_\_\_\_\_

*F. Ali Shah Bukhari*  
Dr. Farasat Ali Shah Bukhari  
Assistant Professor  
Finance & Investment Department  
NUST Business School, Islamabad

*Dr. M. Fawad Khan*  
DR. M. FAWAD KHAN  
Assistant Professor  
Program-Head (EMBA)  
NUST Business School, H-12, Islamabad

Programme Head Signature with stamp: Dr. Muhammad Fawad Khan

Date: \_\_\_\_\_

Signature of HoD with stamp: Mr. Saad Al Marwat

Date: \_\_\_\_\_

*SA*  
SAAD KHAN ALMARWAT  
HoD, Finance & Investments  
NUST Business School (NBS)  
Sector H- 12, Islamabad  
Tel: 051-90853150

### Countersign by

Signature (Dean/Principal): \_\_\_\_\_

Date: \_\_\_\_\_

*Dr. Naukhez Sarwar*  
Principal & Dean  
Dr. Naukhez Sarwar  
NUST Business School

12/07/24

## **AUTHOR'S DECLARATION**

I Muhammet Yasir Bahcivan, hereby state that my MS International Study Tour (IST) Report titled "Trip to University of Southampton Malaysia" is my own work and has not been submitted previously by me for taking any degree from National University of Sciences and Technology, Islamabad or anywhere else in the country/ world.

At any time if my statement is found to be incorrect even after I graduate, the university has the right to withdraw my MS degree.

Name of Student: Muhammet Yasir Bahcivan

Date: \_\_\_\_\_

## **DEDICATION**

I dedicate this study to myself for not giving up despite my health concerns.

## **ACKNOWLEDGEMENTS**

Fore mostly, I would like to acknowledge and appreciate the support of my thesis supervisor, Dr Farasat Ali Shah Bukhari, for encouraging me to continue with this topic and making sure that till the last detail of the study, everything was well-thought out and critically analyzed. Without time, advice, and guidance, I would not have been able to see it through.

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b>	<b>VIII</b>
<b>TABLE OF CONTENTS</b>	<b>IX</b>
<b>LIST OF TABLES</b>	<b>X</b>
<b>LIST OF FIGURES</b>	<b>XI</b>
<b>LIST OF ABBREVIATIONS</b>	<b>XII</b>
<b>ABSTRACT</b>	<b>XIII</b>
<b>CHAPTER 1: INTRODUCTION</b>	<b>1</b>
<b>1.1 Trip to Malaysia for International Study Tour</b>	<b>2</b>
1.1.1 Malaysia	3
1.1.2 Johor Bahru	6
<b>1.2 Sustainable Development Goals (SDGs)</b>	<b>9</b>
<b>CHAPTER 2: COURSEWORK</b>	<b>12</b>
<b>2.1 Bloomberg Terminal</b>	<b>12</b>
2.1.1 Investment Instruments	13
2.1.2 News and Insights	14
2.1.3 Analytics and Statistics	14
<b>2.1 Risk, Return and Volatility</b>	<b>16</b>
<b>2.3 The Impact of Business Education on Human Capital</b>	<b>21</b>
<b>CHAPTER 3: VISIT TO PORT OF TANJUNG PELEPAS (PTP)</b>	<b>27</b>
<b>3.1 Transshipment Ports, Markets and PTP</b>	<b>27</b>
<b>3.2 The Organization and Business</b>	<b>32</b>
3.2.1 Container Services	34
3.2.2 Free Zone Services	35
3.2.3 Maritime Services	36
<b>3.3 Future Vision</b>	<b>36</b>
<b>CHAPTER 4: CONCLUSIONS AND FUTURE RECOMMENDATION</b>	<b>39</b>
<b>REFERENCES</b>	<b>41</b>

**LIST OF TABLES**

**Page No.**

Table 3. 1.....29  
Table 3. 2.....31



## LIST OF FIGURES

	<b>Page No.</b>
Figure 1.1: Petronas Towers .....	3
Figure 1.2: Map of Malaysia.....	4
Figure 1.3: Malaysian Culture.....	5
Figure 1.4: Major Automobile Companies in Malaysia .....	6
Figure 1.5: Johar Bahru .....	7
Figure 1.6: Second Link Malaysia .....	8
Figure 2. 1: Example of Business Setup.....	15
Figure 2. 2: Market Analytics .....	19
Figure 3. 1: Singapore Port .....	30
Figure 3.2: Shipping and Containers .....	34

## LIST OF ABBREVIATIONS

AI	Artificial Intelligence
APMT	APMT Corporation
BT	Bloomberg Terminal
EMBA	Executive Master of Business and Administration
FED	Federal Reserve
HOD	Head of Department
IST	International Study Tour
MMC	MMC Corporation
NBS	NUST Business School
NUST	National University of Sciences and Technology
PTP	Pelabuhan Tanjung Pelepas/Port of Tanjung Pelepas
R&D	Research and Development
SDGs	Sustainable Development Goals
Soton	University of Southampton
TEU	Twenty-foot equivalent units
UoSM	University of Southampton Malaysia
VTMIS	Vessel Traffic Management and Information Systems

## **ABSTRACT**

The international Study Tour (IST) is an optional component of Executive MBA program. It can be opted for as a replacement of business Project, which is a compulsory part of the curriculum of the EMBA program. IST 2024 was organized to University of Southampton Malaysia, in Johor Bahru Malaysia, with the efforts of Dr. Fawad Khan, Program Head EMBA.

University of Southampton Malaysia is a branch and operating under the same roof of University of Southampton United Kingdom. Students can transfer within branches after completion of first years of their programs.

The IST 2024 consisted of mainly two parts. Students have attended courses in classrooms of University of Southampton Malaysia. Courses of different subjects are delivered to students, including one Harvard Business Review case study and Bloomberg Lab. Students have added to their knowledge by attending the courses in the fields of marketing, artificial intelligence, volatility in financial market investment instruments and emerging technologies. Through the case study, students have sharpened their analytical and critical thinking, within the context of holistic thinking and achieving strategic objectives. Students also familiarized themselves with the capabilities and uses of Bloomberg Terminal, worlds one of the biggest real time databases for all sorts of economic and financial activities and indexes.

Students had a wonderful opportunity to enhance their networks with many faculty members of UoSM, each of which are from different fields, with different experiences,

even some of them having switched from different industries to academia. Students also had opportunities to interact and network with students of UoSM Business School. Students even connected within themselves with each other, making use of the different and energizing environment they have found themselves in, since the IST brought together students of different batches together.

Second part of IST was an industry visit to Pelabuhan Tanjung Pelepas Sdn Bhd (PTP), a transshipment port located in the same city as the university, Johor Bahru. Company officials guided students on a tour, explained the business volume and logistics volume in different aspects and numbers, revealed insider insight to the operations, regulations, stakeholders and business partners, as well as the strategic stance and importance of the port, with respect to Malaysian economy and international impacts.

Students have added to their conceptual and practical knowledge through these classes, case studies, labs and industry visits, which led to the outcome of reinforcement of their entire learnings with synthesis of a new economical environment and market, taking in account the dynamics of local cultures and human, as a consequential outcome of that culture. Exposure to a new economy and environment also led students to sharpen their analytical and critical skills, since habitually all new learnings are compared to the environment in Pakistan economy and industry.

**Keywords: International Study Tour, Johor Bahru, University of Southampton Malaysia, Marketing, Artificial Intelligence, Bloomberg Terminal, Investment Instruments, Emerging Technologies, Industry Visit, Pelabuhan Tanjung Pelepas Sdn Bhd (PTP), Pakistan, Transshipment.**

## **CHAPTER 1: INTRODUCTION**

Learning, in simple words, is the process of acquiring new knowledge, skills and abilities. Learning can happen in a classroom environment between a teacher and students. But if this was enough, every student in history would end up learning everything that was told to them and every student in history would become geniuses, inventors or founders. Since one method is not enough for learning, many more methods of learning and teaching arose in time. Student-centric approach in learning and learning approach by doing are the most contemporary progressive methods to learning. These two emerge to replace or reinforce classical classroom learning and ultimately consolidate the learnings of desired outcomes.

Learning is a continuous process and as said above, it is not limited to a specific learning environment. Within the context of business education, fundamentals are learned in school but it can be argued that most of the learnings happen outside of classroom, in corporate professional life, to be more precise. But even if most of the learnings happen in professional life, without a doubt, classrooms and academia are in many cases the place where knowledge is produced. It is important to reinforce classroom learnings with realities and dynamics of industries. Fundamental learnings in classrooms can be considered as main ingredients, which will eventually be shaped by the realities of industries. However, this is a two-way street. Even when in professional life, one can refer to academia for advancement, improvement and solutions to challenges.

