PERODUA

UNIVERSITI TEKNOLOGI MARA
Cawangan Perlis
Kampus Arau

INDUSTRIAL TRAINING REPORT

PERUSAHAAN OTOMOBIL KEDUA SDN. BHD. (PERODUA)

1 MARCH 2023 - 15 AUGUST 2023

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EXECUTIVE SUMMARY

This report discusses my industrial training experience at Kiam Fatt Motor Sdn Bhd (Perodua) Seri Iskandar, Perak from 1st March 2023 until 15th August 2023 which is 24 weeks. Industrial training is required for all the undergraduate programs under the Faculty of Business and Management as stipulated in the Plan of Study. Thus, before completing my studies for a Bachelor of Business Administration (Hons) Finance, I was required to undergo internship attachment or on-the-job training (OJT).

During the 6 months of internship training, I experienced a great journey that I had not experienced before with a positive working environment. At Perodua Seri Iskandar, I learn new tasks and work culture which enhance my skills and abilities to become a good worker in the future. As an internship student at Perodua Seri Iskandar, I was assigned to the customer care executive and admin department. My responsibilities are to fulfill customers' satisfaction and solve their problems. Besides, I also arrange customers' appointments booking for service. Arranging the appointment can reduce cancellations and no-shows. I also generate invoices for customers which are helpful for bookkeeping purposes. Next, I make collection payments from customers for services and purchasing parts.

This department also allocated me with excellent interpersonal skills, where I need to understand the feelings of customers to respond appropriately and create good relationships with them. In addition, it is also challenging because sometimes I need to face and calm an irate customer when some of their complaints or satisfaction we unsuccessful to fulfill. In conclusion, my internship journey was wonderful and great because of my supportive and helpful coworkers and friendly supervisor. They always teach me and advise me on the things that I do not understand. It gives me intense pleasure to recommend Kiam Fatt Motor Sdn Bhd as an internship location.

(300 words)

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PART 3: COMPANY'S PROFILE

3.1 COMPANY'S BACKGROUND

Figure 1: Perodua Corporate Office in Rawang, Selangor

Name	Perusahaan Otomobil Kedua Sendirian Berhad (Perodua)
Headquarters	Sungai Choh, Rawang, Selangor
Established	1993
Type of company	Private Limited Company
Industry	Automotive
Chairman	Tan Sri Asmat Kamaludin
President & CEO	Dato Zainal Abidin Ahmad
Slogan	"Building Cars, People First" *(2008–present)*
Outlets	Over 200 outlets
Website	www.perodua.com.my

Table 1: Company's descriptions

Perusahaan Otomobil Kedua Sendirian Berhad or known as Perodua was founded in 1993. Uniquely, Perodua has begun its journey as Malaysia's second national automaker after Proton. As we know, Perodua is a very known company that afford to serve people's need and want for affordable and quality in manufacturing compact cars. Perodua Kancil was the first model manufactured and introduced to the market in 1994 after 28 days opening ceremony of the first Perodua factory that was launched by Tun Dr. Mahathir Mohamad, the Prime Minister at the time. Not to mention, the public favourably accepted Perodua Kancil, which sparked Malaysia's interest in compact hatchbacks. Perodua has continued to develop compact cars, including the best-selling Myvi, and various vehicles ranging from sedans to sports utility vehicles (SUVs) since the launch of the Perodua Kancil.

Moreover, Perodua has been a Malaysian Japanese joint venture corporation since its establishment. Perodua has collaborated with Japanese automaker Daihatsu, which has a 20% company share. Daihatsu created the designs and essential components for Perodua's vehicles, including the engines and transmissions. It meant that all Perodua vehicles were equipped with Daihatsu technology. While all its cars are based on Daihatsu models, Perodua has put more of its design into its vehicles in recent years. Briefly, the third generation Perodua Myvi, introduced in 2017, was wholly designed and manufactured in Malaysia, marking a significant milestone for Perodua. In addition, Perodua's slogan is "Building Cars, People First." Perodua's promise to their customers places them first in everything that Perodua does, for instance, from vehicle design to after-sales service. It is indicated that customer satisfaction is a priority and essential for Perodua.

Generally, Perodua has 41 branches and 139 sales dealers nationwide to provide extraordinary service to its clients. It also has 46 service branches and 124 service dealer outlets around Malaysia for the convenience of its customers. Not to mention that Perodua has sold around 1.67 million vehicles of various variants since the end of 2009 and exports its cars to Sri Lanka, Nepal, Singapore, Fiji, Brunei, and the United Kingdom. In addition, Perodua has two manufacturing sites on its 522-acre headquarters in Sungai Choh, Rawang, which are Perodua Manufacturing Sdn Bhd (PMSB) factory and the Perodua Global Manufacturing Sdn Bhd (PGMSB), which officially opened in 2016. Both factories can produce up to 320,000 automobiles per year.

Apart from manufacturing cars, Perodua also produces engine components for both local and international carmakers at Sendayan TechValley, contributing to the development of Malaysia's automotive sector. Over 100 local part suppliers benefit from Perodua's vendor development program, which helps them improve component quality, pricing, and delivery. Additionally, Perodua has received many awards throughout its establishment. Some of them are People's Choice, Automotive Category (Bronze) - Putra Brands Awards 2010, People's Choice, Automotive Category (Silver) - Putra Brands Awards 2012, 2015 & 2016, and Most Favorite Brand Automotive Sedan/Compact Cars - The BrandLaureate Bestbrands Award 2016-2017. It demonstrates how far the company's capabilities have advanced since 1994.

3.2 COMPANY'S VISION

The vision of Perodua is to be the most preferred automotive brand renowned for products and services of excellent quality which contributes to the development of the nation.

3.3 COMPANY'S MISSION

There are several missions that Perodua aim to ensure vision successful accomplished which are:

- Aspiration to glorify the name of Perodua.
- Uniqueness in our products.
- Professionalism in all our operations.
- Resilience in meeting our challenges.
- Efficiency in utilising technologies and available resources.
- Dedication towards social responsibility to the community, the environment and development of a competent workforce.
- Optimisation of customer satisfaction and benefit to stakeholders.

3.4 COMPANY'S OBJECTIVES

- To developed automobile industries preparation and manufacturing industries.
- To maximize the safety aspect of Perodua.
- To strengthen the manufacturer competitive of Perodua industry.
- Aims at profitability and quality service delivered.
- To introduce an economical and fuel savers car.
- To have a knowledge of technological and industrial ability within automobile industries.

3.5 COMPANY'S GOALS

- To develop work force, example recruiting hiring and training.
- Keeping production on track, help to improve the productivity of the manufacturing operation.
- Conducting special youth hiring program security and trained in house.
- Having competent and qualified employees with basic automobile skills and knowledge.

