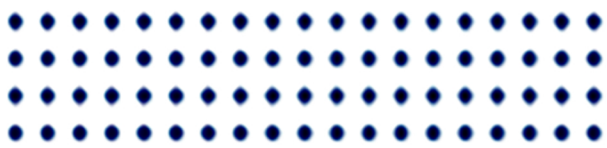




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COMPETITIVENESS ANALYSIS OF EDIBLE-BIRDNEST (EBN) RANCHING IN JOHOR BAHRU AND GUA MUSANG, MALAYSIA

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ABSTRACT

The swiftlet industry is listed under 12 Entry Point Projects (EPP) under the Agriculture National Key Economic Area (NKEA), which is one of the cores of the Economic Transformation Programme (ETP) as it can generate income for the nation. Although these swiftlet ranching located in both urban and rural areas, a majority are in the earlier. Previous works of literature have suggested that Malaysian swiftlet ranching is less competitive than that in Indonesia and Thailand. It lacks strategic plans to enhance its competitiveness with a dearth of research on its competitiveness. Even though this industry is lucrative, it is high-risk and unpredictable. The structure of swiftlet ranching between urban and rural areas differs and a question arises whether this could affect the production of EBN. This study has been conducted in Johor Bahru and Gua Musang with the earlier and latter representing swiftlet ranching activities in urban and rural areas, respectively. Therefore, this study is to assess the factors that contribute to or lack of competitiveness of swiftlet ranching. The result found that factor conditions are the most essential component, followed by demand conditions, firm strategy and structure and rivalry, related and supporting industry, the role of government and finally chance for both areas. Knowledge and experience are the most important factors to be competitive and to be successful in swiftlet ranching industry.

Keywords: swiftlet ranching, competitiveness, EBN

1.0 INTRODUCTION

Many emerging nations still rely on agricultural production to boost their GDP (Jalil, 2019). According to Saudid (2018), the growth of the Malaysian economy has been significantly influenced by the agricultural sector. This is demonstrated by the fact that the agriculture sector will be developed as the third driving force contributing to the country in the Ninth Malaysian Plan (RMK9). In Malaysia, the swiftlet ranching is expanding at an astounding rate. This

industry has gone through a period of tremendous expansion over the course of the last decade. Based on the Department of Veterinary Services (DVS) report, a total of 10016 swiftlet dwellings were reported in 2015, representing a 65.61 percent rise from the number of swiftlet houses documented in 2011 to those recorded in 2015. According to Yassin et al. (2020), there have been a total of 60,000 swiftlet dwellings reported as of the year 2017. Swiftlet ranching continues to grow stronger because it can gain high profit with low operating costs. A total of RM5 billion worth of EBN was to be produced, as outlined in the 10th Malaysian Plan, and the government aimed to reach this goal by building 100,000 swiftlet dwellings (Ya'acob et al., 2022)

The strong market demand for swiftlet nests, spurred predominantly by China, has bolstered Malaysia's swiftlet ranching competitiveness. Traditional Chinese medicine has long revered swiftlet nests for their purported health benefits, which include enhancing respiratory health, bolstering the immune system, and promoting overall health. The demand for high-quality swiftlet nests continues to increase as the Chinese middle class grows and consumer preferences migrate towards natural and premium products. Malaysia's reputation for manufacturing nests of exceptional quality has positioned the nation as the world's foremost supplier. The primary export market for Malaysian EBN is Hong Kong, which accounts for 50 percent of the country's total export, followed by China (8 percent), Taiwan (4 percent), and Macau (3 percent), respectively. It is anticipated that the production of EBN would expand since there is an ongoing demand from nations that are importers, particularly China (Ya'acob et al., 2021)

In addition, according to Umi Kalsum et al. (2013), the difference in production costs has made the Malaysian swiftlet ranching industry less competitive compared to Indonesia and Thailand. These problems need critical analysis to find out factors that can contribute to the competitiveness of the swiftlet ranching industry and how it can be improved to achieve the goal set by the government for this industry.

To improve this condition, people need to bear in mind that swiftlet ranching in Malaysia is in both urban and rural areas. The uniqueness of this swiftlet ranching is that most of the swiftlet houses were in the urban area (Mislih & Rafae, 2001) even though it is well known that swiftlets only nest in an environment that is similar to their habitat. However, recent data indicates that the number of swiftlet houses in the urban areas has started to decrease but are gradually increasing in the rural area (Othman et al., 2008). This may be due to three main reasons which are swiftlet population is also abundant in the rural areas, the lack of suitable places in the urban areas for swiftlet rearing and agriculture areas support more food sources for swiftlets especially insects (Lourie & Tompkins, 2000). Even though the numbers of swiftlet houses in rural areas are increasing and have more room for expansion, people should not take light on the situation of swiftlet ranching in urban areas and it should be improved.

With this situation mentioned above, analysing the competitiveness of the swiftlet ranching in both areas becomes a need to understand the underlying structure, conduct and performance of these both areas. Yet, there is a dearth of research on the competitiveness of swiftlet ranching as many studies focus more on scientific research of EBN (Ya'acob et al., 2021). The same can be said for the lack of strategic plans to enhance the competitiveness of swiftlet ranching.

The swiftlet industry is a new industry in Malaysia thus there is a lack of knowledge and research regarding the swiftlet EBN economic performance. Analysing the competitiveness of swiftlet ranching becomes essential to understanding the underlying structure, conduct and performance of ranching activities. With a better understanding of swiftlet ranching, the profiles

of firms with higher economic performance could be ascertained to serve as guidance for other less successful firms already in operation. Thus, the objective of this study is to analyse the critical factors that influence the competitiveness of the EBN industry in Johor Bahru and Gua Musang.

2.0 LITERATURE REVIEW

Competitiveness helps the industry to grow. An industry is competitive when firms are able to provide products more effectively and efficiently compared to their competitors, able to stay in business to have the capacity to exploit existing market opportunities and generate new markets. Moreover, a competitive firm can attain some desired results in terms of profit, price, return, or quality of products (Dieter & Englert, 2007). A suitable method to investigate factors that contribute to competitiveness for the Malaysian swiftlet industry is Porter's Diamond model. This model is often used as an indicator to define the structure and performance of an industry. Porter (1980) was among the new industrial economists who held that the market economy evolves through the interplay of firms and policymakers who attempt to control economic evaluation. Before Diamond Model, Porter developed the five-force industry analysis which explained that there are five forces that determine competition in an industry. After that, he modified the five-forces model and argued that a country can create new advanced factor endowments to attain competitive advantage through four main determinants which are factor conditions, demand conditions, related and supporting industries and firm strategy, structure and rivalry. According to Akombo (2010), based on the researchers Yetton et al. (1992) the four determinants, which interact together in a diamond, are the forces that provide the pressures, incentives and capabilities for firms to undertake such improvement and innovation.

The Porter Diamond model includes four determinants which are; i) factor condition, ii) demand condition, iii) related and supporting industry, iv) firm's strategy, structure and rivalry. These four determinants interact with each other in a diamond and any changes to one of them can influence the other three determinants. While these are the four main factors that are going to be weighed within the diamond, there are two other elements that should not be ignored which are government and chance. In addition, government and chance also have their own attributes to influence competitiveness indirectly. All these determinants can provide the firms or industry some incentive and capabilities to make such improvements and innovation and teach them how to compete (Akombo, 2010).

2.1 Factor Condition

The first determinant is factor condition which describes those factors in a nation that can be used by industry or companies. Porter (1990) noted that factor condition refers to the factor of production, which can be grouped into human resources, material resources, knowledge, capital resources and infrastructure. In addition, according to Porter (1990), these elements may be broken down into four categories: basic, advanced, generalised, and specialised. Due to this, the consequences of these characteristics primarily give competitiveness over the course of a longer period; as a result, it helps to attract new investors to the region (Erboz, 2020). A significant number of scholars try to explain factor conditions with labour and capital aspects, such as investments in these technologies and their infrastructures. However, the availability of natural resources in a country could also effectively forge an advantage of utilising these factors (Heeks, 2006; Moon et al., 1998; Riasi 2015; Bakan & Doğan 2012).

2.2 Demand Condition

The second determinant is the demand condition where the nation or industry can gain a competitive advantage if the home demand is greater than the foreign demand. Home demand plays an important role in producing competitiveness. This is because it can provide an earlier picture of how the companies or industry increase competition by making some innovation to the product and increasing quality through the buyers' need, thus can achieve a sophisticated competitive advantage (Akombo, 2010). In addition, Porter believes that the growth of the domestic market can encourage the producer to increase their efficiency and develop better technology (Aghdaie et al., 2012). For countries with a small domestic market, they can look at the possibility of exporting to the international market.

2.3 Related and Supporting Industries

The third determinant is related and supporting industries. According to Porter (1990), related and supporting industries mean "the presence or absence in the nation of supplier industries and related industries that are internationally competitive". It means that by having a relationship with related industries can give an advantage to the industry in terms of innovation, improved quality of product, information flow and technology sharing to make the industry become competitive (Jin & Moon, 2006).

2.4 Firm Strategy, Structure and Rivalry

The fourth determinant is firm strategy, structure and rivalry. Porter (1998) defines firm strategy, structure and rivalry as "the conditions in the nation governing how companies are created, organized and manage as well as the nature of domestic rivalry". It means the way companies are managed and strategies of a firm can give impact to the performance and competitiveness of the firm as well as industry. According to Smit (2010), this factor can be influenced by the national environment and business environment of each country and it can determine the way the firm competes in the industry as well as characteristics of competitiveness. Strategy refers to how the firms take action to achieve their goals including cost advantage and distinction advantage. Structure refers to the degree of the industry either it's competitive or monopolistic, global or domestic, or concentrated or dispersed. There is greater competitiveness when the industry has crowded structure (Akombo, 2010). Meanwhile, rivalry refers to the number of competitors or players in the industry. The higher the rivalry, the greater the competitiveness

2.5 Government

The fifth determinant is government. Government can give impact to competitiveness either positively or negatively depending on their intervention in setting policies and regulation, politics and economy (Aghdaie et al., 2012). Government can affect all these four determinants by using their power into it. The role of government, all the policies and regulations made by policymakers at all levels of government can benefit or adversely influence the competency of a country and an industry (Barragan, 2005).

2.6 Chance

The final determinant is chance. Chance refers to occurrence of events that is beyond control by the industries or government, such as natural disasters, climate change, economic crisis and other situations that cannot be controlled by anyone. Chance is composed of external factors that are not well foreseen such as new inventions, political decisions by foreign governments, wars, rapid changes in financial markets or exchange rates, surges of world or regional demand, discontinuities in input costs, other radical technical changes (Mehrizi & Pakneiat, 2008; Tasevska, 2006; Tuna, 2006).

3.0 METHODOLOGY

3.1 Data Collection

Primary data is collected to gain more precise answers. Questionnaires are used to get the current scenario regarding the swiftlet ranching industry in Gua Musang and Johor Bahru. data were obtained from 190 ranchers (95 ranchers in Gua Musang and 95 ranchers in Johor Bahru). Two areas were chosen for this study which are Gua Musang and Johor Bahru. These two districts were chosen after the researcher ran the preliminary study in several states which are Penang, Melaka, Selangor, Kelantan, Terengganu, Perlis, Negeri Sembilan and Johor for getting more information regarding the swiftlet ranching in Malaysia. Johor Bahru is a good place to do research since it has different demographic features. Johor Bahru is a successful urban area in producing EBN. Besides that, based on a preliminary study, ranchers and buyers also mentioned that Gua Musang is one of the popular places among buyers because it can produce the best quality of EBN and the demographic are quite different from Johor Bahru since they operate in a rural area. In this study, simple random sampling is used to collect the data. In Gua Musang the total population of ranchers is 100 meanwhile in Johor Bahru the total population is 120 ranchers. Thus, referring to Krejci and Morgan (1970), the minimum sample size for Gua Musang is 80 respondents and Johor Bahru is 92 respondents.

3.2 Data Analysis

The Porter Diamond model is used to study the competitiveness of swiftlet ranching in both areas. This model includes six categories of determinants which are i) factor condition, ii) demand condition, iii) related and supporting industry, iv) firms' strategy, structure and rivalry, v) role of government and vi) role of chances. Analysis of data started with data being sorted, coded and accurately fed into the SPSS program for computerised analysis. This study will apply the basic model for factor analysis used by Mohd Shahwahid et al. (2010) which is:

$$Z = b_1j_1 + b_2j_2 + \dots + b_nj_n \quad (1)$$

Where Z is a linear combination of components $j_1, j_2, \dots, j_n$, are variables corresponding to the factors influencing the Porter's Diamond competitiveness that are highly correlated with each other and $b_1, b_2, \dots, b_n$ are coefficients of that variables. Z is the level of Porter's Diamond competitiveness. The Cronbach's Alpha reliability test was then applied to measure if the scales that have been constructed are reliable or valid. Then, Kaiser-Meyer-Olkin (KMO) was later applied to validate if the variables are factorable. The KMO value should be greater than 0.5 for a satisfactory factor analysis.

4.0 RESULT AND DISCUSSION

To determine the rank of critical factors influencing the competitiveness of the swiftlet ranching in both Johor Bahru and Gua Musang. By using Porter's Competitiveness Model. First, it will focus on Johor Bahru then Gua Musang.

4.1 Johor Bahru

The reliability test was conducted using 95 samples in Johor Bahru with a result of 0.749. Table 1 shows that the 0.404 KMO measure is also acceptable. The degree of common variance is meritorious whereby the factors extracted would account for a substantial amount of the variance in the competitiveness of the swiftlet industry. The Bartlett's Test of sphericity value is moderately high with 500.967 which is statistically significant at a 5 percent level of significance.

Table 1: Reliability Test for Johor Bahru

Cronbach Alpha	0.749
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Table 2: KMO and Bartlett's Test for Johor Bahru

Kaiser-Meyer-Olkin measure of sampling adequacy	0.404
Bartlett' s test of sphericity	500.967
Significant level	0.016

Table 3: Total Variance explain for Johor Bahru

Component		Initial Eigenvalues		
		Total	% of Variance	Cumulative %
Dimension	1	8.203	29.297	29.297
	2	5.295	18.912	48.208
	3	3.057	10.920	59.128
	4	2.155	7.696	66.824
	5	1.869	6.676	73.500
	6	1.607	5.739	79.239

Table 4: The Summary of Factor Analysis Result for Johor Bahru.

No	Dimension	Sub-variables loading	Variance (% of explained) (Eigenvalues)
1	Factor condition		29.297 (8.203)
	Knowledge	0.899	
	Capital	0.871	
	Labour	0.866	
	Technology	0.705	
	Swiftlet population	0.486	
2	Demand condition		18.912 (5.295)
	Market size	0.973	
	Growth market	0.966	
	Preference level	0.782	
	Demand in country	0.395	
	Demand in region	0.339	
3	Firm strategy, structure and rivalry		10.920 (3.057)

	Duration in the industry	0.975	
	Applied strategy	0.917	
	Numbers of players	0.846	
	Innovation level	0.774	
	RFID	0.423	
4	Related and supporting industries		7.696 (2.155)
	Link between buyers	0.973	
	Ties with researcher	0.951	
	Relation with government	0.881	
	Local supplier	0.773	
	Product distribution	0.757	
5	Government		6.676 (1.869)
	Government intervention	0.898	
	Environmental regulation	0.840	
	Fees by government	0.881	
	Policy by government	0.779	
6	Chance		5.739 (1.607)
	Crime	0.947	
	Climate change and air pollution	0.926	
	Embargo	0.842	
	Potential added product	0.521	

The total of variance explained	79.239
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From Table 3 above, there are six extracted components based on Eigenvalues. Table 4 shows the summary of the factor analysis. These factors are factor condition, demand condition, firm strategy, structure and rivalry, related and supporting industries, government and lastly chance. All these factors are factors from the Porter Diamond model to measure competitiveness.

The first factor that had the strongest variation explanation level (29.297 percent) is the factor condition. In this factor, knowledge and experience have the highest loading factor (0.899) followed by capital (0.871), labour (0.866), technology (0.705) and swiftlet population (0.486). The result shows that knowledge and experience is a very important factors to increase the competitiveness in swiftlet ranching in Johor Bahru. Even though most of the ranchers are quite a long in the industry, they still search for knowledge about proper management techniques in terms of internal design and construction of the swiftlet houses as Malaysia still do not have any specific SOP to follow in term of swiftlet houses management. In addition, their place is in urban where the swiftlet population getting reduced then they need to know on how to attract more swiftlets to nest in their swiftlet houses and make the birds feel safe to build their nest in that house.

The second factor is the demand condition which carries 18.912 percent of the total variance explained. For this factor, the highest variable explaining demand condition that can help to build competitiveness is the market size (0.973), followed by the growth market for EBN products (0.966), preference level of domestic consumers (0.782), the demand for EBN in the country (0.395) and demand of EBN in the region (0.339). This is partially attributable to the high cost of capital required to enter the industry that has kept production capacity low, hence a mismatch between supply and demand.

The third factor that had 10.920 percent of the total variance is firm strategy, structure and rivalry. This factor contains 5 variables, and the highest sub-loading is the duration in the

industry (0.975). The second sub-loading is the right applied strategy for harvesting EBN (0.917), followed by numbers of players in swiftlet ranching (0.846), innovation level among ranchers (0.774), and importance of installing RFID (0.423). Most of the ranchers interviewed in Johor Bahru said that there are some advantages of being long in this industry because ranchers can attract more swiftlet population to nest in their swiftlet house. This is called first mover advantage or leaders. In Johor Bahru, the ranchers started swiftlet ranching from shop lots when many owners of businesses stop their business because of the economic downturn that happened in Malaysia in 1997. When they see this swiftlet market has good demand then they convert their shop lots into swiftlet houses and many swiftlets come and nesting. In addition, this kind of bird is loyal, and they will not nest in other's houses, thus making the first movers or leaders in that place can attract more swiftlets compared to the others. However, if ranchers are not good at managing the swiftlet house, it can make the swiftlet go to other places. That is the reason the applied strategy is important to make sure swiftlet houses can be sustained. One of the strategies applied by ranchers to obtain a good-shaped nest, therefore, getting a higher price for the EBN is ranchers leave the nest for much longer and wait until 3 weeks after the offspring fly off to harvest the nest. This can reduce the potential of offspring death and can increase the population of swiftlet.

The fourth factor is related and supporting industries which had 7.696 percent of the total variance. The variables that had the highest sub-loading are linkages between buyers. Then, it is followed by ties with researchers that may contribute to the success of the industry (0.951), the working relationship with the government (0.881), local suppliers (0.773) and a vibrant product distribution network (0.757). In Johor Bahru, there are no big problems related to buyers. Ranchers know their buyers well and the price can be negotiated between them. Besides that, ranchers have loyal buyers that always buy from them and there is no issue that ranchers need to hold the EBN for a long time as ranchers can go to the buyers and sell it.

The fifth factor is government (6.676 percent) and the variable that had the highest sub-loading is government intervention. In Johor Bahru, their local agency always requires ranchers to discontinue the operation of the swiftlet house especially as they received many complaints about the noise of the swiftlet sound system disturbing the residents there. Besides that, swiftlet houses there make an eyesore in urban areas swiftlet flies around that place, especially during the morning and evening. This situation makes many ranchers need to stop the sound systems and cause the swiftlet not attracted in that house.

The last factor is chance which had a total variance of 5.739 percent that included four variables and the highest sub-loading is crime. In Johor Bahru, there is a lot of crime happening in which swiftlet houses were broken into by thieves and stole EBN. This makes ranchers lose a lot. To avoid this thing happening again, ranchers must install CCTV and other precautionary measures to make sure the rate of crime can be reduced. Crime not just incurred losses to ranchers but also made the swiftlet feel unsafe to nest in those houses as humans entered those houses when the swiftlet is in.

4.2 Gua Musang

In Gua Musang, the test was conducted using a 95 samples size with a reliability of 0.776. Table 5 shows that the 0.470 KMO measure is also acceptable. The Barlett's Test of sphericity value is moderately high with 598.989 which is statistically significant at a 5 percent level of significance.

Table 5: KMO and Barlett's test for Gua Musang

Kaiser-Meyer-Olkin measure of sampling adequacy	0.470
Bartlett's test of sphericity	598.989
Significant level	0.000

Table 6: Reliability Test for Gua Musang

Cronbach Alpha	0.766
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Table 7: Total Variance Explain for Gua Musang

Component		Initial Eigenvalues		
		Total	% of Variance	Cumulative %
Dimension	1	8.203	29.297	29.297
	2	5.295	18.912	48.208
	3	3.057	10.920	59.128
	4	2.155	7.696	66.824
	5	1.869	6.676	73.500
	6	1.607	5.739	79.239

Table 8: The Summary of Factor Analysis Result in Gua Musang

No	Dimension	Sub-variables loading	Variance (% of explained) (Eigenvalues)
1	Factor condition		29.206 (8.178)
	Knowledge	0.870	
	Labor	0.750	
	Swiftlet population	0.680	
	Capital	0.598	
	Technology	0.527	
2	Demand condition		17.465(4.890)
	Preference level	0.963	
	Growth market	0.922	
	Market size	0.901	
	Demand in country	0.723	
	Demand in region	0.606	
3	Firm strategy, structure and rivalry		9.362(2.621)
	Duration in the industry	0.962	
	Applied strategy	0.894	
	Innovation level	0.695	
	Numbers of players	0.578	
	RFID	0.489	
4	Related and supporting industries		6.783(1.899)
	Link between buyers	0.888	
	Ties with researcher	0.864	
	Product distribution	0.786	
	Relation with government	0.689	
	Local supplier	0.576	
5	Government		5.779(1.618)
	Fees by government	0.934	
	Environmental regulation	0.822	
	Government intervention	0.725	
	Policy by government	0.528	
6	Chance		4.676(1.309)
	Climate change and air pollution	0.944	

Embargo	0.750
Crime	0.447
Potential added product	0.145

The total of variance explained	73.272
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The first factor is factor condition which accounted for 29.206 percent of the total variance. The result indicates that knowledge and experience could improve the competitiveness level of swiftlet ranching in Gua Musang. This is because ranchers there are still new in this industry as most of them are Malay and do not have enough experience in managing swiftlet houses. Ranchers still lack knowledge on how to know the right location to build swiftlet houses even if they have idle agricultural land. Few of them used consultation to build their house but it incurred more capital. Some ranchers learn from their friends who are already in the industry.

The second factor that had 17.465 percent of the total variance is demand condition with the highest sub-loading is the preference level of domestic consumers (0.963) then followed by the growth market for EBN product (0.922), market size (0.901), the demand of EBN in the country (0.723) and demand of EBN in the region (0.606). In Gua Musang, most of the population is Malay and they do not prefer to consume EBN and they are even aware of EBN but they do not have any intention to consume EBN. Due to this, ranchers try to produce added value product of EBN and sell it to test the local market there.

The third factor is firm strategy, structure and rivalry which has 9.363 percent of the total variance. The highest sub-loading is the duration in the industry (0.962) followed by the right applied strategy for harvesting EBN (0.894), innovation level among ranchers (0.695), number of players in swiftlet ranching (0.578), the importance of installing RFID (0.423). In Gua Musang, according to interviewed ranchers, those who have been involved in this industry for a longer time have advantages over new ones in several aspects such as knowledge, production of bird nest, buyers, and among fellow ranchers. So that when they have problems concerning their swiftlet houses, they can call for help because senior ranchers have much experience regarding swiftlet houses, how to attract swiftlets and to protect the house from predators.

The fourth factor is related to and supporting industries and the highest sub-loading is the link between buyers (0.888). Then followed by the rest which are ties with researchers that may contribute to the success of industry (0.864), a vibrant product distribution network (0.689), work relations with government (0.689), local and supplier (0.576). In Gua Musang, the buyers have the power to demand the price and the ranchers must accept the price to avoid holding the stock for too long and thus make the EBN has no value when EBN are no longer moist. Ranchers there accept any price offered by buyers. However, this will make them unsatisfied and to solve this issue, they make a tender bid once a month to sell the EBN so that ranchers can mark up a bit the price of EBN. This tender is organized by the Association of Ranchers in Gua Musang. In that situation, the reserve price of EBN was RM1,600 per kg (May 2015), and the rancher managed to raise the price to RM1,700 per kg.

The fifth factor is government, and the highest sub-loading is fees by the government (0.934). The second highest sub-loading is environment regulation that can constrain swiftlet ranching (0.822), followed by government intervention (0.725) and policy by the government (0.528). In Gua Musang, ranchers must pay RM1,000 per year to the Local Council for every swiftlet house they have. They must also obtain planning approval from the Local Council before they build their swiftlet house and need to prepare an RC plan (structure plan) with a

price of RM1 for 1 square feet. This is discouraging ranchers from building more swiftlet houses because of the additional fees that they need to bear.

The last factor is chance which had a total variance of 4.676 percent that included four variables and the highest sub-loading is climate change and air pollution (0.944) and then followed by the rest which is climate change and air pollution (0.944), an embargo (0.750), Crime (0.447), potential added product (0.145). The flood happens in 2014 causing swiftlets to run away and not come back to the house. In addition, air pollution comes from garbage burning causing the swiftlet not to dwell in the house.

4.3 Discussion Between Johor Bahru and Gua Musang

Based on the analysis there is not much difference between Johor Bahru and Gua Musang. For both districts, factor condition is the important factor that contributes to competitiveness in which knowledge and experience are the most important. For knowledge and experience, all ranchers need this to be successful regardless of any place, district, state or country. This is because, according to Alias et al. (2013) about 70 percent to 80 percent of these swiftlet houses have failed to attract sufficient swiftlets to nest due to the lack of ranchers' understanding and knowledge on how to manage the house. This is very important as the high percentage of unsuccessful swiftlet ranches makes investment in this industry considerably risky. In Johor Bahru, even though ranchers have much experience and knowledge but they still searching for new knowledge on how to improve EBN quality and to attract more swiftlet to get into their swiftlet house. Meanwhile, in Gua Musang, most ranchers are still newbies in this business and need to learn how to handle their swiftlet house. As there is no specification or standard of operation (SOP) to construct the swiftlet house, many ranchers in Gua Musang agreed that to start this business line they need special knowledge on how to build a successful house. Usually, they will refer to their friends in Gua Musang swiftlet association who have more experience when they have problems with their swiftlet houses. According to Encik Hisham bin Mustapha, the Chairman of the Swiftlet Association in Gua Musang, the most important that every rancher must know is the location of the house needs to be strategic. Ranchers need to test the location of the house to see whether there are swiftlets coming there. The direction that they come from also needs to be understood by the ranchers. The sound that is played to attract the swiftlet is another important factor. After building the house, the temperature and humidity level also need to be at the right level. Ranchers must think about how to protect the swiftlet from predators. This needs trial and error because sometimes the protection measures end up killing the swiftlet.

For both districts, ranchers will refer to DVS when they still cannot find any solution on how to settle down their swiftlet houses' problems. Capital seems to be quite important in Johor Bahru compared to Gua Musang. This is because in Johor Bahru, most of the swiftlet houses are shop-lots and it consumes more money to convert from shop-lots to swiftlet houses compared to Gua Musang. This is because ranchers in Gua Musang build swiftlet houses on their own agricultural land, and they are not using consultants to help them to build their swiftlet houses. Technology seems to be less important for both districts as the techniques uses in this swiftlet ranching industry are common using and easily accessible technology such as mimicking the sound of swiftlet inside and outside of the swiftlet house, audio systems and speakers and humidifier which is to maintain moisture in swiftlet houses. Generally, all these things were used in almost all the swiftlet houses in Malaysia. This is in line with Umi Kalsum et al. (2013) where the technical requirements for swiftlet houses are simple, not too technical, easy to adapt and can be shared among ranchers.

For demand conditions, preference level is important in Gua Musang meanwhile market size is important in Johor Bahru. This is due to the larger Malay population in Gua Musang compared to Johor Bahru. This is in line with Umi Kalsum et al. (2013) where only 36.8 percent of Malay people ever tried the EBN product compared to 45.6 percent of Chinese people in Malaysia. From this figure, most Malay consumers are likely to consume ready-to-drink products and cosmetic products from EBN compared to the Chinese who drink EBN tonic. This result shows Malaysia needs to step up efforts to focus on the domestic market, such as increasing the ready-to-drink product, producing products accredited by HACCP, GMP, and MUST, and providing products that are affordable for consumers. These will help to increase the preference level of Malaysian consumers and can increase the market size and the growth of domestic markets as well as international market such as the Middle East.

Next is firm strategy, structure and rivalry which shows not many differences between both districts. Duration in the industry plays important in the swiftlet ranching industry. The longer ranchers go in this industry, the more networks they can get such as buyers, processors, and among fellow ranchers. Besides that, the more experience they can gain as well as the more swiftlet they can attract because of not many swiftlet houses at that time that they need to compete. Almost 70 percent of ranchers in Johor Bahru were involved in swiftlet ranching for more than 8 years compared to Gua Musang just 6 to 9 years. The applied strategy also plays an important factor. Ranchers need to harvest the nest at the right time, which is once the offspring can fly from the nest. For both districts, ranchers have healthy competition because increasing numbers of players in swiftlet ranching will not give an adverse impact or bad competition to them. The innovation level of ranchers is high and to be competitive in this industry, they cannot depend on selling raw EBN to buyers. These innovative ranchers can be found in Johor Bahru. Almost 80 percent of ranchers interviewed in Johor Bahru produce products made from EBN such as EBN drinks, cosmetics and health supplements. However not all ranchers have adopted this innovative thinking. The government needs to emphasize the advantages of registering and installation of RFID to every rancher as they are not aware of the importance of having RFID in their swiftlet houses. In Gua Musang, most of them are reluctant to install RFID in their swiftlet houses even though there is no fee charged by DVS because they see RFID is not so important to their business and could not support requests for better prices of EBN. However, in Johor Bahru, most ranchers install RFID at their swiftlet houses even though they admit RFID will not give them any benefits. Basically, there are a lot of advantages of RFID which is not explained crystal clear to the rancher. The function of RFID is to trace EBN products along the entire supply chain from production or harvesting, and whilst being transported to registered storage areas and on to retail distribution outlets by installation of RFID. This initiative will ensure consumer confidence, allowing retailers to guarantee genuine EBN products which are safe for consumption, especially in China. This initiative will allow Malaysian companies to compete in one of the largest EBN markets.

For related and supporting industries, the link between buyers, the link between buyers is important for both districts. However, there is a difference in the situation between Johor Bahru and Gua Musang. In Gua Musang ranchers have less power to bargain the EBN price compared to Johor Bahru. This is because, in Gua Musang, the buyers will come to ranchers when they want to buy EBN from them. Meanwhile, in Johor Bahru, most of the ranchers will choose which buyers they want to sell their EBN. The problem faced by all ranchers in both districts is buyers intend upon lowering the buying prices of EBN with excuses such as the impact of the embargo, low quality of EBN, the market is not so good condition and so on. Even though the quality of EBN in Gua Musang is good but the ranchers still cannot set the price for the buyers. To prevent buyers from taking advantage, there is a case in Gua Musang where ranchers undertake a tender process to sell the EBN to the highest bidder. This tender

is organized by the Association of Ranchers in Gua Musang. By doing this tender, ranchers can avoid buyers offering them a price below the market price.

The role of government, intervention from the government is it difficult for the ranchers to be more competitive in Johor Bahru while fees charged by the government will be difficult for ranchers in Gua Musang. As said before, in Johor Bahru the local council asked ranchers to discontinue their swiftlet houses because of complaints made by the residents. This is because the noise made by the sound systems attracts swiftlet to lure and nest in the swiftlet house. In Gua Musang, ranchers need to pay to local council RM1000 per year for each of the swiftlet houses that they have. This will incur a burden to each of the ranchers. Policies made by the government seem to be a less important aspect. Even though Malaysia has a stronger structure, initiative and industry guidelines than other importing countries such as Indonesia and Thailand however it is not very helpful to solve this kind of technical problem faced by ranchers from each of state in Malaysia. However, if the swiftlet house is not following the specifications on the management of swiftlet ranching, for example, timing of playing the sound imitation, sound distance and placement angle of the funnel the local council authorities can take action under Section 80, 81, 82 and 84 of the Local Government Act 1976 (Act 171). Besides that, the location for swiftlet house construction, the design of swiftlet house needs to follow the specification stated in the 1GP. All these are taken for granted by the ranchers. Policy by government seem to be least important for both district, however many things done by government to improve the importation of EBN to international market as well as to improve performance of swiftlet industry such as conducting research on the type of food source suitable for swiftlet to encourage swiftlet population, tries very hard in promoting EBN products to increase demand from non-Chinese consumers by awareness campaign, seminar, promotion in halal food festival and R&D. The government also introduced the Malaysian Standard for EBN with the objective of developing a competitive EBN industry. Ranchers need to follow the rules that were set up in 1GP, they need to register their swiftlet houses with DVS and MyGap Scheme where DVS will monitor the swiftlet houses every year to monitor the level of cleanliness of the house. In 2010, the government established the E-Kasih scheme where a RM10,000 loan is given to retirees or villagers interested to join in this business. Unfortunately, most of the participants of the scheme failed due to several factors.

Last but not least is the chance. Crime is the factor that can lead to reduce the competitiveness level in Johor Bahru meanwhile in Gua Musang is climate change and air pollution. Embargo is the second important that lead to reduce the competitiveness for both districts. The impact of embargo still can be felt even happened after a long time ago. Even the buyers still used these reasons to avoid increment of price demand from ranchers. To avoid this thing happen again in the future, the government has implicated the system of detection and registration of premises called RFID and increased Malaysia gate regulation and border crossing to avoid the influx of EBN resources from unsecured neighbouring countries such as Indonesia.

As conclusion, knowledge and experience is most important factors to be competitive and to be successful in swiftlet ranching industry. Without enough knowledge regarding swiftlet ranching, ranchers cannot handle the swiftlet houses efficiently. In this point, government needs to find an expertise to share experience and ideas on how to make swiftlet houses successful through seminar and produce specific SOP related to managing swiftlet houses. The ranchers should master on understanding the site selection, the size and structure of the swiftlet houses, the choice of imitation for swiftlet sound, temperature and humidity, the entrance and the threat of the enemies could help ranchers to be successful and be more competitive. This is in line with Vaiappuri et al. (2012) stated that highly knowledgeable players keeping the industry sustainable for the long term.

Besides that, improve the consumer preference level and growth of market of EBN product to boost demand for home country so that Malaysia just not depends on international market to sustain. Preference level of local consumers, growth market, market size and demand in country provided the future challenges for ranchers as well as government to improve to make swiftlet ranching industry be more competitive. Duration in the swiftlet ranching and applied strategy are important to the competitiveness for both districts in term of strategy, structure and rivalry. The longer ranchers go in swiftlet ranching give them more advantages.

The good link between buyers also important to avoid the buyers taking granted to the ranchers by offered them below the market price. The government also takes effort by do negotiations to export the raw uncleaned EBN (RUCEBN) to China, in addition to raw cleaned EBN (RCEBN). This will allow Malaysian ranchers to sell their raw product to the Ministry of Agriculture and Agro-based Industry (MOA), which will then export it untouched to China, where it will be processed and cleaned in Qinzhou and then sold to the Chinese market. That platform is important to allow the export of bird's nest directly to China and avoid China from banning Malaysian EBN products as well as to avoid problems regarding ranchers-buyers. Besides that, high local council intervention and high fees charged by the local council also can hinder the competitiveness of swiftlet ranching industry. This is because the rancher cannot easily shut down the operation of swiftlet houses as it will incur huge losses to them. For Gua Musang, most of ranchers are come from village people who want to increase the income. They still newbie in this industry and if local council charged them high fees, then they will take a long time to breakeven and get profit to improve their living standard. The government agencies and ranchers need to sit together to discuss about the guidelines that ranchers must adhere to avoid misunderstandings between these two parties. DVS itself should address this issue to the government to set the SOPs and the standardized charges for each state. This matter will be the future challenge for government has to face to support swiftlet ranching industry.

From this analysis, a lot of things that ranchers and government need to improve such as provide new knowledge to improve management of swiftlet houses, focusing on the development and consumer needs of EBN products, set a standardized price of raw unclean EBN to avoid buyers taking advantages of the seller as well as setting a standardized SOPs and charge for all state. These can help develop a sustainable industry in line with the country's aspiration to make this industry as a contributor to the country's export earnings as well as can help Malaysia to be achieve 40 percent of world export and be more competitive compared to Indonesia and Thailand.