Business Project of EMBA program urges students to analyze a business within an industry with a perfectionist lens. Students are expected to identify a problem or a challenge, or even maybe a strategic innovation or change to develop and formulate a solution where the particular business can make use of it by either overcoming a challenge successfully or suggest the business a premise where it can strengthen their growths, explore new markets or dimensions, which may or may not eventually lead to strategic redirection. The business project must be suitable, feasible, profitable -by either increasing revenue or decreasing costs, which would be the case even in only making things more

efficient and effective- and sustainable. Having mentioned sustainability, a larger vision to the premise is involved. Subject of the business project should ideally not be in the nature of a one-shot initiative, but a temporary implementation. Hence, business projects, if evaluated correctly, are actually in a nature of training for the students, where they can implement their classroom learnings to something real. There may or may not be an impact or implementation in the business, but having a look to the business with the learnings has still a lot of outcome for the students, since they will face constraints of professional life, corporate culture and industry realities, as well as soft challenges such as stakeholders' resistance, adoption and adaptation.

IST, that can be opted by student instead of Business Project has ultimately the same objective, which is to lead students to use their classroom learnings in industry. Students not only have further attended classes in the hosting university and added to their knowledge, but also visited port Pelabuhan Tanjung Pelepas Sdn Bhd (PTP), a transshipment, located in the same city. Students have been given detailed information and explanation of the port within the context of regional logistics, national economy and logistics operations know how and challenges. The strategic vision of the port was also explained to students which made the entire set of information more compact, allowing students to envision a bigger picture on their comprehensions.

### **1.1 Trip to Malaysia for International Study Tour**

The trip IST was planned for dates 15.01.2024 to 18.01.2024, by representatives of two universities and approvals respective authorities. 19 EMBA students from batches 2k19, 2k20, 2K21 and 2K22 have participated in IST, with the supervision of Dr Fawad Khan, Program Head EMBA. Students have made their own arrangements for their travels and accommodations. Some have arrived earlier than kick off dates and have taken the opportunity to explore Malaysia the city of Johor Bahru and the culture before the IST program officially started. Some students have even visited other countries prior the commencement of the program.

### 1.1.1 *Malaysia*

Malaysia was a very exciting individual discovery for many of the students, since it is not often spoken of like other popular countries. Even as compared to other countries in that region, it has a unique environment that comes to eye. Different ethnicities are living together in perfect harmony and peace, with close to no controversy that comes from ethnic differences. When looked a little deeper, it becomes even more interesting, learning how different their state is structured and the history behind it.

Malaysia came into existence in 1963 through agreements and union of several states and ethnicities under one roof, in a federative state structure. In 1957, these states have started to gain their independence from British rule, just like India and Pakistan



**Figure 1.1:** Petronas Towers

around a decade earlier. In time, these states have formed a federal state to stand stronger in external affairs against other countries. Singapore, being one of these states, was expelled from this union in 1965. And today, 13 states and 3 federal regions are the components of Malaysia in terms of politics and administration. Kuala Lumpur is the national capital and the residence of legislative branch of the government, where the Senate

and House of Representatives are located. Putrajaya is the administrative center of Malaysia, housing executive branch of the state. Malaysia's form of administration is federal constitutional monarchy. A king is elected every five years among the 9 sultans, and the assemblies are restricting the powers of the King through their legit powers and entitlements. This information about Malaysia themselves are illuminating for students, without even considering the educative content of IST.

a. Geography

Malaysia consists of two main islands, Eastern Malaysia and Western Malaysia. Eastern Malaysia is located in an island that is mostly ruled by Indonesia.



**Figure 1.2:** Map of Malaysia

It has a different time zone than Western Malaysia, which is in form of a peninsula, connected and neighbouring to Thailand with a narrow piece of land to the north of it. Malaysia's land consists of forests by 61%, of agricultural lands by 30% and residential and commercial use by the remaining 9% percent. It has only one season which is summer.

Considering the latitude and location with respect to sea and ocean, it is humid throughout the year, which also means the span of temperature is not very broad.



Temperature throughout the year changes from 22-35 Celsius degrees. Malaysia has a land totalling 330.800km<sup>2</sup>, less than half of Pakistan's area.

#### b. Demography, Ethnography, Religion and Languages

Demography of Malaysia is a combination of Malay by 69%, Chinese by 23% and Indian by 6% and less than 1% by other ethnicities (Lim, 2022).



**Figure 1.3:** Malaysian Culture

Malay is the native and official language of the country and English being spoken by almost the entire population, can be unofficially considered as a second language. However, different native minorities and indigenous groups have their own native languages within themselves, in a comparable way to the ethnicities in Pakistan. The official religion of the country is Islam.

Different minorities, however, have their own beliefs as well under legal status. Despite being an Islamic country, consumption of Islamically unlawful goods such as pork, alcohol and several marine products are officially legal. Estimated population today according to US official sources is 33.2 million, ranking 43<sup>rd</sup> in the world (CIA Factbook, 2024). Malaysia's total area is 330.800km<sup>2</sup>, less than half of Pakistan's soil (CIA Factbook, 2024).

### c. Economy

Malaysia has the world's biggest 31st economy with respect to GDP nominal (CIA Factbook, 2024b). The economy is performing well and stable in terms of inflation, unemployment and foreign currency reserves (World Bank, 2024a). More than half of the economy consists of the service sector, more than one third consists of industrial sector. Despite more than 30% of the lands are in agricultural status, agriculture sector contributes less than 9% to the economy (Malaysia Madani, 202). Malaysia is the second highest high-tech exporter in the region, after Singapore (World Bank, 2024b). The car manufacturers without a doubt play a significant role in this statistic.



**Figure 1.4:** Major Automobile Companies in Malaysia

The emergence of COVID-19 has significantly damaged tourism industry within service sector starting from 2019 and is still yet to reach its pre-pandemic performance.

#### 1.1.2 *Johor Bahru*

Johor Bahru is the capital of state Johor, one of the 13 states of Malaysia. The city borders to Singapore, has the second largest economy in the country, mainly through service and logistics industry (World Bank, 2024c). The city is home to the Port of Tanjung Pelapas, one of the world's busiest container ports, ranking 15<sup>th</sup>, despite Port of Singapore's presence in the region, which is the world's 2<sup>nd</sup> busiest container port (Lloyd's List, 2023). Due to the close location to Singapore, a trade hub, the Johor Bahru positions itself within the special economic zone, formed in 2006. Special economic zones have different laws and regulations for trade, than the rest of the country, due to the opportunities and requirements in the region (Lloyd's List, 2023).



**Figure 1.5:** Johar Bahru

Within a context of Singapore and Johor Bahru, Johor Bahru is very similar to Rawalpindi, within to context of twin cities. Due to the high cost of living in Singapore, many who have the opportunity, work in Singapore but live in Malaysia, namely in Johor Bahru. This situation can also be interpreted from the reverse angle; many Malaysian living in Johor Bahru prefer to work in Singapore due to higher payrolls. Either way, people crossing the border daily or weekly, make Johor Bahru and Singapore the world's busiest

international crossing point. 1.13 million residents of Johor Bahru preferred to work in Singapore in year 2022 (The Strait Times, 2023).

### *University of Southampton Malaysia*

University of Southampton Malaysia (UoSM) is one of the seven branches,



**Figure 1.6:** Second Link Malaysia

University of Southampton (Soton) located in United Kingdom. It is the only international branch of Soton. The UoSM offers undergraduate and graduate programs in four schools; computer science, electrical and electronic engineering, mechanical engineering and aeronautics and astronautics, and business. Engineering labs are equipped with high-tech tools and devices, that allow students to master their experiments and research. Business school offers programs in fields of management, marketing, finance and economics. Business school has many international faculties from various countries and backgrounds. This way, students are naturally exposed to different cultures and ways of thinking. Being a branch of Soton, UoSM students have the possibility to transfer to other branches of Soton as well, under different conditions.

Soton, including UoSM, has a QS ranking of 81 in the world (QS Top Universities, 2024). According to UoSM faculty, the university is part of “educity”, an educational initiative consisting of 9 different foreign universities, which was incentivized by Malaysian government to attract investments in education. However, no credible source for this information was found in written. Without a doubt, UoSM is an excellent choice for students who wish to have a quality education with approaches of the west under an influential network.