3.6 ORGANIZATIONAL STRUCTURE

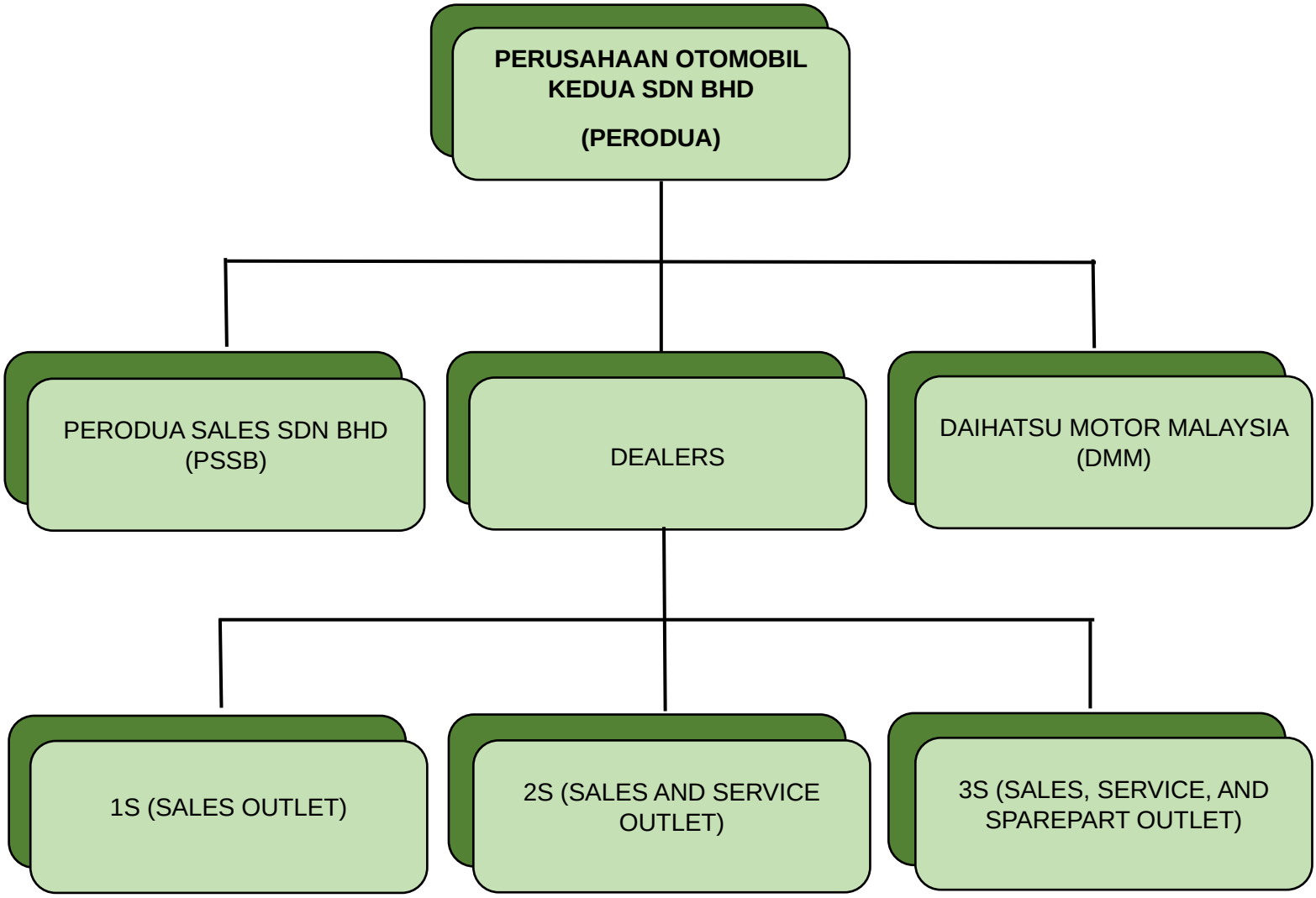

Figure 2: Distribution Structure of Perodua

PERUSAHAAN OTOMOBIL KEDUA SDN BHD

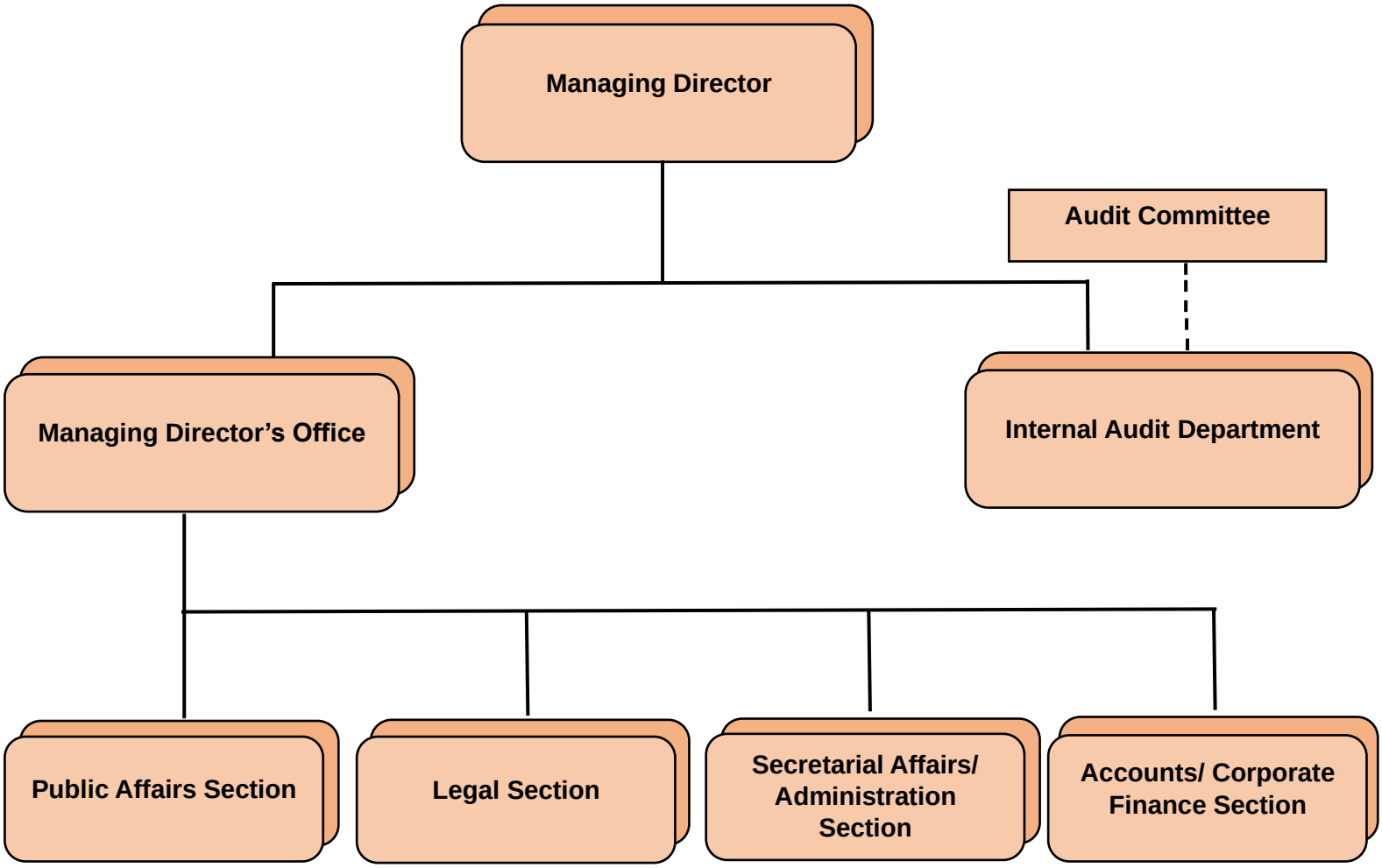

Figure 3: Organizational Structure of Perodua

3.7 COMPANY SERVICES/ PRODUCTS

NO	CAR MODEL	DESCRIPTIONS
1	Perodua Kancil (Perodua Nippa) – *(1994-2009)* 	• The first car was manufactured by Perodua. • Based on Daihatsu Mira L200. • Small five-door hatchback powered by a 660 or an 850-cc engine. • Compact design and affordability.
2	Perodua Rusa - *(1996-1998)* 	• The second car manufactured by Perodua after Kancil. • Based on Daihatsu Zebra. • Microvan concept with two, five, and seven seat configurations. • Versatile and affordability.
3	Perodua Kembara- *(1998-2008)* 	• Sports utility vehicle (SUV) based on the Daihatsu Terios J100 A-segment. • The first locally made SUV. • Boxy styling with a spare tyre mounted on the rear hatch door.
4	Perodua Kenari- *(2000-2008)* 	• The iconic car from Perodua. • It was based on the second-generation Daihatsu Move minicar. • It was offered with a 990-cc engine. • Boxy styling, compact and quirky nature.

5	Perodua Kelisa *(2001-2007)* 	• Based on the Daihatsu Mira L700. • Rounded shape with softer body lines and rounded lights. • Slightly larger than the Kancil. • Available in an 847-cc as well as a 989-cc engine.
6	Perodua Myvi *(2005- Present)* 	• The best-selling car in Malaysia. • Based on the Toyota Passo/Daihatsu Boon. • Youthful design and versatile convenience.
7	Perodua Viva *(2007- Present)* 	• The replacement of the Kancil and Kelisa. • Based on the seventh generation Daihatsu Mira. • Larger dimensions, and better interior refinement. • The production Perodua Viva ended in 2014.
8	Perodua Nautica *(2008- 2010)* 	• Only manufactured between 2008 and 2009. • Based on Daihatsu Terios J200. • The successor to the Kembara. • Low demand in market which eventually caused it to be discontinued in 2009.

9	Perodua Alza *(2009- Present)* 	• It is a B-segment multi-purpose vehicle (MPV). • Based on the Daihatsu Boon Luminas. • The best-selling MPV in Malaysia in 2010. • The second-generation Alza in 2022 based on the 2021 Daihatsu Xenia and Toyota Avanza.
10	Perodua Axia *(2014- Present)* 	• The Perodua Axia is the successor to the Perodua Viva. • Based on the Daihatsu Ayla and Toyota Agya. • Has extensive unique design elements. • The first Perodua to be certified as an Energy Efficient Vehicle (EEV).
11	Perodua Bezza *(2016- Present)* 	• Perodua's first sedan, • The first major in-house design. • The first Perodua features Vehicle Stability Control (VSC). • The first Perodua is not to be based on an existing Daihatsu or Toyota model.

12	Perodua Aruz *(2019- Present)* 	• The Perodua Aruz is a B-segment SUV. • Based on the Toyota Rush. • Perodua Aruz has a seven-seater SUV. • Perodua Aruz has Perodua's A.S.A safety suite like the Bezza and Myvi.
13	Perodua Ativa *(2021- Present)* 	• Perodua Ativa is a B-segment SUV. • Based on Daihatsu Rocky. • It has several new features not found in previous Perodua models. • The first Perodua to be built on the Daihatsu New Global Architecture (DNGA) platform. • Advance safety and modern technology.

Table 2: List of Perodua's products

3.8 COMPANY'S SHAREHOLDERS

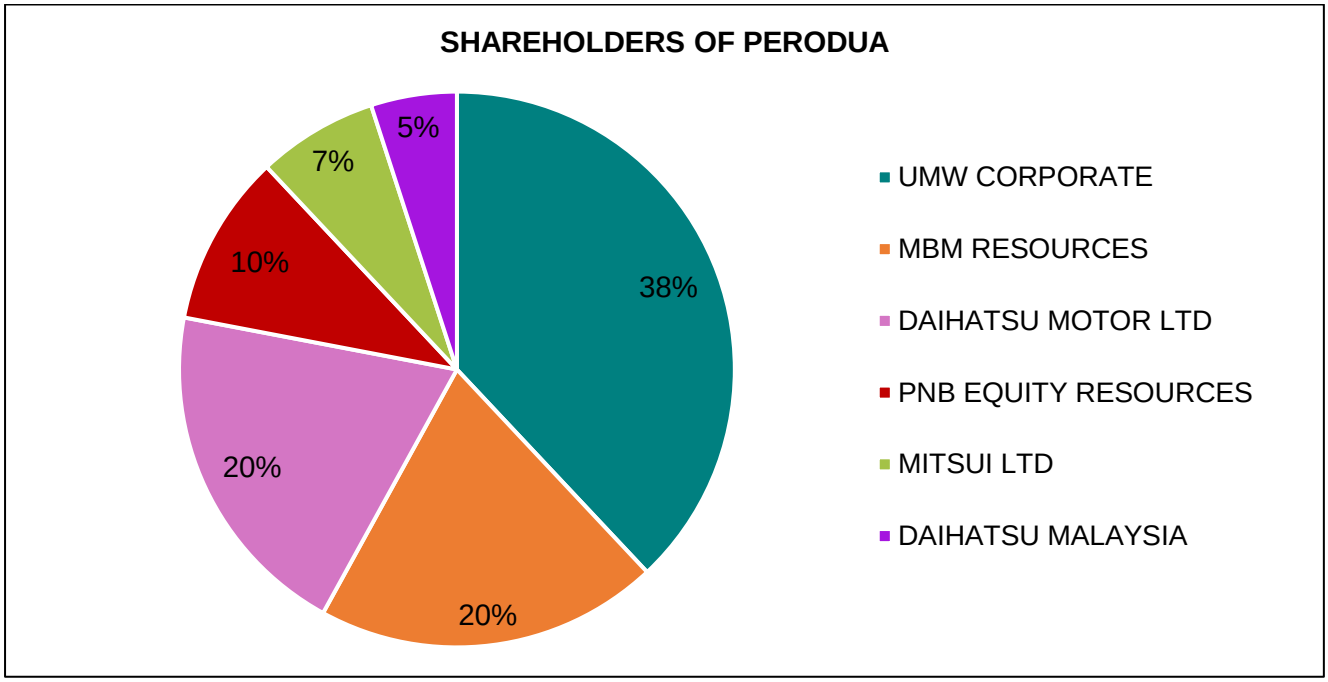

Figure 4: Shareholders of Perodua

Figure 4 above shows the list of Perodua shareholders who collaborate to ensure Perodua becomes powerful and more successful in the automotive industry. The most significant shareholder of Perodua is UMW Corporation which owns 38% of the company. UMW Corporation became the distributor of the arm for motor vehicles and spare parts for Perodua Sales Sdn Bhd. In addition, UMW Corporation is also responsible for the cars manufactured and assembled for Perodua Manufacturing Sdn Bhd.