5.0 SUGGESTION FOR FUTURE RESEARCH

This study could be extended in a variety of ways. Firstly, a wider study is required to incorporate other players such as value adding EBN processors and EBN exporters to expand the investigations all along the value chain. In this manner, more information could be gathered and disseminated on efficient practices of value adding EBN processing and exporting.

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CO- AUTHORS CONTRIBUTION

All authors contributed equally to the conception and design of the study.

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OIL PRICE SHOCKS AND CONSUMPTION EXPENDITURE IN NIGERIA: EVIDENCE FROM THE ERROR CORRECTION MODEL

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ABSTRACT

Nigeria is an oil-exporting country with a low income and a decreasing standard of living. As a result, consumers in Nigeria tend to spend most of their income on consumable goods. The effect of consumption expenditure in an economy is influenced by a variety of factors, including consumer income, the consumer price index, and oil price volatility. Changes in oil prices can have a significant impact on consumer spending, manufacturing output, and national and global economic performance. This study examines the linearity assumption and shock effect of oil price volatility and the consumer price index on consumption expenditure in Nigeria between 1980 and 2021. The Error Correction Model was used to correct the disequilibrium in the study. The findings of the study show that there is a long-run relationship between oil price volatility, the consumer price index, and consumption expenditure in Nigeria. The value of 1.07 indicates that the imbalance in consumer expenditure changes over the sampled period can be attributed to oil price volatility and the persistent increase in the consumer price index. The study recommends that the government adopt a macroeconomic agenda that focuses on alternative sources of government funding (reducing reliance on oil revenues), fiscal restraint in the use of crude oil receipts, and aggressive saving of oil revenue booms in the future to withstand the fluctuations of future oil shocks.

Keywords: Consumption expenditure, Oil price volatility, Consumer price index, Error Correction Model, Nigeria

1.0 INTRODUCTION

Final consumption holds a paramount position within the realm of macroeconomics due to its nexus and linearity shock on oil price volatility and consumer price index. In Nigeria, oil price volatility determines a large share of the final consumption, likewise the consumer price index. Relatively, oil price volatility and consumer price index influence household consumption through inflationary pressure, and cost of energy consumption which in turn leads to income distribution and substitution effects on consumption of goods and services. As such, this study aims to elucidate the intricate dynamics of final consumption expenditure, specifically about both general government and household expenditure. While household final consumption

expenditure denotes spending on consumables by households, government consumption expenditure refers to the corresponding spending by governmental entities. Notably, household final consumption expenditure, often termed domestic consumption expenditure, constitutes a more significant component of aggregate demand than government consumption expenditure. Consequently, an array of factors influences consumption expenditure, including consumer income, the consumer price index, and the volatility of oil prices, which entails variations in the price of petroleum products (Akomolafe, 2020).

The significance of crude oil in the manufacturing sector renders it a crucial factor. Fluctuations in oil prices have a substantial impact on consumer spending, manufacturing output, and overall economic performance at both national and global levels (Mohamued et al., 2021). Decreases in oil prices ease operational aspects for businesses, factories, and households, thereby increasing output, and income, and raising living standards. In effect, the price of oil assumes a pivotal role, whereby it influences national production, manufacturing activities, and living standards. Consequently, an interrelationship emerges between the price of oil and the price of goods. Given these circumstances, the linkage between goods prices, petroleum prices, and consumption expenditure plays an indispensable role in driving economic activities and fostering growth in both developing and developed economies (Sambo & Deng, 2018; Amagoh et al., 2014 ; Babalola & Salau, 2020).

Moreover, the price of oil holds a significant impact on economic inputs, with its upward trajectory exerting inflationary pressures throughout the economy. Frequent adjustments in local petroleum product pricing further intensify inflationary tendencies in Nigeria (Anthony, 2019). Consequently, such adjustments predominantly result in escalated prices of consumable items and transportation. As Nigeria depends on imported refined petroleum products, consumer prices inevitably fluctuate with oil price variations (Otoakhia, 2020). Consequently, this phenomenon leaves an indelible imprint on consumption patterns and aggregate demand, ultimately contributing to a higher cost of living (Nwosu, 2009). Noteworthy, shocks in oil prices possess both supply and demand effects on citizens and the overall economy (Tang et al., 2010). Okwu et al. (2020) investigate the asymmetric short- and long-term effects of oil export earnings and exchange rate fluctuations on aggregate consumption in Nigeria. Employing the Nonlinear Autoregressive Distributed Lag (ARDL) approach, the study confirms the existence of long-run co-integration among oil export earnings, the consumer price index, the nominal effective exchange rate, and final consumption expenditure. Additionally, the findings demonstrate that negative exchange rate shocks yield a significant positive impact on consumption in the short run, whereas positive shocks yield the opposite effect. Notably, negative shocks continue to exert a short-term negative and significant impact on consumption, which subsequently transitions to a short-term positive and inconsequential impact. Furthermore, long-term changes in currency rates and earnings from oil exports exhibit favourable and significant effects on consumption.

Several studies have also explored the connection between oil price volatility and final consumption expenditure. For instance, Ogede (2020) conducted a study to investigate the influence of oil price volatilities on consumer household consumption expenditure during the economically significant period from 1995 to 2019. Using the Vector Autoregressive (VAR) model, the research revealed that unexpected changes in oil prices have a considerable impact on household consumption expenditure in Nigeria. Specifically, a one standard deviation unexpected change in oil prices corresponded to a significant 28.31 per cent increase in Nigeria's consumption expenditure. Notably, the decomposition of variance did not alter the direction and significance of the relationship between oil price volatility and consumption expenditure. Consequently, the study advocates that the nation's continued reliance on oil hinges on its ability to develop alternative energy sources and enhance energy conservation practices.

Abonongi and Ewane (2022) investigated the impact of inflation on household final consumption expenditure in Cameroon. Using data from the World Bank from 1980 to 2020, the ex post facto research design found that an increase in the inflation rate has a positive and significant impact on household final consumption expenditure in both the short and long run. This means that as inflation increases, households tend to increase their spending. The study's findings suggest that an unstable inflation rate can significantly impact household final consumption expenditure in Cameroon. This is because inflation can erode the purchasing power of households, leading them to increase their spending to maintain their standard of living. Additionally, inflation can make it more difficult for households to plan their finances, which can lead to impulsive spending.

Ojeyinka and Yinusa (2021) used trade-weighted variables from Nigeria's five major trading partners to examine the impact of external shocks on the country's output composition from the first quarter of 1981 to the fourth quarter of 2018. The study found that external shocks have a significant impact on consumption and investment, with foreign output, the real effective exchange rate, and the foreign interest rate having significant negative effects. Additionally, the study found that foreign inflation and real effective exchange rate shocks are major drivers of fluctuations, while oil price shocks account for minor variations. The study's findings suggest that Nigeria's high reliance on oil revenues and external financing makes it vulnerable to external shocks. This is because changes in these factors can have a significant impact on the country's economy, leading to fluctuations in output composition and uncertainty for policymakers.

Efayena et al. (2019) investigated the impact of oil price changes on Nigerian consumption patterns. Using the Autoregressive Distributed Lag (ARDL) model, the study found that increased oil prices harm consumption and development levels. This is because higher oil prices lead to higher inflation, which erodes the purchasing power of households and businesses. Additionally, higher oil prices can lead to a decline in investment, as businesses become more cautious about making new investments in a more uncertain economic environment. The study's findings suggest that the Nigerian government should take steps to cushion the impact of oil price fluctuations on the economy. This could include using fiscal policy to provide support to households and businesses or diversifying the economy away from oil.

Furthermore, Obinna (2020) empirically examined the impact of inflation on household final consumption expenditure in Nigeria from 1981 to 2018 using the ordinary least squares (OLS) econometric method. The study's findings showed that there is a positive and significant long-run relationship between inflation and household consumption spending in Nigeria. This means that as inflation increases, household consumption spending also tends to increase. The study's findings suggest that the government of Nigeria should strive to maintain low and stable prices to minimize the negative impact of inflation on private consumption. This is because high inflation can erode the purchasing power of households, leading them to reduce their spending. Additionally, high inflation can make it more difficult for households to plan their finances, which can lead to impulsive spending.

In Nigeria, a nation renowned for its crude oil products and abundant resources, the insufficient production capacity of refineries has hindered domestic petroleum product consumption. This has necessitated the costly importation of refined petroleum products from other countries. Consequently, the Nigerian government has been compelled to allocate significant subsidies, which could have been channelled towards the attainment of Sustainable Development Goals. However, inflationary volatility and high petroleum prices have resulted in impulsive inflation, increased production costs, diminished productivity, a lower standard of living, and elevated transportation expenses for citizens. It is important to highlight that previous research has extensively investigated the relationship between oil price volatility and macroeconomic and manufacturing output shocks in Nigeria. However, limited or no studies have comprehensively

examined the correlation and association between oil price volatility and the consumer price index on final household consumption in Nigeria, using a model that corrects the disequilibrium in economic external shocks. Therefore, this study aims to contribute significantly to the existing literature by focusing on the genuine domestic petroleum price volatility in Nigeria and conducting an in-depth analysis of the short and long-term effects of petroleum price volatility and the consumer price index on consumption levels from 1980 to 2021.

This study contributes fresh empirical evidence supported by robust methodological approaches, drawing on various econometric techniques and the utilization of time series data in Nigeria different from other econometric methods employed by other studies. Consequently, it significantly enriches the body of knowledge and offers valuable insights for scholars and decision-makers in Nigeria and other developing nations. The subsequent sections of this paper encompass the theoretical review in Section 2, data and econometric methodology in Section 3, the results findings in Section 4, and the discussion and conclusion in Section 5.

2.0 THEORETICAL REVIEW

Understanding the correlation between Nigeria's consumer spending, the consumer price index (CPI), and oil price volatility is enhanced by considering the Dutch Disease concept (Wijnbergen, 1984). The Dutch Disease Theory, an economic principle, elucidates the adverse effects that can arise in an economy due to a rapid surge in revenues from natural resource exports, such as oil, which may negatively impact other sectors (Stijns, 2005; Corden & Neary, 1982). Nigeria, being a major oil-producing nation, relies significantly on oil exports, playing a crucial role in its economy. The fluctuations in oil prices can substantially influence household final consumption and Nigeria's fiscal revenue. The government's revenue from oil exports is subject to change with fluctuating oil prices, introducing unpredictability into the nation's income sources (Omojolaibi & Egwaikhede, 2013; Abalaba & Dada, 2013; Sachs & Warner, 1995).

Moreover, the Dutch Disease idea suggests that an increase in oil prices might lead to currency appreciation, as foreign capital floods into the country due to higher oil revenues. However, this appreciation of the domestic currency can lead to a decline in manufacturing and non-oil industries, reducing their competitiveness in the global market (Abdulkareem and Abdulkareem, 2016). Ogundipe, et al 2014; Gylfason, 2001). Consequently, Nigeria may become overly reliant on oil earnings, causing a lack of economic diversification. This lack of diversification could lead to a decrease in domestic production of goods and services, resulting in increased imports. As the stronger currency makes imported goods and services more affordable, inflationary pressures may affect the CPI. (Ross, 2004)

During periods of high oil prices and substantial tax income, the government may boost investments in infrastructure projects and welfare initiatives, stimulating consumer spending and increasing demand for goods and services. Nonetheless, the long-term positive impact on consumer spending may be hindered by the Dutch Disease effect (Arezki & van der Ploeg, 2007). Neglecting other industries like manufacturing and agriculture due to excessive dependence on oil revenues could limit job opportunities outside the oil sector (Matsen & Torvik, 2005). Consequently, oil-dependent regions in Nigeria may face job losses and reduced consumer spending if the oil sector experiences a downturn due to oil price volatility (Oludimu & Alola, 2022). Additionally, inflationary pressures resulting from currency appreciation and increased imports may erode consumers' purchasing power, further affecting their overall spending (Yinusa & Ojo, 2019).

3.0 METHODOLOGY

3.1. Research design

The present study adopts an explanatory research design, focusing on investigating the intricate relationships between oil price volatility, the consumer price index, and final household consumption through empirical analysis. The choice of an explanatory research design stems from its conceptual significance in elucidating the underlying basis for understanding the interconnections among oil price volatility, the consumer price index, and final household consumption in the context of Nigeria.

3.2. Data Collection and Description

The time series data for this study were obtained from reputable secondary sources, including the World Bank, Nigerian National Petroleum Corporation (NNPC), and Reuters (NNPC, 2023; NUPRC, 2022; WDI, 2022). The data collection spanned the period from 1980 to 2021. To represent consumption expenditure, the study utilized final consumption expenditure as a proxy. Crude oil prices served as a proxy for oil price volatility, and consumer price indexes were also sourced for analysis. Table 1 provides details regarding the data sources, the expected sign of a priori hypotheses, and a brief description of the data utilized in the study.

Table 1: Variable description

Variables	Description	<i>A priori</i> expectation sign
Consumption expenditure	Final consumption expenditure includes household and government expenditures, estimating resource supply and consumption disparities.	-/+
Consumer price index	The consumer price index measures inflation, reflecting the average consumer's cost of acquiring goods and services, either fixed or adjusted annually.	+
Oil price volatility	It is the degree of change or variability in the price of crude oil over a certain period that is referred to as oil price volatility.	+

Source: Authors' compilation.

3.3. Econometric methodology

The time series data were analyzed using descriptive statistics, such as the mean, skewness, kurtosis, and Jarque–Bera test of normality. The unit root test was conducted to check for stationarity. The optimal lag length was determined using the Akaike information criterion (AIC). The Autoregressive Distributed Lag (ARDL) bound test was used to assess the long-run relationship between the variables. The results of the ARDL bound test indicated that the variables were cointegrated, which led to the adoption of the Error Correction Model (ECM).

The empirical regression model adopted by the study is as follows:

$$CE_t = \beta_0 + \beta_1 OPV_t + \beta_2 CPI_t \quad (1)$$

Since we have some variables that could affect CE but are not captured in the model, however, due to parsimony, they were all included in the error term which leads to an econometric equation below:

$$CE_t = \beta_0 + \beta_1 OPV_t + \beta_2 CPI_t + \varepsilon_t \quad (2)$$

where α is the intercept, β_1 and β_2 are the coefficients of the independent variables, and ϵ_t is the error term. CE represents Consumption expenditure, OPV is Oil Price Volatility, and CPI is the consumer price index.

4.0 RESULTS AND FINDINGS

Table 2. Descriptive Statistics and optimal lag length

Variables	Mean	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.	Obs.
CE	5.07	14.79	1.22	5.56	21.38	0.00	41
OPV	36.65	35.97	0.67	2.32	3.88	0.14	41
CPI	18.95	16.66	1.85	5.30	32.58	0.00	41

Source: Authors' compilation

Table 2 presents the descriptive statistics of the dependent and independent variables. The mean of consumption expenditure is 5.07, the mean of oil price volatility is 36.65, and the mean of the consumer price index is 18.95. The standard deviation of consumption expenditure, oil price volatility, and consumer price index are 14.79, 35.97, and 16.66, respectively. The skewness of consumption expenditure and consumer price index is positive, indicating that the distributions of these variables are skewed to the right. The kurtosis of consumption expenditure and consumer price index is greater than 3, indicating that these variables are leptokurtic. The Jarque–Bera test rejects the null hypothesis of normality for consumption expenditure and consumer price index, but it does not reject the null hypothesis of normality for oil price volatility.

To identify the most suitable lag length, we employed various information criteria, namely the Akaike information criteria (AIC), Schwarz information criteria (SIC), Hannan-Quinn (HQ) criteria, and final predictor error (FPE) criteria. The results obtained from all these criteria consistently indicate that the optimal lag length is 1. Both the AIC, SIC, and HQ criteria, as well as the FPE criterion, concur in suggesting a lag length of 1 as the most appropriate choice for the model. We, therefore, adopt the AIC criterion and proceed with one lag.

Table 3. Optimal Lag Order Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-502.24	NA	7098	26.59	26.72	26.64
1	-458.69	77.93*	1155*	24.77*	25.29*	24.96*
2	-453.68	8.17	1439	24.98	25.89	25.31
3	-448.37	7.83	1792	25.18	26.47	25.64

Note: * indicates lag order selected by the criterion.

Unit Root Tests

To obtain a reliable model that captures the stationarity and non-stationarity of the variables, the Augmented Dickey-Fuller (ADF) and Phillips-Peron (PP) unit root tests were used. These tests have the advantage of including lagged terms of the dependent variables, which helps to avoid the problem of autocorrelation and to improve the robustness of the results. The ADF test is a modified version of the Dickey-Fuller test that allows for the inclusion of lagged terms of the dependent variable. The PP test is a similar test that uses a different lag selection procedure.

Table 4. ADF and PP Unit Root Test

a). ADF							
	Level			First difference			Decision
	t-Statistic	Prob.	5% Critical value	t-Statistic	Prob.	5% Critical value	
CE	-6.96	0.00	-2.94				I(0)
OPV	-1.39	0.57	-2.94	-6.65	0.00	-2.94	I(1)
CPI	-2.52	0.12	-2.94	-6.45	0.00	-2.94	I(1)
b). PP							
	Level			First difference			Decision
	t-Statistic	Prob.	5% Critical value	t-Statistic	Prob.	5% Critical value	
CE	-7.01	0.00	-2.94				I(0)
OPV	-1.26	0.64	-2.94	-6.89	0.00	-2.94	I(1)
CPI	-2.96	0.05	-2.94	-12.39	0.00	-2.94	I(1)

Source: Authors' compilation.

The results of the ADF and PP tests indicate that consumption expenditures were stationary at levels while oil price volatility and consumer price index were stationary at first difference. This suggests that the variables are stationary of order 1, or I(1) except consumption expenditure at 0, or I(0). The results of the unit root tests are important because they inform the choice of the appropriate econometric model. For example, if the variables were not stationary, then a time series regression model would not be appropriate. Therefore, since there is mixed stationarity among the variables, there is a need to determine whether the variables are co-integrated in the short-run or long-run using the ARDL Bounds test.

Table 5. ARDL Bounds Test

F-Statistic	K	I(0) Bound at 5% Critical	I(1) Bound at 5% Critical
12.97	2	3.79	4.85

Source: Authors' compilation.

Cointegration Tests

The results of the Autoregressive Distributed Lag (ARDL) bound test in Table 5 indicate that there is a long-run relationship between consumption expenditure, consumer price index, and oil price volatility in Nigeria between 1980 and 2021. The F-statistic is greater than the critical value for the upper bound at the 5% significance level, which means that we can reject the null hypothesis of no cointegration. This suggests that there is a long-run relationship between the variables and that changes in one variable will be reflected in changes in the other variables in the long run. The results of the cointegration test are important because they inform the choice of the appropriate econometric model. For example, if there was no cointegration, then a time series regression model would not be appropriate. However, because there is cointegration, we can use an Error Correction Model (ECM) to model the relationship between the variables.

To correct this disequilibrium among the variables in the long run, we adopt an Error Correction Term (ECT), and it is then estimated below:

$$\Delta CE_t = \beta_0 + \sum_{i=1}^p \beta_1 \Delta CE_{t-1} + \sum_{i=1}^q \beta_2 \Delta OPV_{t-1} + \sum_{i=1}^q \beta_3 \Delta CPI_{t-1} + \varepsilon_t \quad (3)$$

$$\Delta CE_t = \beta_0 + \sum_{i=1}^p \beta_1 \Delta CE_{t-1} + \sum_{i=1}^q \beta_2 \Delta OPV_{t-1} + \sum_{i=1}^q \beta_3 \Delta CPI_{t-1} + \lambda ECT_{t-1} + \varepsilon_t \quad (4)$$

where,

$$ECT_{t-1} = \lambda CE_{t-1} + \lambda OPV_{t-1} + \lambda CPI_{t-1} \quad (5)$$

$$ECT_{t-1} \equiv \varepsilon_{t-1} = CE_{t-1} - (\beta_0 + \beta_1 OPV_{t-1} + \beta_2 CPI_{t-1}) \quad (6)$$

Table 6. Long-Run and Error Correction Results

Long-Term Model			Error Correction Model		
Variable	Coefficient	Prob.	Variable	Coefficient	Prob.
OPV	0.05	0.52	D(OPV)	0.27	0.09
CPI	-0.04	0.78	D(CPI)	-0.12	0.45
			ECT(-1)	-1.07	0.00
C	4.16	0.42	C	-0.65	0.78
R ²	0.02		R ²	0.60	
F-Stat.	0.37		F-Stat.	17.69	
D.W Stat.	2.22		D.W Stat.	1.89	
Prob. (F-Stat.)		0.70	Prob. (F-Stat.)		0.00

Source: Authors' compilation.

Error Correction Model

The ECT guides the variables (consumption expenditure, oil price volatility, and consumer price index) of the model to restore equilibrium. In other words, the ECT corrects disequilibrium. For the sake of the results shown in Table 5, the ECT (-1) explains the ECT, which ought to be negative. The coefficient tells us the rate at which the previous period of the disequilibrium is corrected. The negative coefficient validates that there is a long-run relationship between the dependent and independent variables. The ECM, in theory, maintains a constant long-term equilibrium between economic variables. As such, the ECM fixes any short-term imbalances in the following period if they exist (Engle & Granger 1987; Granger & Newbold, 1974). The residual coefficient (-1) or ECT must be significant to determine whether the employed ECM model is legitimate or not.

Based on the probability of the ECT coefficient, the model is significant at the 0.05 significance level, which specifies that the ECM is usable. Foregoing, the equilibrium value of -1.07 deduces that the process of adjusting the imbalance of consumer expenditure changes for the period of 1980–2021 is relatively slow and that it will take a couple of years to achieve a stable consumer expenditure in Nigeria due to oil price volatility and the persistent increase in the consumer's price index. Also, from the result, it was shown that the R-squared is 60 per cent, which shows fit for the model, and the F-statistic probability reveals that the variables are jointly significant at a 5 per cent level of significance. This further upholds that the ECM is stationary at level after carrying out its Augmented Dickey-Fuller unit root test as shown in Figure 1.

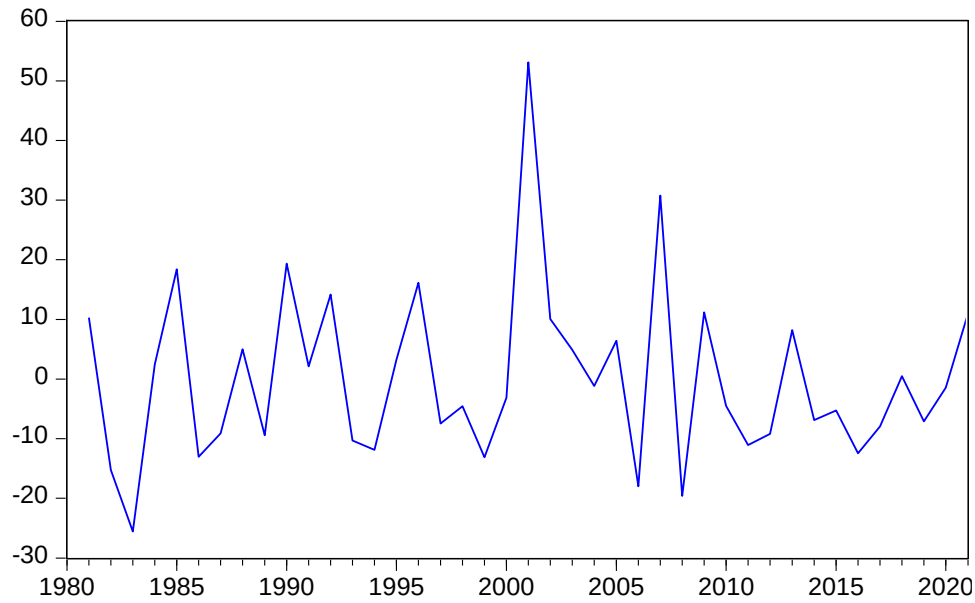


Figure 1. Unit root stationarity graph of the Error Correction Term

From Equation 5, the results can be estimated as:

$$ECT_{t-1} = CE_{t-1} - 1.07 + 0.27OPV_{t-1} - 0.12CPI_{t-1} \quad (7)$$

Equation 6 shows that the rate at which the disequilibrium between the variables, in the long run, can be corrected is 1.07, and it shows to be significant with a probability less than 0.05. The probability of oil price volatility is positive and significant, indicating that there is no long-run relationship between oil price volatility and consumption expenditure. This affirms the findings of Okwu et al. (2020), Akomolafe (2020) and Muktar et al. (2020). Also, since the results show that the consumer price index is negative but significant, it shows that there is no long-run relationship between the consumer price index and consumption expenditure. This is not following the findings of Ezeji & Ajudua (2015) or in support of Dennis Brown and Onah (2022). Therefore, if the oil price volatility is increased by one per cent, then the consumption expenditure will be increased by 27 per cent, and if the consumer price index is increased by one per cent, then the consumption expenditure will be decreased by 12 per cent. However, the model is normally distributed, with an ECM less than 0.05 significance level. Moreover, the model fulfilled the Linearity assumption by having an F-statistic probability greater than 5 per cent significance, as shown in Table 7.

Table 7. Ramsey RESET Test

	Value	Df	Probability
t-Stat.	0.73	35	0.47
F-stat.	0.54	(1, 35)	0.47
Likelihood ratio	0.61	1	0.44

Source: Author's compilation.

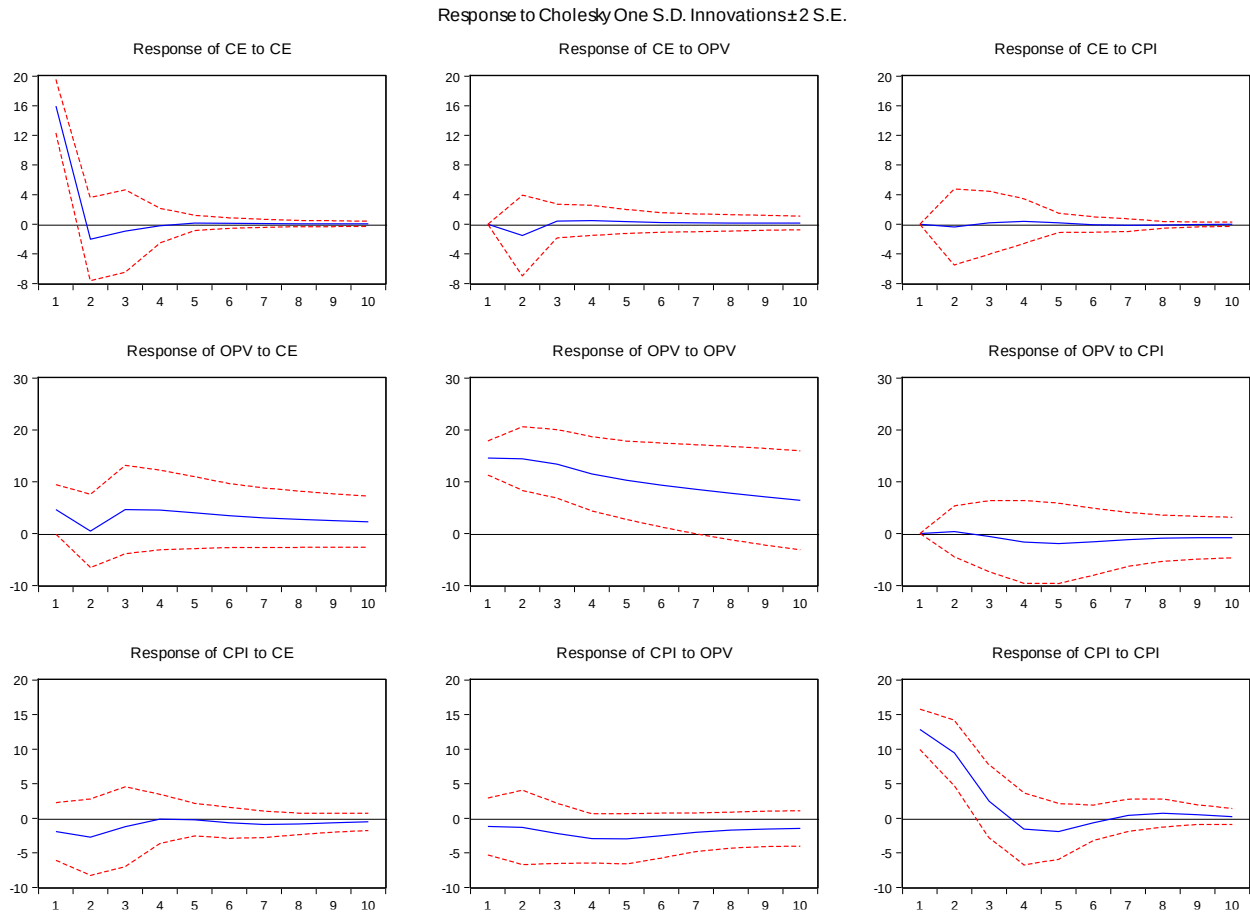


Figure 2. Impulse response functions between consumption expenditure, oil price volatility, and consumer price index

To ascertain the short-run interrelations and dynamism between the variables, the impulse response function was adopted to reveal the persistent effect of shock on consumption expenditure, oil price volatility, and consumer price index. The impulse response function illustrates how a variable, as well as the other variables in the system, respond over time to a shock of one standard deviation. The Cholesky one standard deviation innovation over 10 years was used in this investigation. Figure 2 shows that the immediate response of consumption expenditure to a shock in oil price volatility was negative till the second year and later maintained a positive stable shock till the ten years. Also, it maintained a stable positive shock effect in the consumer price index from the first year till the tenth year. The oil price volatility responded to a decreased shock in consumer expenditure and later increased in the second year the third year and the tenth year, it revealed a slight decrease in consumer expenditure in Nigeria. And revealed that oil price volatility responded to a negative shock effect in the consumer price index from the first year till the tenth year.

5.0 DISCUSSION AND CONCLUSION

Consumption expenditure is a significant component of a nation's total expenditures and is a key factor in a nation's development. A rise in consumption expenditure will result in a rise in overall demand, which will lead to increased investor profits, decreased unemployment, increased incomes, and accelerated economic growth. However, a decline in consumption expenditure will result in excess stocks, which will lead to job losses, increased unemployment, decreased incomes, and a recession (Babalola & Salau, 2020). The price

elasticity of the demand for petroleum products is inelastic, which means that a small increase in the price of petroleum products will lead to a large increase in consumption expenditure. This is because consumers have little choice but to continue to consume petroleum products even when their prices rise. As a result, the increase in the price of petroleum products will lead to an increase in consumption expenditure, which will lead to a decrease in the purchasing power of consumers for non-oil goods. This will cause households to spend less money on non-oil items and more on petroleum products.

The overall implication is that the future of the Nigerian economy is uncertain after the shocks to oil prices and inflation purged an increase in the consumption expenditure of households and commodities. Policymakers need to urgently focus on measures that will bolster and stabilize the macroeconomic framework of the Nigerian economy. These measures should include:

- Reducing the monetization of social media.
- Finding alternative sources of government funding (reducing reliance on oil earnings).
- Fiscal restraint in the use of crude oil receipts.
- Aggressive saving of oil revenue booms in the future to withstand the fluctuations of future oil shocks.

The results of this study have important implications for policymakers in Nigeria. They suggest that the government needs to take steps to reduce its reliance on oil revenue and diversify the economy. The government also needs to take steps to stabilize the macroeconomic framework and protect consumers from the effects of oil price volatility.

In conclusion, the findings of this study suggest that there is a long-run relationship between consumption expenditure, oil price volatility, and consumer price index in Nigeria. The ECM model is a good model for correcting for disequilibrium in this relationship. The results of the ECM can be used to inform policy decisions and to develop models that can be used to predict future changes in these variables. The study also suggests that the Nigerian economy is facing an uncertain future due to oil price shocks and inflation. Policymakers need to focus on measures to strengthen and stabilize the macroeconomic framework of the Nigerian economy to mitigate the negative effects of these shocks.

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THE ROLE OF ATTITUDE IN SHAPING WATER CONSERVATION INTENTION AMONG MALAYSIANS

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ABSTRACT

Water conservation has emerged as a critical issue in today's world due to the rapid depletion of water resources and increasing concerns about environmental sustainability. Researchers aim to gain a deeper understanding of the factors influencing individuals' intentions to conserve water, enabling the development of effective strategies and interventions to promote sustainable water usage. This paper highlights the significance of attitude as a key predictor of pro-environmental behaviour by examining its impact on water conservation intentions. Data for this study was collected using questionnaires administered through Google Forms, and the analysis was conducted using SmartPLS 4.0.9.3. The results demonstrate good convergent validity of the scales, with all items exhibiting values above 0.5 and 0.7 for Average Variance Extracted (AVE) and composite reliability, respectively. Notably, the findings reveal a positive and significant relationship between attitude and water conservation intention. These findings underscore the importance of water conservation, highlighting the potential adverse consequences of water scarcity and emphasizing the need for favourable attitudes towards water conservation intention. By understanding the influential role of attitude, this research contributes to the development of effective measures to promote sustainable water conservation practices.

Keywords: Attitude, Intention, Sustainability, Water conservation

1.0 INTRODUCTION

The continuous alteration of the environment by human activities poses a significant threat to the availability of natural resources. Among these resources, water stands out as one of the most vital and endangered. This situation raises concerns about the overall importance and sustainability of water resources (Onukogu et al., 2018). The water supply is already in limited supply due to population growth, economic expansion, and a decline in the availability of fresh water. Water scarcity exists in Malaysia due to inadequate water management and rising water demand (Saad & Harun, 2017). Water issues must be addressed expeditiously to assure the availability and sustainability of water. The United Nations issued a recommendation for daily

water consumption of 165 litres per individual. According to data from the National Water Services Commission (SPAN), Malaysians consume a daily average of 201 litres of water, which is equivalent to 134 1.5 litre bottles. Malaysia's average daily water consumption is 27% greater than the United Nations' daily water consumption per capita standard. Malek et al. (2013) state that Malaysia's water services have issues that must be addressed promptly if they are to be economically viable and sustainable. If immediate action is not taken, water scarcity and the depletion of pure water resources will become unavoidable issues.

Due to the importance of water to human development and environmental demands, achieving virtually all SDGs will rely significantly on it (Vorosmarty et al., 2018). SDG 6, part of the United Nations' 2030 Agenda for Sustainable Development adopted in 2015, aims to ensure universal access to water and sanitation while promoting their sustainable management. This goal is part of the broader framework known as the Sustainable Development Goals (SDGs), which seek to foster human and environmental well-being. Goal 6 specifically addresses critical global concerns including water scarcity, water quality, sanitation, and hygiene. Its purpose is to tackle these issues and establish a foundation for the availability and sustainable management of water and sanitation for all (Fehri et al., 2019; Sadoff et al., 2020). The aim contains eight targets to be met by 2030, including increasing water usage efficiency and ensuring freshwater supplies (Ortigara et al., 2018).

The issue of water conservation has become increasingly urgent in contemporary society due to the rapid depletion of water resources and growing concerns regarding environmental sustainability. To create efficient strategies and interventions that encourage sustainable water usage, researchers need a better understanding of the elements that influence people's intentions to conserve water (Singha & Eljamal, 2020). The importance of attitude as a crucial predictor of pro-environmental behaviour is highlighted in this abstract, which investigates the effect of attitude on influencing water conservation intentions. According to Reddy et al. (2023), attitudes are cognitive means to direct beliefs and perceptions towards an intent to act, and further towards taking action.

Attitude refers to an individual's positive or negative evaluation of a particular behaviour or belief. In the context of water conservation, a positive attitude towards water conservation is likely to enhance individuals' intention to engage in water-saving practices. A strong positive attitude towards water conservation is often associated with a deeper understanding of the importance of water resource management and a sense of responsibility towards preserving this vital resource for future generations (Singha et. al., 2022).

Furthermore, attitude can be influenced by various factors, including education, awareness campaigns, social norms, and personal experiences. Effective communication strategies that emphasize the benefits of water conservation and highlight the potential negative consequences of water scarcity can help shape positive attitudes towards water conservation.