## **1.2 Sustainable Development Goals (SDGs)**

The United Nations have established the Sustainable Development Goals (SDGs), with the aim of bringing peace and prosperity to the world. The SDGs have a total of 17 main objectives, covering a wide scope of challenges in areas including ecology, climate and humanity. The 17 objectives are:

1. No Poverty: end poverty for everyone and everywhere
2. Zero Hunger: end starvation and hunger, promote sustainable agriculture and food security
3. Good Health and Well-being: Promote well-being for everyone, everywhere and at all ages and ensure healthy lives
4. Quality Education: promote consistent and lifelong learning opportunities and ensure quality, equitable and inclusive education
5. Gender Equality: Achieve and maintain gender equality and empower all girls and women
6. Clean Water and Sanitation: ensure clean water and sanitation is accessible and sustainable
7. Affordable and Clean Energy: Ensure access to sustainable, reliable, affordable and modern energy for everyone
8. Decent Work and Economic Growth: Promote inclusive, sustained, and sustainable economic growth, productive and stable employment, and decent work for everyone

9. Industry, Innovation, and Infrastructure: Build lasting infrastructure, promote sustainable and inclusive industrialization, and foster room for innovation
10. Reduced Inequality: Reduce inequality everywhere for everyone
11. Sustainable Cities and Communities: Make cities and human settlements are safe, resilient, inclusive, and sustainable.
12. Responsible Consumption and Production: Ensure production and consumption patterns are sustainable
13. Climate Action: take immediate action to fight climate change with its impacts.
14. Life Below Water: preserve the use of seas, the oceans, and marine resources, ensure sustainability
15. Life on Land: Protect, promote, and restore sustainable use of terrestrial ecosystems, manage forests, fight desertification, and challenge biodiversity loss.
16. Peace, Justice, and Strong Institutions: Promote inclusive and peaceful societies, ensure justice for everyone, and build accountable, reliable and effective, institutions at all levels.
17. Partnerships for the Goals: reinforce the means and instruments of implementation, regenerate partnership in consistence for sustainable development.

SDGs aim to transform our world starting from today, for a better tomorrow, with specific calls to action. It aims preserving and protecting our planet in an environmental context, both in land and water, and clean energy for environmental sustainability. It also addresses the concerns of climate change for the same purpose. For humanity aspect, poverty, hunger, quality education, health and well-being, sanitation and access to clean water, gender equality and general equality matters are addressed.

As part of IST, a trip was conducted to Pelabuhan Tanjung Pelepas (PTP), a transshipment port, operating in the city of Johor Bahru. Students were given insight to the operations, regulations, stakeholders and business partners, as well as the strategic stance and importance of the port, with respect to Malaysian economy and international impacts. Based on the insight and information provided by the port officials to students, it can be

said that PTP is doing a good job with aligning their operations and policies with some objectives of the SDGs.

PTP are currently operating on a quay that is 5 km long. Among their plans is to increase the quay length to 20kilometers within ten years of time. This timeline may be exceeding the target of 2030, by United Nations. Yet, the increase will be implemented gradually and hence it is safe to say that PTP will have a significant sustainable growth by 2030. This plan aligns with the 8th and 9th objectives of the SDGs, that are decent work and economic growth, and industry, innovation and infrastructure, respectively.

PTP have already started their transition from oil powered equipment to electricity powered equipment, to increase their carbon footprint. They have started with their cranes which are in total 228. The number of electricity powered cranes were not shared by the official, yet the estimate was around 30. This transformation aligns with and promotes the objectives of affordable and clean energy, as well as addressing climate change actions, in an indirect way.

Lastly, PTP attach a big value on their employees, so much that their employees are called “their people”. It is also embedded in their corporate values. Within this value, PTP pay a separate attention to women employment and empowerment. Despite being a difficult industry, they tend to take opportunities to hire women in suitable roles. In this frame, 150 prime movers out of 484 are operated and driven by women. Clearly, there is a consistence between the corporate values and their practices. Furthermore, these prime movers are also coloured in pink, to go beyond employing and empowering women, but also motivating and promoting gender equality. Further details about PTP will be provided in the coming chapters.

## **CHAPTER 2: COURSEWORK**

Students have attended several courses on the first, second and fourth day of the IST. The first course was about “Emerging Global Technologies and Trends”. Students were briefed about the recent approaches and studies, both in academia and industry. Second course was “Green Business School and Sustainable Development”, where students were lectured about the differences between courses in business schools and realities of professional life. Students were explained emerging concepts in detail, regarding how to cope with the challenge on incompatibility. Following the second course, a case study was studied, where Netflix had to make a strategic decision regarding remaining an ad-free platform, as their positioning in the market. On the following day, students had a lab-work in Bloomberg Terminal, regarding markets and investment instruments. This will be discussed in detail in this chapter. Fifth session and third class was a lecture about the concept of volatility, its function in decision making and its impact on instrument market performances. This course will be discussed in detail in this chapter. Last session of the IST was a panel, where speakers from UoSM have delivered insights, experiences, challenges and approaches towards corporate world, under the topic of “The Impact of Business Education on Human Capital Development”. This panel will be discussed in detail in this chapter.

### **2.1 Bloomberg Terminal**

Bloomberg Terminal (BT) is a software system that stores data of investment instruments, economy and indexes and provides it to their users in a large scale and detail. The type and span of data is much larger and will be elaborated in this chapter. Precious metals, commodities, forex, oil, real estate, bonds, stocks, funds, mutual funds, annuities, digital assets, cryptocurrencies of different countries, different stock exchanges, governments, banks projects (in the case of cryptocurrencies) are stored and provided to the users. In a macro perspective, all these and other investment instruments are interrelated to each other, since one unit of money can buy only one of these instruments, which means the demand for one instrument will increase and result in increase of the value or market



price. Whilst price of one increases, other instruments are either remaining stable or decreasing in price or value. Considering these are only types of investment instruments and there are endless choices in all of these instruments, understanding the market and performances of specific instruments and forecasting their prospective value for making a purchase decision becomes much more complex. BT provides all these data to their users and makes it easier for them to access data and hence make investment decisions. Each instrument and market have their own players, issuers, markets and other dynamic.

Mostly, a story or narrative plays a big role on macro level to forecast or even impact different instruments. For example, when FED increases the interest rate, investors are preferring saving accounts with high interest yields on their principal (equity invested) amount. Or at times of economic crisis or recessions, investors and individuals prefer precious metals due to lower risk and uncertainty. Data of a market itself is not enough to make investment decisions. News, analytics, statistics and insights are also provided to the users to support their decision making.

As explained, BT provides data, news, analytics and insight of investment instruments, indexes, markets, companies, countries, importers and exporters. All these have their own importance and relative significance. These will be explained in detail, starting with investment instruments.

### *2.1.1 Investment Instruments*

Precious Metals such as gold, silver and metals are traded in different markets across the world. In the example of Gold, it has always been a store of value throughout the history, regardless of civilization and geography. For this reason, it is considered as a safe haven for investors and individuals to preserve the value of their savings and investments.

Commodities is another investment instrument where investors can buy agricultural commodities, oil and gas or other commodities, depending on events happening in a country or in the world. In an example where rice production of the world decreases significantly, demand to rice would stay constant whereas supply would decrease. In this

exemplary case, rice value would increase dramatically and would earn a good return to its investors.

Stocks are certificates that mean partial ownership in companies that issue the stock. In an abundant economy where interest rates are low, guaranteed returns are less and consumption high, many sectors would perform well on sales and finances. This drives investors and individuals to invest in stocks. Mainly, uncertainty or insufficient returns of other instruments can drive investors towards stock markets. Of course, same is the case vice versa, as explained above.

Bonds are debt certificates issued by companies or governments, with less risk and more stable returns. When economy is instable and too risky, bonds become a good option for investors.

### *2.1.2 News and Insights*

News on macro level, from governments, regulatory bodies or companies themselves critically shape the market performances of instruments. For example, governments changing regulation for agricultural lands for construction permissions will have a positive impact on lands and real estate indexes. In this case, along with the index, stocks of construction and cement companies will also be positively impacted. Furthermore, agricultural lands' decrease would result in increase of commodity index, since supply can be expected to decrease. Russia-Ukraine war and Israel-Palestine massacre had different impacts on oil and gas prices.