Next, Daihatsu Motor LTD and MBM Resources became the second largest, which owns 20% of the company. Meanwhile, PNB Equity Resources owns 10% of the company. PNB is an essential shareholder in UMW Corporation. UMW Corporation also plans to push for MBM resources and more control of carmaker Perusahaan Otomobil Kedua Sdn Bhd (Perodua). From Figure 4 above, it is also indicated that Mitsui LTD owns 7% of the company, and Daihatsu Malaysia owns 5% of the company. In 2001, Daihatsu Motor LTD, Mitsui LTD, and Perodua of Malaysia agreed to collaborate on a joint venture that resulted in forming a new holding company, Perodua Auto Corporation Sdn. Bhd. (PCSB).

PART 4: TRAINING REFLECTION

4.1 DURATION OF WORKS

As I have noted, industrial training is part of the course of study for all students under the Faculty of Business and Management. All students must obtain a degree or certificate of completion. Industrial training is vital for all students to familiarize themselves with the working environment. As a result, students will be capable of understanding the theories learned with more extensive and hands-on practice in a real-world job environment.

It is required for me to perform six months or 24 weeks industrial training. The period of industrial training was arranged and set by Universiti Teknologi Mara. It begins on 1st March 2023 and until 15th August 2023. My training working day and time are similar to other employees at Kiam Fatt Motor Sdn Bhd (Perodua), Seri Iskandar, which is:

DAYS	WORKING HOURS	TOTAL HOURS
Monday- Saturday	8.30am– 5.00pm	8 Hours
Sunday and Public Holiday	OFF	

Table 3: The operation of company

Working at Perodua Seri Iskandar is flexible, the reason is employees do not feel burdened or stressed out to bring work to their home. It provides a better work-life balance for them, which can give employees time for their personal lives, to spend time with family or do other activities they enjoy even though the working days at Perodua are six days a week.

4.2 ROLES AND RESPONSIBILITIES

Briefly, at Perodua Seri Iskandar, I was assigned to the Customer Care Executive and Admin Department. My six-month industrial training has had a significant impact on me, this is because each department provided me with new knowledge and skills that I had not learned before as I prepared to enter the industry. My responsibilities are always to ensure customer satisfaction will be fulfilled since both departments are always related to customers. Below are several tasks that I need to fulfill every day at Perodua Seri Iskandar:

4.2.1 CUSTOMER CARE EXECUTIVE DEPARTMENT:

4.2.1.1 Communicated with customers and support staff.

Developing good communication with customers and staff is incredibly important in the company. Thus, improving customer communication should be a key priority for the company. As a customer care executive, I was trained to manage customers properly to maintain customer satisfaction and loyalty. Maintaining a positive attitude is crucial in communication; this is because a positive attitude can improve the relationship with customers. There are several positive attitudes that I always practice when confronting customers, for instance, always grateful and smile at the customers. With this attitude, customers feel overwhelmed and welcomed into the company. Additionally, word-of-mouth marketing can happen when customers talk to their friends, family, and others about the company and its product. Because of this situation, it can promote our company with free advertising.

Not to mention, Perodua Seri Iskandar is the customer's favorite and choice for service outlets over other outlets. It is because, from positive reviews, they said our staff is friendly and well manner for helping them. Customers from Seri Manjung, Ipoh, Seri Iskandar, and the nearest Perodua Seri Iskandar always come to our outlet. Next, when customers called to book an appointment, I always provided them with the available date and time and a quotation for their service according to their car's mileage to ensure customers understood and noticed the appointment service so that customers could come on time according to the schedule.

4.2.1.2 Arrange customers' appointments booking for service.

Next, since I was assigned to the service department as a customer care executive, I used Perodua Service System (PSS). This system differs from the sales department, which is Perodua Sales Operating (PSOS). The sales department cannot arrange customers' appointments; thus, sales advisors will be referring to me for booking appointments for their customers. Customers can also make booking appointments in two ways: call appointment booking and walk-in booking appointments.

Usually, customers will call and choose their appointment date and time. However, if the date and the time chosen are fully booked, I will advise them to choose another date and time. I also used respectfulness and a soft tone of voice when communicating with them to show respect and to ensure customers do not feel hurt or disrespected. Sometimes, some customers disagree with changing the date, so I must persuade them until they agree.

4.2.1.3 Arrange pre-registered repair orders for customers.

Furthermore, I must register customers before the service as a customer care executive. Once customers arrive, they need to register at the registration desk by giving their car's number to me; then, I will enter their car's number into the Perodua Service System (PSS). This procedure is also the same for customers who want to purchase or order parts such as the oil engine, oil filter, gasket, or gear-up, also known as car accessories such as spoiler, body kit, luggage tray, coil mat, and door visor.

After the registration procedure, customers must wait about 10 minutes at the customer's lounge for the service advisor to walk around inspecting their car for interior and exterior checking. The service advisor will check interior items such as the car's mileage, wiper and washer, air-cond blower, gauges and indicators, and engine compartment. Meanwhile, the exterior checking service advisor will check the front, left, right, and rear view to identify any scratch or dent in the car's body. This inspection is essential before service to identify problems or parts that need to be changed and repaired. After that, the service advisor will explain their car's condition and brief the total quotation for the services.

4.2.1.4 Addresses customers' complaints to service advisor.

Moreover, sometimes during the registration procedure, customers will complain or notify me of their car's problem. Thus, I must deliver or address customer complaints to the service advisor. I need to remark on the supplementary repair order form about the issue. For instance, some customers complain that a warning or indicator light turns on during engine running. Then, the service advisor will note the complaint and solve the customer's problem.

Looking forward to this situation, we can see that communication is the key. Communication is essential to solving problems. With communication, the problem can be solved. As a customer care executive, I must listen to and understand customers' conditions or issues to improve customer satisfaction. It is because listening to customers is not only hearing about their issues or problems but listening to customers allows us to establish a relationship with them. This connection will make customers feel appreciated and experience the best service quality.

4.2.1.5 Key in extraction of monthly appointment and no-show tracking search.

Next, the other task I was assigned was key in extracting monthly appointment and no-show tracking searches. It is crucial for the company's report because sometimes the internal audit department from headquarters will come suddenly to check the company's report. Therefore, every day at 4.00 pm, I constantly update and key in the no-show in the system because at this time customers have already done their car services. Thus, it does not interfere with the other jobs that require using the system.

4.2.1.6 Drive the customer's car from the parking lot to the workshop bay.

In addition, the task of driving the customer's car from the parking lot to the workshop bay is not necessary to do for a customer care executive; however, I do it because sometimes many customers are coming at the same time, which are customers that already had an appointment or customers that have an emergency case such as brake problems. Thus, I willingly help the service advisor to drive the customer's car from the parking lot to the workshop bay. From my perspective, I love to do this task because I can experience driving various vehicles every day. Still, I also need to be careful when driving a customer's car to prevent any problems and unwanted things from happening.

4.2.1.7 Reminder customers for service.

Lastly, as a customer care executive, I am also responsible for reminding customers of service. This task needs to be completed before the service date comes around the corner. I must remind customers by calling their contact number according to the service reminder target date. If I miss out on the date, the system will update the reminder status as incomplete. Thus, I must do this as a daily task to ensure customers are alert and know their service date.

4.2.2 ADMIN DEPARTMENT:

4.2.2.1 Generate invoices for customers.

Besides, working in the admin department I need to generate invoices for customers. The admin department also uses the same system, which is Perodua Service System (PSS). The first procedure or step I need to do before generating the invoice I need to check whether the customers have e-vouchers or not in the system. If customers have the e-voucher they can claim it as a discount for the service. Next, I will submit the amount of the service and recheck the amount many times to ensure the amount is the same as the amount that the mechanic and foreman generate at their system with our system.

The invoice needs to be printed as three copies if customers do air-cond and basic service. This is because the two copies are for internal references while one copy is for the customers. While, for the basic service or major service I need to print only two copies of invoices, one for them and the other one for our reference. As we know, the invoice is important for the company and businesses as agreements between a company and customers as a service is delivered and payments are made. Invoices also assist the company in tracking sales and managing its finances**.**

4.2.2.2 Key in details of deposit in Excel.

Next, I also need to key in the deposit details in Excel. It must be completed daily to record the cash transaction, such as cash inflow and cash outflow of the money for the day operation. Cash inflow refers to the money that goes into a business from sales, services, or financing. Meanwhile, cash outflow is the opposite of cash inflow, which describes any money that leaves the company, such as expenses. In addition, it is also essential to understand and monitor the cash flow of our company to ensure the performance of the company's stable and positive cash flow.

4.2.2.3 Key in the details of reimbursement claim form for 2023 Perodua’s Auto Rahmah Package.

Furthermore, from 12 April 2023 until 15 May 2023, Perodua launched the 2023 Perodua's Auto Rahmah Package for customers. This package discount only offers to car models Bezza and Axia. Customers can get about a 30% discount calculated from total labor and total items with conditions customers must perform service maintenance. It is in reaction to the Ministry of Investment, Trade, and Industry's (MITI) recently announced Auto Rahmah Package, which is part of the government's Payung Rahmah Programme, which attempts to lessen the burden on the populace by addressing different cost-of-living issues. Additionally, Perodua also launched this package to their customer for Hari Raya celebrations. Before planning to travel long distances, we need to do service maintenance on our car. Thus, Perodua takes this as an opportunity to help the customers.

Thus, I need to key in the details of the reimbursement claim form for 2023 Perodua's Auto Rahmah Package in the system for internal and headquarters references. I also need to manually calculate the exact amount to ensure the correct amount.

4.2.2.4 Key in and updating of extraction customers data.

Last but not least, working at admin department also I need to key in and updating of extraction customers data for April and May 2023. This is required to do because Perodua launched Auto Rahmah Package for their customers. For this task, I need to update and recheck the details of customers such as number registration car, invoice number, model description, repair type, and discount received by customers. To ensure the data is accurate and exact I need to optimize my work and keep focus to do this task to avoid any inaccurate information or overlapping.

4.3 INTRINSIC AND EXTRINSIC BENEFITS:

In brief, working at Perodua Seri Iskandar provided me with a lot of new knowledge and skills that I will never get in other places. These skills and experience have boosted my confidence when confronting people. The skills and knowledge that I received are known as intrinsic benefits. Intrinsic benefits can be defined as internal rewards that employees receive for effectively completing their jobs or projects. These rewards are primarily psychological and are dependent on a person's work and ability.