Attitude plays a significant role in shaping water conservation behaviour (Han et al., 2018). People's beliefs, perceptions, and values about water and the environment can influence their willingness to engage in water-saving actions (Randolph & Troy, 2008). Attitude refers to an individual's overall evaluation or feelings toward a specific object, topic, or behaviour. In the context of water conservation, attitude plays a crucial role in shaping an individual's intention to engage in water-saving behaviours (Chaudhary et al., 2017). Individuals with positive attitudes toward water conservation are more likely to have a higher intention to engage in water-saving behaviours. When people view water conservation as important, necessary, and beneficial, they are more motivated to take action and conserve water resources.

Research suggests that individuals with a positive attitude towards water conservation are more likely to engage in behaviours such as reducing water consumption, fixing leaky faucets, and using water-efficient appliances. They are also more inclined to spread awareness about water conservation practices within their social networks, influencing others to adopt similar behaviours. On the other hand, individuals with a negative attitude towards water conservation may be less motivated to conserve water and may engage in wasteful practices.

Given the potential impact on the public, it is crucial to have a comprehensive understanding of people's attitudes, behaviours, and perceptions regarding water usage. Therefore, within this context, this paper aims to explore the impact of attitude on water conservation intention using the framework of the Theory of Planned Behaviour.

The remainder of this paper is organised as follows. The next section provides an overview of water management in Malaysia, focusing on water conservation intention. It includes a review of relevant literature and the theoretical framework that underpins this study. Following that, the research methodology and variable definitions are described. Subsequently, the findings are presented and discussed. Finally, the last section comprises the conclusion, study limitations, and suggestions for future research.

2.0 LITERATURE REVIEW

2.1 Water Management in Malaysia

The management of water resources in Malaysia encompasses a hierarchical governance framework that encompasses both federal and state entities. The Ministry of Energy and Natural Resources (KeTSA) is tasked with the formulation of policies, establishment of national standards, and coordination of water resource management initiatives at the federal level. According to the Ministry of Energy and Natural Resources (2023), the ministry assumes a pivotal role in formulating strategies and devising plans aimed at promoting sustainable practices in water management. In order to maintain sustainability, an efficient and effective water management system is an essential component (Raja Ahmad et al., 2019).

At the state level, it is observed that each state in Malaysia possesses an independent State Water Authority or Water Supply Department, which assumes the responsibility of overseeing water resources management within their respective jurisdictions. The aforementioned state agencies are responsible for the oversight of various activities, including but not limited to water abstraction, water treatment, distribution, and regulatory enforcement.

The National Water Services Commission Act 2006 (Act 654) is a significant legislative framework that governs water management in Malaysia. The aforementioned legislation was enacted to establish the National Water Services Commission (SPAN) as the governing entity responsible for regulating the water supply and sewerage services sector. The responsibilities of SPAN encompass the licensing of water service providers, regulation of tariffs, and the assurance of the provision of water services of high quality.

Malaysia has a total water resource of about 580 billion cubic meters per year, with 97% of it is from the surface water and 3% of it from groundwater (Department of Irrigation and Drainage Malaysian 2020). Furthermore, 10.7 billion out of 17.3 billion cubic meters of water supplies is for the domestics. In terms of water qualities, in 2019 Malaysia ranks 90th out of 180 countries that has good quality of waters with a score of 53.1 out of 100 (Environmental Performance Index, 2020). Based on National Water Services Commission (2023), the water tariff in Malaysia varies depending on the states and volume of water consumed with the average tariff of RM0.57 per cubic meter.

The combination of favourable water quality and low tariff rates in Malaysia has resulted in a phenomenon of excessive water consumption among the population. According to the National Water Services Commission (SPAN), Malaysia has reported the highest per capita water consumption of approximately 210 Liters per day, surpassing the globally recommended average of 165 Liters per day. The issue of water consumption has gained significant attention in Malaysia due to the reported non-revenue water percentage of approximately 35%, surpassing the recommended threshold of 25% set by the World Bank for the period spanning from 2017 to 2022, as indicated by the National Water Services Commission. This situation encompasses factors such as leakage and theft, which contribute to the overall non-revenue water percentage.

Based on this statistic, this paper will discuss the relationship between the attitude and intention among Malaysian by using the Theory of Planned Behaviour's framework.

2.2 Theory of Planned Behaviour, Water Attitude and Water Intentions

According to the Reddy et al. (2023), attitudes can have a significant impact on water conservation intentions. Ajzen's theory of planned behaviour proposes that intentions are influenced by attitudes, as well as subjective norms (social expectations) and perceived behavioural control (perception of ability to engage in the behaviour).

The Theory of Planned Behaviour (TPB) was formulated and introduced by Icek Ajzen in 1991 with the aim of elucidating and forecasting human behaviour (Ajzen, 1991). The origin of TPB can be traced back to an extension of the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen in 1975, and further developed by Ajzen and Fishbein in 1980. The TRA posits that human behaviour can be predicted by considering two key factors: attitude and subjective norm (Fishbein & Ajzen, 1975). However, the predictors of attitude and subjective norm were insufficient in accurately predicting human behaviour and the assumption of voluntary control. TPB became more popular due to the addition of a new variable that is capable of managing the insufficient volitional control found in TRA (Dali et al., 2021). Ajzen (1991) introduces the concept of perceived behaviour control as an additional variable in the prediction of human behaviour.

The centre point of TPB framework is the human intention which refers to the degree of human control over their behaviour. TPB posits that behavioural intention is based on; (1) attitude, (2) subjective norm; and (3) perceived behavioural control. Mahdavi (2021) using TPB to explain farmer's intention towards water policy option and this study found that attitudes, subjective norms, and perceived behavioural control have a positive and significant effect on the intention. Similarly, Guo et al. (2021) also found that attitudes, subjective norms, and perceived behavioural control have a significant effect on the purchase of bottled water intention in China.

According to Sally V. R. and Cristof K. (2020), attitudes, norms and habits play an important role in determining intention to conserve water, and that habits were the single most important predictor of water conservation intentions. Some individuals may have a higher intention to consume water due to recognizing the importance and benefits of water. Others may have a lower intention due to a lack of awareness.

In previous studies utilising the TPB to investigate intention, Kristin et al, (2021) discovered a positive relationship between attitude and the intention to engage in water conservation. A positive attitude implies that an individual evaluates water consumption practices in positive light. Hoxha and Hoxha (2022) provided support for the significance of attitudes as a key antecedent of water conservation intention in Phristina, Kosovo. They found that individuals who perceive responsible water usage as important, beneficial, and aligned with their values are more likely to have a favourable intention to engage in water-saving

behaviours. Building on this research, the current study aims to explore the potential influence of water consumption attitudes as antecedents on water consumption intention.

Attitudes can be assessed based on various factors, including awareness levels, education, information received, and income. Ensuring efficient water use and responsible, sustainable utilisation of water resources to minimize waste and maximize productivity relies on awareness. This encompasses the adoption of practices, technologies, and behaviours that optimize water use across various sectors (Nižetić et al., 2019). Implementing water conservation measures is crucial to reducing water waste. This can include raising awareness about the importance of efficient water use through public campaigns and education programs to encourage individuals and communities to adopt water-saving behaviours.

Next is information. If information is learnt in a fashion that can create a change in behaviour in the intended direction, then environmental education has achieved its goal, as argued by (Aydin et al., 2017). In other words, knowledge is not considered to have been learnt unless it is reflected in one's actions or behaviour.

Income can play a role in access to information and education regarding water conservation practices. Higher income individuals may have greater exposure to environmental concerns and resources that promote sustainable water behaviour. This awareness can lead to more conscious water usage and conservation efforts. On the other hand, higher income individuals may be more likely to invest in water-efficient appliances and technologies. They may have the means to install water-saving fixtures, such as low-flow toilets and showerheads, or implement rainwater harvesting systems. These conservation efforts can help reduce water consumption despite having larger homes.

Based on the above discussions, attitudes refer to the degree to which a person has a favourable or unfavourable evaluation of the behaviour of interest. It entails a consideration of the outcomes of performing the behaviour. Ajzen (1991) found a positive attitude would bring a positive result to the behavioural intention and vice versa. Water consumption attitudes plays a significant role in shaping an individual's intention to engage in water saving behaviours. A positive attitude towards water consumption is likely to lead to a higher intention to engage in responsible water usage practices. Based on the theory of planned behaviour, a novel comprehensive framework has been developed by extending environmental concern, perceived risk, and information publicity. Attitude and information publicity are the most important antecedents of water-saving intention, followed by subjective norms and perceived behavioural control (Hongyun et al., 2022).

2.3 Subjective Norm, Attitudes and Water Consumption Intention

According to Reddy et al. (2023), attitudes towards water conservation can be influenced by subjective norms (social expectations) and perceived behavioural control (perception of ability to engage in the behaviour). Subjective norm refers to the belief about whether most people approve or disapprove of the behaviour. It has to do with a person's thoughts regarding whether their contemporaries and other individuals who are important to them think that they should engage in the conduct. Subjective norms are affected by an individual's normative beliefs, which can be defined as the individual's impressions of what other people are expecting of them in terms of their behaviours. Lili et al. (2021) mentioned that, when applied to the context of water consumption, subjective norms, attitude, and perceived behaviour control have considerable beneficial effects on behavioural intention and further impact the usage of desalinated water. It is possible for a person to have a strengthening of their subjective norms and an increase in their intention to engage in water saving behaviours if they believe that social networks expect them to conserve water and disprove of excessive water consumption.

Subjective norms refer to an individual's perception of social pressure or the perceived expectations of others regarding a specific behaviour (Randolph & Troy 2008). In the context of water conservation, subjective norms play a significant role in shaping an individual's intention to engage in water-saving behaviours. Social norms and peer influence can shape individuals' attitudes toward water conservation. When people perceive that conserving water is a social expectation or observe others engaging in water-saving behaviours, they are more inclined to adopt similar actions themselves (Ahmmadi et al., 2021).

2.4 Perceived Behaviour Control and Water Consumption Intention

The concept of perceived behaviour refers to the subjective interpretation and understanding of an individual's actions, as perceived by others. Control can be defined as an individual's confidence in their capacity to execute a specific behaviour, which is associated with their perception of their ability to regulate and participate in water-related activities. Perceived behavioural control is based on the individual's presumptions regarding the potential for both internal and external variables to support the effectiveness of the behaviour (Azizan et al., 2022). The behaviour of individuals can be influenced by various factors such as challenges, obstacles, and opportunities (Borusiak et al., 2021). The provision of water is a universally accessible resource for individuals across the globe. Hence, the utilisation of water resources holds significant importance due to its impact on resource availability and accessibility for individuals. The potential overconsumption of water by individuals may emerge as a primary concern that necessitates attention to prevent the depletion of clean water resources in the coming years.

Self-efficacy, as defined by Acarli and Dervisoglu (2013), encompasses an individual's confidence in their capacity to execute a particular behaviour and surmount any obstacles or difficulties associated with it. The influence on perceived behavioural control is contingent upon the knowledge and skills possessed by individuals in relation to water conservation. According to Cooper (2017), individuals' perceived behavioural control and intention to conserve water are enhanced when they possess adequate knowledge regarding water-saving techniques, strategies, and best practices, and when they feel confident in their ability to implement them proficiently. In a similar vein, prior studies in the research field concerning water bottle consumption intention (Borusiak et al., 2021), water consumption pattern (Ang & Mansor, 2021), water consumption drivers (Enshassi et al., 2017) found that perceived behaviour control is the strongest predictor to influence the consumption intention.

Furthermore, the study conducted by Seyyed et al. (2022) revealed that the intention to consume water was influenced by factors such as self-efficacy and perceived behavioural control. The impact of self-efficacy and perceived behavioural control on an individual's intention to engage in water consumption behaviours is substantial. An individual's intention to consume water responsibly is positively influenced by increased levels of self-efficacy in relation to water conservation. When individuals possess the requisite knowledge, skills, and agency to conserve water, they experience heightened self-assurance in their capacity to embrace and sustain water-saving behaviours. The individuals' belief in their abilities has a positive impact on their inclination to participate in water consumption behaviours.

Thus, in line with TPB the more people feel they have control over water consumption, the more they are willing to reduce water consumption. Thus, in this study we predict that perceived behaviour control among the users is important due to the individual's behaviour may influence the water management.

3.0 METHODOLOGY

The constructs used are adapted based on studies by Taufique and Vaithianathan (2018) for WCI and Aydin and Kiraz (2017) for water conservation attitude.

Table 1. Construct development

Variables	Authors	Title	No of items
Water conservation intention	Taufique, K. M. R., & Vaithianathan, S. (2018)	A fresh look at understanding green consumer behavior among young urban Indian consumers through the lens of Theory of Planned Behaviour	8
Water conservation attitude	Aydin, C. Y., Deniz, P. O., & Kiraz, E. D. E. (2017)	Water use attitudes and behaviours of high-education students who do receive and do not receive environmental health training	7
Total			15

4.0 RESULTS AND DISCUSSION

Table 2. Cronbach Alpha

Variable	No of Items	Cronbach's Alpha	Result
Water Conservation Intention	8	0.885	Reliable
Water Conservation Attitude	7	0.846	Reliable

Table 3. Convergent validity

Construct	Items	Code Name	Loadings	Composite Realibility	Average Variance Extracted (AVE)
Water Conservation Intention (WCI)	E.Appliances	WCI1	0.778	0.909	0.590
	E.Choose	WCI2	0.870		
	E.Join	WCI3	0.747		
	E.Purchase	WCI5	0.832		
	E.S.Buy	WCI6	0.675		
	E.Sacrifices	WCI7	0.706		
	E.Support	WCI8	0.752		
Water Conservation Attitude (WCA)	B.Appliances	WCA1	0.728	0.927	0.679
	B.Awareness	WCA2	0.779		
	B.Education	WCA3	0.875		
	B.Idea	WCA4	0.850		
	B.Mentality	WCA5	0.878		
	B.People	WCA7	0.825		

Note: WCI4 and WCA6, were deleted due to low loadings

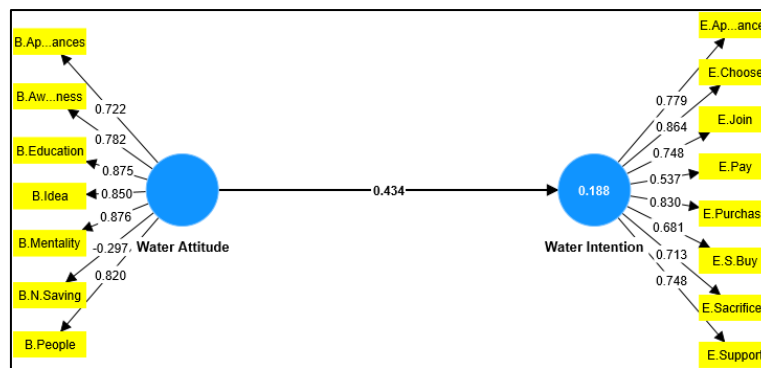


Fig. 1 Factor loading before deletion process.

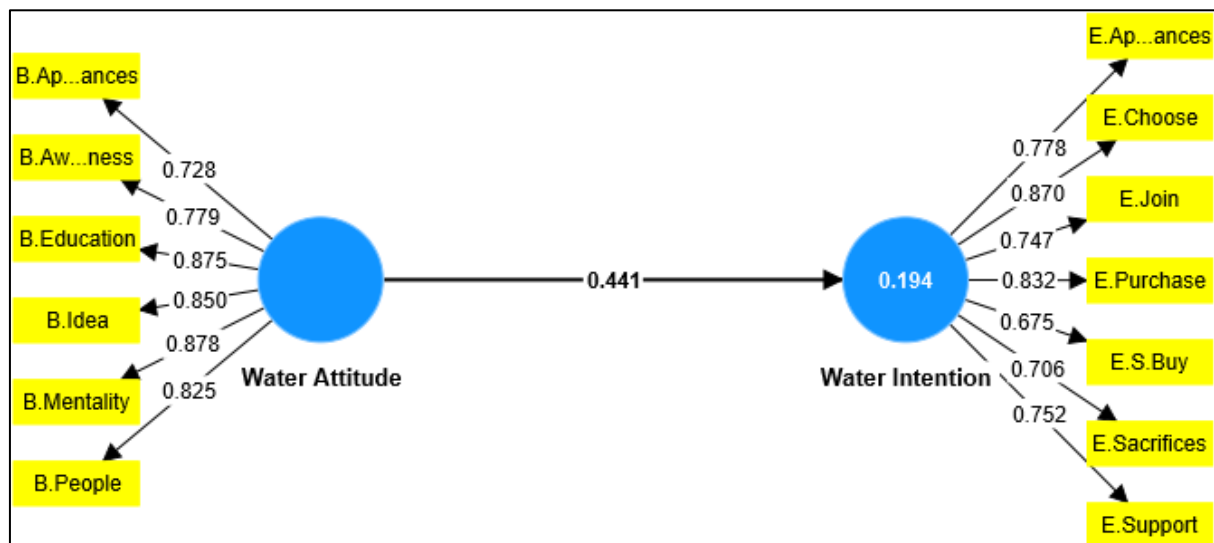


Fig. 2 Convergent validity

Table 2 shows the Cronbach's Alpha scores for each selected variable were more than 0.70 which indicates that the Cronbach's Alpha score for water conservation intention (0.885), water conservation attitude (0.846). As a result, this shows that the instrument is reliable and suitable for measuring the targeted research.

Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct, and to establish convergent validity, researchers consider the average variance extracted (AVE) (Hair et al, 2017).

Based on Table 3, two (2) items were deleted due to low loadings (WCI4 and WCA6). However, the results indicate that the scales have good convergent validity where all items show above 0.5 and 0.7 respectively for AVE and composite reliability (CR). According to Hair et al. (2017), convergent validity was reported based on loadings ≥ 0.70 , average variance extracted (AVE) ≥ 0.50 for each construct. and composite reliability (CR) ≥ 0.70 (in exploratory research, 0.60 to 0.70 is considered acceptable). This reveals that water conservation intention has affected the factors of Water Conservation Behaviour, Subjective Norm and Perceived Behavioural Control.

One interesting finding that can be found from this study is the negative loading obtained from one factor (Water Conservation Attitude with 7 items) had items with negative and positive factor loading (6 items had positive loading, and one had negative loading, specifically WCA6 is usually uninteresting). This item asked the respondents on the income they received monthly. It shows that income does not play any role in explaining the water conservation attitude thus giving no impact on the attitude. This is aligned with the past study from Liu et al.

(2022) that stated individual differences in views on water consumption were not significantly explained by household size, family income and occupation. Income may not be the primary factor affecting water behaviour. Other factors such as infrastructure, water scarcity, or reliance on alternative water sources may play a more significant role.

Understanding subjective norms and their influence on water conservation intention is important for designing effective interventions and communication strategies. In other words, subjective norms capture an individual's perception of social norms and the expectations of significant others regarding a behaviour. This finding is consistent with the study from Gibson et al. (2021) where it is found that subjective norms significantly can affect intentions. In the case of domestic water consumption, subjective norms can be influenced by factors such as the opinions of family members, friends, and neighbours regarding water-saving behaviours (Tian & Chen 2022). If individuals perceive that others important to them support and value water conservation, it strengthens their intention to adopt water-saving practice.

By promoting positive subjective norms, encouraging social support, and showcasing positive role models, individuals can be motivated to adopt water-saving behaviours and contribute to collective efforts in water conservation.

Consistency between attitudes and behaviour is important for water conservation intention. This finding is similar to a study from Willis et al. (2011) that indicates people with positive attitudes towards environment tends to consume less water. When individuals perceive their actions to be consistent with their positive attitude toward water conservation, it reinforces their intention to engage in water-saving behaviours consistently.

Developing successful interventions and strategies requires an understanding of the role of perceived behavioural control in the intention to conserve water. This finding is aligned with the study from Nugroho et al. (2022) that tells there is a positive relationship between perceived behavioural control and water conservation intention. By addressing barriers, providing resources and support, and promoting self-efficacy and empowerment, individuals can be motivated to overcome obstacles and engage in water-saving behaviours, contributing to sustainable water management. In this study, perceived behavioural control encompasses factors such as personal capabilities, access to water-saving technologies or information, and the availability of resources. When individuals believe they have the necessary skills, knowledge, and resources to engage in water-saving behaviours, it increases their intention to conserve water.

5.0 CONCLUSION

In conclusion, attitude plays a crucial role in shaping individuals' intention to conserve water. By fostering positive attitudes towards water conservation through education, awareness campaigns, and targeted interventions, it is possible to promote sustainable water usage and contribute to the preservation of this vital resource. Understanding the impact of attitude on shaping water conservation intention is essential for policymakers, environmental organisations, and individuals alike in their efforts to address the global water crisis and build a more sustainable future.

The intention to conserve water is closely aligned with Sustainable Development Goal 6, which specifically targets the availability and sustainable management of water and sanitation for all individuals. The primary objective of Sustainable Development Goal 6 (SDG 6) is to tackle water-related difficulties and advance sustainable approaches in order to attain widespread availability of clean drinking water, adequate sanitation facilities, and enhanced management of water resources. Water conservation plays a pivotal role in advancing Sustainable Development Goal 6 (SDG 6) by actively safeguarding and maintaining water resources. By implementing measures to minimise water wastage, adopting efficient water

utilisation techniques, and advocating for sustainable water management practices, individuals and organisations actively contribute to the achievement of Sustainable Development Goal 6. This goal aims to ensure the preservation and availability of water resources for both current and future generations.

6.0 SUGGESTION FOR FUTURE RESEARCH

Future studies could investigate the effectiveness of education and awareness campaigns in promoting water conservation behaviours among different target groups. Examining the long-term impact of such campaigns on knowledge, attitudes, and behaviours related to water conservation can provide valuable insights into the benefits of such initiatives. This would provide a more tailored and impactful campaigns to address specific barriers and encourage sustainable water use in diverse communities.

In addition, future studies could also explore the efficacy of behavioural interventions, such as nudges and incentives, in influencing water conservation practices. Assess the effectiveness of different intervention strategies in encouraging water-saving behaviours at individual, household, and community levels. This could then contribute to a deeper understanding of water conservation and sustainable water management, facilitating the development of effective strategies and policies for ensuring water security and resilience.

CO-AUTHOR CONTRIBUTION

The authors affirmed that there is no conflict of interest associated with the research and its findings. All authors have contributed significantly to the research and preparation of the paper. Each author has played a role in designing and conducting the study, analysing the data, and interpreting the results. Additionally, all authors have collaborated in writing and revising the manuscript to ensure its accuracy and clarity.

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RESEARCH ETHICS

This research has received ethical approval from the Research Ethics Committee of UiTM: REC/02/2023 (ST/MR/27).

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DETERMINANTS OF SAVING BEHAVIOUR AMONG BUSINESS STUDENTS AT UiTM

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ABSTRACT

Savings encourage investment, which supports the growth of the economy. Failure to save money and poor money management can lead to major financial problems, including bankruptcy. Modern young people have been shown to put less emphasis on saving habits and money management, which negatively affects their quality of life, increases their reliance on family and government financial support, and adds to their debt load. University students are the younger generation most likely to become involved in these issues. Careful financial preparation is necessary to assure adequacy in the rising cost of living environment of today. Therefore, this research intends to investigate the determinants of savings behaviour among undergraduate students from the Faculty of Business Management, UiTM Segamat Johor. A total of 151 respondents were included in this study. A self-administered questionnaire was used to gather primary data, which was analysed by using the Statistical Package for Social Science (SPSS). Multiple Regression Analysis was used to determine four factors relative to students' saving behaviour. The results indicate that financial literacy, parental influence, peer influence, and self-restraint have significant relationships. Financial literacy becomes a crucial factor that influences saving behaviour. These findings could be useful references for related organizations as well as a body of knowledge with practical implications for those interested in developing personal savings in the context of avoiding bankruptcy.

Keywords: Saving Behaviour, Financial Literacy, Parent Influence, Peer Influence, Self-restraint

1.0 INTRODUCTION

Savings can be defined as additional income that remains after all expenses have been paid by a consumer or household (Aizuddin & Kadir, 2019). Saving has played a vital role in economic growth and development in recent decades. Savings support investment, which encourages the development of an economy. Those who are unable to save money and manage their finances well may face serious financial troubles, including bankruptcy. Shah et al., (2022) in his study found that of those under the age of 45, 15% of them have no savings while another 37% have never thought about preparing for retirement. According to the Malaysian Financial Literacy Study (2021), some Malaysians are unable to save money

because they spend all their income, have small savings, and would be unable to subsist for more than three months on their wages if they lost their employment. The survey findings prove that saving money is not everyone's primary concern in Malaysia (Zainudin & Shaharuddin, 2022). The writer also added that the youngsters do not manage their money effectively. Failing to develop good saving habits could result in bankruptcy for a person.

It has been observed that the modern youthful generation places less focus on saving practices and money management, which has a detrimental impact on their life and makes them more dependent on their family and government financial assistance, while also increasing their debt burden (Alshebami & Aldhyani, 2022). University students are the modern youthful generation that could be trapped in the latter problems. Thus, they need to ensure that their economic management is well-planned. This target group is important because they will enter their workforce and need to be independent with their income. Financial planning needs to be done carefully to ensure sufficiency in today's excessive cost of living situation (Husin, 2022). Previously, there was a study on money management behaviour among Malaysian Public Universities, focusing on Universiti Putra Malaysia that consists of multiple races such as Malay, Chinese, Indian, and others, found that most students acknowledge they lack self-control when it comes to managing their finances (Zulfaris et al., 2020). The researcher added, students of higher education are mostly young people and always strive to equip themselves with skills to face the challenges outside of campus life.

Considering this issue research has been conducted in UiTM to see financial saving behaviour among students especially Bumiputera as this university focuses on Bumiputra and B40 families. (Utusan Malaysia, 2022) reported that out of its 185,400 students, 129,780 individuals, which accounts for 70 percent, are from low-income families (B40). The remaining 55,620 students, constituting 30 percent of the total, belong to middle-income (M40) and high-income (T20) families, and they are pursuing their studies at the diploma and degree levels. The research aims to study the determinants of saving behaviour among students at UiTM and employ identical variables utilized by prior researchers, consisting of financial literacy, parental influence, peer influence, and self-restraint (Zulfaris et al., 2020). Even though the same variables were applied, the study was conducted at a different place with different samples.

Our paper proceeds as follows: Section 2 is the literature review, section 3 is the discussion of the data analysis, and section 4 is the report of the findings. Finally, section 5, presents the conclusion and recommendation of the study.

2.0 LITERATURE REVIEW

2.1 Savings Behaviour

Behaviour theory is a psychological framework that aims to analyse and explain human behaviour based on observable behaviours and responses to stimuli. This theory emphasises the impact of environmental and reward factors in developing and affecting behaviour. B.F. Skinner's Operant Conditioning Theory (Skinner, 1938) is a well-known behaviour theory. Skinner believes that behaviour is determined by its consequences. This theory claims that reinforced (rewarded) behaviour is more likely to be repeated, but punished or unreinforced behaviour is less likely to occur in the future. Skinner's work had a massive impact on psychology and helped us understand behaviour and learning processes.

The term "saving" has a few different connotations and is interpreted in a variety of ways. Savings are the residual revenue in an economic scenario after current spending is deducted for a specified time. Saving entails making wise choices today and preparing for the future. Individuals' actions and decisions about the allocation of their income towards saving

and the accumulation of financial resources for future use are referred to as savings behaviour. It includes a variety of circumstances, motivations, and techniques that affect how people save money. Personal, societal, and economic factors all have an impact on saving behaviour.

It is crucial to highlight that savings behaviour varies amongst people and is impacted by several factors. Understanding the factors can assist individuals and policymakers in developing interventions and policies to promote positive saving behaviour and financial well-being. Several factors influence how individuals save. Savings is one of the finest indicators of personal achievement and economic prosperity (Andrew, 2017).

Some academics are starting to categorise saving as a sort of investment because of the conversion of unconsumed money into savings (Ling, 2021). People frequently stereotype today's youngsters as materialistic spendthrifts who struggle to manage their finances.

A deeper examination reveals, however, that young people nowadays are frugal with their money (Arnold, 2018). Another result in France was that the percentage of persons who are financially insecure grows with age. 54% of 19- and 20-year-olds agree, 46% of 17- and 18-year-olds agree, and 28% of 15- and 16-year-olds agree (Arnold, 2018).

An examination of economic psychology's history and ties to its parent disciplines will be particularly beneficial to students' saving behaviour (Earl, 2001). Higher GPAs and married parents enhanced the chance of students becoming financially secure. The kids believe that their parents have the greatest influence on how they manage their money (Akben-Selcuk, 2015).

2.2 Financial Literacy

In examinations of people's saving habits, financial literacy has repeatedly been recognised as a key variable. Financial literacy, according to Ling (2021), is not only a good and significant indicator, but it also has the largest effect on individual saving behaviour. This means that people with a higher level of financial literacy are better equipped to manage their finances and save more money (Mahdzan & Tabiani, 2013).

Malaysians, however, have a poor level of financial knowledge, according to Bank Negara Malaysia. According to research referenced by Ismail et al. (2020), financial literacy is greater among middle-aged individuals than among young and old persons. Ariffin et al. (2017) discovered that the mean values for financial literacy among 192-degree programme students enrolled in business administration at Universiti Putra Malaysia are still at a modest level. Another survey of 853 students from a Turkish institution found a comparable situation (Akben-Selcuk, 2015). The authors found that formal student finance education, a comprehensive learning strategy, and parent-taught financial education were all significant predictors of better levels of financial literacy.

As a result, it is critical for young people to understand how to manage their monthly allowances or income. In the long term, this will help people save and spend money wisely (Looi et al., 2022). Kassim et al. (2020) agreed, recommending that schools, the government, and local governments organise more economic management seminars since such activities might increase kids' and parents' financial literacy and saving behaviour. Moreover, more financially knowledgeable individuals may create better retirement plans, save more money, attain financial well-being, and enjoy a better life (Alshebami & Aldhyani, 2022).

2.3 Parents Influence

Numerous studies have shown that parental influence is a strong predictor of teenage saving behaviour. According to Brown et al. (2015), a vast number of studies in psychology

and economics have investigated the relationship between parents and children's economic behaviour and uncovered the phenomena of intergenerational transmission. In other words, financially responsible parents are more likely to influence their children's financial behaviour (Kassim et al., 2020).

According to Akben-Selcuk (2015), children's inclination to participate in desirable financial behaviours such as on-time bill payment, budgeting to manage funds, and actively saving for the future is favourably and substantially impacted by their parents' financial behaviour. That is congruent with the findings of research done on 404 university students from 16 different Guangdong cities (Ling, 2021), which shows the relevance of parental influence in inspiring and pushing children to save.

Webley and Nyhus (2006) discovered that parental behaviour and parental orientation had a minor but considerable influence on their children's and adults' economic behaviour. This study contains thorough information on financial behaviour as well as numerous psychological concepts of parents and children. When their parents advise and teach them about money concerns, children are more inclined to exercise saving behaviour (Kagotho et al., 2017). As a result, there is little question that parents' responsibility in training and pushing their children to practise healthy saving habits is vital, reflecting the proverb that "good habits begin at home" (Looi et al., 2022).

2.4 Peer Influence

Peer influence is a significant social factor that impacts people's behaviour in general. Peer pressure or influence occurs when you act to feel accepted and respected by your peers. Peer influence may be good or detrimental. Striking the right balance between being yourself and fitting in with your classmates is essential for properly coping with peer influence. Peer influence encompasses not just increasing financial knowledge but also influencing people's financial choices and behaviours, as well as their savings (Alshebami & Aldhyani, 2022).

In prior research, Ling (2021) predicted that groups ranking high on the peer-oriented dimension would be less patient and less willing to conserve money. Peers have an impact on how individuals save their money.

There are various scientific findings that contradict this kind of view. According to Beshears et al. (2015), peer knowledge has a detrimental impact on savings behaviour. They performed a field experiment on retirement savings behaviour using 15,000 samples. They discovered a limited relationship between peer influence and retirement savings behaviour (Kamarudin & Hashim, 2018).

Most of the studies, however, found substantial impacts from peer influence on savings behaviour. This is supported by research conducted by Alshebami and Aldhyani (2022), which found that peers have a significant impact on their colleagues since they spend a large amount of time together and so acquire different behaviours from one another. Peer influence is seen to have a key effect in molding individual behaviour, notably financial and savings behaviour, particularly among Generation Z and, more recently, Generation Alpha.

A study done in the United States collected data from 712 workers at a prominent institution to investigate the association between social engagement with peers and savings behaviour. These data imply that comparable tastes among peers have a substantial link and influence savings behaviour.

2.5 Self Restraint

Self-control, sometimes known as self-restraint, is the act of limiting one's own behaviours. Self-control refers to the ability to recognise and regulate one's emotions and wants (Andrew, 2017). The consumption function theories that are often taught to students ignore the importance of caution, willpower, and internal savings motives (Earl, 2001). Individual savings rates are therefore the most visible sign of a person's financial wellbeing.

Everyone should understand the significance of managing their financial status to reach financial well-being, which starts with healthier saving habits (Zainudin & Shahrudin, 2022). Saving and wise spending might help one gain control over their spending habits.

According to Akben-Selcuk (2015), pupils who have a good attitude about money are more inclined to save. According to the study's findings, pupils were 1.69 times more likely to have their own savings for every extra unit on the money ethic scale. Additionally, Alshebami and Aldhyani (2022) discovered that self-control dampens the links between Saudi young people's financial literacy and saving behaviour.

According to Zainudin and Shahrudin, (2022), self-dominance is the most crucial element affecting students' savings practices, followed by parental socialisation, peer influence, and financial literacy. Some studies, on the other hand, study whether the variable self-control has any influence on saving behaviour (Karunaanithy et al., 2017). This might be connected to the fact that kids' behaviour is influenced by outside factors.

3.0 METHODOLOGY

This quantitative research is being conducted to investigate the saving habits of business students. 151 students of UiTM Segamat were taken as a sample. A survey derived from Ling (2021) was utilised as the instrument (see Table 1). Section 2 has six items defining financial literacy characteristics, and Section 3 contains five items explaining parental influence variables, in addition to the demographic profile in Section 1. Section 4 has five items on peer influence, Section 5 contains six items on self-control, and Section 6 contains six items on saving behaviour.

Table 1. Distribution of Items in Survey

Section	Variable	No. of Items
2	Financial Literacy	6
3	Parental Influence	5
4	Peer Influence	5
5	Self- Restraint	6
6	Savings Behaviour	6

This study defines saving behaviour as a dependent variable, while the independent variables are financial literacy, parental influence, peer influence, and self-restraint. The conceptual framework of the study is shown in figure 1. The study Cronbach's alpha is used to estimate the reliability of the internal consistency of items. The range of 0.6 to 0.7 was deemed the lower limit of acceptability (Hair et al., 2018).

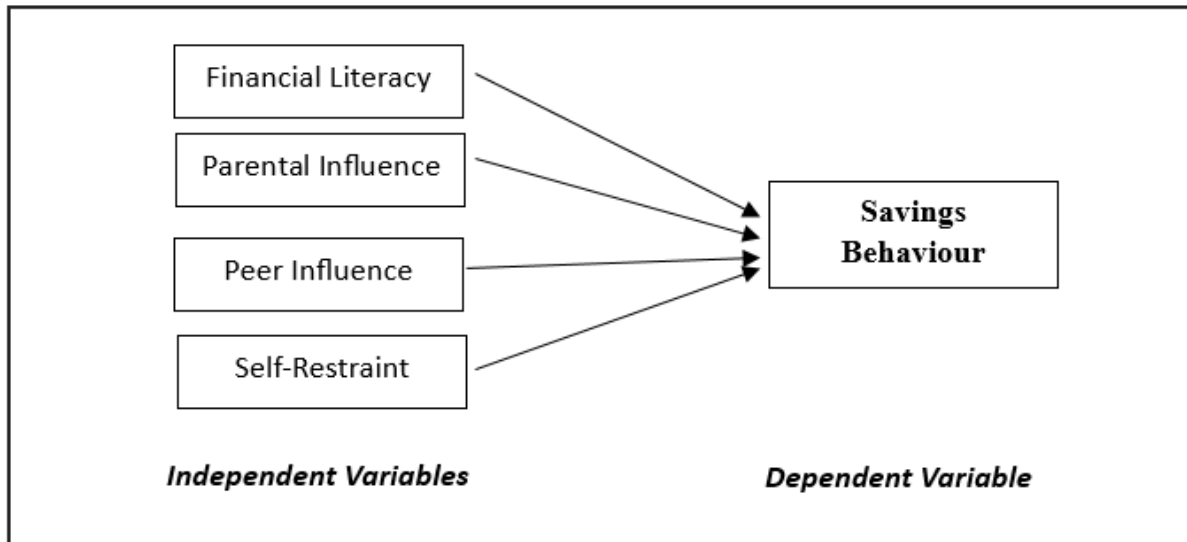


Fig.1 Conceptual Framework of the Study

Using the frequency table, the descriptive analysis is used to look at the demographics of the respondents. In determining the factors that influence saving behaviour, multiple linear regressions are conducted. The F-test is used to establish the overall significance of the model. The F-test is a statistical test used to test the null hypothesis that there is no independent variable significantly related to saving behaviour, while the alternative hypothesis is at least one independent variable significantly related to saving behaviour. Also, the F-test, R-value, and R-squared value are employed to explain the model fits of the data. Meanwhile, the t-test is used to determine the significant factors for the saving behaviour variable.