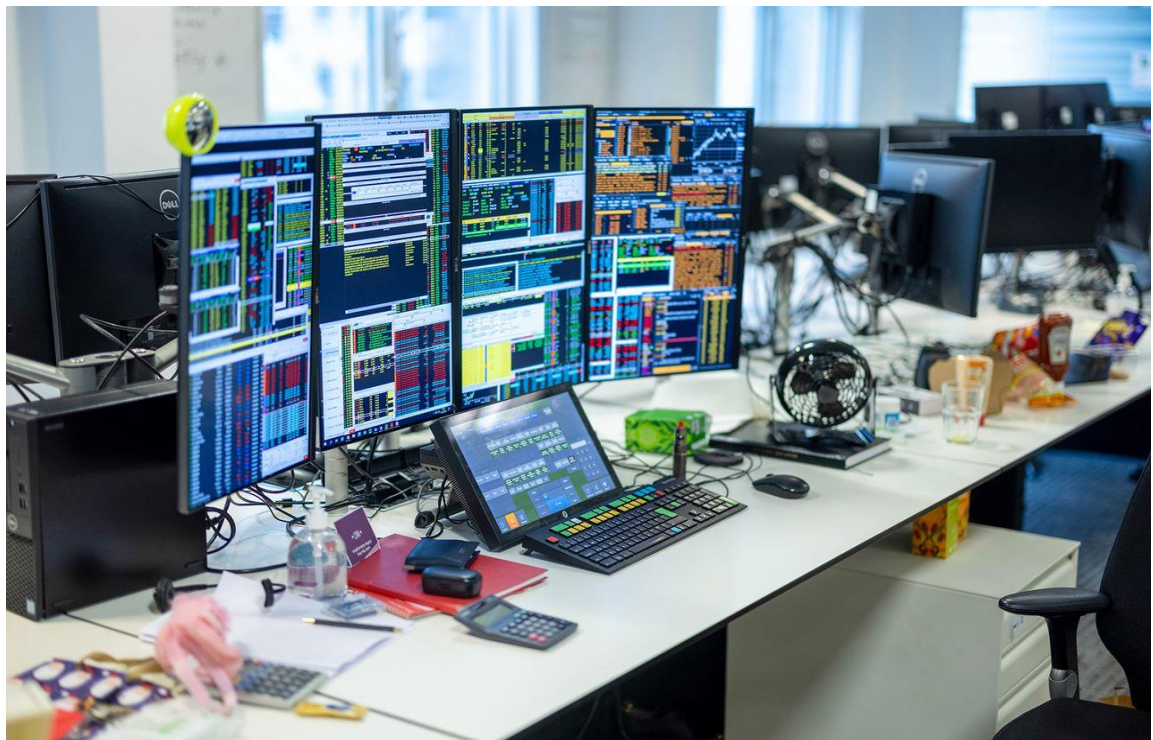
News, as can be seen, have big impacts on all instruments and hence are very important. BT provides real-time news and insights for each instruments regularly to their users, so that users are more informed. Insights are a processed outcome of fundamental analysis, technical analysis, news, analysis within the same market and with respect to other instrument markets.

### *2.1.3 Analytics and Statistics*

BT allows users to make their own analysis, comparative analysis, forecasts and estimations through data provision and templates. There are mainly two types of analysis where all other metrics can be grouped into; fundamental and technical analysis.

Fundamental analysis evaluates instruments by analyzing factors such as financial statements, earnings growth, revenue trends, market position and relative competition, competitors and market dynamics, macroeconomic, from a perspective that affects their intrinsic values. In simple words, this analysis tells a user what to buy among all the choices.

Technical analysis evaluates instruments based on the assumption of the historical data for the instrument to be meaningful with respect to forecasting and estimation of the instruments market value. This analysis takes into account historical prices, price patterns, volume analysis intra and inter-market of the instrument. These data are analysed through models and patterns, which then provides a meaningful outcome.



**Figure 2. 1: Example of Business Setup**

Candlesticks, price patterns, Fibonacci, moving averages, resistance and support points, momentum indicators and many other patterns and models are used to explain data

and turn it into meaningful outcomes. Technical analysis, in simple words, tells when to buy and when to sell an instrument.

As can be seen in the image above, users can display data, analysis, news or insights at the same time on multiple screens, gather information for their consumption, process these information as per their strategy and make their own best decisions. Since different investors have different strategies, all users eventually have to make their own analysis and decisions. BT, along with their own insights and analysis, are providing data from other analysts as well. JP Morgan, Moody's, Barclays, Bank of America and many other financial institutions regularly publish analysis and insights to public, their investors or subscribers. But none of these, including BT itself, do not urge an investor to invest in a specific instrument. All they do is process a big amount of data, refine a meaningful conclusion expressed in words but supported with numbers, and present it to their audiences' and users' considerations.

BT provides data, news, analysis and insights for imports, exports and volumes, broken down sector by sector, between and for each country as well. This alone can too be a very critical information in specific circumstances.

Bloomberg Terminal is currently one of the best databases in the world. Subscription fee for BT is annually USD 24.000, which can also be paid monthly.

BT's biggest competitor in the market, S&P Global has the same subscription fee.

## **2.1 Risk, Return and Volatility**

One course within the coursework for students in IST was the volatility lecture after Bloomberg Terminal lab session. Students have revisited the definition of volatility, why it is important, how it should be understood or interpreted, and most importantly, how it is calculated. Few models for calculating volatility are explained to students briefly. Among those, GARCH model is explained in detail, in a way that students can make their own calculations.

One of the very important metrics in technical analysis for any investment instrument is the volatility metrics. Volatility is the average deviation of in investment instrument,

from its median price, within the lowest and highest price range, within a specific period of time.

For a better understanding of volatility, getting familiar with few terms and metrics can be helpful.

**Book Value/Price:** the price of an asset or instrument based on its cost, or values added, regardless of its market price

**Market price:** the value of an instrument on which trade transaction is performed

**Closing price:** the market price of an instrument on which last trade of a day was performed, before market closes for that day

**52-week low:** the lowest market price an instrument was traded on, within 52 weeks

**52 weeks high:** the highest market price an instrument was traded on, within 52 weeks

Volatility in other words is, how low and how high the market price of an instrument can be, within a specified time period. Evaluating and interpreting volatility metrics will be explained later in this chapter.

Current volatility rate can be seen by looking at the recorded historical data of an instrument. This is generally expressed in Beta ratio. 1 value in Beta is considered as neutral, any value above is considered high volatile and any value below 1 is considered low volatile. Low volatility means the instrument will not fluctuate in a large range of prices, hence it can be said that the price will not decrease drastically. However, low volatility also means that price will not rise significantly. Briefly, an instrument with low volatility carries low risk, but the expected return on investment is equally low. Hence, instruments with low volatility is a good option for those who aren't well informed about the market or is not sufficiently financially literate. Low volatile instruments can also be preferred to have a seat belt, in case other high volatile instruments shrink.

Forecasting future volatility is the next level of analysis before making a decision towards an instrument. An instrument maybe less volatile and less risky, but will it remain the same tomorrow? Few approaches help users forecast future volatility.

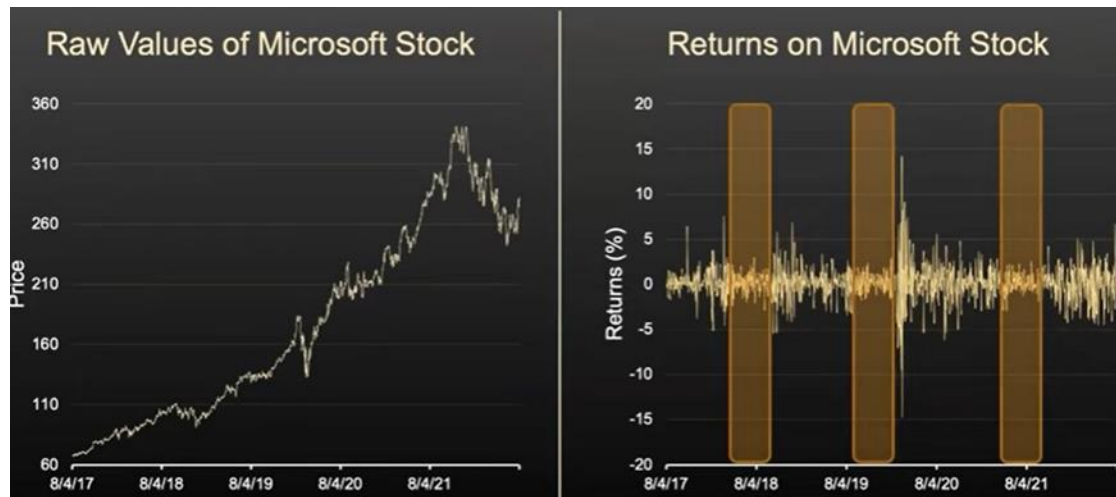
Implied volatility (Sigma) is metric that is used to predict future volatility of options (a type of instrument). Based on predictive factors or narratives, the market estimates a downfall or a rise in the price of an option for future trades. These predictions become a metrics and can tell about the price of the options in the future.

Realized volatility is another method to estimate future volatility, based on finding out repeating patterns of historical data. However, market narrative can always go in a different direction.

Before explaining the final model for estimation of future volatility, reliability of these models also need to be considered. Implied volatility is based on option prices set by traders for future transactions. However, dynamics or narratives in the market may change. Despite having options traded and future volatility is estimated, market prices of the asset may change due to several reasons. A competitor may go bankrupt, or, in the case of a company with low current assets and high bank loans, increase in interest rates may significantly change the market price of that instrument. Hence, the realized volatility may differ from the estimated one. Same is the case for realized volatility model. Patterns do not always repeat themselves. Global conflicts, pandemics, dollarization, local interest rates are always the game changer for market prices, performances and hence volatilities.