There are several skills and knowledge that I acquired when working in the customer care executive and admin departments. First, problem-solving skills where I can provide proactive advice or a solution that the customer is unaware of exists. Next, I also gained clear communication skills when working with customers. The ability to communicate is essential because miscommunication can lead to disappointment and anger. Furthermore, I also gained product knowledge specifically automotive products and basic car parts that everyone should know. A car is a sophisticated machine with several mechanical and electrical components such as an engine, transmission known as a gearbox, clutch, battery, alternator, radiator, catalytic converter, muffler, brakes, steering, and suspension. As a result, working at Perodua Seri Iskandar provided me multi-talented in excellent interpersonal and communication skills as well as a professional appearance.

Furthermore, working at Perodua Seri Iskandar also provided me with extrinsic benefits such as allowance and other benefits. Every month I got my allowance on day 28 like other staff who got their salaries on that day. The admin cashier will pay me the allowance in cash. The other benefits that I got from Perodua Seri Iskandar are during Hari Raya Aidilfitri the manager provides every staff bonus, one carton carbonated drink, and a money envelope engraved Zurich that’s for me is a beautiful design. In addition, I was also offered by the manager to work at Perodua Seri Iskandar after finished my internship. I am grateful for the opportunities and benefits that the company has given to me.

PART 5: RESEARCH REPORT

This section will discuss a detailed explanation of the research report which will investigate the factors influencing the food inflation in Malaysia. This study was conducted by using yearly time series data. As for this report, the data will be collected from 1979 to 2020. To investigate the factors influencing food inflation in Malaysia, we first evaluate previous empirical studies in this field.

5.1 INTRODUCTION

Chapter 1 presents an introduction to the topic decided for this study. Basically, there are several parts that will be discussed as a beginning of this research. The first is the background of the study where some research is being conducted on the topic of the factors of influencing food inflation in Malaysia, defining and describing how it works. Next, the problem statement, this section we will focus on what are the unsolved issues and the difficulties that it aims to address. It means any issues related to the factors of food inflation in Malaysia will be debated. In addition, in this part we will also identify, investigate, examine, and analyze the relationships between the factors and the food inflation brought on by a country. Altogether, there are five chapters included in this research which are Chapter 1: Introduction, Chapter 2: Literature Review, Chapter 3: Research Methodology, Chapter 4: Data Analysis, and Chapter 5: Discussion, Conclusion, and Implications.

5.1.1 Background of the study

Sustaining high economic growth is the main objective and goal of every country. Many previous studies in Malaysia examined and investigated the factors influencing food inflation in Malaysia. The increases or decreases in food prices can be caused by inflation. Generally, inflation is defined as an increase in prices that results in a loss of buying power over time. The average price increase of a basket of selected goods and services over time can show the rate at which buying power declines. The price increase, frequently stated as a percentage, signifies that a currency unit buys less than it did previously. Inflation is distinguished from deflation, which happens when prices fall but buying power rises. (June & Fernando, 2023). Inflation is an essential economic statistic since it impacts the value of money and shows the general soundness of a country's economy.

In fact, inflation became one of the more important issues over time. Many causes have contributed to Malaysia's inflation over the last few years. These factors are either caused by economic or external factors unrelated to the economy. The inflation then can lead to food inflation, which can hit the food price hardly. Food inflation can be determined when the cost of food commodities increases. Food inflation is volatile in the economy, where it is very unpredictable. A variety of factors can have an impact on food availability, which in turn affects prices. It is critical when comparing the rise in pricing and the growth in median income to food costs. Prices for agricultural commodities are prone to swings since supply and demand are neither elastic, and supply can vary because of climate. Despite the typical fluctuation, food prices are rising, reaching record highs in recent years.

Usually, Keynesian Theory and Quantity Theory of Money is always used in studies to determine the price level. In 1911, an American economist identified as Irving Fisher published his work titled 'The Purchasing Power of Money,' which contained a version of the transaction of the quantity theory of money. The Quantity Theory of Money is also known as Neo-Quantity Theory or Fisherian Theory. According to Fisher, as the quantity of money in circulation increases and the other things remain constant. The level of prices rises in a direct correlation to the loss in value for money, and vice versa. Fisher's Theory is easiest to understand using a well-known equation, which is calculated as:

$$\boldsymbol{M \times V = P \times T}$$

M = Money supply

V = Velocity of circulation of money

P = Average price level

T = Volume of transactions in the economy

In general, the quantity theory of money explains how increases in the quantity of money cause inflation and vice versa. The initial theory considered V, Velocity, to be constant and T, the Volume of economic transactions, to be consistent regarding M, money supply. Thus, any changes in M money supply directly impacted P, the average price level. In other words, if the money supply expands, so will the intermediate price level and vice versa, with no influence on actual economic activity.

Meanwhile, the Keynesian Theory is a theory of macroeconomics that examines overall spending on goods and services and its impact on employment, output, and inflation. It was established in the 1930s by British economist John Maynard Keynes to comprehend the Great Depression. Keynesian Theory emphasizes using active government policy to regulate aggregate demand to address or avoid economic downturns. In addition, in response to the Great Depression, Keynes created his theories and was harshly critical of prior economic theories, which he referred to as classical economics. Keynesian economists support active fiscal and monetary policy as the primary tools for managing the economy and combating unemployment. (Olah & Investopedia, 2023)

According to historical data, Malaysia's inflation rate has averaged 2.9% each year, indicating that the country has low inflation. On the other hand, Malaysia experienced four periods of high inflation in the 1970s, 1980s, 1990s, and 2000s. Prices rose dramatically during the 1970s and 1980s due to a shortfall of the global food supply. This is due to the Egypt-Israeli War in 1973, the Iranian Revolution in 1979, and the Iran-Iraq War in the early 1980s, all of which significantly caused petroleum costs to rise. In Malaysia, inflation increased by 17.3% in 1974 and 9.7% in 1981. Domestic inflation remained above 3% in the 1990s, except for 1997 and 1999.

Furthermore, domestic supply factors, particularly food, caused Malaysian inflation during this period. Domestic demand was another element that contributed to inflation in the 1990s. Domestic demand was extremely high because of rising income and employment growth. Because of the increase in world oil prices induced by the Gulf War, inflation reached over 4% in 1991 and 1992. In 1998, the ringgit fell by roughly 28.3% versus the US dollar, and Malaysia faced food scarcity, causing inflation to peak at 5.3%. Malaysia suffered moderate to meager inflation in the early 2000s because supply and demand pressures had diminished in the 1990s. However, inflation rose gradually in 2005, reaching 8.5% in July 2008. Not only that, but the global financial crisis is also one of the causes or factors that contributed to this increment.

Gross domestic product, climate change, money supply, exchange rate, and food inflation rate are the determinants used in this study to demonstrate the relationship between the independent and dependent variables. The food inflation rate has been designated the dependent variable, with the others serving as independent variables. Many studies have been undertaken on this topic to determine the variable that most influences Malaysia's food inflation.

5.1.2 Problem statement

There are many factors were affecting the food inflation in Malaysia. As I mentioned before, Food inflation is volatile in the economy, where it is very unpredictable. A variety of factors can have an impact on food availability, which in turn affects prices.

The relationship between the money supply and the food inflation was positively correlated. This relationship was proven from studies by (Samal et al., 2022). From these studies, it was stated that money supply is the most significant factor in affecting the food inflation in India. It is important to implement a monetary policy to control the inflation in India. To brief, money supply is a major factor in whether inflation occurs and agricultural prices.

It is believed that gross domestic product (GDP) is one of the determinants of causing food inflation in countries specifically in Malaysia. Inflation is essential for the economic growth of a country. This study was conducted to identify in more detail the short-run and long-run relationship between inflation rates and gross domestic product in Malaysia. This is because, there is an argument from previous studies which revealed that the inflation rate is necessary for economic growth, or it only hurts growth. For example, the studies from (Ismaya & Anugrah, 2018) stated that gross domestic product and food inflation has a negative influence on the economic growth of Pakistan.

It is also recognized that the exchange rate has contributed to the inflation rate in Malaysia. The traders believe that inflation is the key economic measure that they constantly monitor in the foreign exchange market. Even when other factors are considered, the inflation rate is one of the most important predictors of exchange rate movements. Previous studies revealed that the influence of the exchange rate on the inflation rate is negative. This study was conducted by Abidemi and Maliq (2010) and Khan, Bukhari, and Ahmed (2007). The degree of inflation was additionally influenced by import prices, which are affected by the value of the exchange rate. Therefore, the government's monetary policies will have a significant impact on the exchange rate, which in turn will affect the level of import costs.

Furthermore, climate change also contributed to the inflation rate in Malaysia. It is believed that climate change is hastening the inflation rate of countries around the world. This is expected to continue as global warming. There are studies conducted by researchers that set out to investigate the effects of global warming on inflation in 121 nations, and they discovered that higher-than-average temperatures are raising the prices of food and other commodities and services.

In brief, the factors which are influenced of food inflation are money supply, gross domestic product (GDP), exchange rate, and climate change are significant in determine the food inflation in Malaysia. Therefore, for future study they should include all these factors to identify the relationship between these factors with food inflation in Malaysia.

5.1.3 Research objective

General Objectives

These studies focus on the factors influencing the food inflation in Malaysia from year 1979 to year 2020 (annually) which is money supply, gross domestic product (GDP), exchange rate, and climate change.

Specific Objectives

I. To determine the significant relationship between food inflation and money supply.
II. To identify the significant relationship between food inflation and gross domestic product (GDP).
III. To investigate the significant relationship between food inflation and exchange rate.
IV. To analyze the relationship between food inflation and climate change.

5.1.4 Research Questions

Questions of the study

I. Is there any significant relationship between food inflation and money supply?
II. Is there any significant relationship between food inflation and gross domestic product (GDP)?
III. Is there any significant relationship between food inflation and exchange rate?
IV. Is there any significant relationship between food inflation and climate change?

5.1.5 Significant of the study

The main goal of conducting this study is to identify the factors influencing the food inflation in Malaysia. Previously, this study was determined by using numerous factors such as interest rates, foreign direct investment, and unemployment rate. However, this study will investigate the other factors that contribute to food inflation in Malaysia in more detail and specific with new variables to ensure it can help to other researchers in the future.