4.0 FINDINGS

4.1 Findings for Descriptive Analysis

The descriptive analysis is summarised in Table 2. There are 27.2 percent male respondents and 72.8 percent female respondents among the 151 total respondents. Most respondents (74.8 percent) are between the ages of 19 and 20 years old, followed by those between the ages of 21 and 22 years old (19.2 percent), those between the ages of 23 and above (5.3 percent), and those between the ages of 18 and 20 years old (0.7 percent). In terms of academic level, 80.1 percent are at the diploma level and 19.9 percent are at the bachelor's degree level. According to programme code, the most (34.4 percent) are from the BA114 programme, with the BA119 programme coming in second (33.1 percent), followed by the BA111 programme (12.6 percent). The BA240 programme has the lowest proportion of programme code (2.0 percent).

Table 2. The summary of Descriptive Analysis

Variable	Category	Frequency	Percentage (%)
	Male	41	27.2
	Female	110	72.8
		151	100.0
Age	18 and below	1	0.7
	19 - 20	113	74.8
	21 - 22	29	19.2
	23 and above	8	5.3
		151	100.0
Level of Study	Diploma	121	80.1
	Bachelor's degree	30	19.9
		151	100

Program Code	BA111	19	12.6
	BA114	52	34.4
	BA119	50	33.1
	BA240	3	2.0
	BA242	11	7.3
	BA249	9	6.0
	BA252	7	4.6
		151	100

Table 3. The mean score and standard deviation of Financial Literacy

No.	Item	Mean Score	Standard Deviation
1	I have the habit of keeping accounts	3.47	0.88
2	Managing my money well is not a difficult problem for me.	3.22	0.93
3	I can manage my credit consumption very well.	3.25	0.83
4	I can make a weekly/monthly budget for myself.	3.40	1.02
5	I often learn about financial information consciously.	3.33	0.89
6	I have a better understanding of financial instruments. (E.g., bonds, stock, T-Bills, future contract, options etc.)	3.17	0.92

Table 3 shows the items in financial literacy. The mean scores range from 3.17 to 3.47. The highest mean score was “I have the habit of keeping accounts” (M=3.47, SD=0.88) followed by the item of “I can make a weekly/monthly budget for myself.” (M=3.40, SD=1.02). Next was “I often learn about financial information consciously.” (M=3.33, SD=0.89). Then followed by “I can manage my credit consumption very well.” (M=3.25, SD=0.83), “Managing my money well is not a difficult problem for me.” (M=3.22, SD=0.93) and “I have a better understanding of financial instruments. (E.g., bonds, stock, T-Bills, future contract, options etc.).” (M=3.17, SD=0.92)

Table 4. The mean score and standard deviation of Parental Influence

No.	Item	Mean Score	Standard Deviation
1	My parents are my role models when it comes to financial management.	3.61	1.02
2	Sometimes it is good to let my parents take care of my money to help me save.	3.52	1.09
3	My parents are happy and gratified with my savings.	3.47	1.04
4	I appreciate my parents' advice on what to do with my money.	3.94	0.90
5	Saving money is what I always do because my parents want me to save money when I am young.	3.82	0.98

Table 4 indicates the items in parental influence. The mean scores are between 3.47 and 3.94. The highest mean score was “I appreciate my parents' advice on what to do with my money.” (M=3.94, SD=0.90) followed by the item of “Saving money is what I always do because my parents want me to save money when I am very young.” (M=3.82, SD=0.98). Next was “My parents are my role models when it comes to financial management.” (M=3.61, SD=1.02). Then followed by “Sometimes it's good to let my parents take care of my money to help me save” (M=3.52, SD=1.09), and “My parents are happy and gratified with my savings.” (M=3.47, SD=1.04)

Table 5. The mean score and standard deviation of Peer Influence

No.	Item	Mean Score	Standard Deviation
1	As far as I know, some of my friends have the habit of saving money often.	3.23	1.00
2	My friends often discuss financial matters (savings) and I also participate in it.	3.18	1.00
3	I always compare the amount of savings and consumption with my friends.	2.89	1.10
4	I always spend my free time with my friends.	3.41	1.03
5	I always go to money-spending activities with my friends.	3.12	1.00

Items in peer influence are listed in Table 5. The mean scores range from 2.89 and 3.41. The highest mean score was “*I always spend my free time with my friends.*” (M=3.41, SD=1.03) followed by the item of “*As far as I know, some of my friends have the habit of saving money often.*” (M=3.23, SD=1.00). Next was “*My friends often discuss financial matters (savings) and I also participate in it.*” (M=3.18, SD=1.00). Then followed by “*I always go to money-spending activities with my friends.*” (M=3.12, SD=1.00), and “*I always compare the amount of savings and consumption with my friends.*” (M=2.89, SD=1.10)

Table 6. The mean score and standard deviation of Self-Restraint

No.	Item	Mean Score	Standard Deviation
1	Saving is too difficult for me, so I do not save.	2.23	0.97
2	Every time I get a sum of money, I always spend it right away (within 1 to 2 days)	2.27	1.04
3	“Just do it” is my style of buying things.	2.49	1.02
4	I am more concerned with what happens to me in the short run than in the long run.	2.66	1.07
5	I enjoy spending money on things that are not practical.	2.38	0.92
6	I am easily attracted to temptation.	2.81	0.98

Table 6 indicates the components of self-restraint. The mean scores range from 2.23 and 2.81. The highest mean score was “*I am easily attracted to temptation.*” (M=2.81, SD=0.98) followed by the item of “*I am more concerned with what happens to me in the short run than in the long run.*” (M=2.66, SD=1.07). Next was “*“Just do it” is my style of buying things.*” (M=2.49, SD=1.02). Then followed by “*I enjoy spending money on things that are not practical.*” (M=2.38, SD=0.98), “*Every time I get a sum of money, I always spend it right away (within 1 to 2 days).*” (M=2.27, SD=1.04) and “*Saving is too difficult for me, so I don’t save.*” (M=2.23, SD=0.97)

Table 7. The mean score and standard deviation of Saving Behaviour

No.	Item	Mean Score	Standard Deviation
1	I save money regularly for future needs.	3.54	0.92
2	In order to save money, I often compare prices and choose the lower ones.	4.34	0.79
3	In order to save money, I often consider whether I really need something before I buy.	4.16	0.86
4	When risks come, I have the available money to deal with them.	3.77	0.83
5	I plan to reduce my expenses to save money.	4.14	0.79
6	Achieving savings goals is not difficult for me.	3.27	0.95

Table 7 presents the items of saving behaviour. The mean scores lie from 3.27 and 4.32. The highest mean score was “*In order to save money, I often compare prices and choose the lower ones.*” (M=4.34, SD=0.79) followed by the item of “*In order to save money, I often consider whether I really need something before I buy.*” (M=4.16, SD=0.86). Next was “*I plan*

to reduce my expenses to save money.” (M=4.14, SD=0.79). Then followed by “When risks come, I have the available money to deal with them.” (M=3.77, SD=0.83), “I save money regularly for future needs.” (M=3.54, SD=0.92) and “Achieving savings goals is not difficult for me.” (M=3.27, SD=0.95)

4.2 Findings for Reliability Analysis and Multiple Linear Regression Analysis

Table 8 indicates the value of Cronbach’s alpha for each of the variables. The value of Cronbach’s alpha lies between 0.627 and 0.831, meeting the minimum range of acceptability of 0.6 (Hair et al., 2018). It shows that the items are internally consistent for each of the variables.

Table 8. Reliability Analysis

Variable	Cronbach Alpha	No. of Item
Financial Literacy	0.784	6
Peer Influence	0.627	5
Parental Influence	0.831	5
Self-Restraint	0.820	6
Saving Behaviour	0.803	6

Table 9 shows the goodness of fit of the model is considered good when R can be categorised as a strong relationship between the dependent variable and independent variables. While R-squared describes that 50.5 percent of the variation in savings behaviour can be explained by variation in financial literacy, parental influence, peer influence, and self-restraint. Moreover, the multiple regression model is statistically significant at 1% level of significance ($F=36.791$, $p<0.001$), explaining that the null hypothesis is rejected. It can be concluded that there is sufficient evidence to conclude that at least one of the independent variables is related to savings behaviour.

Table 9. The goodness of fit of multiple linear regression model.

Statistical Measure	Value
R	0.711
R- Squared	0.505
F-test	36.791 (<0.001)

Table 10. Fitted model.

Variable	Unstandardized Coefficient	Standardized Coefficient	t	p-value	Finding
(constant)	1.646		5.061	<0.001***	
Financial Literacy	0.374	0.385	6.003	<0.001***	Significant
Parental Influence	0.271	0.343	5.568	<0.001***	Significant
Peer Influence	0.105	0.126	1.859	0.065*	Significant
Self-Restraint	0.142	0.151	2.274	0.007***	Significant

Note: ***p <0.01; **p<0.05; *p<0.10

The multiple linear regression coefficients for independent variables are shown in Table 10. The independent variables of financial literacy ($\beta=0.374$, $t=6.003$, $p<0.01$), parental influence ($\beta=0.271$, $t=5.568$, $p<0.01$), and self-restraint ($\beta=0.142$, $t=2.274$, $p<0.01$) are positively statistically significant at 5% level of significance. However, the analysis is also indicated that peer influence ($\beta=0.105$, $t=1.859$, $p<0.1$) can be considered statistically significant at 10% level of significance with positive direction effect. Based on the standardized coefficient, financial literacy was found to be the most influential variable ($\beta=0.385$) followed by parental influence ($\beta=0.343$), next by self-restraint ($\beta=0.151$) and the least influential factor is peer influence ($\beta=0.126$).

5.0 CONCLUSION AND RECOMMENDATIONS

The purpose of this study is to identify savings behaviour among Business Faculty students at UiTM Segamat Johor. Finding reveals that financial literacy is statistically significant with positive direction to saving behaviour. This result aligns with the study conducted by (Ling, 2021; Mahdzan & Tabiani, 2013). They concluded that financial literacy has a strong positive and substantial association. Financial literacy, according to Ling (2021) is not only a good and vital attribute, but it also has the greatest effect on individual saving behaviour. The conclusion drawn by Ling (2021) is consistent with the findings of the study. In addition, Mahdzan and Tabiani (2013) reported that those who are more financially literate are better able to manage their finances and save more money.

According to Akben-Selcuk (2015) and Looi et al. (2022) parental influence has the second largest favourable link with savings behaviours. The first mention of parental impact shows that children's proclivity to participate in healthy financial habits, such as paying bills on time, creating a budget to manage money, and actively saving for the future, is considerably and favourably affected by their parents' financial habits. Their conclusion corresponds with the findings of the research. Research finding discloses that parental influence is positively statistically significant and the second largest contributor to saving behaviour. The latter emphasises the importance of parents in educating and encouraging their children to create healthy saving habits, echoing the cliché "good habits begin at home."

Self-control relates to saved behaviour, which is consistent with previous research (Earl, 2001; Akben-Selcuk, 2015; Alshebami & Aldhyani, 2022). Earl (2001) claims that the consumption function theories often taught to students ignore prudence, willpower, and intrinsic reasons for saving. According to Akben-Selcuk (2015) and Alshebami and Aldhyani (2022), pupils who have a favourable attitude about money are more inclined to save.

Peer information has a major influence on savings behaviour. According to Zulfaris et al. (2020) finding peers has insignificant effect on student money management. Married students were required to learn about financial difficulties that single students may not be aware of (e.g., health and life insurance, budgeting, investing, and wills).

To summarise, financial knowledge, parental influence, peer influence and self-control were shown to have a favourable and substantial link with saving behaviour. From that, it is advisable that financial education should be taught at the elementary and secondary levels so that students who will become adults have adequate financial understanding to manage their income and debt and prepare for their retirement. The competent authorities must guarantee that any financial education project aimed at increasing financial awareness does not rely just on printed materials or other mass media, but rather takes a more methodical approach to assisting individuals in understanding personal economic management. Future studies are advised to concentrate on higher education in urban areas because they have greater living expenses than rural areas and require more self-discipline to save for survival.

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DIVIDEND PAYOUT RATIO: A CASE STUDY OF THE FOOD AND BEVERAGES INDUSTRY

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ABSTRACT

The purpose of this study was to investigate the variables affecting the ratio of dividend payments in the food and beverage industry. These variables include firm size, current ratio, and return on asset. The samples used in this study came from five of the thirty-nine businesses that were identified as belonging to the food and beverage sub-sector from the year 2009- 2020. A panel data regression model was the analytical technique employed in this investigation. It was discovered that the current ratio (CR) and dividend payout had a negative relationship. On the other hand, the dividend payout ratio is only positively correlated with return on assets (ROA) and firm size (FSTA). These findings should serve as a guide for investors and firm management alike as they decide on their investment strategy.

Keywords: Consumer Sector, Food and Beverages, Return on Asset, Current Ratio, Firm Size.

1.0 INTRODUCTION

A dividend is a payment or profit made by a company to its shareholders as a token of its gratitude. To pay the dividend, the companies used their profit from that fiscal year. Scientific research that looks into issues relating to dividend payments made by a corporation has received a lot of attention from academics and business managers (Septiani et al., 2020). Because of this, the payout policy of a company continues to be an interesting and engaging topic of research. The dividend payout ratio (DPR) is a method for calculating the proportion of a company's annual net profit that is distributed to shareholders in the form of dividends over a predetermined time frame (often one year). This ratio provides information regarding the proportion of annual net profit that is allocated to funding the company's ongoing business

operations (Budianto & Bertuah, 2020). It is an important financial indicator that indicates the proportion of earnings delivered to shareholders in the form of dividends. This ratio plays a vital role in determining both the financial performance of a firm and its appeal to potential investors. The payout itself can be used to determine the long-term viability of a dividend. Companies are advised not to reduce the dividend payment since it could lower the stock price and reflect adversely on management's performance. The payout ratio's long-term changes are also important. A consistently rising ratio may suggest a strong and growing business. An abnormally high dividend payout ratio may signal the company is attempting to hide a poor business situation from investors by paying out large dividends.

The consumer products and services sector is one of the main sectors listed and traded on Bursa Malaysia. This sector now has a total market value of RM 77.26 billion, which represents 16.54 percent of the main market capitalization, and a total market capitalization of RM 107 billion for the FTSE Bursa Malaysia EMAS Index, making up 16.61 percent of the FTSE Bursa Malaysia EMAS Index (Malaysia Sector Outlook, 2023). About 180 companies are listed for seven subsectors under the consumer products and services sector: agricultural products, automotive, consumer services, food and beverages, household goods, personal goods, retailers, travel, leisure, and hospitality. The consumer product sector in Malaysia is one of the most performing sectors in Bursa Malaysia. The sector has continued to grow over the past twelve years with the aid of economic growth. Even during the subprime crisis in 2008, the lowest points recorded were at RM 264.77, compared with RM 227.59 in 2006 and RM 218.73 in 2005. This indicates that the consumer sector is a defensive yet growing industry. This character fits well for long-term investors and fund managers who seek a hedging portfolio. Alongside the rise of the economy over many years, the consumer products and services business has consistently shown strong performance and growth. Because of this, the companies have seen a significant and welcome increase in their income. The food and beverage industry are a large part of the consumer product and service sector, and it includes a wide variety of businesses that are involved in the manufacture and distribution of food and beverage goods. These companies frequently deal with one-of-a-kind obstacles because of shifting consumer tastes, fluctuating pricing of raw materials, competitive pressures, and the need to comply with regulatory requirements.

Since it represents both the dividend policy of a firm and its overall financial stability, the dividend payout ratio is regarded as a vital indication of financial health. A high dividend payout ratio may suggest that a firm is returning a considerable amount of its profits to shareholders. This may be interpreted as a reflection of confidence in the company's financial performance and may generate value for shareholders. On the other hand, a low dividend payout ratio may indicate that a firm is reinvesting a greater portion of its profits into its core business to foster growth and expansion. To the author's best knowledge, fewer studies focus on the consumer sector, particularly in the food and beverage industries. There have been a great number of studies done on dividend policy, with a concentration on the banking industry, manufacturing sector, oil and gas sector, healthcare sector, and other sectors. Lee (2009) talks mainly about the banking industry; Gill et al. (2010) studied manufacturing and service companies; and Tahir and Mushtaq (2016) studied oil and gas companies. Pongsupatt and Pongsupatt (2019) wrote about the SET 100 Thailand firm; Le et al. (2019) studied three Asian emerging markets: Malaysia, Indonesia, and Thailand; and Wahjudi (2020) studied manufacturing companies in Indonesia. As for Malaysia, Issa (2015) studied the seven sectors listed in Bursa Malaysia; Mustapha and Mui (2016) studied the 100 listed firms across the sector with certain financial criteria; and Latif et al. (2021) studied the healthcare sector.

As a result, it is important to recognise any element that may influence the consumer products firm's dividend payout, which specialises in food and beverages. The consumer sector has been widely known as the defensive sector throughout the years. Even amid a crisis, the sector can still perform well, as demand is always there. Consistent dividends and stable earnings are a promise to shareholders; thus, this paper tries to find out the relationship between the independent variables and the dividend payout, mainly focusing on the sub-sector food and beverages of the consumer products and services industry. The objective of this research is to determine the factors that influence the dividend payout ratio of the consumer sector specialising in food and beverages in Malaysia from 2009–2020. The factors that may be considered in this study are return on assets (ROA), current ratio (CR), and firm size (FSTA).

The significance of the study is based on the relationship between the variables of the study -the return on asset (ROA), current ratio (CR), and firm size (FSTA) - and the dividend payout ratio. The dividend payout ratio was chosen as it is a crucial statistic for determining how well a company is functioning and whether it has adequate room for expansion. As for the investors, the dividend payout ratio shows how much money shareholders get back in the form of percentage returns from the company's overall profit. Thus, it may help investors and fund managers who seek tools to hedge their portfolios against the economic downturn over the years. Besides that, it is anticipated that the company would derive some value from defining the policy of dividend distribution based on several different financial performance variables such as the current ratio, the return on assets, and firm size.

2.0 LITERATURE REVIEW

According to Issa (2015), the dividend payout decisions of the corporate sector are a hot topic for debate among researchers. This subject is also mentioned and agreed upon by (Mustapha & Mui, 2016). Various studies have been made by researchers across the world to find out the main factor that may influence the dividend payout ratio. The result varied based on the sector and country. There was no single factor that may be universal, and Latif et al. (2021) and Thapa (2021) agreed that future research needs to be done to support the lack of previous studies. Latif et al. (2021) and Mustapha and Mui (2016) called out the dividend payout as the dividend policy, as it is a company's dividend policy for paying out dividends to shareholders. While the dividend payout ratio is the proportion in percentage (%) of a company's net income to the total amount of dividends paid out to the shareholders, a substantial quantity of literature has been published in this area because of previous research on the dividend policy. Nevertheless, as mentioned before by Gill et al. (2010), Issa (2015), Mustapha (2016), and Mui (2016), it remains a contentious issue in corporate finance. Almost all the earlier dividend policies have employed the dividend payout ratio to measure dividends as a dependent variable (Gill et al., 2010; Issa, 2015; Latif et al., 2021; Le et al., 2019; Lee, 2009; Mustapha and Mui, 2016; Tahir and Mushtaq, 2016; Wahjudi, 2020). A series of determinants of a company's dividend payout policies have been identified and explored in the literature. The independent variables in this study are as follows: return on assets, current ratio, and firm size.

2.1 Return on Asset

Profitability ratios are a group of financial indicators that are used to evaluate a company's ability to create earnings over time about its revenue, operational costs, balance sheet assets,

or shareholder equity by utilising the data from a certain point in time. The return on assets is part of profitability and has long been viewed as the most important indicator of a company's ability to pay dividends. According to Gill et al. (2010), the determinants of profitability and dividend payout vary by sector. On the other side, Al Shabibi and Ramesh (2011) and Tahir and Mushtaq (2016) state that profitability plays an important role in paying the dividend rather than a non-profitable company, which contrasts with Latif et al. (2021) who state that profitability does not determine the dividend payout of the company. While Le et al. (2019) find out that growth companies usually pay a higher dividend as a signal to investors that the company is doing well, some of the companies still pay a dividend even if they record losses to maintain the reputation of the investors. The findings were also supported by Wahjudi (2020), who noted that the company with higher profitability did not indicate that the dividend payout would be higher. It all depends on the company management to make the decision, even with the company's written losses. Thus, the hypothesis for this variable is:

H0: There is no significant relationship between return on assets and dividend payout ratio.

HA: There is a significant relationship between return on assets and dividend payout ratio.

2.2 Current Ratio

The current ratio is a type of financial indicator that is used to determine the debtor's capacity to repay current debt obligations without having to raise additional funds. Kamierska-Jówiak (2015), Latif et al. (2021), and Mustapha and Mui (2016) found that there is a positive relationship between liquidity and the dividend payout ratio. The findings state that a company with high liquidity tends to pay a higher dividend as long as the company's management does not misuse the cash. For instance, Le et al. (2019) did not support the theory mentioned before. The high liquidity did not relate to any dividend payout policy. It only symbolizes that the company has good financial health. Wahjudi (2020) also stated that the liquidity did not relate to the dividend payout policy. The high liquidity may be a sign of ineffectiveness in utilising the current assets and inventories. Thus, the hypothesis for this variable is:

H0: There is no significant relationship between the current ratio and the dividend payout ratio.

HA: There is a significant relationship between the current ratio and the dividend payout ratio.

2.3 Firm Size

Firm size is the level of identification that determines the size of a company (Azhar & Geraldina, 2020). Theoretically, a larger company tends to pay higher dividends than a smaller one. According to Mustapha and Mui (2016), there is a significant relationship between the firm's size and the dividend payout due to its size and level of business cycle. Other findings by Tahir and Mushtaq (2016) stated that large companies are more competitive than small companies as they have large capital and are quite known in the market by their credit ratings. These two findings agree with Latif et al. (2021) and Thapa (2021) that firm size has a positive but insignificant relationship with the dividend payout. The Issa (2015) study covered the 284 listed companies in Bursa Malaysia across seven sectors: consumer products, technology, finance, property, telecommunications, industrial products, and the construction sector. This study defined firm size as its market capitalization. The findings varied by sector. This is because all sectors except technology have a relationship between firm size and dividend payout. While Le et al. (2019) concluded that there is no relationship between firm size and dividend payout, the researchers emphasised that this result only implied the emerging market of Asian countries. Thus, the hypothesis for this variable is:

H0: There is no significant relationship between firm size and dividend payout ratio.

HA: There is a significant relationship between firm size and dividend payout ratio.

Based on the literature review the theoretical framework is as below:

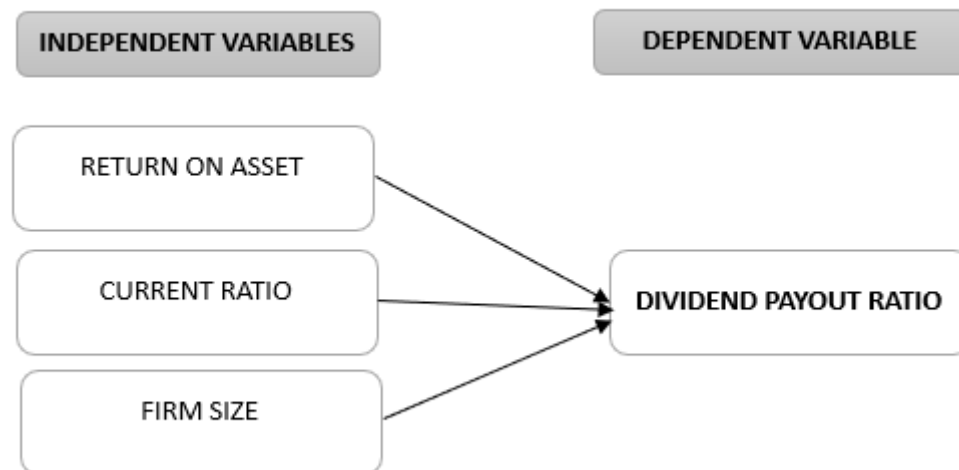


Fig 1 Theoretical Framework

3.0 METHODOLOGY

The samples that were utilised in this study were from five of the thirty-nine companies that were classified as being in the sub-sector of food and beverages. The most important aspects of this research are that the market capitalization must be greater than RM1 billion in 2021 and that it must comply with Shariah law. The data spans a period of 12 years, beginning in 2009 and continuing through 2020.

Table 1. Measurement of the Variables

	Variables	Acronym	Measurement	Units
DV	Div. Payout Ratio	DPR	$\frac{\text{Div. per Share}}{\text{Earning per Share}}$	Percentage
IV	Return on Asset	ROA	$\frac{\text{NPAT}}{\text{Total Assest}}$	Percentage
	Liquidity	CR	$\frac{\text{Current Asset}}{\text{Current Liabilities}}$	Times
	Firm Size	FSTA	Liability + Equity	RM

The total number of observations in the sample is 60, and its foundation is in the yearly data. The data was compiled using panel data, which was obtained from Thomson Reuters DataStream, Bursa Malaysia, and the annual financial reports of the firms. The dependent and independent variables are measured in Table 1.

A panel data analysis approach is applied in this study to investigate the influence that the independent factors, namely return on asset (ROA), current ratio (CR), and firm size (FSTA), have on the dependent variable, which is the dividend payout ratio (DPR). According

to Tay *et al.* (2019), panel data analysis, which includes data for cross sections and time periods, may provide numerous benefits over time series analysis. The regression model for this study is in Eq. 1.

$$DPR_{it} = \beta_0 + \beta_1 (ROA_{it}) + \beta_2 (CR_{it}) + \beta_3 (FSTA_{it}) + \varepsilon_{it} \quad (1)$$

DPR = Dividend Payout Ratio

$\beta_1, \beta_2, \beta_3$ = Coefficient Beta Value

ROA = Return on Asset (Profitability Ratio)

CR = Current Ratio (Liquidity Ratio)

FSTA = Firm Size

ε = Error Term

i = 5 selected companies listed in the sub-sector food & beverages

t = 12 Years (2009 – 2020)

4.0 RESULT AND DISCUSSION

4.1 Correlation Analysis

Table 2 above shows the correlation analysis of this research. As shown in the table below, if the probability of the correlation is greater than 95 percent of the degree of freedom, all correlations between the dependent variable and the independent variables have a significant relationship. On the other hand, the direction of the relationship revealed different results, with one of the independent variables, return on asset (ROA), having a moderately positive relationship with the dependent variable, dividend payout ratio (DPR). The other two independent variables, which are the current ratio (CR) and firm size (FSTA), have a moderately negative relationship with the dividend payout ratio (DPR). Among these 3 independent variables, the return on asset (ROA) influences the dividend payout ratio (DPR) the most, even though it has a moderate influence. The results also show that there was no multicollinearity problem in this study due to the lack of correlations between the independent and dependent variables that were close to 0.85, which may have caused the issue of multicollinearity among the variables employed.

Table 2. Correlation Analysis

	DPR	ROA	CR	FSTA
DPR	1			
ROA	0.5027	1		
	4.4289	----		
	0.0000	----		
CR	-0.4526	-0.4347	1	
	-3.8656	-3.6760	----	
	0.0003	0.0005	----	
FSTA	-0.2733	-0.5105	0.7345	1
	-2.1635	-4.5219	8.2422	----
	0.0346	0.0000	0.0000	----

4.2 Panel Data Analysis

The details of a regression analysis of four independent variables against the dividend payout ratio (DPR) can be seen in Table 3, which are return on assets (ROA), current ratio (CR), and firm size (FSTA). The panel data used in this research consists of five companies listed in the consumer products sub-sector of food and beverages in Bursa Malaysia. The analytical equation is Eq. 2.

$$DPR_{it} = 0.5207 + 1.4076(ROA_{it}) - 0.1571(CR_{it}) + 0.0124(FSTA_{it}) + \varepsilon_{it} \quad (2)$$

Table 3. Regression Analysis

Variable	Coefficient	Std. Error	T-Stat	Prob.
C	0.5027	0.1061	4.7373	0.0000
ROA	1.4076	0.3888	3.6199	0.0006***
CR	-0.1571	0.0509	-3.0883	0.0031***
FSTA	0.0124	0.0065	1.9085	0.0615*
R ²	0.3618			
Adjusted R ²	0.3276			
F-Statistic	10.5819			
Prob (F-Statistic)	0.000013			

Based on the table above, the return on asset (ROA) indicated that the relationship between ROA and DPR is positively and statistically significant at a 1 percent level of significance. This result is relative to Issa (2015), Pattiruhu and Paais (2020), Maharani et al. (2021), and Salim and Aulia (2021), who found that the return on asset (ROA) has a significant relationship with the dividend payout ratio (DPR). This is because the greater the ROA that a firm has, the bigger the dividend that will also be given by the company. This occurs because when a stock issuer has a substantial profit, it tends to pay more in the form of dividends, and vice versa. In addition, ROA is one of the most important criteria that affects the choices that are made regarding dividend policy. To be more specific, profitable companies have more potential for expansion and are more likely to pay dividends. This is also in line with the findings of Terpstra and Verbeeten (2014), which showed that the ROA has a considerable influence on the dividend payout ratio.

The firm size (FSTA) also has a positive relationship with the dividend payout ratio (DPR). Simply defined, the larger the company, the greater the impact on the dividend payout increment. Clearly, FSTA is statistically significant at the 10 percent level of significance. This result is in line with Mustapha and Mui (2016), Rahmadi (2020), Pattiruhu and Paais (2020), and Aprilyani et al. (2021), who stated that the dividend payout ratio (DPR) is influenced by the firm size (FSTA). The argument for this is that large companies, in comparison to smaller ones, will be in a better position to ensure their continued existence and will have simpler access to available money on the market. Due to this, it is reasonable to anticipate that huge companies will be able to generate greater profits, which will allow them to pay higher dividends as compared to small-oriented businesses.

On the other hand, the current ratio (CR) has a negative relationship with the dividend payout ratio (DPR) and is statistically significant at the 10 percent level of significance. This finding is consistent with the research conducted by Sunarto and Andi Kartika (2003), which concluded that there is a negative relationship between the current ratio and the dividend

payout ratio. This scenario may arise when companies encounter financial difficulties, prompting them to prioritise the enhancement of their financial stability and creditworthiness. Furthermore, shareholders demand dividends on the capital invested in the company; therefore, a big payout is greatly anticipated (Husna and Satria, 2019). A reduction in dividends may result in a drop in the company's stock price; thus, to avoid this, corporations may continue to pay dividends even if their liquidity is threatened.

The accuracy of a regression line can be measured by using the coefficient of determination. The coefficient of determination (R^2) obtained from the analysis shown in Table 3 is 0.3618, indicating that 36.18 percent of the variance in the dependent variable can be explained by the independent variables, which are the return on asset (ROA), firm size (FSTA), and current ratio (CR). The rest of 63.82 percent is explained by the other determinants.

5.0 CONCLUSION

In the ideal situation, the company's needs should determine the size of dividend policies. Companies that must incur large sums for business development and expansion or pay off all of the company's debts would want to issue dividends to investors. The payment of dividends does not need to take the form of liquid assets all the time. It may be distributed in the form of stocks, dividend scripts, or bonds, as well as property dividends or distributions of dividends in the form of corporate goods or assets. This study focuses on Malaysia's food and beverage sub-sector of consumer products, using financial data from five firms over 12 years from 2009 to 2020. The purpose of this study is to determine which key factor affected the dividend payout.

To conclude, a few methods were performed, including correlation analysis and panel data analysis. As a result, all three independent variables have a significant relationship with the dependent variable, which is the dividend payout ratio (DPR). From the findings of this study, the value of the dividend payout ratio (DPR) will increase if there are any increments in return on assets (ROA) and firm size (FSTA) and a decrement in the current ratio (CR). The current ratio (CR) was found to have a negative relationship with dividend payouts. On the other hand, only return on assets (ROA) and firm size (FSTA) have a positive relationship with the dividend payout ratio.

6.0 SUGGESTION FOR FUTURE RESEARCH

Based on the findings, it is suggested that the management of consumer product firms consider the findings to improve and maintain the dividend payout rate. A firm that has good financial health will be able to maintain its dividend payout and may consider issuing special dividends for its shareholders. The uncertain dividend payout may be an early sign that its finances are in trouble. On the other side, the investors do not even care for the company unless they have shares in it and will keep looking for other companies that fit their portfolio.

Therefore, it is possible to say that there are a great many variables that affect the dependent variable, but they were left out of this study. In this particular study, only three independent factors were investigated. It is anticipated that future research will increase both the number of observations and the observation times to more accurately depict the actual conditions. Additionally, the sample will likely be expanded to present a more accurate image. In addition, it is anticipated that additional study will enable the addition of additional variables that are assumed to influence the dividend payment ratio.

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CO- AUTHORS' CONTRIBUTION

All authors contributed equally to the conception and design of the study.

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NEO-TECHNICAL SKILLS FOR THE FUTURE OF WORK: A PERSPECTIVE OF MALAYSIAN EMPLOYERS ON GRADUATES' SKILLS

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ABSTRACT

With the stark predictions about skills shortages and mismatches with unknown integration of skills required due to technological disruptions brought by IR4.0, it is not surprising that the debates around the future job demands have tended to sway towards the uncertainties on the investment in human capital. Researchers and practitioners are witnessing the rapid transformation of technical skills requirements in the digital labour market. This paper intended to recognise the new technical skills deemed crucial in the IR4.0 era and explore whether the technical skills requirements heavily impact employment. This study employed a qualitative case study with semi-structured interviews. Qualitative data of 10 employers in IR4.0 technology-based operations organisations in the manufacturing and services industry has been analysed. Data analysis revealed that new technical skills are emerging across various industries and jobs. The demand for neo-technical skills involving future technical and digital professionals is highly needed to perform specific jobs according to their expertise. The paper advances existing knowledge by constructing a neo-technical framework to tackle the issues of unknown identification of technical skills in the era of IR4.0.

Keywords: Technical skills, the fourth industrial revolution, graduate's skills

1.0 INTRODUCTION

The Fourth Industrial Revolution (IR4.0) shows dramatic changes in how we live, operate, and adopt technology such as cyber-physical systems, the Internet of Things (IoT), and web technologies (Akhtar et al., 2018, p. 663).

IR4.0 is constructed based on nine pillars comprising big data and analytics, autonomous robots, simulation, vertical and horizontal system integration, Internet of Things (IoT), Cloud computing, Augmented Reality (AR), additive manufacturing, and Cyber Security (Trauth-Goik, 2021, p. 3). As technology evolves, job demands are also changing by the job requirements requiring new skills. IR4.0 is expected to bring distinctive impacts on employment, which demand future employees to possess multiple skills, including technical skills and knowledge to utilise IT technology and interact with modern interfaces and cyber security (Ismail & Hassan, 2013, p. 58).