The last approach to estimating future volatility is one of the econometrics models, GARCH model. GARCH stands for the General Autoregressive Heteroskedasticity and is a model of econometry, that can also be used to estimate future volatility of an instrument. Heteroskedasticity describes how irregular the variation patterns are, of a certain variable, in this case, of an instruments price. As mentioned above, the patterns do not always repeat. This term focuses on the irregularities of these patterns. Heteroscedasticity simply means the variance that changes, is not unconditional, but conditional. GARCH model for forecasting volatility uses returns, rather than closing prices. Reason for this is that closing

prices cannot always be modelled in patterns. In fact, they mostly cannot be modelled in a meaningful way. But returns on an instrument can be modelled in percentage terms.



**Figure 2. 2:** Market Analytics

As seen, price of the instrument in in units and it is given for a span of 5 years. The variable (price) changes from around 70 to around 280, with a lot of ups and downs. Considering a time span of 52 weeks would show much more fluctuations within a narrower range of values. Both, in larger time span and narrower time span, modelling the changes is not meaningfully possible.

However, on the right side of the image, the changes in returns are expressed in percentages. The percentile values mostly change within a range of around -5 to around +5. Expressing the returns in percentages, as can be seen, makes the changes much more suitable for modelling, processing and interpreting, for the ultimate objective of estimating future volatility, in order to find out to risk and expectable returns on the instrument.

Having established this logic, returns for the instrument for an entire selected time span is required to start computing the GARCH model. The returns for everyday within a time span is called time series. Volatility for one day may not be a very meaningful data, so mostly calculations are made for at least one year. However, this may always be different in line with the risk appetite and strategy of the investors. For one year, the returns of the instrument are recorded on excel, vertically. These data can be exported from databases like Bloomberg Terminal, S&P Global IQ, investing.com, interactive brokers, Bank of

America and other brokers or databases, and inserted into an excel spreadsheet. Next, this time series is input into an application called Microfit. Microfit runs and estimates the model and plots conditional volatility. Postestimation test of the model gives us the final value for estimated volatility.

In case where investors want to forecast volatilities of multiple variables(instruments), GARCH model deviates into MGARCH model, which is basically Multivariate GARCH model. As explained above, investors tend to compare different instruments to make a better decision. MGARCH functions in a similar way and gives us volatility forecasts for multiple instruments. In today's world of technology, there are many software running models, including GARCH and MGARCH, in an automated and computed way. Some databases even provide these analysis themselves, without any additional need of the investor or user. SPSS, Microfit, Microsoft Excel are some tools and applications that can help investors estimate future volatility.

Mainly, there are two major strategies for investors for returns and gains. Some investors prefer short term returns whereas others prefer long term returns. Long term returns require longer times and investors with this strategy are not in a rush and mostly do not have to take larger risks. Long term investors mostly are not likely to take risks, since there is no urgency. The risk appetite is very low. Such investors prefer less volatile instruments, with lesser returns on investment. One popular example is, investing USD 1.000.000 in savings accounts with a monthly return of 1%. This would make USD 10.000 in one month. This is also called smart money, less likely to lose, and highly likely to win, not much, but still win. On the other hand, for an investor with a budget of USD 10.000, a return of USD 10.000 would mean 100% return. Since there is no bank that returns 100% in one-month period, this investor would seek instrument with possibilities of higher return, with the cost of higher risk. For such investors and short-term investors, highly volatile instruments such as futures, options, derivatives, cryptocurrencies are better choices.

Volatility does neither mean bad nor good. It all depends on the strategy of the investors. With a high amount of investment and no urgency, an investor can opt for less volatile, less risky and lesser returns, which would be low in percentage, but higher in amount, due to the high amount of initial investment. An investor with a limited budget however desires sooner returns in satisfactory amounts.



Investors and individuals, to be on the safer side, should avoid investing their entire savings into instruments with higher volatility. A basket of instruments with a mixture of less volatile instruments, to avoid dramatic losses if things go wrong, and more volatile instruments with higher expected return can be preferred.

### **2.3 The Impact of Business Education on Human Capital**

Students lastly have attended a panel where business education was linked to the human capital needs in corporate life, or real life. Panel members were;

- Prof Dr Chew Ging Lee, Head of Southampton Malaysia Business School
- Assoc Prof Dr Jo-Han Ng, Head of Research, University of Southampton Malaysia
- Assoc Prof Dr Varun Thangamani, Associate Professor in Aeronautics & Astronautics

Each of the panel members evaluated business education from different perspectives, through their own experiences in professional life. However, majority of the panel revolved around artificial intelligence, from various aspects.

Academia, corporate world, regulatory government bodies and societies are inseparable from each other. Interchangeably, they pave the way for the others. Academia started with the ancient philosophers, where science and philosophy was meant the same thing. With contributions of different philosophers, logic, logical thinking and concepts in different fields were established. When Avicenna first started studying herbology and medicine, he started producing healing and curing mixtures for society's members in need of health. Next was the commercialization of his products and services. In this example, no official regulation was in place. The interaction started from academia and reached the society as a service, and ended as a commercial offering.

In another example, with the rise of social media and communication technologies, entrepreneurs have successfully identified the demand of the society for online dating apps. This interaction first started in corporate world, reached the society and regulators have followed the emergence. Academia was the last to show existence in this field.

Legal affairs can be said to be the almost only thing where regulators trigger businesses to start innovating and developing. Hence, it is safe to say regulators are always the last to follow what is happening.

Interactions, or businesses, almost always start with demand of the society, responded by corporate world. There are cases as well, where businesses create their own demand, where it initially doesn't actually exist.

Academia however, can be initiating, as explained in the first example, but also always follows what is happening. Society is studied and identified correctly by academia and many businesses benefit from social studies in order to know their audiences and markets. STEM studies are always illuminating for industries when it comes to their own researches and developments (R&D).

When it comes to business education, it is shaping businesses with basis for innovations, structuring theories for practices in scientific paradigms. However, business education is also shaped by society and corporate realities. Marine studies, aquaculture studies and horticulture studies can be expected to be more developed in coastal cities, where business volume, demand and opportunities are higher. In cities where industrialization is developed, we can expect engineering and in general STEM studies to be advanced. Academia studies what makes the society busy, what businesses are doing and what businesses can do. These are not ultimate goals of academia, but the impacts of academia.

Business education does not only feed the industry and society with concepts and innovations, but also grows individuals for businesses. Academia brings up future leaders, as well as future experts in various fields. In a business where one group of laborers mine metals and another group processes the metals into shapes or tools, an expert is required to market and sell these. This business can operate well. But a manager or leader with a good business education can improve the efficiency and effectiveness of this business. The manager can invest in safety and lighting equipment, hire one more group of laborers, initialize a night shift and double the production of their products. Further investment can be made to acquire machinery to increase mining and production within the same time

span. A warehouse can be built to store finished good for opportunities of sales in big volumes. An investor can be attracted and found to expand with another mine. Finance experts can be hired to increase cost efficiency and tax efficiency. A procurement expert can be hired to benefit from experience curve. Chemists can be hired to process the metals further with chemicals, to decrease health-harming effects, if any. A lawyer can be hired to make sure the business operates within legal context, to avoid any lawsuits, which would eventually harm the business. Health benefits can be given to employees to assure employees remain healthy. Human resources experts can be hired to regulate operating procedures, employees' rights and the best interest of the business. Financial and social benefits can be introduced to retain skillful human assets. Marketing experts can be hired to make sure the right audience is addressed with the right message, for the right objectives.

Multilingual managers can be hired to expand the business in other countries. An engineer can be hired to develop new products with the same raw materials. One manager can dramatically change the scale and scope of any business in the right place and time. Furthermore, almost all additional hiring after the manager require business education in general, and specialization in one branch of business education. In today's world, for businesses, management employees are as essential as the employees who are actually mining the metals and manufacturing the products. In fact, even further, businesses with only managers can somehow manage to survive, but business with no managers cannot survive.

Business education studies the corporate world, conceptualizes the existing practices. Corporate world has almost always been the driving force before academia, society and regulations. Because the ultimate objective is to make profit and maximize shareholder's wealth. There is no stronger motivation and incentive than money.

Through both driving the business and studying what they are doing -mostly what is done by individuals with business education-, business education is plays a crucial role in today's business world, as well as in the future of the business world. It can be said that business schools are factories that produce experts, leaders and managers of tomorrow. Business education is reinforced with connections to businesses. Lots of case studies,

simulations, internships and credited employments are methods where students can link their classroom learnings with experiences of business world. Students are urged to acquire the fundamental concepts in business fields like management, leadership, human resources, accounting and finance, marketing and sales, information systems, procurement and sourcing, manufacturing, economics, trade and international trade. Students also are taught concepts in fields that are significantly or somewhat related to business education such as econometrics, statistics, analytics and law. With these learnings, with the help of carefully designed curriculums and assessments, students are urged to take their learnings beyond memory games of concepts, and are encouraged to sharpen their analytical and critical thinking skills. At this steps, concepts of entrepreneurship, innovation, foundations and changes and problem-solving approaches are further incorporated into the curriculums.