This research can help policymakers such as Bank Negara Malaysia and the Federal Government in determining which factors have a substantial impact on Malaysian inflation. Bank Negara Malaysia and the Federal Government are two organizations with the authority to make changes to stabilize inflation. Monetary policy is used by Bank Negara Malaysia to control the money supply and demand, whereas fiscal policy is used to impact the economy through expenditure and revenue (taxes). This study also can help Bank Negara Malaysia and Federal Government in decision-making to maintain the growth economy. One of the decisions that can assist Bank Negara in determining whether to change the overnight policy rate (OPR). This is one of the responsibilities of Bank Negara Malaysia in terms of controlling the country's money supply.

Furthermore, this study provides suggestions or serves as a reference for investors who desire to invest in Malaysia. The greatest strategy to keep inflation under control is to adjust the system of taxes to inflation. Depending on the type of investment, inflation can be beneficial or detrimental. Additionally, different forms of investments provide varying degrees of protection; therefore, it is essential to understand how asset class behavior can and does alter over time. As a result, this study can be used by investors to protect their investments.

In brief, by performing this study, researchers will have a better understanding of the factors that influence food inflation in Malaysia. As a result, deliver a more robust result to Bank Negara Malaysia and investors on the influence of the money supply, gross domestic product (GDP), exchange rate, and climate change on Malaysia’s food inflation.

5.2 LITERATURE REVIEW

5.2.1 Introduction

Chapter 2 is a process of reviewing, categorizing, evaluating, and summarizing academic texts on specific topics known as literature review. It provides an overview of current knowledge, helping to find applicable theories, methodologies, and gaps in existing research that researchers may later apply to the topic of research. The literature will be divided into the following areas which are money supply, gross domestic product (GDP), exchange rate, and climate change.

5.2.2 Money Supply

According to (Adjemian et al., 2023) money supply contributes to food inflation in the United States. The period of the data collected for the study was from 2004 to 2022 on a monthly level. The purpose of this research is to examine the relationship between money supply and food inflation. According to the results of the impulse response functions, the money supply has a considerable positive and significant on food inflation. The study also used Cholesky, NGML, and DC method in conducting the study.

Next, a study conducted by (Ashiru, 2022) has stated that there is positive and significant relationship between money supply and food inflation in Nigeria. The data was collected from the year 1996 until 2021. Meanwhile, the purpose of this research is to determine the impact of money supply toward food inflation in Nigeria. The estimation method that is used in this study is the Augmented Dickey-Fuller, Autoregressive Distributed Lag Model (ARDL), and Ordinary Least Square (OLS).

Previous study by (Kuma & Gata, 2023) showed that there is positive and significant relationship between food inflation and money supply in Ethiopia. The result is based on the Autoregressive Distributed Lag Model (ARDL), Fully Modified Ordinary Least Square (FMOLS), and Co-integrating Regression (SSR). The data of this study was collected from the year 1990 to 2021. To conclude, the study revealed that the real GDP, world food price, money supply, and exchange rate was cointegration in the study.

Last but not least, according to (Abdul Ghafoor Awan & Imran MPhil scholar, 2015) there is positive and significant relationship between food price inflation and money supply. The study was conducted by collecting data from 1980 to 2013. In addition, Augmented Dickey-Fuller (ADF) test, Johansen’s co-integration technique, and VECM are used in this study to investigate the long term and short run relationship between the variables.

5.2.3 Gross Domestic Products (GDP)

Research by (Kai et al., 2017) investigate the impact of real gross domestic product on Malaysian food price. In this study, the result shows the positive and not significant relationship between the two variables. This study adopted Augmented Dickey-Fuller, Phillips Perron, Unit Root Test, and Unrestricted NARDL as the estimation methods.

Furthermore, in the study (Hasan et al, 2018) is stated that there is positive and significant relationship between food inflation and gross domestic product (GDP) in Malaysia. The data collected for this study is from 2010 until 2018 by monthly data. The study also indicated that the variables which are crude oil price, consumer price index, exchange rate, and GDP are cointegrated in long run. The study used Augmented Dickey-Fuller, Phillips Perron, Unit Root Test, and Cointegration Test as the estimation methods.

The study from (Salamai et al., 2022) revealed that there is negative and insignificant relationship between inflation rate and gross domestic product in Saudi Arabia. The data was collected from 1969 until 2020, this study seeks to objectively examine the relationship between Saudi Arabia's GDP and inflation rate. The study used multiple econometric models, including Ordinarily Least Squares (OLS), to correlate GDP and inflation rate. In this study also, the unit root test (ADF test) and normality tests (Jarque-Bera) are used to confirm the accuracy of the data.

5.2.4 Exchange Rate

According to (Samal et al., 2022b)it is indicated that there are positive and insignificant relationships between exchange rates and food inflation in India at the short run estimation. The purpose of this paper is to investigate the factors that influence food price inflation in India. The data was utilized monthly time series data from January 2006 to March 2019. The study adopted Augmented Dickey- Fuller, Phillips Perron, Unit Root Test, and ARDL Cointegration Test as the estimation methods.

Based on the study from (Wong et al., 2017) it is revealed that the exchange rate displayed negative and significant correlated towards inflation rate in Malaysia. The purpose of this study conducted is to examines the relationship between macroeconomic factors and inflation rate in Malaysia. The data was collected from the year of 1986 to 2015. Furthermore, this study investigates the empirical model's long run, short run, stability, normality, and specification errors.

5.2.6 Climate Change

Moreover, (Cevik et al., 2023) stated that there is negative and significant relationship between climate change and inflation rate in the countries. This study uses data from 173 nations from the period 1970 to 2020. The empirical research demonstrates that disasters caused by climate change have a considerable impact on inflation and growth, although the direction and amount of the impact vary. While excessive temperatures cause lower inflation, droughts and storms cause higher inflation. In addition, climate change is a diverse and changing phenomenon that has a significant impact on the global economy and financial markets.

The other study from (Odongo et al., 2022) revealed that the climate change has a positive and significant relationship with inflation rate in Eastern and Southern Africa. The dynamics of significant climate change indicators and their consequences for food prices in Eastern and Southern African countries are examined in this study. The study employs descriptive and quantitative analysis of monthly data from ten nations from 2001 through 2020. The descriptive analysis demonstrates that the sampled nations have experienced an increasing number of climate change events over the last two decades.

5.3 RESEARCH METHODOLOGY

5.3.1 Introduction

Chapter 3 refers to the research methodology. It can be defined as the way of how researchers conduct their research or how of a research investigation. It is primarily about how a researcher designs a study in a methodical manner to produce accurate and trustworthy results that address the research aims, objectives, and research questions. Furthermore, this chapter will provide an extensive description of the entire study approach. This chapter contains several aspects, including research design, data collection method, and theoretical framework. The secondary data is being used and was acquired from numerous sources, including past study journals, yearly reports, World Bank websites, and Data stream.

5.3.2 Research Design

Research design can be defined as the fundamental guideline needed to carry out the study. Quantitative research entails gathering numerical data to address a specific research issue. The research design in this study consists of one main objective which needs to be investigated, as follows:

- To study the factors influencing the food inflation in Malaysia.

This study will use time series data of factors that contributed to the food inflation in Malaysia such as money supply, gross domestic product (GDP), exchange rate, and climate change. Time series data, often known as time-stamped data, is a set of data items that are indexed in time order. These data points are used to track change over time and typically consist of sequential measurements taken from the same source over a set time interval. There are four types of the time series data such as secular trend, seasonal variations, cyclical fluctuations, and irregular variations.

Furthermore, the data acquired in the study is set up to provide statistical data. It is gathering more structured data. Quantitative research not only gives a summary of the aspects, but it is also important in determining the correlation. The correlation matrix, unit root test, and cointegration test will be used to study the relationship between factors influencing the food inflation in Malaysia. This study extended the years of observations from 1979 to 2020 that had not been used by previous researchers on Malaysia, in order to assist future researchers in continuing the study.

5.3.3 Theoretical Framework

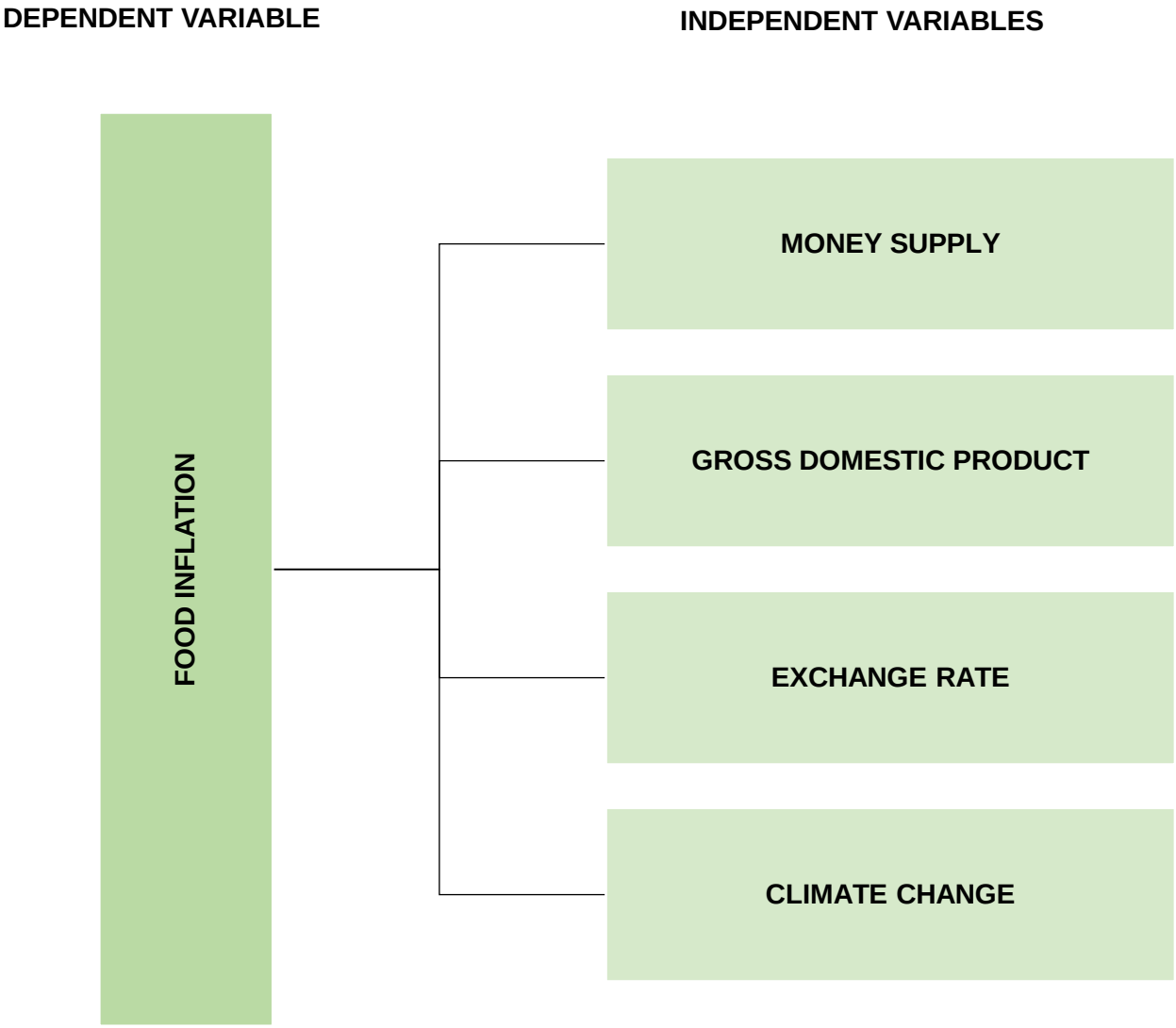

Figure 5: Theoretical framework

Based on figure 5 above, it shows the theoretical framework in this study. According to this framework, there are four independent variables which are money supply, gross domestic product, exchange rate, and climate change. These variables are used to investigate the dependent variable. Meanwhile, the dependent variable in this study is food inflation in Malaysia. This study also conducted to examine the relationship between independent and dependent variables either it will turn out positive or negative towards food inflation in Malaysia.