Skills are the core of human capital development to secure employment. Therefore, graduates are expected to possess relevant skills crucial for the business. The graduates play

a significant role in transforming the digital economy that is expected to dominate digital content creation, finance, e-commerce, automation, robotics, and the Internet of Things (IoT) (Kwan, 2020, para. 1). However, the graduates do not possess the right skills demanded by employers in the IR4.0 era. The major problems happen when the graduates are inadequately prepared for the industry (Gouda, 2022, p. 908). The topic of skill shortages and mismatches in the Malaysian workforce is controversial as it continues to be the major obstacle to increasing productivity and supporting economic growth in achieving high-income status between 2024 and 2028 (Mohd et al., 2019, p. 5). A recent news report exposed that employers urge the government to improve graduates' skills, including creative thinking, teamwork, and analytical and digital skills, to overcome unemployment issues among graduates (Lee, 2019, p. 54; Supian et al., 2020, p. 1). Employers expect graduates to be able to work in a digital environment, possess technical skills, and possess non-technical skills while performing jobs. Surprisingly, the graduates failed to portray the right skills needed in the IR4.0 era (Sani, 2019, para. 2). The Malaysian government agency has crafted strategies to develop highly skilled and knowledgeable talent in responding to employers' concerns. However, the outlined strategy is exclusive and does not focus on young educated groups, which remain underdeveloped.

Moreover, the lack of digital transformation and the 'agenda-in-progress' phenomenon exposed vulnerabilities to the Malaysian education system, leading to failure in mapping the right integration of skills deemed critical in the IR4.0 era (Moonyati, 2020, para. 7). The employers are in need to hire high skilled people to adapt with digital technology. However, our nations are incapable of supporting the current job demand. While extensive studies highlight the need for non-technical skills in solving complex problems, there is a great shortage of studies on the technical skills required to perform technical jobs in the IR4.0 environment (Anshari & Hamdan, 2022, p. 386).

Therefore, this study draws attention to identifying the right technical skills employers hoped for in employing graduates to help circumvent the existing skills shortage. The inability to recognise the right skills needed in the IR4.0 era will negatively contribute to greater unemployment of graduates, making it harder for graduates to secure a relevant job with relevant educational background, forcing them to work with minimum wages (Muhammad, 2023, p. 5). The earlier studies are "zeros" in the Malaysian context to examine how the issue of lack of skills among graduates is debated and the relevant skills identified as compulsory in the IR4.0 era. Therefore, this study intends to answer the rhetoric questions of the technical skills needed in the IR4.0 and to what extent all the skills demanded require integration.

2.0 LITERATURE REVIEW

2.1 Technical Skills in the IR4.0 Era

Traditionally, technical skills are subject-specific knowledge relevant to a particular discipline, such as information technology or psychology (Cassidy, 2006, p. 2). Moreover, according to (Schallock et al., 2018), technical skills often relate to the ability to perform a task related to computer programming, installing, and operating an IT device, which is often needed in specific jobs mostly found at advanced levels (p.25).

Contrary, in the IR4.0 setting, technical skills are often related to job-specific skills to operate digital technologies that require an individual to install and operate IT devices such as radio frequency identification tags (RFID), tablets, or automatic guided vehicles (AGV) (Schallock et al., 2018, p. 28). The technical skills also involve developing and maintaining other digital technologies such as IoT, Cloud Computing, Cybersecurity, and Big Data.

Another researcher identified technical skills based on ten essential knowledge IT skills. The technical skills comprise Office Software, Cybersecurity, System Development, Project Management, Web and Electronic Service, Cloud-Based Technology, Networking, Mathematical Capability, Hardware Architecture, Mobile and Wireless knowledge, and mainframe storage (Almutairi & Hasanat, 2018, p. 4). The technical skills in the IR4.0 landscape focus on ensuring the specific individual can manage and develop the technology to perform its functions efficiently. Therefore, it can be concluded that an individual must possess specific technical skills in operating digital technology. Extensive research mentioned that technical skills often revolve around digital technology. However, in their studies, Zoe (2019, p.8) highlighted five other technical skills: project planning, quality assurance, extensive data analysis, technical writing, and subject matter expert skills.

The statement is supported by Flores et al. (2020), where the authors mentioned that in the IR4.0 environment, technical skills are also part of digital skills (p. 692).

2.2 Digital Skills in the IR4.0 Era

Rapid technological changes pose a substantial impact on the labour market. Digitalisation has led to a significantly increased demand for highly skilled individuals with digital skills and technical knowledge to perform tasks in a technological environment (Bejaković & Mrnjavac, 2020, p. 921). Therefore, digital skills requirements are also changing, consistent with the development of IR4.0 technology. Traditionally, digital skills were derived from the basic concepts of 'digital literacy' founded by Gilster (1988), which majorly focuses on managing information (p. 1). As modern technology expands, digital skills terms also expand multiple terms such as ICT skills, information technology skills, 21st-century skills, and digital skills or skills (Bejaković & Mrnjavac, 2020, p. 923). Bejaković and Mrnjavac (2020) describe digital skills as the ability to use computers, understand the power of images and sounds, and manipulate and transform digital media (p. 923).

A previous study has found five main digital skills among Malaysian graduates: information navigation, creative, mobile, social, and operational skills. Based on the results, the graduates possess all the skills related to internet use. However, the graduates lack creative and operational skills (Lee, 2019, p. 53). Lee (2019) highlighted that digital skills are measured based on graduates' ability to perform fundamental online activities, such as browsing and bookmarking websites, installing applications, and removing social contact lists (p.59). However, all the skills are relatively general and do not emphasise how digital skills may affect employment opportunities. In the IR4.0 era, digital literacy skills require data analytical skills to identify correlations, understand the business process, and draw conclusions, including using a statistical and general programming language (Lorenz et al., 2015, p. 12). For instance, IR4.0 focuses on utilising the IoT, where there is a need to have big data analytical skills to extract information from large amounts of data (Vassakis et al., 2018, p. 4). Therefore, the employer needs employees with analytical skills to manage information from big data. The utilisation of big data merely affects decision-making based on data analytics.

Conclusively, technical skills and digital skills in the IR4.0 era contradict the classics, as mentioned by Cassidy (2006) (p. 508). While the classics focus more on operating IT devices, the technical skills in the IR4.0 era merely focus on operating digital technology in 9 main pillars, as mentioned in the previous section. Technical skills in the IR4.0 era are massive,

which includes the ability to 'operate' IR4.0 technology and also the ability to 'use' IR4.0 technology in performing tasks. Therefore, integrating technical and digital skills can be seen as a new skill requiring greater attention from multiple stakeholders, including higher education institutions, policymakers, and employers.

2.3 Non-technical skills in the IR4.0 Era

While technical and digital skills deliver excessive information in operational terms, non-technical skills, in contrast, are relatively straightforward. Non-technical skills are associated with personality, attitude, and behaviour rather than formal or technical knowledge (Teng et al., 2019, p. 591). In the IR4.0 environment, critical thinking involves seeing the issues from different perspectives and creating innovative solutions to solve problems (Hernandez-de-Menendez et al., 2020, p. 1516). Other than critical thinking skills, social skills are also needed, including language skills; communication and networking skills; teamwork; the ability to transfer knowledge; and leadership skills (Stief et al., 2019, p. 204). The appearance of digital technology such as big data, cloud computing, Internet of Things (IoT) eventually changed the working practice and attitudes in performing the task (Sony & Naik, 2020, p. 8).

Therefore, social interaction between organisations while working with technical components is also needed to ensure the employees perform the task according to the procedures and gain support from the team in working with technology.

Furthermore, early literature found that IoT and social media platforms are crucial in creating effective marketing strategies to promote products according to customers' preferences and behaviour (Caliskan et al., 2020, p. 1258). Interestingly, besides customer engagement, IoT and social media functions are beneficial in assessing the users' credit scores through finance technology (FinTech) applications based on account activity (Santoso et al., 2021, p. 2). To sum up, social skills in the IR4.0 context highlight the ability of an individual to interact with digital technologies and, in the meantime, pose great communication skills to interact with people internally and outside of the organisation to expand business networks and connect with people to work in a team. IR4.0 is expected to focus on technology affinity. However, technology cannot rout human intelligence, which cannot recognise peoples' emotions. Emotional intelligence has less automation potential, which machines cannot acquire (Lievens & Chan, 2017, p. 6). Aside from emotional intelligence, creative thinking skills are also important in increasing individual values and opportunities (Dali et al., 2021, p. 98). Based on the study conducted in Singapore, specifically in the construction industry, researchers suggested that graduates prepare themselves for the challenging digitisation era by developing emotional intelligence and job-specific skills (Low et al., 2019, p. 3)

2.4 Employers' Expectations on Skills in the IR4.0 Era

Based on the previous literature, technical skills are highly important in a professional job as they may move from manual work to automated processes (Kannan & Garad, 2020, p. 17). For instance, banking and finance technology organisation requires technical skills in state-of-the-art knowledge, process understanding, media skills, coding skills, and information technology (IT) security (Santoso et al., 2021, p. 6). State-of-the-art knowledge refers to experts in particular fields, such as the knowledge to perform data-related tasks using machine

learning (ML) and knowledge to operate cloud computing for a cyber-related task (Li et al., 2021, p. 694). Organisations expect that the resources they possess including their digital assets must be fully utilised by hiring people with digital skills such as digital networking, digital resilience, and digital platforms (Daud et al., 2021, p. 110).

A study exploring the skills bias due to technological changes found that the ability of skilled employees with greater technical skills highly influences the pay level, showing a widening gap in pay between skilled and unskilled employees (Perez-Laborda & Perez-Sebastian, 2020, p. 4). Generally, job demands change lead to a new set of skills that require future graduates to integrate theoretical knowledge with the 'know-how' knowledge gained from work experiences. However, implementing 'know-how' knowledge is extremely challenging for the graduates since the graduates are not in the employment market. The digital transformation brought by IR4.0 has led to greater human resource management (HRM) complexity. The challenge is a significant gap between current skills to match the job roles that require adaptability with digital technology (Agarwal et al., 2021, p. 514). Therefore, this study intends to fill the knowledge gap to uncover the new and right skills needed to resolve the skill mismatch issues among graduates.

2.5 Conceptual Framework

Fig. 1 below depicts the fundamental conceptual framework for this study.

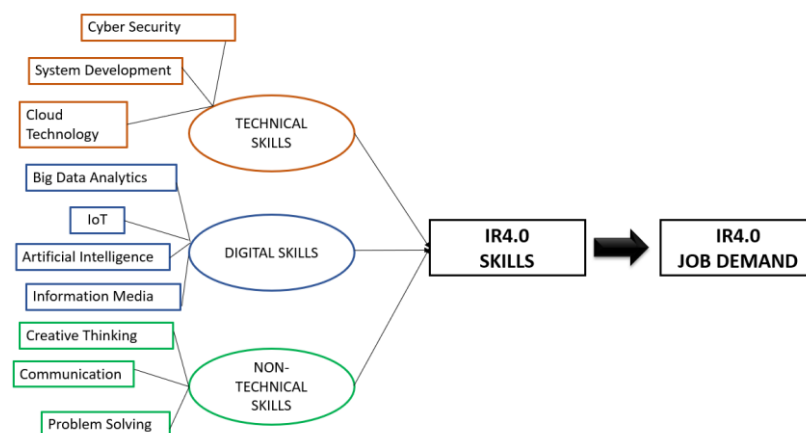


Fig. 1 Conceptual framework for IR4.0 skills

Fig. 1 shows the preliminary conceptual framework of the study, which is constructed based on the earlier section. Based on the previous literature, this study found that 10 core skills constituted IR4.0 job demands. The skills are Technical, Digital, and Non-technical skills. The aforementioned skills are the most echoed category that employers highly demand. The unemployment of graduates in Malaysia increases year by year, raising questions about what went wrong. Surprisingly, the change in job demands due to rapid technological changes and employers' reluctance to hire graduates due to lack of skills are significant reasons for graduates' unemployment. This study will unveil the employers' opinions on the graduates' skills, thus uncovering the reality of employers' job demands. Identifying new skills is deemed necessary to outline relevant execution strategies specific to Malaysian graduates. The failure to construct exclusive execution strategies for the graduates' employment allows the

stakeholders to live in a 'fairy tale,' where the current skills are no longer relevant in the current and future job demands.

3.0 METHODOLOGY

As technology evolves, performing a job requires diverse skills to integrate human-machine interaction. The substantial study focuses on scientific analysis, often neglecting the stakeholders' and practitioners' perspectives remain infancy (Tommasi et al., 2022, p. 178). Since the previous studies highlighted the urgency to recognise the right skills, qualitative study is relevant to capture the skills needed in the IR4.0 era. This is because quantitative surveys could not provide sufficient explanations for what and how non-technical skills may lead to graduates' employment. Therefore, this study employed a qualitative study to explore the skills deemed crucial to fill the gap of the unknown emergence of new skills in the IR4.0 era.

This study selected organisations that employ at least one of the nine pillars of IR4.0 technology in running their business operations. Table 1 below summarises organisations with IR4.0 technology adoption in their business operations.

Table 1 Organisation profiles

Organisation	Industry/Sector	Technology Adoption
ZYG	Manufacturing/Construction	• Additive Manufacturing • Internet of Things (IoT) • Big Data and analytics
HG	Services/Finance Technology	• Internet of Things (IoT) • Big Data and analytics • Cloud Computing • Cybersecurity
AK	Services/Airline Services	• Internet of Things (IoT) • Cybersecurity • Cloud Computing • Simulation
OD	Services/ Airline Services	• Internet of Things (IoT) • Cybersecurity • Cloud Computing • Simulation
RKV	Manufacturing/Food Emulsifier	• Autonomous Robots • Additive Manufacturing
CG	Services/ Cloud Technology	• Internet of Things (IoT) • Big Data and analytics • Cloud Computing • Cybersecurity
THC	Services/Legislative	• Internet of Things • Cloud Computing • Information Media
NYC	Services/Legislative	• Internet of Things • Cloud Computing • Information Media
SJV	Services/Construction	• Internet of Things • Cloud Computing • 3D printing
ZLT	Services/Construction	• Internet of Things • Cloud Computing • 3D printing

Table 1 summarises the industry profiles willing to participate in this study. Initially, this study invited seventy-five reputable organisations to involve in this study. However, only 10 participants responded positively and expressed interest in participating in this study. The remaining sixty-five potential participants decided to reject the invitation due to privacy concerns, time constraints, last-minute cancellations due to coronavirus infections, and surprisingly, the person in charge was also being retrenched due to the financial crisis faced by the organisation.

Creswell et al. (2007) suggested that the studied group should consist of 3 to 15 members with experience related to the studied phenomenon (p. 258). These recommendations guide the researcher to estimate the number of required participants considering the saturation is reached. Data saturation refers to accumulating qualitative data to the point where there is a sense of closure because new data yield redundant information (Polit & Beck, 2017, p. 471). Since the data saturation was reached, the data collection stopped at the tenth participant.

The selection of participants consists of expert professionals with extensive experience in recruiting graduates. This study collected responses from 10 hiring professionals in manufacturing and services that serve specific sectors, including Construction, Finance technology, Airline services, Food Technology (emulsifier), Cloud technology, and Legislative. The participants' feedback is valuable for this study as they possess extensive experience in the recruitment and selection process and are actively involved in recruitment decisions. Table 2 below displays the list of participants in this study.

Table 2. Participants profiles

Organisation	Position	Working Experiences	Industry/Sectors
Participant 1	Head of Department, Human Resource	5 years	Manufacturing/Construction
Participant 2	Chief Executive Officer	3 years	Services/Finance Technology
Participant 3	Assistant Manager	5 years	Services/Airline Services
Participant 4	Human Resource Executive	3 years	Services/ Airline Services
Participant 5	Material Planning Manager	13 years	Manufacturing/Food Emulsifier
Participant 6	Human Resource Executive	4 years	Services/ Cloud Technology
Participant 7	Chief Executive Officer	10 years	Services/Legislative
Participant 8	Managing Partner/Human Resource Manager	15 years	Services/Legislative
Participant 9	Human Resource Manager	12 years	Services/Construction
Participant 10	Chief Executive Officer	10 years	Services/Construction

This study explores employers' perspectives on graduate employability, comprising the manufacturing and service sectors highly involved in the IR4.0 setting. In-depth interviews consider expert opinions and experiences in gaining insight into the study (Milena et al., 2008, p. 1279). This study gained insights from individuals working in an organisation with IR4.0 features and actively recruiting and selecting employees. Based on the participant's profiles, the majority of the participants have more than 3 years of experience in the recruitment of candidates, which the results of this study are important in collecting rich data. The employers have diverse viewpoints regarding this inquiry, depending on the industry in which each participant operates. Thus, it is essential to have a systematic framework for conducting the interview that matches the primary objectives.

This study employed semi-structured interviews for this purpose. The framework developed by Carspecken (1996) gives a complete guideline applicable to numerous fields, including the social sciences (p. 238). Carspecken (1996) established a rigorous qualitative study technique that emphasises designing study projects by developing semi-structured interview questions based on social science data collection protocols and building questions mapped to study questions and objectives (p.238). A semi-structured interview is a set of predetermined questions on a specific topic that guides the interviewer to ask questions chronologically (Lune & Berg, 2017, p. 158). It allows the interviewer to probe for more answers and clarifications. Semi-structured interviews were chosen as the study instrument because they provide answers aligned with the study's objective, question, and the relationship between events and actions (Lune & Berg, 2017, p. 175). The use of technology in qualitative data analysis will provide a quick and easy approach to handling data analysis based on a certain theme, providing a more complete picture of the whole study. The Computer-Aided Qualitative Data Analysis Software (CAQDAS) 'NVivo' version 12 was utilised as the primary tool for direct transcription of the interview recordings to help manage textual data.

4.0 RESULTS AND DISCUSSIONS

4.1 Data Analysis

Table 3 below indicates the most coded items that lead to the construction of Neo-technical skills. Based on the coding analysis using Nvivo 12 software, the employers mentioned 28 times that technical workers need to have good social skills in communicating with people internally and the urge (coded 32 times) for the non-technical workers to understand the technical term, even though they act as the end-user.

Table 3. Neo-technical codes

Component	Codes	Frequency
Neo-Technical Skills	System developer	6
	Maintain big data and security of the information	12
	Handle data from security attacks	2
	Technical professionals must interact with other people	2
	Minimum interaction with people	12
	The technical team and internal connection	28
	The non-technical team must understand the technical term	32
	Focus on the operation and maintenance of data	6
	Work in a team to develop great technology	27
	Product and service knowledge	25
	Analyse large data set	10
	Resolve technical disputes and complaints	12

As shown in Table 3, it can be seen that an individual's ability to learn new knowledge plays a vital role in convincing employers to get hired. While the data analysis yielded the thematic finding of new skills, it was surprising that employers emphasised graduates' skills to link all the highlighted skills to the actual working environment. Digital technology alone is insufficient. During the coding analysis, the study discovered that most employers frequently

echoed the importance of working in a team (coded 27 times) and having basic digital technology and operating system knowledge to complete a task. It is anticipated that digital technology will aid in resolving complex problems and decision-making.

4.2 The new skills in the IR4.0 era: Neo-technical skills

Based on the interview conducted with 10 employers that work in IR4.0-based organisations, this research found unique interactions on skills requirements and job specifications. Based on the data collection, this study found that most employers expect future graduates to possess basic technical skills to complement non-technical skills to perform specific jobs. Conventional technical jobs often require workers to work with machines and tools, which involve minimum interaction with people. Surprisingly, there is an envisaged change in employers' requirements in performing tasks in the new digital technology flows. The constructs in Fig. 2 below represent unique interactions of technical jobs performed by technical professionals and the non-technical skills required. Operationally, neo-technical skills can be defined as the integration of skills needed in performing technical jobs in the digital environment.

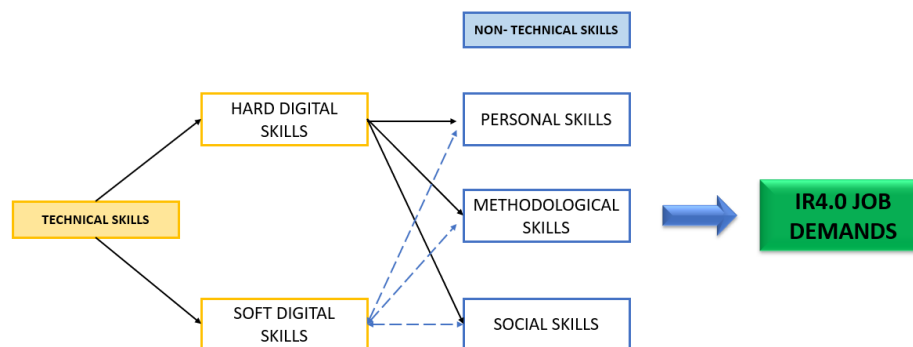


Fig. 2 Neo technical constructs

Fig. 2 depicts the anticipated transition from a job-specific foundation to the new techno-digital flows. The constructs represent one-of-a-kind interactions for digital professionals relevant to various IR4.0 sectors. After reviewing potential themes in the construction of skills framework, employers' opinions on digital and technical skills lead to interesting findings.

This study divided these findings into two major themes. The first theme is technical skills. Technical skills frequently relate to developing and maintaining digital technologies such as IoT, big data, and Cyber Security.

IR4.0 landscape focuses on ensuring that the individual can efficiently manage and develop the technology. The statement is supported by Flores et al. (2020), who state that technical skills are also considered digital skills in the IR4.0 environment (p. 692). Interestingly, based on the interview with the employers, digital skills can be performed without having hard and technical skills, consistent with the previous findings found in Flores et al. (2020) (p. 697). Therefore, this study will break Technical Skills into two sub-themes: Hard-digital skills and Soft-digital skills. Hard-digital skills focus on performing job-specific tasks requiring specific individuals with relevant qualifications and experiences. Hard digital skills are necessary for a specific position, such as IT engineer. This is consistent with the study conducted by Zaheer et al. (2021), highlighting that technical skills focus on the job-specific task (p. 20).

On the other hand, soft-digital skills are focused on the 'user' of the digital technology, which does not necessarily perform a hard-digital task such as developing software or system

maintenance. However, they must have basic technical knowledge to perform basic technical tasks in using digital technology. For instance, data analysts do not necessarily possess technical skills in maintaining big data software. However, digital knowledge of analysing and interpreting big data is necessary.

"We generated the customers' data to send regular newsletters and updates on our products and promotions. We want people who can read the data and analyse consumers' trends to improve our mobile applications and products." (Employer 2)

The researcher discovered differences in the technical skill requirements based on the interview. It can be concluded that the technical skills of the digital age can be divided between 'developer' and 'user'. The developer possesses extensive digital expertise and is responsible for deploying technology for end-user use. However, the 'end user' must have soft-digital skills to use digital technology to complete the task. Soft-digital skills focus on the 'user' of digital technology, not software development or system maintenance. Data analysts may not have the skills to maintain important data. However, it requires deep knowledge to understand the data. The employers hoped the graduates to possess basic knowledge of big data, and IoT and utilise the technology to analyse market trends, recognise customer preferences, and generate personalised promotional activities for greater engagement.

The second theme is non-technical skills. Based on the coding analysis, this study found three categories of non-technical skills which are personal, methodological, and social. There is an extensive list of non-technical skills available. However, the skills mentioned earlier are the most coded items mentioned by the participants. Based on Figure 2, non-technical skills are influential to soft-digital skills. Despite having basic knowledge and skills on IR4.0 technologies, future graduates must have non-technical skills, including personal, social, and methodological, while performing digital tasks. Therefore, soft-digital skills must complement non-technical skills and be influential to each other. For instance, Employer 3 highlighted the importance of having skills in using robotic systems and, at the same time, great social and methodological skills.

"...even though the robot system auto-generated and auto-replied the conversation, our chatbox team needs to respond to complicated issues. They must use the right words, avoid negative responses to minimise customer complaints, and resolve issues quickly." (Employer 3)

"...for coding, we want someone who can do programming to develop the financial apps and work in a team. You have to be able to multi-task to perform the job at one time and work with people in your team." (Employer 2)

On the other hand, social skills are important across various positions covering technical positions. The result shows that the technical position requires the employee to possess teamwork skills to complement technical skills. The employer expects the future candidate to have social and methodological skills, which are problem-solving in representing analytical data and also personal skills that eradicate on graduate's ability to portray a positive attitude in dealing with new responsibility.

"Our sales and marketing team specialist must be a highly motivated individual with basic technical knowledge of the product to convince our potential client to secure a contract". (Employer 6)

As a lawyer, we need a revolution. We look for someone who can, as an officer and a lawyer, we will interact with people a lot to share information on laws and regulations, also

opinions on recent cases. So, we need to have social media and technology-savvy people."
(Employer 8)

Methodological skills are also needed in performing technical jobs. The professionals' ability to explain the technical part in an understandable format will help the management staff understand the process. Although technical professionals focus on the back-end task and procedure that requires less interaction with humans, technical professionals in the digital era must possess non-technical qualities for greater working relationships. For instance, a lawyer in the legislative industry must possess high technical skills in understanding policy to solve unique cases. However, the legislative firm also realises the need to expose its service for business continuity. Therefore, the use of social platforms as a medium of communication is deemed relevant in the era of IR4.0

The overall constructs of neo-technical skills show that the employer values technical professionals with multiple skills for a single task. Technical professionals in the digital era must have non-technical qualities for improved working relationships. The technical job requires specialised knowledge, critical thinking, and communication. Employers will require more coordinated, organised, and strategic talent from qualified candidates because of IR4.0. In addition, there is a growing demand for neo-technical skills in companies with a high technological reliance. Investing in new technology will yield substantial returns and contribute to the competitive advantage of large businesses. Surprisingly, few organisations have begun to establish a department that specialises in digital development and is responsible for developing homegrown systems and digital infrastructure for increased efficiency and the organisation's reputation.

5.0 CONCLUSION

This study expands the existing research into a new field specific to the IR4.0 environment and focuses on future technology professionals. In Malaysia, IR4.0 is still in the early stage of implementation. However, most participants are conscious that technology has changed how they work. Therefore, a change in skills requires the individual to perform multiple tasks and require multiple skills to perform a single task. This is perhaps the study's most significant dimension of new skills construction. This study discovers the additional skills, which are neo-technical skills, which integrate digital, technical, and non-technical skills specifically for the IR4.0 job demands and the future of work. This study provides implications for higher education institutions (HEIs), policymakers, and employers. All the stakeholders must create a negotiated relationship in developing strategies and allocate resources for long-term learning development, including facilities, technologies, and workforce in developing young minds through real-life working exposure will help future graduates construct and reconstruct their identities to match the industry's needs. The study, therefore, recommends that business entities and industries launch incubation programs within the local economies by lending digital resources, including digital infrastructure and professionals through real working experience.

Moreover, policymakers may escalate their investments into well-built digital infrastructure for the inclusivity of digital technology, fastening the IR4.0 technology development to support organisations' aspirations in hiring young professionals. For HEIs, it is time to majorly revamp the curriculum by focusing on strengthening hard and soft-digital skills for future graduates. The rationale for developing a new program is to encourage future graduates to understand

how digital technology performs its functions. Therefore, future graduates can apply the knowledge in line with the organisation's strategic needs and environmental conditions.

Theories and abstract knowledge were brought into the classroom, as it was expected to allow the university graduates to explore the knowledge learned through the application as they can make their way to adapt to the working environment. As a result, the more future-oriented graduates will expand their skills and create fresh ideas to venture into business, thus creating more job opportunities.

6.0 FUTURE RESEARCH DIRECTIONS

Some of the limitations of this study are limited access to larger participants. Therefore, this study calls for future researchers to explore other sectors involved in IR4.0 technologies and the nexus of graduates' skills. This study has shown the potential of performing technical tasks in a digital technology environment and how technical skills, be they hard or soft, may transform the employment landscape. Therefore, this study encourages future researchers to quantify the technical skills for richer data collection across various stakeholders and industry players. The construction of technical skills could be mapped during the study period to improve government policies and structural governance.

CO-AUTHOR CONTRIBUTION

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the fieldwork and study design and overlooked the article's write-up. Author 2 wrote the research methodology. Author 3 carried out the data analysis and interpretation of the results. Author 4 focused on the literature review construction, and Author 5 was responsible for the final checking.

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EXAMINING ESG DISCLOSURE PRACTICES AND FIRM PERFORMANCE IN THE FOOD AND BEVERAGES INDUSTRY: A CONTENT ANALYSIS APPROACH

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ABSTRACT

The relationship between ESG disclosure and firm performance has recently gained significant attention. ESG disclosure provides transparency and accountability to stakeholders. It enables them to evaluate a company's performance in crucial environmental, social, and governance areas, facilitating informed decision-making and enforcing corporate responsibility. This study examines the effect of Environmental, Social, and Governance (ESG) disclosure on firm performance. Using a random sampling technique of the subsector Food and Beverages industry from the Main Market Bursa Malaysia, the final sample consisted of ten firms in 2021. This study used content analysis to measure ESG disclosure, while the financial data were gathered from the annual report. It was found that ESG disclosure is positively and significantly associated with short-term performance, as measured by the Return on Assets (ROA). This implies that firm investment in ESG and better disclosure can attract investors and increase short-term performance. However, insignificant associations were found between ESG disclosure and Tobin Q. Furthermore, firm size is negatively significant with ROA, while firm leverage is positively significant with long-term performance (Tobin Q). This study adds substantial evidence of ESG disclosure's effect on firm performance in the food and beverages industry. This paper offers evidence on ESG disclosure and firm performance using content analysis based on the FTSE Russell ESG rating methodology. ESG disclosure benefits firms by enhancing reputation, access to capital, risk management, and operational efficiency while benefiting society through environmental stewardship, social impact, stakeholder engagement, and long-term economic stability. It promotes ethical business conduct that considers different stakeholders' needs and fosters sustainable development for a better future. Further, by integrating ESG into fundamental business practices, firms could contribute to a more sustainable future and foster long-term business resilience.

Keywords: Environmental, Social, and Governance (ESG) Disclosure, Firm Performance

1.0 INTRODUCTION

Since its origin before the 1990s, the idea of "sustainability" has gained prominence on a global scale and has been hotly debated in recent years (Ahi & Searcy, 2015). In this decade, issues like climate change, health crises, the greenhouse effect caused by industrialization,

and extensive deforestation to make room for more new advancements have captured the attention of the entire world like never before.

Sustainability, in a nutshell, refers to the concept of development that fulfills the present needs without compromising the needs of the future generation (Armstrong, 2020). The concept of managing it is also being incorporated into organisations' day-to-day business and operation activities, involving decision-making, which requires integration of the necessary actions and management approach (Ahi & Searcy, 2015). While the concept is used widely, the terms "sustainability" or "sustainable development" are suggested to be used interchangeably in the literature.

Considering this, Environmental, Social, and Governance (ESG) criteria were used as one of the sustainability dimensions in addition to the accounting data of the corporate performance (Mohamad, 2020). Various practices, policies used, and projects executed are encompassed in the initiatives on how the firms are meeting their obligations towards doing social good (Husted & Sousa-Filho, 2017; Matten & Moon, 2008) and enhancing the well-being of living organisms and the earth (Brickson, 2007; Husted & Sousa-Filho, 2017).

ESG, an acronym for environmental, social, and governance, is a framework designed to understand and measure how an organization identifies, assesses, and manages risks and opportunities related to sustainability, encompassing the aspects of environmental, social, and governance criteria (Raja Ahmad, 2023). Investors use this framework as a holistic approach to consider issues that influence corporate behaviour when making investment decisions (Armstrong, 2020).

Each of the pillars encompasses different issues to be assessed with specific targets. Firstly, the environmental pillar refers to issues such as deforestation, climate change, water and air pollution, exploitation of land, and loss of biodiversity. The evaluation is done on the efforts by a company in their energy efficiency management, emission of greenhouse gas, waste management as well water and resource management (Billio et al., 2021). Previous findings indicated that more eco-friendly firms benefited from higher stock returns, and the results remain significant. Secondly, the social pillar covers topics regarding gender equality, human rights, labour standards, health and safety, and employee satisfaction (Billio et al., 2021). Previous research argued that a distinct positive relationship exists between long-term stock return and employee satisfaction (Billio et al., 2021; Edmans, 2011). Lastly, the governance pillar encapsulates board management aspects such as independence of the board's administration, rights of shareholders, remunerations, anti-competitive practices, etc. Some studies suggest that the company's profitability can be positively impacted by strong and good governance practices (Billio et al., 2021).

Tracing back to the end of 2015, when the United Nations (UN) announced its adoption go the 2030 Agenda of Sustainable Development, 17 Sustainable Development Goals (SDGs) were established to call on countries to put effort into achieving the goals by or before 2030 (Sánchez-Chaparro et al., 2022). It is a blueprint plan with actions for people, planet, and prosperity, to be achieved with an ambitious and broad scope that addresses other aspects with regards to peace, justice, and effective institutions covering the three dimensions of sustainable development, namely social, economic and environmental (UN, 2015). Following suit, the United Nations has called on all sectors, particularly businesses, to demonstrate their critical role in achieving the agenda by engaging in global challenges and developing a socially and environmentally sustainable business model.

Research in the past has also pointed out that firms with good ESG performance will usually be at their advantage for their investors to make strategic decisions on top of the financial performance (Wan Muhammad & Wasiuzzaman, 2021). It is suggested that investors

reward firms with good ESG performance, while poor disclosure could indicate idiosyncratic risks (Zhou & Zhou, 2021). Firms that comply with ESG requirements are viewed to present better governance and exhibit more concerns towards environmental development and sustainability. Li et al. (2018) argued that when a firm has better ESG disclosure, it helps attract not only financial investors but also other major stakeholders. This will result in an improved mutual relationship and benefit the firms financially in the long run. By disclosing ESG information, the focus shifts towards how the business is being run, leading the firm to strive for better performance in areas such as material consumption, environmental risk reduction, and ultimately increasing the firm's value (Li et al., 2018).

The increased transparency and visibility of ESG activities and performance allow investors to make better decisions, as this information has become a particularly referenced factor in risk management (Duuren et al., 2016). It is essential to understand that different firms or industries are impacted by various types of ESG risks. These risks, including extreme weather events, water shortages, consumer concerns, and regulatory changes, to name a few, are more dynamic and evolving compared to traditionally quantified metrics. They may be becoming more significant than before. Therefore, selecting and prioritising key ESG issues specific to each industry becomes crucial to effectively capture the exposure to emerging and dynamic risks that affect companies (Lee et al., 2020).

Needs and interests in ESG disclosure from investors and companies have grown since the early 2010s. Along with that, guidelines to promote reporting ESG information were developed by key organisations globally. Various global indices were also designed to measure and report sustainability performance (Armstrong, 2020). For example, the United Nations Sustainable Stock Exchanges (SSE) launched "Model Guidance on Reporting ESG Information to Investors" in 2016, at the London Stock Exchange for investors and issuers to promote corporate reporting that is transparent, highly efficient with greater depth that contains ESG information (Bostwick et al., 2015; Wan Muhammad & Wasiuzzaman, 2021). As part of the post-2015 sustainable development frameworks by the United Nations, large businesses must report their environmental and social impact activities before 2030.

On the other hand, the Global Reporting Initiative (GRI), an independent international organisation, developed the GRI reporting standards to assist businesses in responsibly reporting on the impact of their operations on critical sustainability issues. These issues include climate change, corruption, human rights, energy, water, and many other material topics specific to each industry sector. Regarding the ESG score rating system, established business consulting firms have developed various systems worldwide over the years (Alareeni & Hamdan, 2020).

These indicators serve as indexes for measuring ESG performance. The three leading providers at the international level are Bloomberg, Thomson Reuters, and MSCI. They have developed evaluation tools that rate and classify performances, categorising companies based on their best and worst performances regarding ESG issues. In Malaysia, the practice of ESG disclosures by listed firms began in 2015 with the launch of the Sustainability Framework by Bursa Malaysia Securities Berhad (Wan Muhammad & Wasiuzzaman, 2021). Listing Requirements were amended to include a sustainability statement in the annual reports of listed issuers. Concurrently, a Sustainability Reporting Guide was issued to assist listed issuers in enhancing their disclosures on sustainability and meeting stakeholders' information requirements (Law, 2016).

The latest edition of the Malaysia Code of Corporate Governance (MCCG) in 2021 introduced guidelines and best practices for the integration and consideration of sustainability as part of the update (Malaysian Code on Corporate Governance, 2021). Companies on the FTSE Bursa Malaysia Top 100 Index or those with market capitalisations amounting to at least

MYR 2 billion are classified as “Large Companies”. The board of these companies ensures continuous communication between them to their stakeholders by providing necessary information to all stakeholders to facilitate mutual understanding of objectives and expectations. To do so, they are encouraged to consider adopting integrated reporting, which is referred to as the globally recognised framework. This will help the stakeholders make informed decisions regarding policies on social responsibility, governance, and the environment.