Eventually, students build their own careers in line with their individual tendencies, skills, gifts and plans. There are many educative and entertaining videos on social media for career counselling purposes, where they suggest and explain personalities matter as much as skills, when it comes to choosing a career path. In the example of two individuals with equal problem solving skills, the extrovert one chooses to be a manager, where the introvert one chooses to be a software engineer. Of course these are only social media contents and no academic studies, but the main idea is arguably true. Personality is very important for specialization.

Education in general, as well as business education is not as it used to be in the past and has been evolving a lot. Many years ago, students had to do their researches in libraries, skimming through multiple books, and reading through significant parts of the books. Similarly, at times where there were no calculators, students had to do their calculations with their minds. With the advancement of technology, students can do most part of their researches on search engines, digital libraries, thesis hubs, electronic books, soft copies of periodicals. Students, researchers and academicians publish their studies on digital platforms too, hence students can find almost everything they need. With the rise of artificial intelligence, students now don't even have to search for what they need. They only need to ask.

The AI seem to make life easier for its users, for daily life, for professional life and for education life. However, with respect to studies, knowledge and concept is not the only thing that students need to acquire. As explained above, students are urged to sharpen their analytical and critical thinking skills, on the foundation of their conceptual learnings. In many cases, students have to study situations and develop their own approaches towards solution. In such cases, the real learnings are not the concepts, but it is the ability to compare, analyze, criticize situations and formulate solutions. In other words, knowledge once acquired, it is processes by mind and presented as a combination of knowledge and process outcome. An accurate metaphor can be raw material and the value addition to it. Knowledge is the raw material and it is the value addition, the processing, what makes something a final product.

Digital tools, search engines and now artificial intelligence is, not even slowly anymore, fading away the analytical and critical thinking skills of students, if not used correctly. Students no longer make effort or push themselves to come up with ideas to overcome the challenges in their studies or business lives. Of course this is not something that business education wants. In this case students – the society- is driving the academia to reshape itself in line with what is happening. Academia now has to find a way to engage the use of artificial intelligence into the curriculums in such a way that students will still have the freedom to benefit from artificial intelligence within a predefined scope, without compromising from urging the students acquire analytical and critical thinking skills.

One member of the panel, Dr Varun Thangamani explained the current efforts by academia to regulate the use of artificial intelligence in assessments. Academia is already said to have artificial intelligence tools to detect artificial intelligence generated contents in assessments or works of students. However, considering the abilities of artificial intelligence to counter itself and find a gap to improve itself every time, it is doubtful that these tools are actually functioning as required. Nevertheless, academia will not stop its efforts to integrate the use of artificial intelligence in business education, both in curriculums and assessments and evaluations.

One valuable panel member made a worthy contribution to the discussion revolving around the use of artificial intelligence in education. Prof Dr Chew Ging Lee explained that London School of Economics still urge their students to avoid using calculators, and do their calculations by themselves. The justification for this policy is that they want to keep the minds of their students as sharp as possible. No doubt this will offer huge advantages for their students in their future careers especially with matters that require sharp mental skills, but not only knowledge.

Business education will keep on evolving in line with the progress and requirements of corporate world. Business education also will keep on driving corporate world towards new innovations, both hard and soft.

## **CHAPTER 3: VISIT TO PORT OF TANJUNG PELEPAS (PTP)**

One crucial component of the IST was a field trip to industry. The host university have made arrangements the PTP, one of the biggest transshipment ports in Malaysia, and in the region. The port is also among busiest ports in the world.

One official member of the port explained the ports' history, mission and vision, business volume and logistics volume in different aspects and numbers. Students were given insider insight to the operations, regulations, stakeholders and business partners, as well as the strategic stance and importance of the port, with respect to Malaysian economy and international impacts.

### **3.1 Transshipment Ports, Markets and PTP**

Transshipment ports are the facilities where goods are transferred before they reach their final destinations. Transshipment ports can send and receive shipments to each other, unload from other modes of transport and load to other modes of transport. Such ports are the intermediaries between various vessels like bulk carriers, small feeder vessels and container ships, also other modes of transportation like airplanes, trains and trucks.

There are several differences between transshipment ports and other ports. Transshipment ports are intermediaries between modes of transfer. Cargos are unloaded from trucks, loaded onto vessels and shipped to other transshipment ports. At the receiving transshipment port, cargos are unloaded from vessels and loaded to other modes of transfer. These modes can be trains, trucks and planes. This way, transshipment ports are playing a crucial role in global supply chain.

Another difference is that transshipment ports are mostly located on strategically critical points. They are mostly operating at key maritime hubs and major shipping routes. Consequently, the connectivity is maximized with optimal costs and higher efficiency is achieved in global transportation networks. These ports have mostly very well developed infrastructures that allows convenient connectivity and transfer between different modes of transportation.

Transshipment ports can operate with enormous numbers of vessels with their kilometers long sizes and process larger volumes of cargos. Transshipment ports, along with processing large volumes of cargos, also have highly sufficient warehousing infrastructures. These infrastructures can either be their own and also of their business partners’.

Transshipment ports have significant impacts on national and local economies. The huge infrastructure that is the basis for large operations provide employment opportunities for thousands or large numbers of individuals in the region, making a crucial contribution to the local economy. Besides, depending on the maritime routes and the extension of the supply chain in other modes of transportation, the direct and indirect contributions and impacts on national economy is even beyond measurable, considering the implicit impacts. The larger the redistribution facilities and volumes are, the more transshipment ports contribute to the economy.

The most recent statistics about transshipment ports were published in 2023, about the statistics of the year 2022. However different sources have different statistics and there has not been published any other study, since 2023 ended not a long time ago.

Transshipment ports process containers, often referred to as twenty-foot equivalent units (TEU). This port is a part of world’s busiest transshipment ports as per volumes in TEU, according to World Shipping Council (World Shipping Council, 2024).

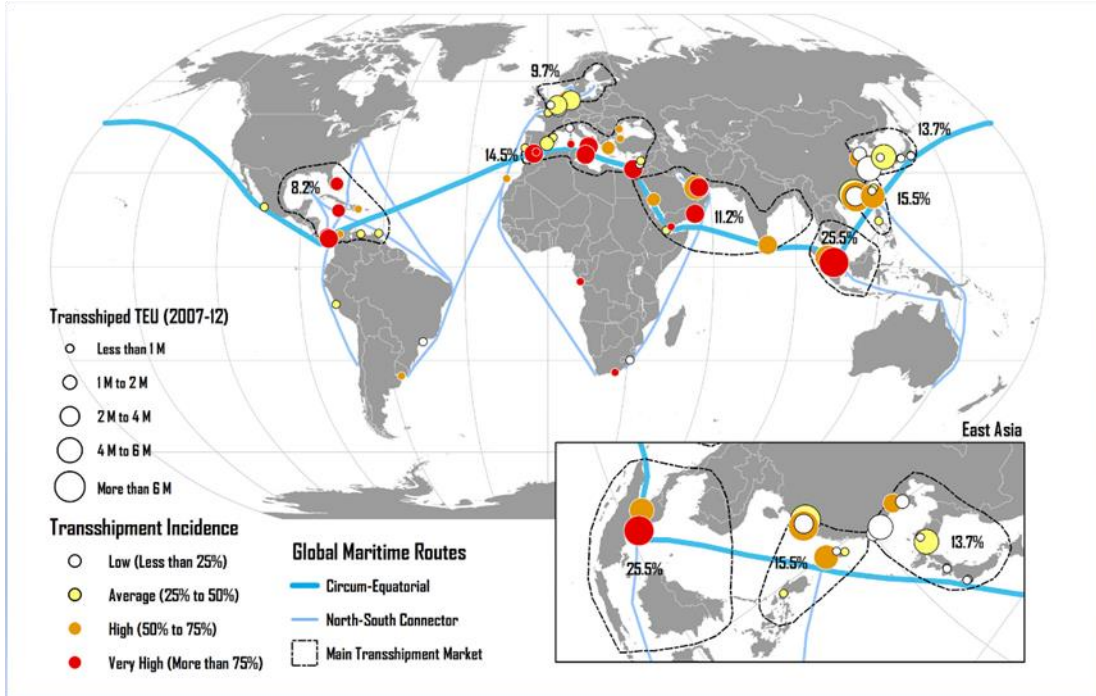


**Table 3. 1**

<b>Rank</b>	<b>Port</b>	<b>Volume (million TEUs)</b>
1	Shanghai, China	47.03
2	Singapore	37.49
3	Ningbo-Zhoushan, China	31.07
4	Shenzhen, China	28.77
5	Guangzhou Harbor, China	24.18
6	Qingdao, China	23.71
7	Busan, South Korea	22.71
8	Tianjin, China	20.27
9	Hong Kong, S.A.R, China	17.8
10	Rotterdam, The Netherlands	15.3
11	Jebel Ali, Dubai, United Arab Emirates	13.74
12	Port Klang, Malaysia	13.72
13	Xiamen, China	12.05
14	Antwerp, Belgium	12.02
15	<b>Tanjung Pelepas, Malaysia</b>	<b>11.20</b>
16	Los Angeles, U.S.A	10.68
17	Kaohsiung, Taiwan, China	9.86
18	Hamburg, Germany	8.82
19	Laem Chabang, Thailand	8.34
20	Dalian, China	3.67

As seen in the table above, PTP ranks itself on 15th position in the list of world's busiest transshipment ports. Among the top 20, China has 10 transshipment ports, South Korea, Singapore and Thailand have one transshipment port each and Malaysia - including PTP- has 2 ports. This means that 14 transshipment ports in this list are in the same region with PTP. Furthermore, Malaysia's biggest transshipment port, Port Klang, and worlds second busiest port Singapore Port are in very close distance to PTP. Considering the density of the transshipment ports in the region, their volume, and the very close distance to two of the busiest ports in the world, PTP is quite successful by the volume they operate yearly.