VARIABLES	PROXY	SYMBOLS
Food inflation	*Food Production Index (2014-2016=100)*	**FPI**
Money Supply	*Broad Money (constant LCU)*	**M3**
Gross Domestic Product	*GDP (constant LCU)*	**GDP**
Exchange Rate	*Real Effective Exchange Rate Index (2010=100)*	**REER**
Climate change	*Arable land (% of land area)*	**LAND**

Table 4:The details of variables

5.3.4 Sample and Data Collection/ Data Collection Methods

In order to focus on the factors that influencing food inflation in Malaysia, the data that has been acquired on the indicators of money supply, gross domestic product, exchange rate, and climate change are from the World Bank database, Data Stream, and Department of Statistic Malaysia database. The raw data was collected from the year 1960 until 2022, however the data of all the variables are available starting from 1979 to 2020. Thus, this study will be conducted by using the range of period. This study also uses annually time series.

The indicator for food inflation in this study is the food production index (2014-2016=100) which is the dependent variable. Next, the indicator that is used for the money supply is broad money (constant LCU). For the exchange rate variable, the indicator used is the real effective exchange rate index (2010 =100). In addition, for the gross domestic product the indicator is gross domestic product (constant LCU). Lastly, for climate change the indicators are arable land (% of land area).

5.3.4.1 E-Views

EViews 12 Student Version Software has been used in this study to implement the correlation matrix, unit root test, and cointegration test. There are numerous versions of EViews with the same function those academic researchers, government agencies, and students can utilize. EViews 12 Student Version Software is an innovative data stream which is very useful for data visualization, statistical analysis, estimation, forecasting, and model solution, as well as high-quality presentation output for publication.

In other words, E-views are store the data in a proprietary and undocumented file format. However, according to Chen (1999), E-views can estimate a regression and output data for each estimated coefficient. Moreover, E-views can also provide useful summaries of each estimated equation. It is also used to start the multiple regressions model and to check for the presence of multicollinearity, autocorrelation, heteroscedasticity issues, and used to execute the model formulation and normalcy tests.

5.3.4.2 Correlation Matrix

Correlation matrix is one of the methods that is used in time series data. A correlation matrix is a square matrix that displays the coefficients of correlation between two variables. Correlation coefficients quantify the strength and direction with which two variables are related in a straight line. In addition, a correlation matrix is frequently used in multivariate analysis and statistics to investigate how multiple variables relate to one another. Correlation matrices can also be used to identify instances in which two or more variables are significantly connected. This is known as multicollinearity. Multicollinearity can pose issues in regression analysis, such as unstable parameter estimations and large standard errors.

Not to mention, but correlation matrix is a valuable tool for determining how several variables are related to one another. It can discover how two variables are related and how changes in one variable could affect the other variables by examining their correlation coefficients.

5.3.4.3 Unit Root Tests/ Stationary Tests

a) Augmented Dickey Fuller (ADF)

There are several tests that can be used to test the unit root test in the time series data, for instance Augmented Dickey Fuller Test. This test is also known as The Dickey-Fuller Test. It was formed by Dickey and Fuller in year 1979. The null result of the DF test is the presence of a unit root in a first-order AR model. The first-order AR procedure also captures first-order autocorrelation. If we assume higher-order autocorrelation in the model, then DF fails, and the error term's white noise assumption is violated. As a result, Dicky and Fuller enhance the equation with higher-order lags to capture higher-order autocorrelation, which is known in the time series literature as the Augmented Dickey Fuller (ADF) test. More specifically, the ADF test is used to parametrically adjust the higher-order correlation by using the greater number of lags on the right side of the equation.

b) Phillips-Perrons (PP)

Phillips-Perrons Test is also one of the unit root tests in statistics. It is used in time series analysis to examine the null hypothesis. This test is designed by Phillips and Perron in year 1988. In general, PP test is used to manage the issue autocorrelation when testing for unit root test or stationary test. The Phillips-Perron test is a nonparametric correction to the t-test statistic that delivers more robust results with regard to nonspecific heteroscedasticity and autocorrelation in the test equation's disturbance process. This type of test is normally used when there is an absence of a degree of freedom due to a small number of observations with higher-order autocorrelations.

5.3.4.4 Cointegration Test (CI)

The cointegration test is a way to determine whether there is a long-term correlation between several time series. Nobel laureates Robert Engle and Clive Granger popularized the test in 1987, following the publication of the spurious regression concept by British economist Paul Newbold and Granger. In addition, Cointegration tests detect situations in which two or more non-stationary time series are integrated together in such a way that they cannot stray from equilibrium over time. The tests are designed to determine how sensitive two variables are to the same average price over a given time period.

a) Ordinary Least Square (OLS)

Ordinary Least Squares regression (OLS) is a method used to estimate the coefficients of linear regression equations which indicate the connection between a number of independent quantitative variables and a dependent variable. The term least squares refer to the minimal squares error (SSE). The alternative techniques to OLS include maximum likelihood and the generalized method of moments estimator. In addition, the OLS approach attempts to reduce the sum of square discrepancies between observed and predicted values.

b) Dynamic Ordinary Least Square (DOLS)

Stock and Watson created an alternative strategy in the year 1993. This strategy also offers advantages over both the OLS and the maximum likelihood processes. Their technique outperforms OLS by dealing with limited sample sizes and dynamic sources of bias. As a complete information methodology, the Johansen method is vulnerable to the problem where parameter predictions in one equation are influenced by any incorrect specification in other equations. Thus, the Stock Watson method, on the other hand, is a robust single equation approach that corrects for regressor endogeneity by including leads and lags of regressor initial differences, as well as for serially correlated errors using a GLS method.

c) Granger Causality

The Granger causality test is a test of statistical hypotheses used to determine whether one time series is a factor that may be used to forecast another time series. In other words, Granger causality is a method for determining the relationship between two variables in a time series. This method is a probabilistic view of causality; it finds patterns of correlation using empirical data sets.

5.3.5 Empirical Model

This model is efficient in examining the factors influencing food inflation in Malaysia. As a result, the empirical model is expanded as follows:

$$lnINFt = \alpha + \beta 1 ln\text{GDP}t + \beta 2 ln\text{LAND}t + \beta 3 ln\text{M3}t + \beta 4 ln\text{REER}t + \mu t$$

INF = *Food inflation, Food production Index (2014-2016=100)*

$\beta 0$ = *Slope coefficient*

βi = *Slope efficient for independent variables, where* t *= 1,2,3,4*

GDP = *Gross Domestic Product (Constant LCU)*

LAND = *Climate change, Arable land (% of land area)*

M3 = *Money supply, Broad Money (Constant LCU)*

REER = *Real Effective Exchange Rate Index (2010=100)*

μ = *Error term*

In this study, the Correlation Matrix, Augmented Dickey Fuller, Phillips Perron, and Cointegration Test will be used to determine the best model. The purpose of choosing the best model in this study is to describe the relationship between independent variables and dependent variables.

5.4 DATA ANALYSIS

5.4.1 Introduction

In chapter 4, it contains an examination of the data acquired for the study. It will analyze the data using the multiple linear regression approach to determine which independent variables significantly affect the dependent variable, such as gross domestic product, as causes for factors of food inflation in Malaysia. The relationship between the dependent and independent variables will be determined through this study in order to achieve the objective and hypothesis stated in Chapter 1.

5.4.2 Descriptive Analysis

This section will discuss the descriptive statistics for all variables that were utilized in this study. Table 5 below will summarize the mean, minimum, maximum, and standard deviation values for each variable.

	FPI	***GDP***	***LAND***	***M3***	***REER***
Mean	67.1893	6.32E+11	2.7438	7.95E+11	116.2183
Median	64.7550	5.60E+11	2.7200	7.07E+11	101.6700
Maximum	104.9200	1.42E+12	3.2900	1.85E+12	184.0300
Minimum	37.2400	1.52E+11	2.4400	1.12E+11	84.4000
Std. Dev	20.6219	3.89E+11	0.2028	5.35E+11	28.4730
Obs	42	42	42	42	42

Table 5:Descriptive Statistic Analysis

Based on table 5 above, it is indicating the descriptive statistical analysis for the dependent and independent variables which includes food inflation *(FPI)*, gross domestic product (GDP), climate change (LAND), money supply *(M3),* and exchange rate *(REER).* The analysis above consists of 42 observations for an overall sample. The average size of food inflation for the period of the study is 67.19 and its ranges from minimum value of 37.24 to the maximum value of 104.92.

5.4.3 Correlation Analysis / Correlation Matrix

	FPI	GDP	LAND	M3	REER
FPI	1.000000	0.969743	-0.822269	0.960750	-0.849848
GDP	**0.969743*** **	1.000000	-0.784714	0.993122	-0.807368
LAND	-0.822269	-0.784714	1.000000	-0.795157	0.742184
M3	**0.960750*** **	0.993122	-0.795157	1.000000	-0.803752
REER	-0.849848	-0.807368	0.742184	-0.803752	1.000000

Note: *** significant at 1% level, ** significant at 5% level, * significant at 10% level.

The dependent variable is food Inflation.