Despite the vast attention given across many, with the majority of research on the random industry, a few questions and problems still need to be explored and will be interest of to this study. Firstly, while many studies may be carried out on vast population sizes over many years, how will the significance level vary if the sample is narrowed to a specific industry? There is a limited study focusing on the food & beverage industry, but most of the data are from the general pool of randomly listed companies (Bae et al., 2023 ; Weber & Saunders-Hogberg, 2018). Consumers in Malaysia have been increasingly focused on health-conscious food choices. There is a growing demand for organic, natural, and functional food products. People are seeking out options that offer nutritional benefits and cater to specific dietary needs, such as vegetarian, vegan, and gluten-free options.

Sustainability and ethical considerations have gained importance in the food and beverage industry. Consumers prefer brands that prioritize sustainable sourcing, environmentally friendly packaging, and ethical treatment of animals. This trend has led to the rise of eco-friendly initiatives and the adoption of sustainable practices by companies. Malaysia's food and beverage industry, like in many other countries, is increasingly recognizing the importance of Environmental, Social, and Governance (ESG) practices and disclosure.

Secondly, the adoption rate of ESG practice is still low in Malaysia as there is no mandatory requirement for disclosure across all firms, and reporting is mainly done by multinational companies or listed companies in Malaysia by large (Atan et al., 2016; Wan Muhammad & Wasiuzzaman, 2021). Thirdly, there are multiple global ESG ratings and scale frameworks which can be complex and complicated as there is no one standard measurement that can fit all industries of all varieties. Neither is there a Malaysian standard of ESG rating framework, and even Bursa Malaysia depends on the FTSE Russell rating scheme for its ESG score (Atan et al., 2016).

This research attempts to examine the effect of ESG disclosure and financial firm performance, by narrowing the scope of a sample by focusing on the publicly listed firms in the subsector of food and beverages. This study aims to contribute as an additional finding to the previous studies by other researchers on the association of ESG disclosure to the firm performance by extending the study to a specific industry sub-sector, instead of looking at the findings from the wider level if there is consistency existed to other studies conducted. Besides, this study reviews the challenges and presumptions on the disclosure and how improvement can be made towards the ESG disclosure, and finally through the findings the study aims to provide researchers, policymakers, and sustainability bodies to effectively identify what can be done to encourage and increase the rate of adoption of ESG disclosure in their planning and strategy programs.

The remainder of this paper is organised as follows. The next section provides an overview of the ESG concept, discussing previous literature reviews, and theories, and developing the theoretical framework and hypotheses. This is followed by a description of the research methodology, sampling design, and variable definitions. Subsequently, the findings from the descriptive and regression analysis are discussed. Finally, the last section includes the conclusion, limitations of the study, and suggestions for future studies.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Stakeholder theory

The theory that underpins this study is stakeholder theory, which was developed in the early 1980s by several scholars. Stakeholder theory emphasises the importance of recognising and managing the relationships between individuals and groups that have an interest in or are affected by a business. According to this theory, a firm should aim to create value for its stakeholders, and these stakeholders can have mutual effects on each other (Parmar et al., 2010). There are two categories of stakeholders which are primary stakeholders and secondary stakeholders (Hidayana et al., 2023). A person or entity that is essential to the company's survival is considered a primary stakeholder. On the other hand, those who have an impact on or are impacted by the company are considered secondary stakeholders. The groups that constitute stakeholders in a business include employees, suppliers, customers, financiers (such as stockholders and banks), and communities. These stakeholders have a vested interest in the activities of the business. The responsibility of company executives is to maximise value creation for these stakeholders and distribute the value accordingly. In situations where trade-offs are necessary, efforts should be made to improve outcomes for all parties involved. Therefore, it is crucial to consider the interests of all stakeholders, rather than focusing exclusively on a select few, as highlighted by Sila & Cek (2017).

In addition to stakeholder theory, the Triple Bottom Line (TBL) concept is also utilised as the framework for this study. It expands the notion of value maximisation beyond the interests of shareholders to encompass all stakeholders (Achim & Borlea, 2015). The TBL model was developed by John Elkington in the mid-1990s as a means of providing a measurement framework for American corporations. The model is often referred to as the 3Ps: profits, people, and the planet, representing interconnected dimensions. Under this framework, organisations are expected to comprehensively report not only their financial performance, profits, and shareholder value but also their environmental and social performance, which are important to shareholders and support sustainability goals. In terms of the economy, maximising economic performance contributes to the maximisation of shareholder value. Maximising social performance leads to improved economic well-being for all stakeholders, including employees, suppliers, communities, customers, creditors, investors, and corporate governance matters. Lastly, by prioritising environmental performance and avoiding negative impacts on surrounding communities and the environment, organizations can achieve the best environmental outcomes.

In 2018, John Elkington, the originator of the Triple Bottom Line (TBL) concept, revisited and refined the concept to highlight that it was not merely intended as an accounting tool, but rather aimed to stimulate deeper reflections on capitalism and its future (Elkington, 2018). The initial objective was to advocate for system change, prioritizing transformative actions that disrupt unsustainable sectors while scaling up market-based solutions for future generations. This approach emphasizes breakthrough changes and asymmetric growth, actively side-lining unsustainable practices and promoting sustainable alternatives.

Following the development of the Triple Bottom Line (TBL), a fourth dimension of performance, 'governance,' was introduced. This led to the emergence of the Environmental, Social, and Governance (ESG) framework, which measures non-financial performance (Achim & Borlea, 2015). In this approach, ESG encompasses corporate governance, aiming to protect investors from potential harm by ensuring appropriate governance practices and measures are in place (Campbell, 2007; Husted & Sousa-Filho, 2017). An alternative way to

illustrate the concept is that firms should adopt best practices in both corporate social responsibility and corporate governance to create value and ensure long-term sustainability (Achim & Borlea, 2015).

2.2 ESG disclosure

Investors and stakeholders rely on ESG information to assess risks and opportunities in firms, making ESG scores and reporting highly significant (Alareeni & Hamdan, 2020). The availability of information is crucial for investors and stakeholders to make informed decisions regarding capital allocation and mitigate potential risks. Increased disclosure levels enhance confidence, particularly in the stock market. The global focus on environmental issues and growing public awareness have compelled firms to establish environmental regulations and standards. Given the frequent pressure from stakeholders, authorities, and NGOs, more firms are complying with the established regulations and disclosing information on the firm's commitment to managing the issue (Alareeni & Hamdan, 2020; Md Nor et al., 2016).

Various rating agencies have developed measurements for the performance of the three dimensions of ESG since the early 2010s. These measurements serve as complementary scores to financial performance and enhance the accuracy of risk assessments (Achim & Borlea, 2015). One widely used framework is the GRI Standards, which provides a modular system of interconnected standards. It assists organisations in transparently presenting their public reporting on the impacts of their activities to stakeholders and other interested parties (Caputo et al., 2021). By following these reporting guidelines, organisations can credibly communicate both positive and negative impacts related to sustainability topics, allowing for relative comparability with other organisations (Machado et al., 2021). This enables organisations to assess internal policies and strategies, make decisions that align with targets and goals, and demonstrate integration with sustainable development. For external stakeholders such as investors, this information facilitates the evaluation of an organisation's strategy, identification of financial risks, and assessment of long-term success (Stefanescua et al., 2016).

To assess the relative performance of companies in terms of ESG, several models incorporate a combination of financial and non-financial inputs, as noted by Lee et al. (2020), from the research company MSCI. Investors are typically interested in these models as they aim to capture financial risks and opportunities and add value to their investment decisions. While sustainability is a commonly discussed goal across all types of organisations (both profit and non-profit, as well as government entities), measuring the extent of sustainability and growth has posed challenges (Slaper & Hall, 2011).

Different approaches to measuring ESG scores can yield varied results for investors. Combining or aggregating ESG scores has been found to better reflect the dynamic changes in the ESG landscape, including emerging risks (Lee et al., 2020). Conversely, when individual pillar scores for Environmental (E), Social (S), and Governance (G) are used with equal weighting, the financial significance may be reduced, leading to a diverse relationship with firms' financial characteristics. It is challenging for rating providers to determine the most influential criteria for measuring firm performance, find the optimal approach to appropriately present the combination of ESG issues in the aggregate ESG score, and improve the ratings themselves (Lee et al., 2020).

By the early 2020s, the Triple Bottom Line (TBL) concept had become widely recognised in the business lexicon, as described by The Economist magazine (Elkington, 2018). A TBL company is one that fully considers the costs of running the business. Subsequently, various rating platforms such as the Global Reporting Initiative (GRI) and Dow Jones Sustainability

Indexes (DJSI) have been introduced to influence corporate accounting, stakeholder engagement, and strategy development.

2.3 ESG Disclosure and Firm Performance

Extensive studies have been conducted to assess the relationship between a firm's financial performance and its ESG performance (Husted & Sousa-Filho, 2017). Numerous studies focusing on each dimension of ESG have also been developed to understand their respective impacts on the most concerned stakeholders. ESG performance has been recognised as an important aspect for firms to develop sustainable strategies that can influence their overall performance (Husted & Sousa-Filho, 2017). The growing interest from investors and stakeholders has significantly contributed to the substantial efforts invested in ESG initiatives.

However, empirical studies conducted over the years to examine the effects of ESG on firm performance have yielded conflicting results. Some studies have reported adverse results between the two, while others have found positive associations (Sadiq et al., 2020). Studies have indicated that ESG disclosure has the potential to improve firm performance and firm value. Good performance of a firm will undoubtedly lead to positive outcomes and increased accessibility (Bhayangkara, 2023). Furthermore, a higher ESG score can also lead to a competitive advantage (Wan Muhammad & Wasiuzzaman, 2021). Research conducted on 70 Malaysian firms from 2009 to 2018 demonstrated a significant relationship between firm value, measured by Tobin's Q factor, and ESG scores (Mohamad, 2020). By prioritising transparency in environmental concerns, accountability in governance, and social responsibility, firms can enhance their value by boosting stakeholders' confidence and perception.

Additionally, a study utilising panel data from 80 companies in Malaysia and Singapore between 2010 and 2014 found a positive and significant relationship between ESG practices and economic performance. Moreover, corporate economic performance was positively associated with ESG disclosure within an effective corporate governance system across more than 1,200 listed companies in Asia between 2005 and 2017 (Alsayegh et al., 2020).

Despite the numerous benefits associated with ESG disclosure, certain studies have failed to establish a definitive relationship between the disclosure of the environmental pillar and firm performance, as observed in research conducted on UK firms (Brooks & Oikonomou, 2018; Qiu et al., 2016). However, when firms engage in social disclosures, it has been found to result in higher market values, possibly due to anticipated future cash flow. Furthermore, it has been suggested that firms with extensive reporting in their disclosures often possess greater economic resources, leading to overall positive net economic benefits (Qiu et al., 2016).

Numerous studies have examined the negative relationship between ESG practices and a firm's financial performance since the inception of the concept in the early 2010s. The argument posits that a firm's primary focus should be on maximising shareholder profit, with the assumption that the profit should not be compromised by ESG activities (Sadiq et al., 2020). Similarly, in a study by Sadiq et al. (2020) on 122 listed firms in Malaysia with data from 2011 to 2019, it was found that ESG disclosure hurts firm value. Duque-Grisales and Aguilera-Caracuel (2022) also suggested a significantly negative relationship between ESG scores and financial performance in their study of 104 multinational companies in Latin America from 2011 to 2015. Similar results were observed when each pillar of environmental, social, and governance was examined separately about financial performance.

Some results show mixed findings of impacts between the ESG disclosure when the sub-components of the factors are separately analysed. For example, a study done by Sila & Cek

(2017) for close to 300 firms in Australia between the span of 2011 to 2016, it is found that the different pillar of ESG has different level of relationship towards economic performance. The study showed that the impact of social and performances towards economic performance was consistent and significantly positive with a greater effect size on environmental performance. As for governance performance, the significance relationship is very weak toward economic performance. A similar mix of results is found in an investigation done by Alareeni and Hamdan (2020) by sampling the US S&P 500-listed companies between 2009 and 2018. The results revealed that although ESG disclosure is positively affecting firms' performance, the relationships are mixed when the sub-components of ESG are assessed separately. The environmental and social components are negatively related to ROA but positively to Tobin's Q, while the governance component is both positively associated with ROA and Tobin's Q (Alareeni & Hamdan, 2020). In addition, firms with higher levels of ESG disclosure will gain higher ROA in return.

When examining the impact of ESG on firm value, it is important to acknowledge that different firms may have different motives behind their ESG reporting (Sadiq et al., 2020). Established multinational firms, for instance, may aim to enhance their reputation or demonstrate their reporting legitimacy, as highlighted in academic studies (Sadiq et al., 2020). While these findings are encouraging, it is important to note that the overall quality of ESG disclosures is heterogeneous, as mentioned by the guideline council of the Global Reporting Initiative (GRI) (Ashwin Kumar et al., 2016). On the other hand, some firms may underreport their ESG disclosures out of fear of tarnishing their reputation due to negative earnings or an inability to maintain a positive track record (Sadiq et al., 2020).

A summary of the mixed result of correlations between ESG performance to firm performance is presented in Table 1.

Table 1: Summary list of relevant empirical studies

Country	Findings on ESG to Financial Performance		Reference (s)
	Factors (Pairs of variables)	Results Of Significant / relationship	
Malaysia	Between ESG score-Tobin's Q	Positive	(Mohamad, 2020)
Malaysia and Singapore	Between ESG score-Economic performance	Positive	(Tarmuji et al., 2016)
Asian Firms	Between ESG score-Economic performance	Positive	(Alsavagh et al., 2020)
UK	- Environment to firm profitability - Social disclosure matters the market value	Not-significant	(Qiu et al., 2016)
Malaysia	Between ESG disclosure-Firm Value (Tobin's Q)	Negative	(Sadiq et al., 2020)
Latin America	Between ESG score to Financial Performance	Negative	(Duque-Grisales & Aguilera-Caracul, 2021)
Australia	- Between Social I-Economic performance - Between Environmental and Governance-Economic performance	Positive Weak positive	(Sila & Cek, 2017)
US	- Between ESG disclosure-Firm Performance - Between E, S-ROA - Between E, S-Tobin's Q - Between G-Tobin's Q & ROA	Positive Negative Positive Positive	(Alareeni & Hamdan, 2020)

This study is built on the previous studies to examine the inconsistency in the findings surrounding the relationship between ESG performance and firm performance. As the results are seen as mixed, it is worth examining the result from time to time with further study as needed. Furthermore, there are limitations in the studies done specifically on the food & beverage manufacturing listed firms. Hence, two hypotheses are proposed below. Figure 1 illustrates the proposed theoretical framework.

H_1 : ESG disclosure positively influence the firm performance in the short term (ROA)

H_2 : ESG disclosure positively influence the firm performance in the long term (TobinQ)

3.0 RESEARCH METHOD

3.1 Data and Sample

The population of this study consists of 31 firms from the subsector food and beverages industry listed in the main market Bursa Malaysia in 2021. Using sample random sampling, the final sample consists of ten firms. The subsectors food and beverages (F&B) were chosen as a sample of this study because it is more stable in term of operation with lesser impact as compared to the other industry during the Covid-19 outbreak and global pandemic (2020), where lockdown or movement control has impacted many businesses on top of the many disruptions in the supply chain (MIDA, 2021). Besides that, F&B sectors also have high coverage among the end customers and a vast supply chain network.

The Environment, Social, and Governance Disclosure (ESGD) index data were hand collected based on the FTSE Russell ESG rating methodology. Data on the Return on Assets (ROA), Tobin Q, the firm leverage, and the firm size were gathered from the annual report.

3.2 Measurement

For the dependent variables, firm performance is proxied by short-term performance (Return on Assets) and long-term performance (Tobin Q). Return on assets (ROA) is a common and widely used short-term performance measure. ROA represents a firm's efficiency in asset usage from the financial aspect throughout a fiscal year given for short-term profitability (Yoon & Chung, 2018; Kyere & Ausloos, 2020). Consistent with prior studies by Md Nor et al., (2016) & Sarumpaet (2005) measured, ROA by dividing a firm's net profits by total assets. It measures how best a company has utilized its assets to generate profit from asset ownership (Yahya & Hidayat, 2020). While Tobin Q is calculated by dividing the company's total market value (including stock and debt) by the total assets (Christensen et al., 2010; Kyere & Ausloos, 2020). Prior studies have found that firms that reported higher Tobin Q performed well and outperformed their industry peers (Awaysheh et al., 2020; Mohamad, 2020; Yoo & Managi, 2022).

For the independent variables, the ESG disclosure Index (ESGD) was based on the FTSE Russell ESG rating methodology. Following the method, each firm's ESG exposure and performance were multi-dimensional, and the assessment was conducted under the three pillars of ESG that covered 14 themes that spread over 300 individual indicators (Ratsimiveh & Haalebos, 2021). A total of 14 themes based on the three pillars are provided as follows:

- Environmental pillar: biodiversity, climate change, environmental supply chain, pollution & resources, water security;
- Social pillar: customer responsibility, health & safety, human rights & community, labour standards, social supply chain;
- Governance pillar: Anti-corruption, corporate governance, risk management, tax transparency

The scoring was conducted based on the criteria mentioned above. A score of 1 was assigned if the firm disclosed ESG information in its annual report, while a score of 0 was given if it did not provide such information. The content analysis scoring method employed was consistent with the prior study conducted by Wan Muhammad & Wasiuzzaman (2021).

Then, the ESG disclosure score was counted based on adding up 14 themes, and the ratio was calculated as the ESG disclosure index. Below is the process of the ESG disclosure index:

Table 2. ESG Disclosure Index

#	Pillar	Themes	1 Carlsberg Brewery Malaysia Bhd	2 Dutch Lady Milk Industries Bhd	3 Fraser & Neave Holdings Bhd	4 Heineken Malaysia Bhd	5 Hup Seng Industries Bhd	6 Hwa Tai Industries Bhd	7 Kawan Food Behd	8 Malayan Flour Mills Bhd	9 MSM Malaysia Holdings Bhd	10 Nestle (M) Bhd
1	Environment	Biodiversity	1	1	1	1	1	0	1	1	1	1
2		Climate Change	1	1	1	1	1	1	1	1	1	1
3		Pollution and Resources	1	1	1	1	1	1	1	1	1	1
4		Environmental Supply Chain	1	1	1	1	1	1	1	1	1	1
5		Water Security / Use/ Stewardship	1	1	1	1	1	1	1	1	1	1
6	Social	Customer Responsibility	1	1	1	1	1	1	1	1	1	1
7		Health and Safety	1	1	1	1	1	1	1	1	1	1
8		Human Rights and Community	1	1	1	1	1	1	1	1	1	1
9		Labor Standards / Practices	1	1	1	1	1	1	1	1	1	1
10		Social Supply Chain	1	1	1	1	0	0	0	1	1	1
11	Governance	Anti-Corruption	1	1	1	1	1	1	1	1	1	1
12		Corporate Governance	1	1	1	1	1	1	1	1	1	1
13		Risk Management	1	1	1	1	1	1	1	1	1	1
14		Tax Transparency	1	1	1	1	1	1	1	1	1	1
Disclosure count =			14	14	14	14	13	12	13	14	14	14
ESG Disclosure % =			100%	100%	100%	100%	93%	86%	93%	100%	100%	100%
ESG Disclosure Ratio =			1.00	1.00	1.00	1.00	0.93	0.86	0.93	1.00	1.00	1.00

We also control firm leverage and size, which might influence the results (Nielsen & Raswanta, 2018). Firm leverage is measured by debt ratio, dividing total liabilities by total assets. Firm size was measured by the logarithm of total assets (Mohamad, 2020).

3.3 Regression Model

Our basic specification for testing the hypotheses is as follows:

$$ROA = \beta_0 + \beta_1 ESGD + \beta_2 LEV + \beta_3 SIZE + \varepsilon \quad (1)$$

$$TobinQ = \beta_0 + \beta_1 ESGD + \beta_2 LEV + \beta_3 SIZE + \varepsilon \quad (2)$$

Where ROA is the ratio of net income to the total assets; TobinQ is total market capitalisation plus total liabilities over total assets; ESGD is the total ESG index; LEV is the ratio of total liabilities divided by total assets; and SIZE is the natural logarithm of total assets.

4.0 RESULT AND DISCUSSION

4.1 Descriptive Analysis

Table 3 reports the descriptive statistics for all the variables. The results in Table 2 indicated that the average ROA was 15%, with values ranging from -3% to 35.37%. The average TobinQ was 3.01, with values ranging from 0.20 to 10.25. The average ESGD is 0.97, with values ranging from 0.86 to 1. The ESGD indicates that better disclosure index among the sample firms. The control variable of the average firm's leverage (LEV) was 0.45, with the values ranging from 0.15 to 0.80. This indicates that there are firms that have high leverage. The average firm size (SIZE) was 5.94, ranging from 4.83 to 6.56.

Table 3. Descriptive Statistics

	Mean	Min	Max	Sd
ROA	0.15	-0.03	0.3537	0.12
TobinQ	3.01	0.20	10.25	3.34
ESGD	0.97	0.86	1	0.05
LEV	0.45	0.15	0.80	0.20
SIZE	5.94	4.83	6.56	0.57

Notes: ROA is the ratio of net income to the total assets; TobinQ is total market capitalisation plus total liabilities over total assets; ESGD is the total ESG disclosure index; LEV is the ratio of total liabilities divided by total assets; and SIZE is the natural logarithm of total assets.

4.2 Multiple Regression Analysis

Table 4 presents the regression results for the effect of the ESG disclosure index (ESGD) on firm performance. For model 1, we first estimated the impact of the ESG disclosure index on short-term performance (ROA). The results show that ESGD has a positive and significant relationship with ROA. The result proves that better ESGD improves the firm's short-term performance (ROA). Align with Wan Muhammad & Wasiuzzaman (2021), who also found that higher ESG scores lead to higher competitive advantage. Moreover, Alsayegh et al. (2020) found that ESG disclosure positively correlates with corporate economy performance among Asian countries. Also, ESG disclosure improves a firm's performance (Husted & Sousa-Filho, 2017). Our finding supports that better ESG transparency may boost stakeholders' confidence and perception and indirectly increase firm performance (ROA).

For Model 2, we estimated the effect of the ESG disclosure index on long-term performance (Tobin's Q). However, we did not find any significant relationship between those associations. Our findings align with Abdullah et al. (2020), who found no significant relationship between ESG factors and firm value among FTSE4G Bursa Malaysia-listed firms. However, their study reveals that firms have gained a good reputation and competitive advantage from FTSE4G Bursa Malaysia listed firms, regardless of whether they issued annual sustainability reports.

ROA is a financial measure that gauges a firm's profitability by examining how efficiently it generates profits from its assets. As mentioned earlier, transparent ESG disclosure demonstrates a firm's commitment to sustainability and responsible business practices. Firms that prioritise ESG factors may experience improved operational efficiency, lower risks, and enhanced reputation. A positive reputation can then attract more investors, customers, and business partners, leading to increased revenue and profitability, which positively influences ROA. While ESG performance can influence a firm's market perception and reputation, its impact on Tobin's Q might not be as direct or immediate. Tobin's Q is influenced by various factors, including market sentiment, debt level and financial stability, growth prospects, and perceived intangible assets, which may not always align perfectly with ESG performance (Fu et al., 2016).

The control variables for Model 1 show that only the firm's size (SIZE) has a negative and significant relationship with ROA. Our finding is consistent with (Akram et al., 2021), who also found a negative relationship between SIZE and ROA due to dominator variables. A negative association was found in the study using the dominator of total sales, whereas the opposite direction was found in the study using the dominator of total assets. While for model 2, only the firm's leverage (LEV) has a positive and significant relationship with Tobin's Q. The positive association between LEV and Tobin's Q is because the leverage is part of Tobin's Q ratio.

Table 4. Regression Result

	Model 1 ROA	Model 2 Tobin's Q
Constant	-2.3895 -4.06***	-0.1531 -0.01
ESGD	4.5511 4.27***	-1.9247 -0.04
LEV	0.0536 0.45	12.7764 2.31*
SIZE	-0.3207 -3.70**	-0.0693 -0.02
Adj. R	72.64%	32.57%

Notes: The reported t-statistics are in parentheses. Asterisks denote statistical significance at the 1% (***), 5% (**), or 10% (*) levels, respectively. ROA is the ratio of net income to the total assets; Tobin Q is total market capitalisation plus total liabilities over total assets; ESGD is the total ESG disclosure index; LEV is the ratio of total liabilities divided by total assets; and SIZE is the natural logarithm of total assets.

5.0 CONCLUSION

The food and beverage industry's operations have significant environmental implications, including resource consumption, waste generation, and carbon emissions. ESG disclosure can involve reporting on measures taken to reduce environmental impact, such as adopting sustainable sourcing practices, minimising food waste, implementing energy-efficient operations, and reducing greenhouse gas emissions (Camilleri, 2015). Companies may also disclose their efforts towards sustainable packaging and supply chain management (Tamimi & Sebastianelli, 2017).

In addition, the food and beverage industry has a direct impact on society, including areas such as public health, labour practices, and community engagement (Macassa, 2022). ESG disclosure can encompass information about initiatives promoting responsible sourcing, fair trade practices, worker welfare, and employee diversity and inclusion (Klinger et al., 2022). It may also involve disclosing efforts to support local communities, invest in social development programs, and contribute to the well-being of society at large.

As for the governance issue, good governance is crucial in maintaining transparency, accountability, and ethical conduct within the food and beverage industry. ESG disclosure in this context may cover aspects such as board composition, executive compensation, risk management, anti-corruption measures, and adherence to ethical business practices (Klettner et al., 2014). Disclosing governance practices provides stakeholders with insights into a company's commitment to ethical conduct and responsible decision-making (Abu-Tapanjeh, 2009).

ESG disclosure has a variety of uses in the food and beverage sector. It can assist businesses in demonstrating their dedication to sustainability, luring ethical investors, enhancing brand reputation, and interacting with constituents that value ESG issues (Saher et al., 2023). Furthermore, by providing investors, clients, and other stakeholders with information on the environmental and social impact of the businesses they do business with, ESG disclosure can help them make well-informed decisions. It is worth noting that different nations and legal systems may have different requirements for certain ESG priorities and disclosure. While aligning the food and beverage sector with more general sustainability objectives and stakeholder expectations, the overarching objective is to promote openness, accountability, and sustainable practices within the sector.

This present study aims to examine the effects of Environmental, Social, and Governance (ESG) disclosure on firm performance in the subsector Food and Beverage industry in Malaysia. Our findings found that ESG disclosure significantly boosts short-term performance (ROA) but not long-term performance (Tobin's Q). This could be due firms have gained a good reputation and competitive advantage from FTSE4G Bursa Malaysia listed firms, regardless of whether they issued annual sustainability reports. Therefore, no significant relationship was found between ESG disclosure and Tobin Q.

Our findings support and align with prior studies in the field of ESG that also found a positive and significant relationship between firm performance (Wan Muhammad & Wasiuzzaman, 2021; Alsayegh et al., 2020; Husted & Sousa-Filho, 2017). Firms with strong ESG performance are often seen as demonstrating good performance and public image. As

a result, this may portray a good image to the customers and may attract other stakeholders. This can positively impact a company's profitability and, in turn, its ROA. In other words, as the awareness of environmental and social issues grows, firms that prioritise ESG considerations are more likely to be rewarded with improved financial performance. Our finding supports that better ESG transparency may boost stakeholders' confidence and perception and indirectly increase firm performance (ROA).

Our findings provide evidence to the firms, investors, and regulators on the importance of ESG disclosure. The enforcement of ESG disclosure and recommendation of the Malaysian Code of Corporate Governance (MCCG 2021) among publicly listed firms on Bursa Malaysia can improve ESG disclosure. The ESG investment, practices, and disclosure can increase net profit, and improve a firm's competitive advantage, and performance. Moreover, the ESG disclosure among firms helps the government to achieve the Sustainable Development Goals (SDG) Agenda by 2030.

This study offers a new finding on ESG disclosure and firm performance in the subsector of F&B industries. This study has only chosen the ROA and Tobin's Q as the proxies of firm performance. Future studies may use multiple measures of firm performance, such as return on equity or cash ratio. Besides that, this study only controls for firm leverage and firm size. Using other control variables, such as profitability, and marketability ratio, may provide a more comprehensive view and minimize confounding effects. Also, the sample size of this study was small and not able to offer a time series or panel data analysis. Therefore, future studies could extend the period and subsector industry to provide an exhaustive picture of the effect of ESG and firm performance in the consumer industry.

CO-AUTHOR CONTRIBUTION

The authors affirmed that there is no conflict of interest in this article. All authors have contributed significantly to the research and preparation of the paper. Author 1 wrote the introduction, literature review, and conclusion. Author 2 contributed to the data collection and prepared the ESG disclosure index based on the FTSE Russell ESG rating methodology. Author 3 wrote the research methodology, conducted the statistical analysis, and interpreted the results.

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FACTORS DETERMINING OVERNIGHT POLICY RATE (OPR) IN MALAYSIA

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ABSTRACT

Overnight Policy Rate (OPR) is one of the most significant topics in the current economy. An announcement of OPR hikes in Malaysia caused great concern among economists as the Malaysian economy is dependent on private consumption. A prediction of the increase of OPR in the near future motivates this paper to explore factors determining the increase in OPR in Malaysia, with explanatory variables that include inflation, unemployment, economic growth, and external trade. This paper utilized the time series data of 19 years beginning from the year 2004 to the year 2022. Statistical techniques, namely Pearson Correlation Matrix and Principal Component Analysis (PCA) are employed to analyse the relationship between the macroeconomic factors. The results from the Pearson Correlation Matrix show that unemployment has a strong negative association with OPR. Principal Component Analysis further enhances the result, by indicating that unemployment is a major indication in explaining the rise in OPR in Malaysia, concerning the results of the clusters. The findings lead to the conclusion that the most significant factor affecting OPR is unemployment. Thus, this implies an increase in employment increasing OPR to sustain elevated inflation from an increase in the demand for goods and services.

Keywords: Overnight Policy Rate (OPR), Macroeconomic, Pearson Correlation Matrix, Principal Component Analysis (PCA), Malaysian Economy

1.0 INTRODUCTION

One of the most significant current discussions in economics is Overnight Policy Rate (OPR). The Overnight Policy Rate is an index of the financial policy set by Bank Negara Malaysia (BNM) and it serves as a target rate for the day-to-day liquidity operations of the BNM (Bank Negara Malaysia, 2022). The implementation of interest rates as main indicators of the monetary policy started with the Base Lending Rate (BLR) from 1995 to 1998, followed by the inclusion of the Intervention Rate on BLR afterward (Senan, 2020). In 2004, BNM changed its interest rate structure, previously setting its benchmark at the intervention rate, and making the overnight policy rate its main rate. This OPR determines the rate of interest for financial institutions that lend each other money overnight. OPR is an important component of Malaysian monetary policy since it has a broad impact on significant financial metrics such as mortgage rates, deposit rates, and foreign currency rates.

The Monetary Policy Committee (MPC) established by BNM, meets at least six times a year to set the OPR. During the period from January 2019 to December 2022, MPC had 24 meetings to review the OPR (Bank Negara Malaysia, 2022). OPR is categorized into ceiling

rate and floor rate, where currently in 2023 the rate is 3.25 and 2.75, respectively (Bank Negara Malaysia, 2023). On record, the highest OPR was recorded at 3.50 percent in April 2006 (Bank Negara Malaysia, 2006). During the said time, Malaysia's economy was reported to be growing steadily, while inflation was recorded at 4.6 percent and a higher OPR was needed to manage the risk of higher prices. When the country is struggling with the COVID-19 pandemic, BNM has reduced the OPR to provide better support for the economy. The lowest OPR was recorded at 1.75 percent from July 2020 until May 2022 to support the economy during the COVID-19 pandemic (Bank Negara Malaysia, 2020; 2022). However, when Malaysia recovered, and the economy started to grow stronger, the MPC decided to slowly reduce the degree of monetary accommodation. According to Bank Negara Malaysia (2022), MPC has decided to increase the OPR by 25 basis points to 2.75 percent. This has been reported to be the fourth time in a row just for this year.

According to Bank Negara Malaysia (2022), the global economy has continued to expand although weighted down by the rising cost and by tighter global financial conditions. Malaysian labor market conditions also seem to have improved after the opening of the international border during the endemic. However, the core inflation rate is still considerably high despite all the good news. Indirectly, the central bank expects more economic growth and will thus continue to modify monetary policy settings, more rapidly, to lessen inflationary pressures. The MPC can manage inflation, economic growth, and financial stability by changing the OPR, which also affects credit and the money supply (Zabri, 2023).

Overall, the overnight policy rate (OPR), has increased over the year 2019 to 2022. The Malaysian government has set the OPR which solely functions to influence the pace of economic activity and inflation in the country. The adverse consequence of a rise in the OPR is a larger monthly installment. However, because of the larger interest payment received, lending institutions favour higher OPR. Depositors prefer greater OPR because of the dividend earned on fixed deposits. Based on this scenario, it triggers doubtful questions about why the OPR is increasing. This study aims to extend the existing literature on determining the factors of Overnight Policy Rate (OPR) hikes in Malaysia. This paper aims to look more deeply at how deep each of the macroeconomic relationships is toward the OPR.

2.0 LITERATURE REVIEW

2.1 Keynesian Economics Theory

Keynesian Economics Theory was introduced in the 1930s by John Maynard Keynes, about macroeconomics factors on the total output of the economy. One of the Keynesian principles suggests fluctuations in any element of expenditure, whether it's consumption, investment, or government spending cause changes in production (Keynes, 1937; Mishra, 2017). In modern economics, Keynesian theories are applied in expansionary policy that entails a rise in government spending, such as education, health, infrastructure, and social programs, which has an impact on the economy's output. This results in an increase in aggregate demand (total demand of goods and services produced by the economy) influenced by monetary and fiscal (i.e., spending and tax) policies (Mishra, 2017; Bank Negara Malaysia, 2023). Furthermore, tax incentives by policymakers stimulate customers' spending as they have more income in paying for goods and services (Saavedra et al., 2023). This circular movement of income throughout the economy is critical to understanding how economies operate.

2.2 Contractionary and Expansionary monetary policy

The policy set by the central bank either fiscal or monetary, can be contractionary and expansionary. Fiscal policy generally involves rules and restrictions on overall government budget balance and spending, borrowing, debt, or reserve rules on the overall economy (Kopits & Symansky, 1998). Meanwhile, monetary policy involves controlling the money supply in the economy to balance the economy's output and inflation to promote monetary stability (Bank Negara Malaysia, 2023). This paper focuses on using the lenses of contractionary and expansionary monetary in exploring the factors of OPR.

Contractionary policies are macroeconomic tools aimed at addressing distortions in economics caused by a bubble in the economy such as extreme inflation (Bank Negara Malaysia, 2023). The effect of contractionary policy helps to reduce GDP for a smoother business cycle, and at the same time maintain a low general level of prices of goods and services (Bank Negara Malaysia, 2023). On the other hand, an expansionary monetary policy implemented by the government to upsurge the money supply in the market by reducing the interest rate, decreasing reserve requirements, and purchasing government security it is intended to boost business investment and consumer spending (Bank Negara Malaysia, 2023). The government will inject money into the economy either through direct government deficit spending or increased lending to businesses and consumers (Bank Negara Malaysia, 2023). For example, the government may enact tax cuts, transfer payments, refunds, and increased government investment in infrastructure upgrades. In the case of Malaysia, the Malaysian government has increased expenditure in the 2021 budget by 2.5 percent to 322.5 billion ringgit, even though the fiscal deficit is forecast to reach 6 percent, the biggest since the global financial crisis of 2009 as a way to boost the economy from pandemic (Sipalan, 2020).

2.3 Macroeconomic factors influencing Overnight Policy Rate

This section summarizes selected previous studies on the issue of OPR. Through this literature, this paper can identify several macroeconomic factors that have a proclivity to operate as potential drivers for the OPR model.