Considering the maritime route and the close distance of the competitors in this market, PTP is achieving what is difficult and operating with a great performance. Image below shows the maritime transshipment routes and their connecting extensions. In



**Figure 3. 1: Singapore Port**

other words, PTP is competing with two major players in the main transshipment market in its region. However, there is one more implicit aspect to this competition. During the tour inside the PTP, the guiding official mentioned in his explanations and briefs, that significant part of PTPs business volume comes from the demands that were not handled by the Port of Singapore. This can be interpreted in multiple different ways. One approach to interpret this information can be, PTP is operating in these high volumes, thanks to the attractive strategic location of Singapore Port. The impact and processing capacity of Singapore Port increased the demands to such a higher level that even its own capacity is no longer sufficient to handle the enormous demand. Hence, in simpler words, it can be said that PTP is living off of the remainders of Singapore Ports processing capacity.

Another perspective to interpret PTPs business volume is the importance of the region. Unlike the first approach claims, the demand of Singapore Port itself may also come from the strategic importance of the region in general. The location of the regions is so important and strategic that it makes it kind of a compulsory stop for global supply chain network. Especially the transshipment ports of China can be said to have higher volumes due to their

enormous volumes of manufacturing and exporting goods as country. With low labor and total production costs, China has always been a major player in global trade. Whatever produced, is transferred to transshipment ports of China, by modes of transportation such as train, trucks or airplanes, and then sent off to other transshipment ports in the global maritime network. In simple words, the gigantic TEU volumes of Chinese port may come from the strength and higher volumes of manufacturing and exporting volumes. However, same cannot be said for Malaysia and Singapore. Despite having sufficient volumes of exports, these volumes cannot be significant factors in explaining the business volumes of Singapore Port, PTP or Port Klang, Malaysia’s biggest port ranking before PTP. Hence it can be said that the region itself is so attractive and strategically important that it attracts enough demands for Singapore Port, Port Klang and PTP.

To understand better, if PTPs demand and business volume is a consequence of Singapore Ports attraction and its insufficient infrastructure to handle the demand, or if it is the regions attraction, the historical data about volumes of the ports in the region may be helpful.

The table below summarizes data from the World Shipping Council’s data and shows the accumulated volume of these three regional transshipment ports in the region. It allows us further analysis. It shows business volume of Port Klang Malaysia, PTP and Singapore Port, in million TEUs.

**Table 3. 2**

Port	Volume 2021	Rank 2021	Volume 2020	Rank 2020	Volume 2019	Rank 2019	Volume 2018	Rank 2018
Singapore Port	37.49	2	36.6	2	37.2	2	36.6	2
Port Klang	13.72	12	13.23	12	13.58	12	12.32	12
PTP	11.2	15	9.85	15	9.10	18	8.96	18
	<b>62.41</b>		<b>59.68</b>		<b>59.88</b>		<b>57.88</b>	

PTP have increased their TEU volume by 25% from 2018 to 2021, whereas the increase of TEU volume in Port Klang and Singapore Port are 11.36% and 0.02%

respectively. For Singapore Port, it can be said that they are processing very close numbers to their infrastructural capacity. The growth curve, without expansion or extension always slows down as time passes, since there is always less left to improve. For the case of Port Klang, it can be said that their growth is sufficient. However, PTP has grown significantly over the 3 given years. As per the brief by the port official, their future vision is to increase their port length from 5 kilometers in 2024 to 20 kilometers, in approximately 10 years of time span.

As per vertical analysis, PTPs market share in this region in years 2018, 2019, 2020 and 2021 are 15.18%, 15.19%, 16.5% and 17.9% respectively.

Hence it is clear PTP has increased its TEU volumes by attracting new demands, as well as attracting its competitors' demands as well. Their regional market share shows a stable increase in the given time span. Despite the port officials' claim about the business model of PTP, being attracting Singapore Port's excessive demands, statistics show otherwise. PTP, as per data, is creating their own market and demand. Considering the future vision, it is safe to say they will capture more market share in the regional as well as global markets.

### **3.2 The Organization and Business**

Pelabuhan Tanjung Pelepas was opened in 2000 and is located in Johor Bahru, closely to the Strait of Malacca. PTP a joint venture of MMC, an infrastructure and utilities group, and AMPT, a global ports group with port networks in 74 countries, holding shares of 70% and 30% respectively. PTP is integrated to the Pelepas Free Economic Zone.

PTP has a unique approach to mission and vision statements, that is, one statement serving for the both of them: 'Our people lead the global benchmark for integrated port services from the Straits of Malacca'(Pelabuhan Tanjung Pelepas Sdn Bhd (PTP), 2024).

PTP's core values are;

- Passion
- Service
- Respect

- Improve
- Empowerment

It can be said that PTP is an employee-oriented company, considering the reference to “their people” in their mission and vision statement, and their core values. In a business that requires such heavy infrastructure and investments, it could ideally be expected that the organization would be customer-oriented. But the nature of the business does not require so and allows to be employee-oriented. In transshipment business, the requirements of the business are more or less the same or similar, or mostly clustered. Some cargos may require cold chain, other may require humidity-free chain and some of them be of fragile nature. Of course, there would be many more, but as compared to hospitality or business, where the needs and wants customers are unique to each of them, transshipment business requirements are very less. A hospitality business ideally has to be customer-oriented, since customer satisfaction mostly depends on a pleasant experience. But in transshipment business, the requirement is that the cargo reaches unloaded from the other modes and loaded to the ships successfully, without causing any sort of harm to the cargo.

Furthermore, heavy equipment and machinery are no fragile or sensitive investments. And having such heavy investments made, it is crucial to utilize them effectively and efficiently. This effectiveness and efficiency can be achieved through a well-structured and designed business planning and effective and efficient utilization of assets and resources, including human resources. Once business planning is successfully made with consideration of use of areas, allocation equipment and operators, the only thing left is the human resources factor. Performance management systems are designed to maximize human resources’ efficiency and effectiveness and if designed well, they have very significant and substantial impact.

PTP took it one step further and designed their values to emphasize and increase human resources’ impact. There are very few examples of mission and vision statements referring to or emphasizing their employees. Empowerment core value allows employees to request for room to take leads, initiate ideas and take responsibility for their decisions and actions, in exchange for accountability. The passion value emphasizes going the extra

mile which again indicates the importance of human resources' efficiency. Innovation comes as an outcome of these two values even in general definitions.

PTP is offering three main types of services. These are container services, free zone services and marine services.

### *3.2.1 Container Services*

PTP is processing containers in their facilities with a sufficient number of equipment and fleet. They transfer containers between modes of transport, as well as provide warehousing services. Their equipment, infrastructure and facilities are given below.



**Figure 3.2: Shipping and Containers**

Processing capacity: 12.5 million TEUs

Linear quay length: 5.04 kilometers

Berths:14

Reefer Points: 4778

TEUs container yard: 240000

Lanes Gate Complexes: 14

Tracks Rail Terminal: 4

Rubber Tyred Gantry Cranes: 169

Prime Movers: 484

Trailers: 560

Empty Handlers: 22

Laden Stackers: 25

Super-Post Panamax Cranes: 59 (PTP, 2024)

PTP also operates a container maintenance and repair facility in their complex. Additionally, their business partners can rent and operate their own warehouses and engineering facilities within the ports complex.

The port official provided some insider insight as well. According to him, the port processes 20.000 moves in a day, loading and unloading combined. One ship that approaches the port carries around 2000-3000 containers. The largest ship ever parked at the port was a ship owned by Evergreen, one of their biggest business partners and global players in the world, with 21.000 containers. Containers on one ship are unloaded to several ports. Hence, the process is not always very fluent. The containers are processed on a software called VTMISS, Vessel Traffic Management and Information System. VTMISS is used by the port, as well as the business partners, allowing transparent and full time access to information regarding the containers such as loaded goods, sender and discharge port. Despite VTMISS making tracks and records more convenient, containers may still be loaded in an unorganized way due to many reasons. Hence, discharging containers is either way not always a smooth process, where large numbers of containers may have to be moved just to reach other containers.