Table 6:Correlation Analysis

Table 6 above portrays the results of the correlation analysis between the variables. The dependent variable for this study is food inflation and the independent variables are gross domestic product, climate change, money supply, and exchange rate.

As shown above, the result of the pairwise correlation shows that gross domestic product (GDP) has a positive and significant correlation at a 1% level with food price index, where the result is above 0.90 ***(0.9697***).*** Thus, it is indicated that food price index is highly correlated with gross domestic product in this study.

In addition, the result also shows that the money supply (M3) positively correlated with the food price index at a significant 1% level. This can be proven when the result is above 0.90 ***(0.9608***)*** which means the food price index is highly correlated with money supply in this study.

5.4.4 Unit Root Test

SERIES	*LEVEL*		*FIRST DIFFERENCE*	
	ADF	**PP**	**ADF**	**PP**
lnFPI	-2.01	-1.83	-4.33***	-4.37***
lnGDP	-0.64	-0.80	-4.74***	-4.74***
lnLAND	-3.15	-3.15	-6.62***	-6.62***
lnM3	-2.94	-2.94	-6.11***	-7.14***
lnREER	-2.66	-2.20	-4.85***	-4.85***

Note: *** significant at 1% level, ** significant at 5% level, * significant at 10% level.

The dependent variable is food Inflation.

Table 7:Unit Root Test

Based on table 7 above, it is indicated the result for Augmented Dickey-Fuller (ADF) and Phillips Perron (PP) at the level and first difference. For Augmented Dickey-Fuller (ADF), the Schwarz Info Criterion, or known as SBC Criteria has been used to determine the optimal lag length. In this method also, the maximum number of lags that has been used is 2. In addition, for Phillips Perron (PP) the estimation method used is Barlett Kernel meanwhile the Newey-West method is selected for the bandwidth. In this study, the significance has three levels denoted as *** significant at the 1% level, ** significant at the 5% level, and * significant at the 10% level.

H0: The data series is non-stationary.

H1: The data series is stationary.

- If the result shows the t-test is more negative than the critical values, it successfully rejects the null hypothesis. Thus, it concludes that the time series or the data is stationary.

- If the result shows the t-test is less negative than the critical values, it unsuccessful to reject the null hypothesis. Thus, it concludes that the time series or the data is non-stationary.

Referring to the table above, it shows that there is no significant relationship at level for the Augmented Dickey-Fuller Test (ADF) and Phillips Perron test (PP). This is because the computed t-statistics for all variables are lower than the critical values at any significant level such as 1%, 5%, and 10%.

Furthermore, all the variables show that there are significant relationships at 1% level when conducting Augmented Dickey-Fuller Test (ADF) and Phillips Perron Test (PP) at first difference. For instance, the food price index computed t-statistic at first difference by -4.33 which higher than the critical values at any significance level. Therefore, it can reject the null hypothesis at 1% significant relationship. Meanwhile, for the Phillips Perron Test (PP) the t-statistic is -4.37 also indicates the significant at 1% level.

Not only that, the variables of gross domestic product, climate change, and exchange rate show the same results for both tests which are Augmented Dickey-Fuller and Phillip Perron at first difference. It is indicating the t-statistic of gross domestic product is -4.74, climate change is -6.62, and exchange rate is -4.85 which higher than the critical values. Thus, it shows that all variables are significantly at 1% level and can reject the null hypothesis.

Meanwhile, for the money supply the result shows that the variable is significantly at 1% level for both tests. The t-statistics of Augmented Dickey-Fuller test is -6.11 which is greater than critical values. Meanwhile, the t-statistics of Phillips Perron is -7.14 also higher than the critical values. Thus, it shows that money supply is significant at the first difference after conducting both tests.

5.4.5 Least Square Method

Dependent Variable: LFPI
Method: Dynamic Least Squares (DOLS)
Date: 07/19/23 Time: 10:53
Sample (adjusted): 1982 2018
Included observations: 37 after adjustments
Cointegrating equation deterministics: C
Fixed leads and lags specification (lead=2, lag=2)
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	0.790428	0.105138	7.517988	0.0000
LLAND	-1.314976	0.168720	-7.793843	0.0000
LM3	-0.307926	0.095936	-3.209689	0.0075
LREER	0.160813	0.088708	1.812844	0.0949
C	-8.397413	1.592748	-5.272278	0.0002

R-squared	0.998491	Mean dependent var	4.179335
Adjusted R-squared	0.995474	S.D. dependent var	0.284411
S.E. of regression	0.019135	Sum squared resid	0.004394

Table 8:Least Square Method

The regression model can be estimated as below:

$\boldsymbol{lnINFt}$ = α + $\boldsymbol{\beta 1 ln}$GDP$\boldsymbol{t}$ + $\boldsymbol{\beta 2 ln}$LAND$\boldsymbol{t}$ + $\boldsymbol{\beta}$3$\boldsymbol{ln}$M3$\boldsymbol{t}$ + $\boldsymbol{\beta}$4$\boldsymbol{ln}$REER$\boldsymbol{t}$ +$\boldsymbol{\mu t}$

$\boldsymbol{lnINFt}$= -8.3974 + 0.7904$\boldsymbol{ln}$GDP – 1.3150$\boldsymbol{ln}$LAND - 03079$\boldsymbol{ln}$M3 + 0.1608$\boldsymbol{ln}$REER

T-stat = (-5.2723) (7.5180) (-7.7938) (-3.2097) (1.8128)

Prob = (0.0002) (0.0000) (0.0000) (0.0075) (0.0949)

5.5 RESULTS AND DISCUSSION

In an era of globalization where economy is unpredictable, the factors of food inflation are crucial to Malaysia's economic growth. As previously examined, there are numerous factors that contribute to Malaysia's food inflation. A diagnostic checking test, F-test, and T-test have been used in the previous chapter to determine the significant link between the independent variable and the dependent variable. This section will show the consequences of the research as well as comparisons of the results with previous research. Last but not least, this section will discuss the study's implications, recommendations for further research, and conclusion.

Independent variables	**Expectation Sign**	**Regression Result**
Gross Domestic Product	Positive	Positive and significant
Climate Change	Negative	Negative and significant
Money Supply	Positive	Negative and significant
Exchange Rate	Negative	Positive and not significant

Table 9:The results for independent variables on food inflation

According to table 8 and 9 above, it is indicated the result for independent variables on the food inflation in Malaysia. It shows the same result for the gross domestic product at the expectation sign and regression result. The coefficient of gross domestic product is 0.7904. The 1% increase in gross domestic product will increase food inflation to 0.7904. This value also indicates the positive correlation between gross domestic product and food inflation in Malaysia. It is statistically significant where the probability value is less than 0.05. Not only that, but this value also influences food inflation. Therefore, the relationship between gross domestic product and food inflation in Malaysia in this study is positive and significantly.

Climate change also shows the same result as the expectation sign. There is a negative and significant relationship between climate change and food inflation. The 1% increase in climate change will decrease food inflation to 1.3150. Furthermore, climate change is statistically significant with food inflation where the probability value is less than 0.05. Thus, it shows that climate change is negatively correlated with food inflation in this study.

Next, for the money supply it shows the contradictory result with expectation sign. There is a negative correlation between money supply and food inflation. If there is a 1% increase in money supply, the food inflation will decrease by 0.3079. Regarding to the result also, it shows that money supply is statistically significant with food inflation where the probability value is 0.0075 which is below 0.05. In brief, the correlation between money supply and food inflation is negative and significant.

Lastly, for the variable exchange rate the result indicates that there is a positive relationship with food inflation. The coefficient of the exchange rate is 0.1608. It means if there is a 1% increase in the exchange rate, the food inflation will increase by 0.1608 in this relationship. However, there is a not significant relationship between the variables because the probability value of the exchange rate is greater than 0.05 where the result is 0.0949. Thus, the relationship between the exchange rate and food inflation is positive and not significant.

5.5.1 Implication of study

Practically, this study provides an important role in examining the factors influencing the food inflation in Malaysia. The first factor is gross domestic product. Food inflation is more probable to have a substantial negative impact on economic growth than a major positive impact. The positive economic growth can lead to poverty reduction, higher living standard, more job creation, political stability, and decreased unemployment. However, due to higher food inflation it can have negative impact to the gross domestic product (GDP) growth or economic growth. Thus, food inflation affects GDP in the short run but has the potential to boost it in the long run.

Next, the other factor is money supply. In this study, money supply is the significant and has a relationship with the food inflation in Malaysia. Bank Negara (BNM) and the Federal Government need to regulate the total amount of money in existence to govern the demand and supply of money. This is related to the gross domestic product (GDP) growth. Bank Negara Malaysia must also adhere to strict guidelines in order to avoid readily printing money. This is because, while it may assist to reduce inflation, the value of money will fall as a result of the requirement to boost Bank Negara Malaysia's reserves. Furthermore, Bank Negara Malaysia should impose a reserve requirement on commercial banks so that there is no excess money in the market.

Moreover, climate change also can affect the economic growth of country specifically Malaysia. Which means it can affect the food price and speed up the inflation rate. Climate change could increase inflation by 1% a year over the next decade due to rise in food prices. This is because climate change threatens the sources of food in both developing and industrialized countries. Floods, droughts, stronger hurricanes, heat waves, and wildfires can reduce crop output, damage livestock, and disrupt food transportation. Additionally, rising carbon dioxide or CO2 levels caused by human activities can make basic crops such as rice and wheat less nutritious.

5.5.2 Limitation of the study

There are several limitations when conducting this study. The first limitation of the study is when collecting the data, the period of data for the variables, either for dependent or independent variables, needs to be reduced because some of the data is not available. The study's sample size is only 42 observations, and it is yearly data from 1979 until 2020.

Next, the time available for completing this study is really limited. This is due to the tight timeline and other daily assessments that must be completed concurrently. Not only that, the cost of printing also becomes a constraint for doing this research. Moreover, the language of reference articles and journals is a limit in completing this study because it is less familiar and requires more effort to understand. In addition, the problems were far too significant to be solved within the scope of the study.

Lastly, the limitation when conducting this study also occurs when running the data by using the data stream. The data stream that has been used at early study in is E-View version 3.1. This version needs to be updated and support the certain command in the manual to run the data. Thus, there is limitation in getting the results. However, after realizing the consequences of using the old version of E-View, I changed the version to E-View version 12 which is the latest version and finally there is no limitation in getting the result as the command in manual.

5.5.3 Recommendations for future research

Various previous studies have analysed the relationship between food inflation and factors that contributed with different results. In this study, it was discovered that gross domestic product, climate change, money supply and exchange rate have an implication towards food inflation either negative or positive correlation. However, the most significant relationship in this study can be revealed that are gross domestic product, climate change, and money supply. Therefore, policymakers can control food inflation by focusing on these three factors.