One of the primary factors influencing the fluctuations in OPR is inflation. Inflation is defined as the rate of increase in prices of goods and services, and the cost of living, over a certain period (Oner, 2010). Inflation is categorized into core inflation and headline inflation, where core inflation is the change in the price of goods and services excluding food and energy sectors as they are dependent on supply-side disruptions, meanwhile, headline inflation includes changes in all sectors of the economy (Ramlee & Abdul Rani, 2016; Singh, 2016). According to Singh (2016), domestic supply-side shocks induced by changes in fuel and food prices are temporary in traits, permitting a rapid shift from headline inflation to core inflation. High inflation is connected with slower economic development due to macroeconomic challenges, whereas low inflation indicates that the economy is growing steadily (Ha et al., 2023). High inflation affects income inequality because it redistributes wealth between lenders and borrowers (Md Isa et al., 2018). As of April 2023, Malaysia's headline inflation rate was stated to be 3.3 percent, compared to a reported 6.5 percent worldwide inflation rate (Department of Statistics of Malaysia, 2023; International Monetary Fund, 2023). This is because the increase was mostly caused by food and non-alcoholic drinks with 6.3 percent and restaurants and hotels with 6.6 percent (Bernama, 2023). Due to the possibility that inflation will continue high, economists anticipate that Bank Negara will raise its benchmark interest rate, which is always expressed as an OPR, further this year (The Star, 2023).

The relationship between inflation and unemployment has been greatly discussed in the literature. The Philips Curve Theory suggests that inflation and unemployment have an inverse relationship where accelerated prices are caused by an increase in the unemployment rate

(Alisa, 2015). According to the literature, the interest rate will adjust to the new level if inflation expectations alter as a result of a change in the unemployment rate (Prag, 1994). This demonstrates the anomalous correlations between the interest rate (OPR), unemployment, and inflation. Ghafar and Masih (2017) discover that inflation is the primary driver of unemployment, followed by population growth and private consumption expenditures. Literature also suggests the unemployment rate corresponds to labour force participation given that unemployed individuals are either in or out of the labour force (Jones & Riddle, 1999; Kingdon & Knight, 2006). Labour constitutes one of the most crucial factors that lead to economic development (Zulkifli et al., 2022). According to Rahn and Weber (2019), the unemployment trend is increasing due to technological shocks affecting changes in economic productivity, in addition to monetary and fiscal policy shocks. In the case of Malaysia, the factors influencing the unemployment rate are slow economic growth, higher foreign direct investment, low energy consumption, and a decrease in domestic investment (Borhan et al., 2023). Furthermore, the unemployment rate has climbed in recent years, particularly among Malaysian graduates, with the main reason being a lack of soft skills as a result of language barriers. (Ismail et al., 2018).

Other than unemployment, the literature suggests that external trade and economic growth might affect the changes in OPR. External trade is interrelated with production output, logically an increase in production output by the industrial sector increases the export and import of goods and services. External trade, also known as international trade or foreign trade, involves the trading of goods and services, either through exports or imports (Boyer, 1996). Malaysia's total trade has gradually continued to grow with double-digit growth in October 2022, surging by 21.1 percent, making RM245.2 billion as compared to RM202.4 billion in the preceding year (Department of Statistics of Malaysia, 2021; 2022). It is reported by the Department of Statistics Malaysia that exports activities such as from electrical and electronic items besides petroleum and palm oil-based products, increased by 15.0 percent to RM131.6 billion in October 2022 while imports at RM113.5 billion rose by 29.2 percent year-on-year. A recent study revealed that external trade - exports influence the savings rate (Trofimov & Aris, 2023) which rate is determined by lending institutions based on the OPR benchmark set by the Central Bank. In addition, the literature suggests gross savings and final consumption expenditure increase the economic growth of Malaysia (Zaharudin & Jalil, 2022).

Therefore, from the literature, this paper aims to determine whether these macroeconomic factors such as inflation, unemployment, external trade, and economic growth are the contributing factors to the rise of OPR in Malaysia.

2.4 Research Framework

The research framework is as follows:

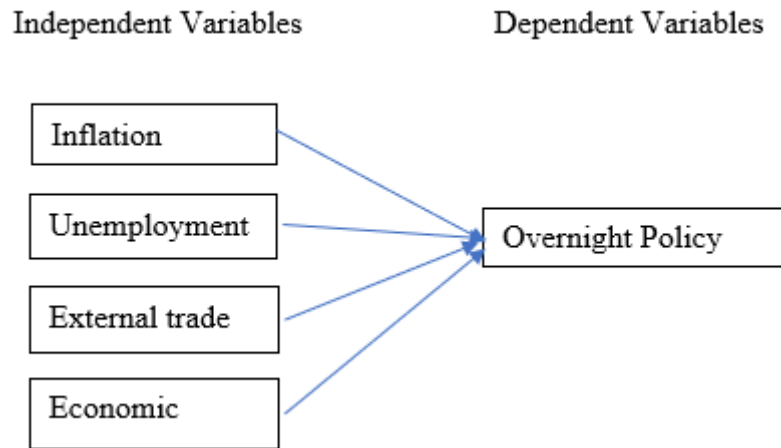


Figure 1. Research Framework

The dependent variable used in this paper is the Overnight Policy Rate (OPR), which is the interest rate that a borrower bank is required to pay to a lending bank for resources acquired. That is, the higher the OPR, the more costly it is to get borrowed. This paper selects an indicator of the health of a country's overall economy and banking system for independent variables, which are inflation, unemployment rate, external trade, and economic growth.

Inflation as measured by the consumer price index (CPI) reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly (World Bank, 2022). This inflation refers to headline inflation. Unemployment rate refers to the share of the labour force that is without work but available for and seeking employment (World Bank, 2022). External trade is the export and import unit value indices that can be used to measure Malaysia's terms of trade (Department of Statistics Malaysia, 2022). Economic growth is a sector of an economy that experiences a higher-than-average growth rate as compared to other sectors, where their growth is a result of demand for new products or services offered by companies in the field (Department of Statistics Malaysia, 2022).

3.0 METHODOLOGY

This paper uses secondary data, collected from the Department of Statistics Malaysia (DOSM), Bank Negara Malaysia (BNM), and the World Bank. BNM modified its interest rate structure, previously set its benchmark at the intervention rate, and made the overnight policy rate its main rate in 2004. Thus, the sample period is from 2004 to 2022 making a total of 19 years of observations.

Being that it incorporates time-series data, this paper uses Augmented-Dickey Fuller (ADF) to determine whether the variables are stationary or non-stationary. This article then used a fractional differencing approach to transform non-stationary into stationary variables. The Variance Inflation Factor (VIF) is also used in this paper to test for homoscedasticity. The

Pearson correlation matrix is used to examine the relationship between two variables. To study classification analysis further, the Principal Component Analysis (PCA) is utilized, which displays the categorization of sample data in the form of a PCA score plot.

4.0 RESULT AND DISCUSSION

4.1 Augmented-Dickey Fuller (ADF)

This paper involves time-series data from 19 years (2004-2022), thus the first step is to ensure all the variables are stationary data. This is because a time series' stationery can have a significant impact on its characteristics and forecasting behaviour, and failing to transform a time series to the correct type of stationary might result in erroneous conclusions (Greunen et al., 2014). Unit-root test of Augmented-Dickey Fuller is applied to all variables using STATA software, and results are summarized as follows.

Table 1: Results of unit root test Augmented Dickey-Fuller		
Variables	Probability	Results
Overnight Policy Rate	0.1117	Non-Stationary
Inflation	0.0009	Stationary
Unemployment	0.2505	Non-Stationary
External Trade	0.3801	Non-Stationary
Economic Growth	0.0022	Stationary

Results indicate variables economic growth and inflation are stationary as their p-value is less than a significant level of 0.05, meanwhile OPR, inflation, and unemployment variables are non-stationary.

4.2 Fractional Differencing Approach

Next, to transform non-stationary variables, a fractional differencing approach is applied, where the differenced form for each variable is constructed by taking the difference of their log forms. The difference is calculated as $DVar1 = Var1 - Var1_{n-1}$. Results as follows.

Table 2: Results of unit root test Augmented Dickey-Fuller (ADF) transformed data				
Variables	Probability First Differences	Results	Probability Second Differences	Results
Overnight Policy Rate	0.0069	Non-Stationary	0.0001	Stationary
Unemployment	0.0017	Stationary	-	Stationary
External Trade	0.0033	Stationary	-	Stationary

4.3 Variance Inflation Factor (VIF)

This paper tests the data for multicollinearity issues, to identify whether the independent variables in a model are correlated. Two variables are perfectly collinear if their correlation coefficient is ± 1.0 . Multicollinearity among independent variables will result in less reliable statistical inferences. A statistical test called the Variance Inflation Factor (VIF) which detects and measures the amount of collinearity in a multiple regression model. A VIF of 1 indicates that the variables are not correlated, while a VIF between 1 and 5 shows that variables are moderately correlated.

Table 3: Results of Variance Inflation Factor

Variables	VIF	1/VIF
External trade	2.23	0.4491
Inflation	2.21	0.4524
Unemployment	1.72	0.5806
Economic growth	1.50	0.6662
Mean VIF	1.92	

Based on Table 3 above, all variables are less than 5 which means that there is no presence of multicollinearity in the model.

4.4 Pearson Correlation Matrix

This test is applied to determine the relationship between two variables. The correlation coefficient shows the strength of the relationship, where -1 to 1 signifies a perfect linear relationship, above 0.8 or below -0.8 is a strong positive or negative relationship, and above 0.6 or below -0.6 is a moderate positive or negative relationship..

Results in Table 4 imply unemployment has a strong and negative relationship with OPR, with -0.8489 which means a decrease in unemployment leads to an increase in OPR. Meanwhile, inflation and economic growth have a moderate and positive relationship with OPR, suggesting an increase in inflation and economic growth caused an increase in OPR. An increase in employment contributes to an increase in demand for goods and services as consumers are willing to pay more. As the economy grows, the government will withdraw its support, thus increasing the interest rate of the monetary policy to flatten inflation (Smialek, 2022).

Table 4. Results of Pearson Correlation Matrix

Variables	Overnight Policy Rate	Inflation	Unemployment	External Trade	Economic Growth
Overnight Policy Rate	1.0000				
Inflation	0.5057	1.0000			
Unemployment	-0.8489	-0.3910	1.0000		
External Trade	0.0810	0.5320	0.0190	1.0000	
Economic Growth	0.6817	0.6094	-0.6236	0.1921	1.0000

4.5 Principal Component Analysis (PCA)

The principal component analysis (PCA) is a statistical tool for describing an extensive amount of numerical variables through components yet retaining as much statistical information as feasible despite reducing the dimensionality of a dataset (Jolliffe & Cadima, 2015; Giordani, 2018). The PCA is commonly used for classification analysis, in which the classification of sample findings is plotted in the form of a PCA score plot. According to Santos and Costa (2020), the first two PCs are sufficient to explain the majority of the variance in the dataset, hence they are used for the plot. This paper runs PCA to determine the relationships between the variables and classify the variables into their clusters. The variables that are clustered in the same group are considered to have significant relationships with each other (Hassan et al., 2022).

The PCA is used to classify the variables into clusters. A mathematical software, namely, Minitab software version 17 (Minitab Inc., Pennsylvania, USA) is utilized to perform the PCA

and analyze the data. The results are plotted in the form of a PCA score plot as shown in Figure 2.

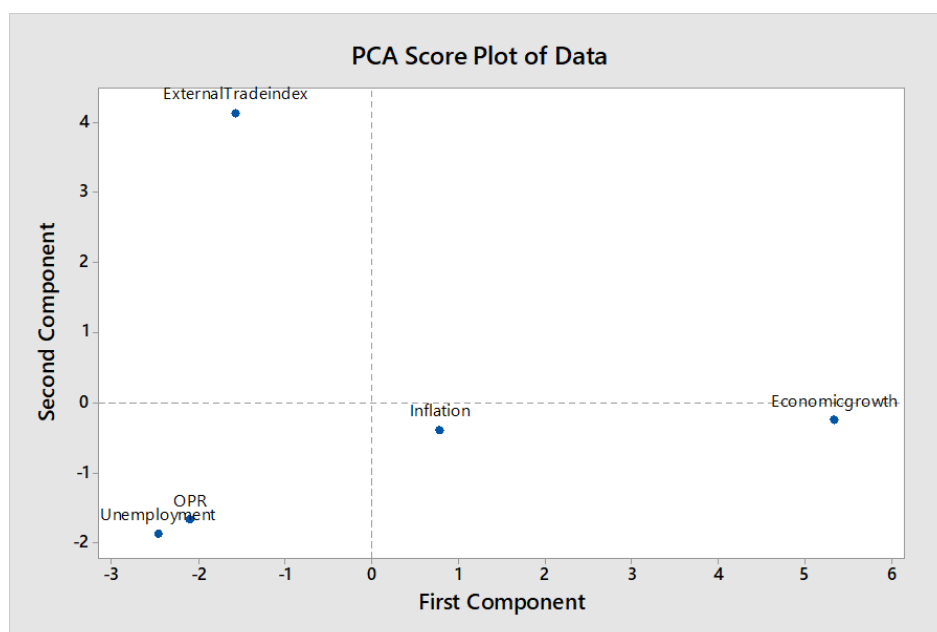


Figure 2. The PCA score plot of the data

The result of PCA coincides with the Pearson Correlation, whereby OPR and unemployment have a high correlation to each other. This finding reflects the Keynesian Theory views on the impact of macroeconomics on the country's economic outputs, where unemployment is influenced by the fluctuations of aggregate demand, but is subject to government expenditures (Keynes, 1937; Mishra, 2017). When the economy expands, the government will implement an expansionary policy by increasing spending, which will cause an increase in consumer spending as the demand for goods and services rises. As a result, the OPR will probably rise as the government will control the money circulation in the economy to prevent high inflation.

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5.0 CONCLUSION

The Malaysian Government recently announced a rise in the Overnight Policy Rate (OPR) that caused a debate among academicians, practitioners, economists, and policymakers. The Malaysian economy is slowly recovering during this endemcity, however, as the prediction of a possible rise in OPR in the near future raised concerns, particularly among households. For individuals and businesses, the concerns are on their cost of borrowing, and for economists, an increase in OPR will affect consumption spending because the Malaysian economy is dependent on private consumption. However, banking and financial institutions are delighted

to hear the news as a rise in interest rates benefits them the most as it widens banks' net profit margin.

Literature tends to focus on how macroeconomic factors impact each other. Md Isa et al. (2018) and Ha et al. (2023) studied the relationship between inflation, income, and economic factors. Many studies (Alisa, 2015; Ghafar & Masih, 2017; Zulkifli et al., 2022) focused on inflation, unemployment, and economic growth, respectively. Zaharudin and Jalil (2022) studied the impact of gross savings and final consumption expenditure on the economic growth of Malaysia, meanwhile, Trofimov and Aris (2023) examined the external trade's effect on the savings rate. However, very few studies or none investigated the impact of macroeconomic factors on OPR.

Therefore, this paper aims to determine the relationship between inflation, unemployment, economic growth, and external trade on the Overnight Policy Rate (OPR) in Malaysia. By using data from the year 2004 until 2022, Pearson Correlation Matrix results reveal that unemployment has a strong negative relationship with OPR. Additionally, Principal Component Analysis (PCA) results further enhance this finding where unemployment is a strong indicator in explaining the rise of OPR in Malaysia. The majority of research (Alisa, 2015; Ghafar & Masi, 2017) revealed a strong association between unemployment and inflation. In particular, economists predict that Bank Negara will increase its interest rate, or OPR if inflation remains high (The Star, 2023). According to Prag (1994), unemployment, inflation, and interest rates may have impacts on each other. Thus, there is a strong likelihood that unemployment and OPR are related. The findings in this paper demonstrate the strong relationship between the two factors.

This suggests a decrease in unemployment implies the economics of Malaysia are growing, thus the government will withdraw its support, raising the monetary policy interest rate to flatten inflation. The findings of this paper provide a deeper understanding for policymakers, businesses, financial institutions, and household borrowers on the impact of macroeconomic issues on Malaysia's economic stability. Combating unemployment is an intervention commonly employed in developing countries to tackle poverty; nevertheless, as the economy moves toward a more sustainable recovery path, communities particularly borrowers must grasp how the economy works. This represents Strategic Thrust 2 of the Financial Sector Blueprint 2022-2026, which aims to improve the financial well-being of households and businesses by developing resilient individuals to income shocks and enterprises to withstand unexpected financial setbacks. This is to ensure that individuals and businesses gain effectively from being involved in the financial system through loans and capital.

6.0 LIMITATIONS AND RECOMMENDATIONS

This study is limited to secondary data which is reported and available in the World Bank data source and the Department of Statistics of Malaysia. Furthermore, only five macroeconomic parameters were examined in the study. The macroeconomic variables employed in the current study, such as the Overnight Policy Rate (OPR), inflation, unemployment rate, external trade, and economic growth, could be expanded in future research. Additionally, contrasting the many types of factors and issues may be helpful in comprehending the various implications and correlations of each category.

AUTHOR CONTRIBUTIONS

Zarith Sofia Jasmi designed the research and methodology and wrote the original version of the manuscript. Nurfarhana Hassan performed the analyses and revised statistical results. Afiqah Raidah Rosli contributed to the writing of the literature review.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest in the research.

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THE RELATIONSHIP BETWEEN THE TOTAL QUALITY OF CAMPUS LIFE (TQCL) AND STUDENT ENGAGEMENT

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ABSTRACT

Total quality of campus life refers to the university environment that provide experiences to students during their studies at the university. Student engagement is an important criterion in improving student achievement, experience and as a key element of institutional success. In order to inspire students to vigorously engage in activities, universities or institutions should focus on student experience in their campus life. This study is purposively to examine the relationship between the total quality of campus life (TQCL) and student engagement. The TQCL is classified into four components namely curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities. This study involves final year undergraduate students from 20 public universities in Malaysia consisting of 4576 total number of respondents. This study employed self-administered survey for data collection. Structural Equation Modelling-Partial Least Square (SEM-PLS) was used to analyse the formative and reflective measurement model as well as structural model for the relationship between total quality of campus life and student engagement. Findings revealed that all constructs of TQCL simultaneously have a positive and significant direct relationship with student engagement.

Keywords: Total Quality of Campus Life (TQCL), Curriculum, Co-curriculum (structured), Unstructured Co-curriculum, Support Services and Facilities, Student Engagement

1.0 INTRODUCTION

University environment has become an essential characteristic of student's life because it will reflect the level of student's well-being and satisfaction within the campus atmospheres which include food, transportation, accommodation, facilities, university services and so forth (Mahmood et al., 2014). Chan (2011) found that by forming rich campus atmospheres that works simultaneously with student's expectations, universities and other institutions can provide positive learning experiences for students to be mentally active and to willingly engaged in their academic activities. Total quality of campus life comprising of curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities (Rahim & Jusoh, 2017). Curriculum aspects are referring to the quality of teaching and learning and co-curriculum (structured) aspects are referring to the activities, programmes, and learning experiences that match to academic curriculum. Unstructured co-curriculum aspects are

referring to the out-of-classroom activities and industrial training, and support services and facilities aspect are referring to the student support services, information and communication technology, library services or resources center and campus atmospheres.

Public universities and private higher education of institutions in Malaysia have a difference in terms of character and environment. A study by Romle and Shamsudin (2008) found that university students in Malaysia are more attracted in campus life and are very satisfied with the university, services and social activities being received. Support services and other facilities at the university are the main aspects that value for both students and faculty (Soon, 2014). Soon (2014) reported that facilities at public universities are well established and recent since they are receiving full funding by the government and need not concern themselves with the monetary aspects. Funding assistance, databases, and libraries are easily accessible by the students at public universities (Soon, 2014). This paired with the quality of teaching and learning as key aspects that contribute to the quality of education at the university (Sidin, 2000).

a (2007) demonstrated campus-based learning as a learning method that creates more opportunities for student engagement. Markwell (2007) stated that the effectiveness of learning environment which involves an individual's active process in learning boosts student engagement. Markwell (2007) also identified that academic staff and academicians assist in stimulating student engagement. In addition, experience outside the classroom and student activities also promote student engagement and contribute to student development (Markwell, 2007). Though, recent research showed that higher education institutions challenge more signs of disengagement rather than engagement (Kazmi, 2010; McInnis, 2001). Ahmad (2015) revealed factors that led to low student engagement such as class size, inappropriate learning environment and the lack of professional staff. Ahmad (2015) also mentioned that most lecturers disregard the necessity to create a safe learning environment for their students. Concisely, the better the experience students received from the campus life, the higher the student engagement, or vice versa.

Hence, the main objective of this study is to examine the relationship between the total quality of campus life (TQCL) consisting of curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities and student engagement among final year undergraduate students at public universities in Malaysia.

2.0 LITERATURE REVIEW

Student engagement is the integration interaction between students and institution (Cressy, 2011). Student engagement connects student behavior and effective educational practices. Curriculum, co-curriculum (structured), unstructured co-curriculum, as well as support services and facilities have been devised as the dimensions of TQCL. The overall dimension of quality of campus life is predictable to have a significant direct relationship with student engagement. Thus, literature review touches on the relationship between TQCL and student engagement.

2.1 Relationship between Curriculum and Student Engagement

Study by Shernoff et al. (2014) showed that the main characteristics of optimal learning environment is thought to be a complex environment when combining environmental challenge and environmental support. A complex environment of optimal learning environment was found to be a positive predictor relationship with student engagement. The role of lecturers in delivering material, providing directions, and managing time are the examples of optimal learning environment that slightly related to engagement (Shernoff et al., 2014). Lee (2014) also highlighted that task characteristics, classroom's goal structure and classroom's autonomy orientation, action-learning, the integration of student-oriented-learning, problem-

based learning, and constructivist learning are promoting the students' cognitive engagement. Similarly, study by Soo-Cheng et al., (2020) highlighted that the project-based learning increased the level of student engagement in the learning process. Student engagement in project-based learning derived the development of student's cognitive, affective and psychomotor domains with the course learning outcomes.

Apart from that, Herrmann (2013) explored the impact of cooperative learning on student engagement. Findings of the study revealed that cooperative learning which was implemented in tutorial increases student engagement in class, but did not give any changes to the measurement of student learning approaches. Study by Azyan et al. (2021) has implementing buddy system programme among civil engineering students. This buddy system is a peer monitoring assistance system consisting of a group of individuals (peers) works in a collaborative team to achieve the desired results. The buddy system is one type of cooperative learning where it provides positive impact such as academic performance, relations with peers and teachers as well as increasing student engagement in class.

Furthermore, study by Mustapha et al. (2010) found that there were four most influential factors that promote students to engage in which positive traits of lecturers ranked the most influential factor. This was followed by positive classmates' traits, engaging class content and conducive physical classroom. Moreover, students revealed that lecturer welcoming active participation of students in the class. Lecturer's positive traits such as understanding the students make students feel comfortable to share their views and ideas as well as lecturers who have a good sense of humour make learning fun encouraging students to engage.

In addition, Zhao and Kuh (2004) and Yancy et al. (2008) reviewed the relationship between learning communities and their impact on student engagement. According to Zhao and Kuh (2004), learning communities give students a form of learning experience in which students are able to apply the lessons learned in other learning or courses. Most learning communities combine active and collaborative learning activities that encourage participation in complementary academic and social activities that extend outside the classroom. The study found that learning communities involving the participation of students is uniformly and positively associated with student academic performance, engagement in educationally purposeful activities, the benefits relevant with college attendance, and overall satisfaction with college experience (Zhao and Kuh, 2004).

Similarly, study by Yancy et al. (2008) hypothesized that educational activities through curriculum has an impact on the progress in fostering student engagement. Results found that the relationship between learning communities and student engagement was positive where student participation in learning community programmes present students with good student outcomes either in academic progress, student satisfaction, and student engagement as well.

The above discussion has given the impression that curriculum has a positive relationship with student engagement. Therefore, hypothesis 1a is deduced as follow;

H1a: There is a significant relationship between curriculum and student engagement

2.2 Relationship between Co-curriculum (Structured) and Student Engagement

Co-curriculum activities can be beneficial to students as students can learn something other than what they have learned inside the classroom (Shamsudin et al., 2014). Co-curriculum activities that promote student interaction with their peers can influence student's personal and social learning (Strayhorn, 2008). Light (2001) reported that learning experiences outside the classroom, especially in residential environment and extracurricular activities such as art influence student engagement. Light (2001) proven that positive out-of-

classroom experience can enhance student engagement and integration in higher education, increase student satisfaction and retention.

Meanwhile, Krause (2007) investigated the nature of student's out-of-classroom peer interactions in which the study provided an understanding of the changing nature of student experience in the context of outside the classroom. Krause (2007) explained that out-of-classroom experience covers various context including formal and non-formal interactions with peers and faculty, campus involvement in cultural events, sports and social events, as well as co-curricular (structured) activities like orientation and programmes. Meanwhile, Kovac and Beck (1997) proven that recreation sports increased the level of student engagement and satisfaction in all aspects of campus life. Students have stated that engagement in recreational sports provide many benefits such as feeling fit, a sense of achievement, reducing stress and strengthen their physical fitness.

Besides that, the pressures from industrial sector and the growing demand to produce competent graduates with the right knowledge, attitudes and skills have forced universities and higher education of institutions to create industrial training programs as one of the requirements that must be fulfilled by students before graduating (Karunaratne & Perera, 2015). Industrial training programmes have an impact on student career development and advancement in which students have an opportunity to experience how the theory works in the real life (Renganathan et al., 2012; Karunaratne & Perera, 2015)

According to Renganathan et al. (2012), generally, the goal of an industrial training programme is to combine student learning from acquired knowledge from classroom-based environment with real-life working environment. Hence, industrial training programmes encourage more participation, student-centered approach, such as putting emphasis on direct engagement, enabling learning activities and building learning by students (Lee et al., 2000). Miller et al., (2011) also supported where the study investigated the effects of high impact learning experiences on student engagement. There are four types of learning experiences namely undergraduate research, learning communities, internships or industrial training and service learning. The study found that undergraduate research and internships or industrial training encourage greater student engagement.

The discussion above has given the impression that co-curriculum (structured) has a positive relationship with student engagement. Therefore, hypothesis 1b is deduced as follows;

H1b: There is a significant relationship between co-curriculum (structured) and student engagement

2.3 Relationship between Unstructured Co-curriculum and Student Engagement

The unstructured co-curriculum is part of the non-formal curriculum which consists of visits to other institutions, exchange of school or university students, voluntary activities and projects outside of the school or universities (Birzea et al., 2004). The unstructured co-curriculum activities are carried out after and during school or university programmes, either within or outside the university building (Keser, et al., 2011).

Student volunteering is any unstructured co-curriculum activity where students voluntarily spend their time, effort and resources to benefit their community, their environment, or other individuals (Gupta et al., 2013). Student volunteering is an important part of student engagement and can be nurtured at the university level (Darwen & Rannard, 2011). Student volunteering is often organized internally through the university student unions and organisations, or externally through the university-related community groups and social action initiatives (Gupta et al., 2013). According to Gupta et al. (2013), creating interdisciplinary

programs, providing opportunities for leadership, creating meaningfully beneficial experiences, recognising and rewarding, and being socially responsive were among five characteristics for the success of student engagement and volunteering programs.

Newswander and Borrego (2009) mentioned that student engagement and volunteerism can be enhanced when various students and organizations are involved. Meanwhile, Brown (2008) stated that programs and universities need to recognize the wisdom of cultivating the culture of engagement and leadership in the student experience, and thus allow students to exchange their campuses and develop their own leadership skills. In addition, student engagement and volunteering programs is meaningful and important to benefit students. Through this volunteer program, students can gain experience in the real world, motivate and empower themselves, reinforce their learning and enable them to gain a deeper understanding of how their courses and skills can be applied in a wider community. Besides that, Barkley (2009) noted that recognition and reward as a motivation and encouragement factor for students to participate in volunteering program which acts as a stepping-stone for future progress.

Other than that, field trip or fieldwork is a study tour conducted outside of classroom to gain immediate experience from a natural environment (Instructional Strategies Online, 2013). This field trip is organized to increase student's interest in learning, to collect data, resources or materials, or objects for classroom learning, as well as to observe objects or phenomena that are unlikely to be reflected or shown in the classroom. Through field trip, students have the opportunity to first-hand information or live experience on people, places and things for continuing learning experiences (Instructional Strategies Online, 2013). Knutson (2016) added that field trip or field work is known as an important learning experience where students share social experiences to discover and explore new things in a genuine environment.

Furthermore, study by Kisiel (2005) found that field trip give exposure to students to new experiences and enhance student engagement and interest in courses regardless of prior interest in a topic. According to Knutson (2016), field trip can be designed to support student's learning more effectively and explore in the most meaningful ways personally.

Besides that, residential colleges also play an important role in most of the world's best universities (Daniel, 2008). According to Coates and Edwards (2009), living in a university-based residence will increase the level of student engagement and student educational outcomes. Coates and Edwards (2009) stated that programs hosted by residential colleges offer a variety of enriching experiences that enhances formal curriculum, and engage students in college social life. Coates and Edwards (2009) found that students living in campus provided a marginal positive contribution to student engagement. Gellin (2003) supported that living in a residence college is an important environmental factor related to increased student engagement.

The above discussion has provided the impression that unstructured co-curriculum has a positive relationship with student engagement. Therefore, hypothesis 1c can be deduced as;

H1c: There is a significant relationship between unstructured co-curriculum and student engagement

2.4 Relationship between support services and facilities and Student Engagement

Studies by Kuh and Gonyea (2003) examined the role of academic libraries to promote student engagement in learning. The study investigated the experiences of undergraduate students with academic libraries. The study found that the use of library to read or study, asking for help from a librarian, reading in library's storage or reference section, as well as using an index or database are the four most significant library experiences that influence

student engagement. The quality of student interaction with librarians has increased and this suggests that librarians are becoming more apparent and accessible to a significant number of students.

Ahmad (2015) introduced, discussed and developed a strategy for promoting student engagement at public university in Kurdistan region. The study has touched the quality of facilities available at the university, learning environment and lecturers' ability as factors related to student performance. According to Ahmad (2015), one approach to improve student engagement is to enhance the quality of interaction between faculty members and students. The role of faculty and creating unique learning environment as key variables that directly influence student engagement. A well-equipped classroom is a factor for positive learning outcome in which students would feel relaxed either mentally or physically. The study found that, by providing complete and best equipment such as facilities and ample spaces in campus and also access to gain resources from the library system may increase active student engagement.

Recreational facilities are defined as any facility that provides at least one physical activity opportunity to individuals especially students to engage in sports such as netball, gymnastics and so forth (Baker et al., 2008). Recreational facilities available at universities are important to avoid students being inactive physically. Reed (2007) explained that the design of university infrastructure including the location of recreational physical activity facilities can be linked to the physical activity pattern of university students. Baker et al. (2008) added that the distance of recreational facilities has found to affect physical activity in a positive way. This shows that recreational facilities can encourage student to actively engage in co-curriculum activities.

In addition, a study by Huesman et al. (2009) found that students who used campus recreational facilities can also develop communities within the facility (Huesman, et al., 2009). Huesman et al. (2009) mentioned that campus recreational facilities are important as they not only offer opportunity for regular physical activity, but also provide a safe place to engage with other students and take a rest from academic studies. The main reasons the campus recreation facilities were created is as a place for students, staff and community to have fun. Students feel a sense of belonging with the facilities as they have opportunity to create social interactions and these feelings are often associated with the institution (Hall, 2006).

The above discussion has given the impression that support services and facilities have a positive relationship with student engagement. Therefore, hypothesis 1d can be deduced as follows;

H1d: There is a significant relationship between support services and facilities and student engagement

2.5 The influence of all components of Total Quality of Campus Life (TQCL) towards student engagement

Apart from efforts to understand the relationship of independent variables individually with student engagement obtained, the relationship in the aggregate or collectively are also identified in order to get a broader and comprehensive overview. Mutual influences of all variables of total quality of campus life (TQCL) to student engagement refer to the combined effect of all four variables of TQCL to student engagement at a time. This means that, all variables of TQCL namely curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities are hypothesized as independent variables which are expected to have a significant direct relationship with student engagement.

Therefore, hypothesis 1 for this study can be deduced as follows;

H1: Curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities simultaneously have a significant relationship with student engagement

3.0 RESEARCH METHODOLOGY

This study mainly focuses on education sector in Malaysia especially on public institution of Higher Education Institution (HEI). The targeted population of this study involves all final year undergraduate students from 20 public universities in Malaysia. These students also divided according to faculties or schools. The estimated number of total populations for final year undergraduate students based on the latest statistics report of Bachelor Degree graduates published by the Ministry of Education in year 2015 were 68,558 respondents. The total number of estimated sample size determined based on Krejcie and Morgan's rule (1970) for this study were 6,446 final year undergraduate students. A stratified random sampling technique was used to acquire a random sample.

A set of questionnaires was constructed by the researcher is based on the literature review, and the validity and reliability of the questionnaire were conducted before being distributed to the respondents. The questionnaire divided into three main sections which are section A, B and C. Section A is the background of the respondents consisting of gender, age, ethnicity, and field of study. Section B is the dimensions of the total quality of campus life (TQCL) which adapted from the previous studies which covers 104 items consisting of four dimensions namely curriculum, co-curriculum (structured), unstructured co-curriculum, as well as support services and facilities. Section C is student engagement where this study adapted the questionnaire from Jaafar et al. (2012) whom developed Malaysian Student Learning Involvement Scale (MUSLIS). The MUSLIS measure student engagement particularly in the Malaysian university context. The MUSLIS contains of 24 question items comprising of four construct items which are student academic engagement, student engagement with academic staff, student engagement with peers and student engagement with community.

Pilot study was carried out to check the clarity of the items in the questionnaires that have been assembled. Data collected from pilot study are then analyzed by using Cronbach's Alpha reliability test to certify that the instruments used were reliable and substantial for further analysis. The values of Cronbach's alpha reliability for independent variables, namely curriculum, co-curriculum (structured), unstructured co-curriculum and support services and facilities were 0.944, 0.937, 0.917, and 0.958. Total reliability values of the independent variables comprising of 104 items were 0.983. Cronbach's alpha reliability values for dependent variables, namely student academic engagement, student engagement with academic staff, student engagement with peers and student engagement with community were 0.866, 0.914, 0.819 and 0.911.

This study used face-to-face method as an administrative method of questionnaire. After the process of data collection is completed and the questionnaires are returned to the researcher, the data are then analysed by using Structural Equation Modelling-Partial Least Square (SEM-PLS). The SEM-PLS software is used to analyze the relationship between the total quality of campus life (TQCL) and student engagement among final year undergraduate students at public universities in Malaysia. The SmartPLS 3.0 software were used to analyze formative and reflective measurement model.

4.0 DATA ANALYSIS

The structural model assessment is to find out the direct effect or direct relationships between independent variables and dependent variable. This study analyses the relationship between

the TQCL consisting of curriculum, co-curriculum (structured), unstructured co-curriculum, and support services and facilities and student engagement. This study wants to examine if there is any significant relationship between the TQCL and student engagement. Hypotheses 1a to 1d refer to the first group of hypotheses. Table 1 shows the results of hypotheses testing 1 (direct effects).