### *3.2.2 Free Zone Services*

Free Zones or Free Economic Zones are special zones where there are specific rules, regulations and taxes are applicable. The idea behind is to incentivize economic activity as per agreements by multiple countries. Trades in free zones are very lightly taxed, or not taxed at all. Hence, it becomes more attractive for businesses to trade within these zones. Businesses first have to qualify for eligibility to trade in free zones. These are subject to certain regulations of multiple cases, depending on cases, and the ones of World Trade Organization (World Trade Organisation, 2024). Once qualified, business are availing;

- custom duty exemptions -subject to approval from case relevant authorities-,
- ownership taxes
- exemption from foreign currency restrictions, such as limitation of repatriation of funds

- possibility and permission for sales up to 20% of total export volume-subject to custom regulations-
  - further tax incentives by Malaysia's government, for the case of PTP free zone
- PTP providing services of marketplace and warehousing creates a significant revenue stream from free zone economic activities.

### *3.2.3 Maritime Services*

As complementary services to their container and free zone services, PTP also offers maritime services such as, towing, pilotage and ship-to-ship services.

Pilotage services are the services that assists -in this case- ships to approach their assigned docks. There are certain rules where ships have to notify the pilot station for arrival within 7 days, and within three hours for approaching the channel. For vessel departures, again a three hours prior notice is required. PTP has 45 pilots in their team and show a significant commitment to their zero-delay principle.

PTP also provides towage services for fire cases in cruising ships or other emergency cases. Tugboats are equipped with 3000-8600 horsepower engines that can pull 45-80 tons bollard. Also, all tugboats are equipped with firefighting equipment. The size of the fleet however is unknown.

PTP also grants access to VTMS to their business partners. This is a management information system that allows maintaining records of containers, their goods, senders, receivers, destination ports and many more. Pilot bookings and approach requests are also processed through VTMS.

### **3.3 Future Vision**

PTPs future vision is to become more profitable with utilization of experience curve, increase efficiency, obtain growth in TEU volume, global market shares and regional market share, while assuring all values are maintained, preserved and enhanced.

PTP is a joint venture between MMC, an infrastructure and utilities group, and AMPT, a global ports group with port networks in 74 countries. Using the experience curves of their holding companies and its own organizational skills and capabilities, PTPs



vision is to preserve and enhance their regional and global maritime networks, which would increase business volume, demand, growth and revenues. However, to achieve this, the organizational capabilities have to be aligned with the potential capacity. Port official stated that PTP has already started its preliminary efforts to increase their quay line. It is planned to reach a quay line length of 20 kilometers within 10 years of time, phase by phase.

PTP also hosts the offices, warehouses and other facilities of their business partners inside their complex. Many major logistics firms have offices, warehouses and other facilities such as repair and maintenance workshops, R&D facilities in PTP facilities, creating a future possibility for them to change their strategy to utilize PTPs strategic location to use it as a regional hub. This would no doubt translate as growth for PTP in terms of business volume, market share and revenue. According to port official, PTP also allows several local business partners to operate within their complex. In addition to this, considering the other subsidiaries of its holding company, MMC, PTP may likely increase their market share in domestic markets as well. MMC holds many more ports' ownership too. But most importantly, to further integrate with the other transport modes, MMC holds the operations of Senai International Airport located in Johor Bahru, same city as PTP. Considering the experience curves of the two holding companies, their abilities and networks, it can be said that PTP is likely to outperform Port Klang, claim their market share in the near future.

PTP also makes efforts to keep their values alive and the basis for their operations. For sustainability, they are gradually replacing their current equipment with new modern equipment, to decrease carbon footprint. Some of their cranes have already been replaced from oil consuming models to electricity powered models. The vision is to achieve replacing the entire equipment with electricity powered equipment.

PTP, despite not explicitly mentioned in their core values, pays a significant attention to empower women employment and empowerment. As per port officials statement, out 484, more than 150 prime movers are operated and driven by women. These

vehicles have been colored pink, so that it symbolizes women empowerment and remains as a motivation.

## **CHAPTER 4: CONCLUSIONS AND FUTURE RECOMMENDATION**

Learning is a continuous process that starts with family, grows in classrooms, and matures in real life. For the case of business education, classroom learnings are only the fundamentals upon which all other learnings will be based on.

For the case of EMBA program and its components, learning becomes much more sophisticated. Students are required to have a minimum of 3 years of experiences in their jobs, which they have started with the qualifications they have acquired from their previous educations. In other words, three years of professional life learnings are added to classroom learnings, and then EMBA program can start. EMBA program was tailored to reinforce students', also can be referred to as professionals', their practical learnings with conceptual learnings. EMBA learnings are mostly not aiming at academic learnings, but professional learnings, the types of learnings that every student faces very frequently, maybe even multiple times in a day.

International Study Tour is one of the components of EMBA program that has its own learning outcomes and curriculum. Students are further taught with concepts from various fields, urged to sharpen their analytical skills and critical thinking skills through case studies and lab experiments such as – in this case- the Bloomberg Terminal Lab. Of crucial component of the IST is the trip to industry. The industry is selected in such a way that it will provide new learnings and offerings to students, which they cannot acquire within themselves. This will make more sense when we think that all students are already professionals with experiences in different sectors, and already are exchanging their industry, sector and company insights among each other. So the trip shall not be made to any business, but to a business where it becomes a real offering, opportunity and learning for the students.

Pelabuhan Tanjung Pelepas Port trip was enlightening for the students in many ways. The practical and experiential learnings regarding global supply chain was acquired on spot. Where things start, how things evolve, how things are intermediated, in other

words, the industrial know-how of logistics, transshipment ports and global supply chain was introduced and explained to students.

This was, just like an internship program after coursework, students had the opportunity to link their freshly acquired classroom learnings to industry and corporate practices.

## REFERENCES

- CIA Factbook. (2024a). *Malaysia*. Available at <https://www.cia.gov/the-world-factbook/countries/malaysia/>.
- CIA Factbook. (2024b). *GDP - Composition, by sector of origin*. Available at <https://www.cia.gov/the-world-factbook/field/gdp-composition-by-sector-of-origin/>.
- Malaysia Madani. (2024). *Economic Performance and Outlook*. Available at <https://belanjawan.mof.gov.my/pdf/belanjawan2023/economy-fiscal/section1.pdf>.
- Lim, I. (2022). *Minister: Census shows Malaysia's oldest man and woman aged 120 and 118; preliminary census findings to be released in Feb 2022*. Available at <https://www.malaymail.com/news/malaysia/2022/01/17/minister-census-shows-malaysias-oldest-man-and-woman-aged-120-and-118-preli/2035636>.
- Lloyd's List. (2023). *One Hundred Ports-2023*. Available at <https://lloydslist.com/one-hundred-container-ports-2023>.
- Pelabuhan Tanjung Pelepas Sdn Bhd (PTP). (2024). *About PTP*. Available at <https://www.ptp.com.my/about-us/about-ntp>.
- QS Top Universities. (2024). *Top 50 Universities*. Available at [https://www.topuniversities.com/world-university-rankings?tab=indicators&search=southam&sort\\_by=rank&order\\_by=asc](https://www.topuniversities.com/world-university-rankings?tab=indicators&search=southam&sort_by=rank&order_by=asc).
- The Strait Times. (2023). *Brain drain: Majority of Malaysians who emigrated moved to Singapore, says human resources minister*. Available at <https://www.straitstimes.com/asia/brain-drain-majority-of-malaysians-who-migrated-moved-to-singapore-says-hr-minister>.
- World Bank. (2024a). *Unemployment, total (% of total labor force) (modeled ILO estimate) - Malaysia*. Available at <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=MY>.
- World Bank. (2024b). *High-technology exports (current US\$) - Singapore, Malaysia, Thailand, Indonesia*. Available at <https://data.worldbank.org/indicator/TX.VAL.TECH.CD?locations=SG-MY-TH-ID>.
- World Bank. (2024c). *Achieving a System of Competitive Cities in Malaysia-Main Report*. Available at <https://documents1.worldbank.org/curated/en/709061475743434007/pdf/102222-v1-REVISED-PUBLIC-Malaysia-Competitive-Cities-Main-Report-low-res-final.pdf>.

World Shipping Council. (2024). *Top 50 Ports*. Available at <https://www.worldshipping.org/top-50-ports>.

World Trade Organization. (2024). *Agreement on Subsidies and Countervailing Measures ("SCM Agreement")*. Available at [https://www.wto.org/english/tratop\\_e/scm\\_e/subs\\_e.htm](https://www.wto.org/english/tratop_e/scm_e/subs_e.htm) .