Food inflation is positive and significant at level 1% for the gross domestic product. Meanwhile, food inflation is negative and significant at level 1% for climate change and money supply. This result can be supported by previous studies such as (Kai et al., 2017) (Kuma & Gata, 2023), (Cevik et al., 2023). All these studies revealed the relationship and the significance of food inflation and factors that contributed to the inflation.

Thus, this study recommends an appropriate regulation. Firstly, there is a need for enhanced oversight of the food supply chain inside the market to effectively monitor the impact of market competition on wholesalers, retailers, and importers. In the foreseeable future, the government must enhance its endeavors in fostering the growth of domestic private agriculture and food processing industries. Furthermore, it is imperative for Malaysia to actively encourage and prioritize the attainment of self-sufficiency in its food reserves.

Next, it is imperative for the government to implement efficient policy measures in order to safeguard consumers from escalating food prices. The following are the successful strategies for implementing public distribution systems, policies aimed at ensuring food security, and the adoption of a contractionary monetary policy to limit the money supply. These measures ultimately lead to a decrease in food price inflation by reducing the demand for food goods.

Not only that, but the rise in global food inflation also stimulates food price inflation through international trade routes. Nevertheless, the impact of global food inflation on the inflation of food prices can be mitigated through the implementation of a flexible tariff framework. Therefore, it is imperative for the government to implement consistent and progressive trade policies that effectively mitigate food price inflation while also safeguarding the financial compensation of farmers.

PART 7: CONCLUSION

In conclusion, it is considered that the findings of this study do not contradict recent relevant efforts in Malaysia, but this study accomplishes those previous studies and thus can contribute to people's understanding of this correlation. This research shows that the money supply, gross domestic product, and climate change have significance in influencing Malaysia's food inflation. All the findings are trustworthy and have been proved by previous studies.

The findings of this study will provide benefits to investors, the government, and the business sector. The study's findings will assist investors in their investment strategies. Meanwhile, the results would be useful for government planners in their monetary and fiscal strategies to manage inflation. Lastly, the findings can help organizations in their business strategies, such as pricing and output decisions. The fundamental commitment of this study that distinguishes it from other studies of food inflation in Malaysia is that it covers the most current year, which is 2023.

PART 8: REFERENCES

Abdul Ghafoor Awan, P., & Imran MPhil scholar, M. (2015). *Food Price Inflation and its impact on Pakistan's Economy*. *41*. www.iiste.org

Adjemian, M. K., Arita, S., Meyer, S., & Salin, D. (2023). Factors affecting recent food price inflation in the United States. *Applied Economic Perspectives and Policy*. https://doi.org/10.1002/aepp.13378

Ashiru, Y. O. (2022). Money Supply Movement and Food Inflation in Nigeria. *Growth*, *9*(1), 1–5. https://doi.org/10.20448/growth.v9i1.3815

Cevik, S., Jalles, J. T., Berger, H., Duval, R., Ferrucci, G., Hasna, Z., Jaumotte, F., Massetti, E., Richmond, C., Schimmelpfennig, A., Starovoits, G., & Zhang, A. T. (2023). *APR Eye of the Storm: The Impact of Climate Shocks on Inflation and Growth Eye of the Storm: The Impact of Climate Shocks on Inflation and Growth*.

Ismaya, B. I., & Anugrah, D. F. (2018). DETERMINANT OF FOOD INFLATION: THE CASE OF INDONESIA. *Buletin Ekonomi Moneter Dan Perbankan*, *21*(1), 81–94. https://doi.org/10.21098/bemp.v21i1.926

June, U., & Fernando, J. (n.d.). *Inflation: What It Is, How It Can Be Controlled, and Extreme Examples What you need to know about the purchasing power of money and how it changes What Is Inflation?* https://www.investopedia.com/terms/i/inflation.asp

Kai, K., Wong, S., & Shamsudin, M. N. (2017). Impact of Crude Oil Price, Exchange Rates and Real GDP on Malaysia's Food Price Fluctuations: Symmetric or Asymmetric? CORE View metadata, citation and similar papers at core.ac.uk provided by Universiti Putra Malaysia Institutional Repository. In *International Journal of Economics and Management Journal homepage* (Vol. 11, Issue 1). http://www.econ.upm.edu.my/ijem

Kuma, B., & Gata, G. (2023). Factors affecting food price inflation in Ethiopia: An autoregressive distributed lag approach. *Journal of Agriculture and Food Research*, *12*. https://doi.org/10.1016/j.jafr.2023.100548

Odongo, M. T., Misati, R. N., Kamau, A. W., & Kisingu, K. N. (2022). Climate Change and Inflation in Eastern and Southern Africa. *Sustainability (Switzerland)*, *14*(22). https://doi.org/10.3390/su142214764

Olah, J., & Investopedia, /. (n.d.). *ECONOMY ECONOMICS Keynesian Economics Theory: Definition and How It's Used What Is Keynesian Economics?* https://www.investopedia.com/terms/k/keynesianeconomics.asp

Personal, M., Archive, R., Hasan, A. N., & Masih, M. (n.d.). *M P RA Determinants of food price inflation: evidence from Malaysia based on linear and nonlinear ARDL Provided by Munich RePEc Personal Archive*.

Salamai, Dr. A. A., Faisal, Dr. S. M., & Khan, Dr. A. K. (2022). The relationship between inflation and GDP with reference to oil based economy. *International Journal of Multidisciplinary Research and Growth Evaluation*, 375–380. https://doi.org/10.54660/anfo.2022.3.1.21

Samal, A., Ummalla, M., & Goyari, P. (2022a). The impact of macroeconomic factors on food price inflation: an evidence from India. *Future Business Journal*, *8*(1). https://doi.org/10.1186/s43093-022-00127-7

Wong, J., Lim, Y. M., Teng, Y., Hui, L., Tai, Y. I., Jie, J., Tunku, U., & Rahman, A. (2017). *EFFECT OF MACROECONOMIC VARIABLES TOWARD INFLATION IN MALAYSIA'S ECONOMY*.

PART 9: APPENDICES

Figure 6: Kiam Fatt Motor Sdn Bhd (Perodua), Seri Iskandar

Figure 7: Customer vehicles

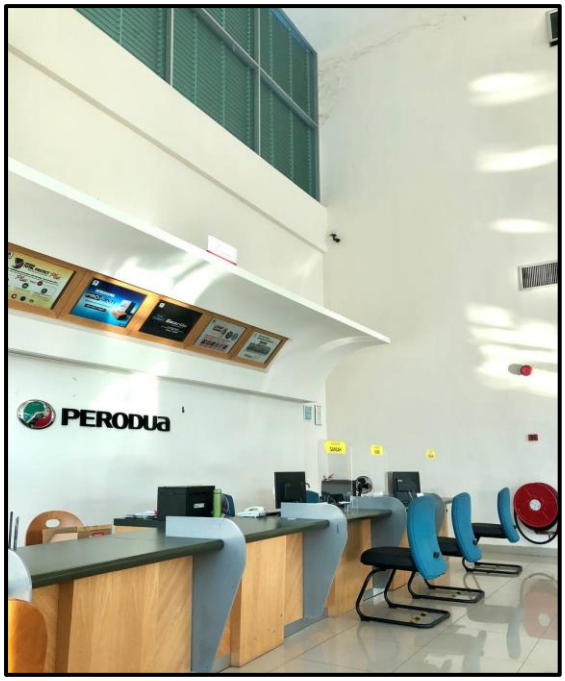

Figure 8: Service Advisors Department

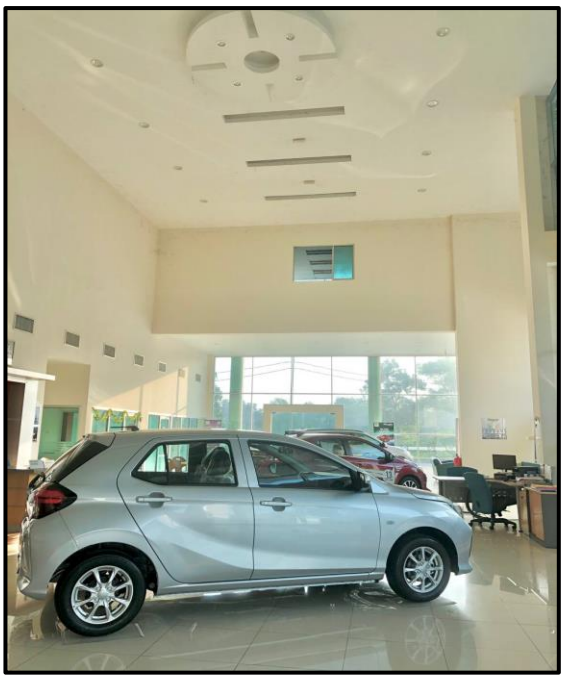

Figure 9: Showroom Area

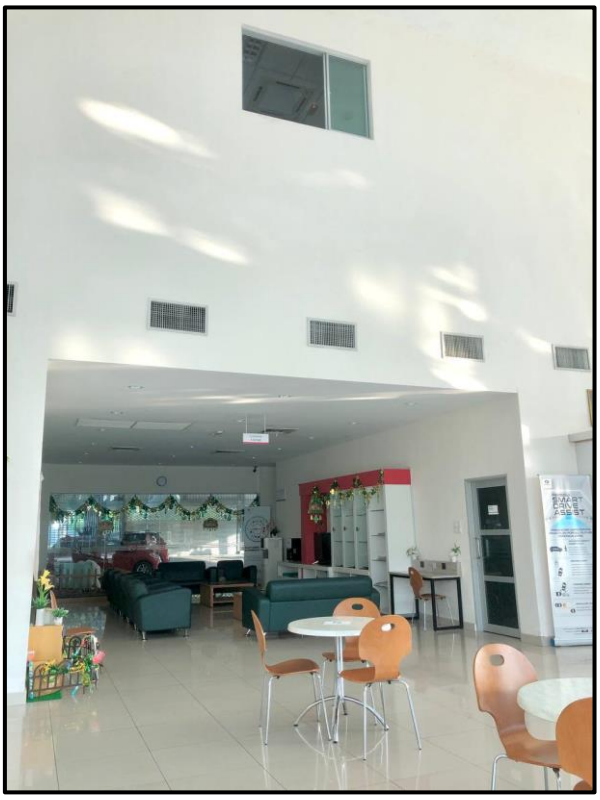

Figure 10: Customers Lounge

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