Table 1: Results of the Predictive Relevance (Q^2)

Research Hypotheses	Relationship	Path coefficient (β)	T value	P value
H1a	C $\rightarrow$ SE	0.135	6.401	0.000***
H1b	SCC $\rightarrow$ SE	0.117	5.078	0.000***
H1c	UCC $\rightarrow$ SE	0.127	6.783	0.000***
H1d	SSF $\rightarrow$ SE	0.397	18.974	0.000***
H1	TQCL $\rightarrow$ SE	0.715	87.804	0.000***

Note: C=Curriculum, SCC=Structured co-curriculum, UCC=Unstructured co-curriculum, SSF=Support services and facilities, TQCL=Total quality of campus life, SE=Student engagement, ($p, < 0.01$ ***)

The result shows that all hypotheses 1 (H1a to H1d) has a positive relationship where the path coefficient are more than zero. Results also shows that t-value for hypotheses 1 (H1a, H1b, H1c, H1d) were significant at $p < 0.01$. The curriculum was positively and significantly related ($\beta = 0.135$, $t = 6.401$, $p < 0.01$) to student engagement. Co-curriculum (structured) and unstructured co-curriculum also were positively and significantly related ($\beta = 0.117$, $t = 5.078$, $p < 0.01$), ($\beta = 0.127$, $t = 6.783$, $p < 0.01$) to student engagement. The relationship between support services and facilities was positive and significant to student engagement ($\beta = 0.397$, $t = 18.974$, $p < 0.01$). Finally, the TQCL which consisted of curriculum, co-curriculum (structured), unstructured co-curriculum and support services and facilities simultaneously have a positive and significant direct relationship with student engagement (H1) ($\beta = 0.715$, $t = 87.804$, $p < 0.1$). Therefore, results indicated that H1a, H1b, H1c, H1d and H1 were supported. The path diagram for the first order of the direct effect of curriculum, co-curriculum (structured), unstructured co-curriculum and support services and facilities constructs to student engagement are shown in Figure 1.

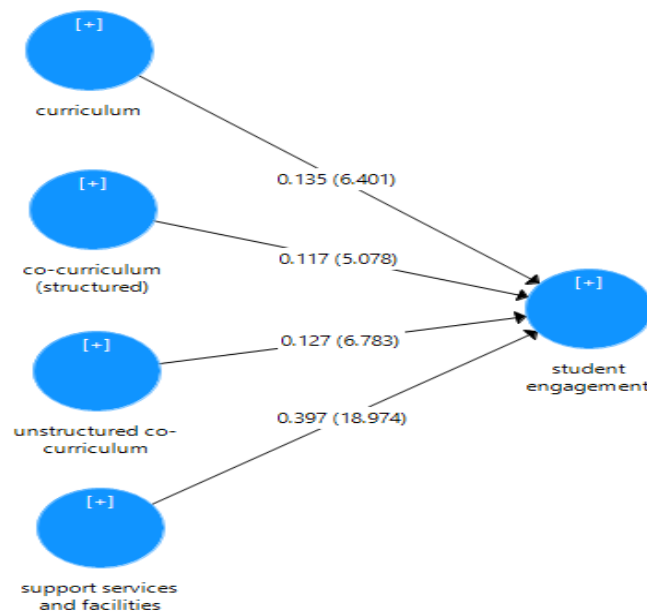


Figure 1: Path Diagram for the First Order of Direct Effect between Curriculum, Co-curriculum (structured), Unstructured co-curriculum and Support Services and Facilities Constructs to Student Engagement

Meanwhile, Figure 2 shows the path diagram for the second order of direct effect of the overall dimensions of TQCL and student engagement

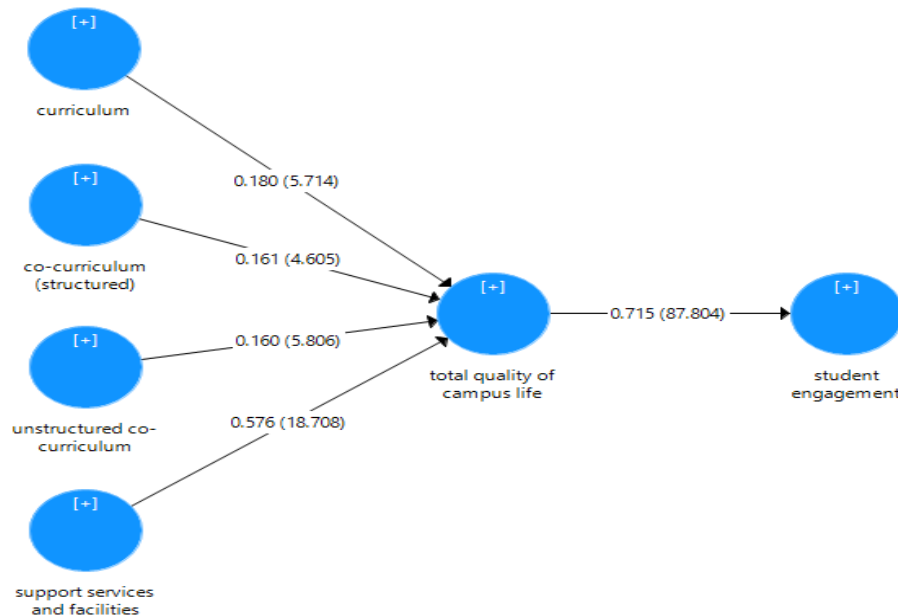


Figure 2: Path Diagram for the Second Order of Direct Effect between the Dimensions of TQCL and student engagement

The overall summary of the hypotheses testing H1 (H1a-H1d) are shown in Table 2.

Table 2: Results of Hypotheses Testing H1 (H1a-H1d)

Hypotheses Statement	Relationship	Results
(H1a) There is a significant relationship between curriculum and student engagement	$C \rightarrow SE$	Supported
(H1b) There is a significant relationship between co-curriculum (structured) and student engagement	$SCC \rightarrow SE$	Supported
(H1c) There is a significant relationship between unstructured co-curriculum and student engagement	$UCC \rightarrow SE$	Supported
(H1d) There is a significant relationship between support services and facilities and student engagement	$SSF \rightarrow SE$	Supported
(H1) Curriculum, co-curriculum (structured), unstructured co-curriculum and support services and facilities simultaneously have a significant direct relationship with student engagement	$TQCL \rightarrow SE$	Supported

5.0 CONCLUSION

Findings of the study revealed that all dimensions or constructs of TQCL consisting of curriculum, co-curriculum (structured), unstructured co-curriculum and support services and facilities aspects had a significant relationship with student engagement. The relationship between TQCL and student engagement were positive and significant at ($\beta = 0.724$, $p < 0.1$, $r^2 = 0.524$).

Markwell (2007) touched the quality of campus life in the context of learning environment and learning communities. Those aspects of quality of campus life then affect student engagement. For example, the effectiveness of learning environment in which it involves active process of individual or students have increased the level of student engagement. According to Markwell (2007), the best learning happens when there is an interaction between students and their peers and lecturers.

Lee (2014) also supported the finding by stating that learning activities have a positive relationship with student engagement. For example, the effectiveness of lecturers in cognitive strategies, the use of self-regulated strategies, and the assistance of students on assignment had a positive relationship with student engagement. In addition, lecturer's behaviour that plays a role in student's learning process also found to influence student participation or engagement. Besides that, student's acceptance of the classroom goal structure was found to be a significant factor in the context of classroom which leads to differences in student's cognitive engagement.

In addition, co-curriculum aspects also have a positive relationship with student engagement whereby Shulruf et al. (2008) found that extracurricular activities have an important role in developing student engagement. Rubin et al. (2002) supported by stating that extracurricular activities provide opportunities outside of the classroom for students to get engaged with other students, whereby it can create a sense of belonging and strengthen the connection among student and school or university.

Furthermore, unstructured co-curriculum aspects have a positive relationship with student engagement where Moore (2013) stated that living-learning programs affect to student engagement. Zhao and Kuh (2004) supported by mentioning that residential learning community adds social interaction to the structure and helps students to reach higher engagement and persistence rates, and also academic results.

Besides that, Ahmad (2015) also supported that the availability of high quality facilities at the universities such as well-equipped classrooms can enhance student engagement. Kuh and Gonyea (2003) also supported by stating that library experiences such as student interaction with librarians and the access to the library as a place to read, study, discuss and find sources also increase student engagement.

Through this study, it can be summarized that total quality of campus life (TQCL) comprising of curriculum, co-curriculum (structured) and unstructured co-curriculum as well as support services and facilities have a significant influence to student engagement. The implication of the study is that students are more engaged when the experiences received within the campus atmosphere are satisfactory, the accessibility to use the facilities, as well as the activities in the residential and learning make them feel actively engaged in the campus or university. This study recommended university administrator to play an important role to provide the overall quality of campus life to students in order to increase the level of student engagement at university.

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ECONOMIC UNCERTAINTY AND GOLD AS SAFE-HAVEN INVESTMENT DURING THE COVID-19 PANDEMIC IN MALAYSIA

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ABSTRACT

The price of gold is frequently perceived as a safe-haven asset, but it is not immune to economic uncertainty. The study examines the daily relationship between gold prices, exchange rates, crude oil prices, and the KLCI market index in Malaysia within the time period of March 2020 to March 2021. The new numbers of COVID-19 cases and deaths have also been included as exploratory variables due to their significant impact on the economic crisis. Using the Ordinary Least Squares method, the results show that the exchange rate, the crude oil price, and the number of new COVID-19 cases have a significant negative effect on the price of gold, while the stock market index has a significant positive effect. In meanwhile, the results failed to reject the null hypothesis, indicating that there is no relationship between the number of new COVID-19 deaths and the price of gold.

Keywords: Gold Price, COVID-19, Economic Forces, Stock Market Index

1.0 INTRODUCTION

Investment in gold has always been considered a safe-haven in times of financial crisis according to Baur and McDermott (2010), but there is scant evidence to support this notion (Chemkha, et al., 2021; Ghazali et al., 2013). During the pandemic outbreak, according to monthly gold price observations in Malaysia from January 2020 to April 2021, the price rises steadily until August 2020, falls to an estimated low of RM7,06,000 per troy ounce in March 2021, and then begins to rise again in April 2021. (World Bank, 2022). This pattern demonstrates that gold prices are not immune to uncertainty during the global spread of COVID-19. As a result, stock markets around the world have adjusted to account for increased risks and shifting market linkages (Zhang et al., 2020).

When determining gold prices, both internal and external factors must be taken into account. For instance, as the US stock market reached four circuit breakers in the span of two weeks, crude oil prices plummeted below \$20 per barrel, a record low since the turn of the millennium. West Texas Intermediate (WTI) crude futures closed at \$37.63 per barrel on April

20, 2020, which was unexpected. This is an unprecedented event with profound implications for practitioners and policymakers. Additionally, the MSCI-US Index and WTI Crude Oil Commodity futures suffered devastating losses since February 2020 and have traded in very similar range trends during this period.

Faced with significant losses, the need to find a safe-haven has resurfaced for both practitioners and researchers. The question is whether their ability to protect their investments remains in the current crisis. Therefore, it is urgent to reassess the role of traditional safe havens during this pandemic. The common perception is that safe-haven investments are not correlated or negatively correlated with other investments and portfolios during turbulent market times (Baur & Lucey, 2010; Bouri et al., 2020). This definition makes sense because safe investments help investors build portfolios that mitigate downside risk in the market. In this paper, the authors examine the effect of specific economic indicators on the gold price under the pandemic conditions in Malaysia. The paper is structured as follows: Section 2 reviews the related literature on studying gold prices. Section 3 discusses the main econometric methods applied. Empirical results are presented in Section 4. The conclusion to the findings is given in Section 5.

2.0 REVIEW OF LITERATURE

Studies on the relationship between gold and other economic indicators have been conducted for decades. The dynamic nature of these variables has led to the development of many more interesting results. Gold is one of the most traded commodities in the world (Singh & Sharma, 2018). Gold is one of the precious metals that is considered a safe asset for long-term storage because it has good durability (Robiyanto et al., 2017). It can also be an effective diversification tool in a portfolio to reduce risk (Tuna, 2019). Toraman (2019), finds that USD has the highest correlation coefficient with negative and larger coefficients. It can be seen as a negative relationship between the return of the dollar and the return of gold. Harmston (1998) examined the relationship between purchasing power parity in the UK, US, France, Germany and Japan and the volatility of gold prices from 1870 to 1996. The results show that gold prices fluctuate due to national and global crises, but gold retains its purchasing power as a store of value.

Arfaoui and Rejeb (2017) found a negative relationship between oil prices and stock prices, but oil prices were positively and significantly affected by gold and USD. Employing the VARMA-GARCH model and its asymmetric variants, the estimated results show statistically significant bidirectional returns and volatility spillovers between the gold and crude oil returns (Salisu, Vo & Lawal, 2020). Gold cannot be categorized as a safe investment asset during the COVID-19 economic crisis. Kumar (2014) showed that there are different positive and even negative dynamic correlations between stocks and gold during times of crisis in India, thus making gold an excellent instrument for multi portfolio diversification. Tuna (2019) believes that there is a weak negative correlation between the stock market and gold, so gold can become an effective safe-haven channel and diversify investment portfolio in case the stock market has a negative impact in times of crisis. Atri et al. (2021) used dynamics modeling like the ARDL approach, which takes time dynamics (lag) into account in explaining their variables to improve predictions of news influence, panic, and media of COVID-19 to the price of gold. The authors point out that gold is less sensitive to "bad news". In fact, the price of gold reacts positively to deaths in the short term and new infections in the long term. The authors further conclude that the impact of new COVID-19 infections on gold prices depends on whether the disease is an epidemic or a pandemic. Salisu et al. (2020) calculated a COVID-19 Global Fear Index (GFI) relying on two factors: reported cases and deaths. They tested the index's predictive ability to

determine price returns for metals (like gold) and agricultural commodities. The results show a positive relationship between the fear index and commodity price returns.

3.0 METHODS

The secondary data of daily exchange rate, crude oil price, and KLCI market index were downloaded from the Bloomberg website while the daily new number of COVID-19 cases and deaths were collected from the Ministry of Health Malaysia website for the period of March 18, 2020, and March 17, 2021, with 228 observations. The dependent variable is the gold price in Malaysia, while the independent variables are the exchange rate (RM/USD), the crude oil price in Malaysia, the KLCI market index, the new number of COVID-19 cases, and the new number of COVID-19 deaths in Malaysia.

The Ordinary Least Squares (OLS) model can be written as Eq. (1).

$$GP_t = \beta_0 + \beta_1 FX_t + \beta_2 OIL_t + \beta_3 KLCI_t + \beta_4 C19N_t + \beta_5 C19D_t + \varepsilon_t \quad (1)$$

Where, GP is the gold price in Malaysia, FX is the exchange rate (RM/USD), OIL is the crude oil price, KLCI is the KLCI market index, C19N is the new number COVID-19 cases, C19D is the new number COVID-19 deaths β_i is the coefficient of each variable, ε is an error term, and t is time.

4.0 RESULTS AND DISCUSSION

Table 1 shows the findings of a summary statistical analysis of 228 observations. The mean of the gold price as a dependent variable is 244.2734, with a standard deviation of 11.8871. The KLCI had the highest mean ($\mu=1530.9750$) with a standard deviation of 91.7129, while C19D had the lowest mean ($\mu=3.5526$) with a standard deviation of 4.9296. With the exception of FX, the data in this study are leptokurtic ($CK>3$) which implies that the data has a higher peak and a fat tail distribution. Since the number of new cases (C19N) and deaths (C19D) are difficult to predict, higher kurtosis values for these two indicate that the data is likely to be abnormal. This issue later will be ignored because the sole purpose of this study is to examine the relationship, and under the OLS, the assumption requiring a normal distribution only applies to the residuals and not to the independent variables. Further, the skewness value indicates that all means are positively skewed, with the exception of the KLCI; with a value greater than one ($CS>1$), which indicates that the distribution is highly skewed to the right for C19N and C19D, and less than one ($CS1$), which indicates that the distribution is asymmetrical.

Next, a correlation analysis was then performed to test the relationship between variables. The correlation coefficient results show that, with the exception of the KLCI index ($\rho=0.2463^{***}$), all of the independent variables; FX ($\rho=-0.1105^*$), OIL ($\rho=-0.1105^{***}$), C19N ($\rho=-0.2831^{***}$), C19D ($\rho=-0.2979^{***}$), are significant and have a negative correlation with the gold price. This significant relationship indicates that all independent variables, albeit at a weaker level of strength (which is less than 0.5), have a relationship with the dependent variable.

Table 1 Descriptive Statistics

Variable	N	Mean	Std. Dev.	Skewness	Kurtosis
GP	228	244.2734	11.8871	0.1031	3.0614
FX	228	4.1817	0.1129	0.3345	1.8795
OIL	228	44.5936	10.9725	0.1902	3.1017
KLCI	228	1530.9750	91.7129	-1.0035	3.5678
C19N	228	882.3596	1153.132	1.4383	4.4910
C19D	228	3.5526	4.9296	1.9731	7.0195

Notes: GP indicates the gold price, FX indicates exchange rate, OIL indicates crude oil price, KLCI indicates KLCI market index, C19N indicates new COVID-19 cases and C19D indicates new COVID-19 deaths

Table 2 exhibits that the gold price is significantly and negatively affected by the exchange rate. This result confirms the findings of many studies in the literature. Toraman et al. (2011) also explored a strong and negative relationship between gold prices and the USA exchange rate. In addition, Ozturk and CAVDAR (2021) also revealed for India that the exchange value of the US Dollar is a key factor explaining the volatilities in gold prices. Further, Yaqoob and Iqbal (2021) found a long-run relationship between precious metals and exchange rates. According to Table 2 also, the crude oil price has a significant negative effect on the gold price in Malaysia. This outcome is partly consistent with a study by Salisu et al. (2020). Employing the asymmetric VARMA-GARCH model in their study and using daily data from January 2016 to August 2020, the authors found that the own shocks for the gold and crude oil returns are positive and statistically significant both before and during the pandemic period. On the contrary, the signs are interchanged for the crude oil conditional volatility response to lagged conditional variance in the gold market, with a negative response before the pandemic changing to positive during the outbreak of COVID-19.

Relating the gold price to the COVID-19 cases, Gautam et al. (2022) in their study using the Granger causality test revealed that gold price had a significant response to increasing COVID-19 cases. In another study using the ARDL approach over the period of January 23, 2020, to June 23, 2020, Atri et al. (2021) found that COVID-19 new infections, deaths, and media coverage have positive effects on the gold price. However, the results in Table 2 contradict the previous findings, where the new COVID-19 cases in Malaysia are showing a significant but negative effect on the gold price, while the new COVID-19 deaths revealed an insignificant effect. Finally, Table 2 reveals that the KLCI stock market index is found to have a significant positive effect on the gold price. This result corroborates the findings of Syahri and Robiyanto (2020) when adopting the DCC-GARCH method, whereby they concluded that the dynamic correlation between the Indonesian Composite Stock Price Index (CSPI) and gold is weak and positive. However, the results of quantile regression indicated that there is an insignificant relationship between the gold price and the total stock price index of the Iran stock market in all its deciles (Zeinedini et al., 2022).

Table 2 Ordinary Least Squares with gold price (GP) as the dependent variable

Variable	Coefficient	Std. Error	t-statistic	Probability
C	471.7483	64.5077	7.3131	0.0000
FX	-70.1753	12.1663	-5.7680	0.0000
OIL	-0.7217	0.1175	-6.1430	0.0000
KLCI	0.0674	0.0135	4.9945	0.0000
C19N	-0.0061	0.0011	-5.4524	0.0000
C19D	0.1018	0.2201	0.4628	0.6440

Notes: C indicates constant, FX indicates exchange rate, OIL indicates crude oil price, KLCI indicates KLCI market index, C19N indicates new COVID-19 cases and C19D indicates new COVID-19 deaths; the test was conducted at a 5% level of significance.

5.0 CONCLUSION

This study examines the relationship between exchange rates, crude oil prices, the KLCI market index and new COVID-19 cases and deaths using daily data during the pandemic period in Malaysia from March 18, 2020, to March 17, 2021. Empirical results provide substantial evidence of the impact of the COVID-19 pandemic on commodity prices. The results show that gold prices are negatively and significantly affected by exchange rates, crude oil prices and new cases of COVID-19. However, the KLCI market index was found to have a significant positive impact on gold prices while the new deaths from COVID19 showed an insignificant result. It is suggested that future research include the number of COVID-19 cases and deaths as moderators rather than independent variables. The effect of including or excluding these two variables will be more significant and more valuable. To end, this study can be useful as a reference for investors to observe the gold variable and its related factors when investing in precious metals.

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DETERMINANTS OF THE COST OF LIVING IN MALAYSIA

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ABSTRACT

Malaysia is a developing nation that has enjoyed economic growth for a few decades. Nevertheless, the previous years, starting from 2021, showed an extreme rise in the cost of goods and services for basic needs such as food, clothing, housing, and transportation. This is unavoidable for Malaysian households since the incidence is also a global phenomenon. The rising cost of living will alleviate the standard of living for Malaysian households. In Malaysia, perceived increases in the cost of living have been a subject of ongoing debate and discussion, despite the country's current low and unstable inflation rate. This research aims to investigate the determinants of the cost of living in Malaysia. Thus, it is important to know the factors influencing the cost of living and by performing this research, a good policy with a good solution will be suggested. This research used annual secondary data from 1990 to 2022 by applying multiple linear regression analysis. The result shows that there are three variables significant to the cost of living, which are the housing price index, net trade, and subsidies. The research proposes that policymakers and the government pay attention to the basic needs and expenditures of Malaysian households.

Keywords: cost of living, net trade, housing price index, government expenditure

1.0 INTRODUCTION

In the Asian Pacific region, Malaysia is considered a developing country. Malaysians have been enjoying high economic growth without sensing the cost of living before the market price showed a cumulative trend from year to year. The rising price of goods and services can affect the well-being of households due to the rising cost of living. According to Konüs (1939), the cost of living is the minimum amount of expenditure required by a family in each period to achieve the standard of living desired by the household. The cost of living is the amount of money needed to cover basic expenses such as food, healthcare, housing, and transportation. Malaysians are having a difficult time making ends meet because of the rising cost of living, which is having an impact on the affordability of essential goods and services such as food, housing, transit, education, and healthcare. Additionally, Saari et al. (2013) conducted research on the cost of living of households in peninsular Malaysia and found that the increase in electricity charges and petrol prices affected the cost of housing, food, and transportation expenses.

In general, the rising cost of living causes a change in the standard of living. The standard of living measures the quality of life, or the level of material prosperity enjoyed by individuals (Bank Negara Malaysia, 2015). On the other hand, the cost of living is the cost required to maintain some minimum basic needs and wants. Bank Negara Malaysia (2015) defines the cost of living as the amount of expenditure on goods and services incurred by households, including their financial obligations, to maintain a certain standard of living. Malaysia has no official cost of living index; thus, the best proxy is the Consumer Price Index (CPI). According to Wahab et al. (2018), the Consumer Price Index (CPI) is an indicator to determine the rising price and cost of living simultaneously, assuming there is no significant difference in the pattern of household spending. Based on the Department of Statistics Malaysia (DOSM) 2019, every quarter, Malaysia's inflation rate increases by 0.6 percent compared to the fourth quarter of 2022. Every month, inflation increased by 0.1 percent in March 2023 (February 2022: 0.2%). Meanwhile, core inflation, which measures changes in the prices of all goods and services, excluding volatile prices of items for fresh food as well as administered prices of goods by the government, remained high at 3.8 percent (February 2023: 3.9%, DOSM).

The first indicator to measure the cost of living is the Housing Price Index (HPI). The housing price index is used to differentiate the changes in living costs from one year to another by comparing the average price of a basket of goods between two periods. The HPI also indicates how much the house price has changed over time. According to The Deputy Finance Minister (2011), housing prices in Malaysia increased by up to 20 percent per year after 2007 on average. Malaysia experienced a dramatic increase in housing prices from 2009 until now. The increase in housing prices will affect the ability of households to demand debt and repay the debt. The second indicator is the exchange rate. The rising cost of living is also caused by the increase in the price of imported goods and services. It happens when the economy faces changes in foreign exchange rates and degree of economic openness. The third indicator is trade openness. According to the study done by Jalil and Zaharudin (2022), it concludes that macroeconomic indicators such as trade openness do not have any influence on economic growth, making the impact of trade on economic growth still ambiguous. Meanwhile, Islam et al. (2017) stated that between 1973 and 1974, imported goods also put pressure on inflation and raised the cost of living. The fourth indicator is the unemployment rate. In Malaysia, the unemployment rate has remained relatively unchanged and is generally seen as steady. This is done to prevent an uptick in inflation and a rise in the cost of living. On the other hand, when there is cyclical unemployment, this may have a beneficial effect on the cost of living. The last indicator is subsidies. Subsidies may increase a society's productivity and standard of living if there are external benefits. One of the most common justifications for fuel subsidies is that they promote the welfare of the poor by lowering fuel prices, enabling a greater quality of living for those individuals.

However, in the update, there is still a lack of studies covering the determinants of the cost of living in Malaysia (Latimaha et al., 2020) specifically macroeconomic determinants. Research by Wahab et al., (2018) does not clarify the causal relationship between the standard of living and the cost of living, even though the statement identifies the standard of living as the most significant contributor to the problems of rising costs of living. Thus, the determinant of the cost of living in Malaysia is still ambiguous. This study will investigate the factors contributing to Malaysia's high cost of living. The findings of this study provide valuable insights for guiding and informing policymakers to tackle the problem of inconsistent determinants affecting the cost of living. Therefore, it is essential to have a clear understanding of the components that go into determining the cost of living. If this study is carried out, a sound plan that addresses the issue will be proposed.

The rest of this paper is structured as follows: Section 2 reports the literature review based on the previous study done on the related topic. Section 3 discusses the data and methodology used to analyze the data. The procedure and justification of variables are explained in this

section. Next, section 4 discusses the findings and discussion of results, and finally, a concluding remark and recommendation are reported in section 5.

2.0 LITERATURE REVIEW

Faced with uncertain economic challenges every year, the cost-of-living issue is no longer new. The index of the cost of living was originally defined by Konüs (1939), which is the ratio of the minimum expenditures required to attain a particular standard of living at two different price regimes. The dynamics of a country contribute to various factors that affect the cost of living of the people. Wahab et al. (2018), Latimaha et al. (2020), and Shu'ara and Olaolu (2023), reported that various factors contribute to the increment in the cost of living in a country. To address issues and challenges related to the cost of living in Malaysia, the National Action Council on Cost of Living (NACCOL) was formed on 7 February 2018 even though this issue has been discussed for years.

Consumer Price Index (CPI) is the best proxy to measure the cost of living since Malaysia does not have an official index (Latimaha et al., 2020). This is in line with the other studies done by Julizah (2014), Wahab et al. (2018), and Shu'ara and Olaolu (2023). Wynne and Sigalla (1994) also support the use of the CPI to measure the rate of change in the cost of living. The CPI reflects an average increase in prices assuming uniformity in spending patterns across households and assuming the quantity and quality of goods and services in the consumption basket remain unchanged (Department of Statistics Malaysia, 2019). In theory, the higher the cost of living, the lower the consumer's purchasing power. When the CPI rises, the typical family must spend more ringgit to maintain their standard of living. The World Bank Group (2020) conducted a study on a sample of 500 goods and services found in Malaysian households from 2014 to 2018. The study encompassed 20,000 locations across Malaysia. The findings indicate that the CPI employed by the Department of Statistics Malaysia (DOSM) 2019 is generally robust and in line with internationally recommended standards. However, several studies concluded that the CPI is not the most accurate index to describe the cost-of-living index (David et al., 2014). This finding is supported by the existence of bias along with price changes, over-indexing government outlays, tax brackets, and an increase in the federal deficit or debt.

Unequal wages and urbanization are contributing factors to the increased cost of living. The value of wages is more depressing in urban areas due to the increase in the high rate of inflation. Shu'ara and Olaolu (2023) found that the purchasing power of consumers declined and the high poverty and unemployment level hurts poor people in parts of Nigeria. Chien and Mistry (2013) also found that living in a high-cost-of-living area will put more stress on a family even if two families have the same income but live in different areas. Moreover, Korkmaz and Abdullazade (2020) conducted a panel causality test for G6 countries to identify whether inflation affects unemployment when many governments implement contractionary fiscal and monetary policies to bring inflation under control. As a result, when inflation is high, the purchasing power and effect of the national currency decreases. Malaysia Quality of Life Index (MQLI) also known as the Malaysia Well-Being Index, as well as a lower unemployment rate, implies the rise in the standard of living of Malaysian people (Economic Planning Unit, 2013). Latimaha et al. (2017) conducted Autoregressive Distributed Lag (ARDL) using two models resulting in a significant relationship between the cost of living and unemployment. However, it still depends on the types of unemployment experienced by Malaysia at that time. However, not all studies show a significant relationship. Aziz (2020) found a negative relationship between the unemployment rate and the increasing cost of living.

H0: There is no significant relationship between the cost of living and the unemployment rate.

H1: There is a significant relationship between the cost of living and the unemployment rate.

For most economists, the exchange rate is an endogenous variable, whose contribution to growth (indirectly related to the cost of living) may be difficult to disentangle. Since it involves the relationship between countries, this variable can give different results to the researcher. Many findings show the relationship between the foreign exchange rate and the cost of living (Wahab et al., 2018; Latimaha et al., 2020). It can be concluded that both are interrelated, for example, the drops in world export prices impact trade and will cause the Malaysian Ringgit to worsen. Many studies relate the price of goods and the exchange rate through the theory of purchasing power parity (PPP). The theory of PPP states that exchange rates between any two currencies will adjust to reflect changes in the relative price levels of the two countries (Sarno & Taylor, 2002). So, the foreign exchange value will be calculated based on the same basket of goods. PPP can be used to compare the cost of living in different locations (Tan, 2016). In addition to the consumer's ability to buy goods, the real and nominal exchange rates must also be considered. Compared to the nominal exchange rate, the real exchange rate is more accurate to study. The real exchange rate shows how much purchasing power changes between countries when price levels are also considered. To compare purchasing power, economists usually measure the real exchange rate. This is because the price of such a basket normally takes the form of an index number as the CPI (Luis, 2007).

H0: There is no significant relationship between the cost of living and the real exchange rate.
H2: There is a significant relationship between the cost of living and the real exchange rate.

Housing is an important element of the urban center and is intimately intertwined with transportation networks, social infrastructure such as health and education facilities, community services, employment centers, and access to markets and information. As such, integrating housing development as part of urban and regional planning should help ensure the balance of supply and demand of affordable housing, either for ownership or rental to the targeted population. The National Housing Policy should be refined by prioritizing low-income and middle-income groups to ensure an adequate supply of affordable housing for those groups. This can be done through ongoing monitoring and analysis of the impact of different policies on the consistency of the real estate market so that policymakers can adjust as necessary. According to Omar et al. (2019), many residents cannot afford to own a house, especially in urban areas, because housing costs are so much higher than the average income level. This problem affects the middle-income group (Sulaiman et al., 2021). The housing price index (HPI) focuses on the changes in residential property prices (Bureau of Labor Statistics). The collaboration between ministries, agencies, and state and local governments in designing housing policies and planning for the target population (World Bank Group, 2020). An ideal cost of living index demonstrates that the poor have been disproportionately impacted by rising relative rents, which have greatly reinforced real income inequality (David et al., 2014). Housing costs and rental prices are included in the CPI's component. The changes in the rental prices captured by the HPI can indirectly impact on the overall CPI. According to Iacoviello (2004), changes in housing prices have a positive impact on consumer spending and overall inflation. This means that when housing prices increase, homeowners can potentially spend more, which can contribute to overall inflation, and vice versa. However, according to Savva (2018), this contrasts with the above. The finding suggests that inflation is a key factor in the increase in the housing price index. Moreover, construction costs are the main factor affecting the housing price index (Brunnermeier & Julliard, 2008).

H0: There is no significant relationship between the cost of living and the housing price index.
H3: There is a significant relationship between the cost of living and the housing price index.

Net trade refers to the difference between a country's exports and imports of goods and services, also known as the trade balance or balance of trade (Nguyen, 2020). When a country's imports exceed its exports, it has negative net trade, and conversely, when a country's exports exceed its imports. Net trade is an important indicator of a country's

economic performance in the global economy. Adetiloye (2010) found that there is a higher positive relationship between the import ratio and CPI using the techniques of correlation and Granger causality. An open economy is always directly linked with import and export activities, which means there is a positive relationship between the degree of openness and economic growth, (Rodriguez, 2000; Squalli & Wilson, 2006). Thus, there is a tendency for the degree of openness to influence the standard of living through the cost of living (Latimaha et al., 2017). Several factors affect the connection between net trade and the cost of living. Changes in the trade balance have implications for a country's overall economy, which in turn can impact the cost of living. A trade deficit, where imports are greater than exports, can lead to increased reliance on imported goods. If the cost of imported goods increases, it can contribute to higher prices for consumers, increasing the overall cost of living (Tsai, 2023). According to Bussière et al. (2016), exchange rate movements are important in addressing global trade imbalances. A country with a trade deficit may experience depreciation in its currency and make imports more expensive, which will contribute to higher prices for imported goods and, subsequently to the cost of living. The trade deficit can result in job losses or decreased wages caused by competition from imports. The employment and wage effect indirectly affects the cost of living (Egger et al. 2013).

H0: There is no significant relationship between the cost of living and the net trade.

H4: There is a significant relationship between the cost of living and the net trade.

Lastly, to compensate for the increase in the cost of living due to market uncertainty, one of the methods implemented by the government is to provide subsidies. Subsidies can be used to offset market failures and externalities to achieve greater economic efficiency. Good subsidies, for a competition authority official, are those that address market failures and increase economic efficiency (OECD, 2022). But, in some cases, subsidies are used as a tool to test competition problems in the economy. In cases of complaints against unfairly imported tires entering the EU, in October 2017, the European Commission (EC) conducted an anti-subsidy investigation. The results found China National Tyre and Rubber Company (CNRC) had benefited from several interventions by the Chinese State as the company did not have sufficient funds to finance the acquisition (OECD, 2022). In simple economic theory, when subsidies are granted, the cost of production will decrease so that producers can provide affordable prices to consumers. The significant relationship between subsidies and the cost of living has been proven through the findings of several studies (Latimaha et al., 2017; Nazri & Khalid, 2022). Furthermore, a study by the World Bank Group (2020) found that fuel subsidy rationalization in December 2014 and the introduction of the goods and services tax in April 2015 have impacted the increase in the cost of living in Malaysia. By examining the results of this study, we can make some hypotheses about the determinants that contribute to the pressure of the rising cost of living that burdens people. In addition, the findings of the study can be used to suggest the best intervention from the parties concerned to reduce this pressure.

H0: There is no significant relationship between the cost of living and the subsidies.

H5: There is a significant relationship between the cost of living and the subsidies.

Based on the literature review above, the proposed conceptual framework for this study is shown in Fig.1.

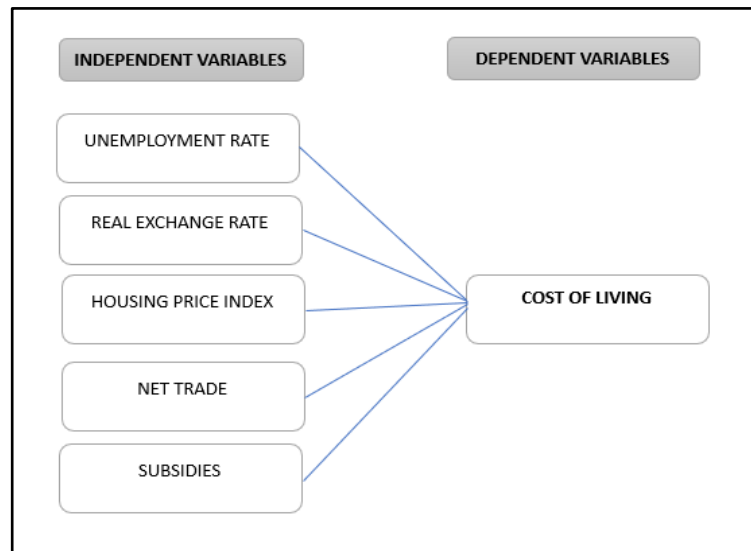


Fig. 1 Conceptual Framework

3.0 RESEARCH METHODOLOGY

3.1 Data Collection

This study adopts annual time series data over 33 years across six variables. The main data sources include Economic Planning Unit (EPU) Malaysia, World Bank data, and FRED Economic. In this research paper, 33 observations of annual data from 1990 to 2022 were used. The study is conducted in the context of the cost of living in Malaysia. In this study, the cost of living is considered the dependent variable. Since it is impossible to analyze every plausible macroeconomic driver to explain the cost of living variation in Malaysia, five macroeconomic determinants, namely the unemployment rate (UR), housing price index (HPI), the real exchange rate (RER), net trade (NT), and subsidies (SUB) – Adhere to the sequence depicted in Figure 1 have been chosen as independent variables in this study. The data for this study was obtained from World Bank data, FRED Economic and Economic Planning Unit (EPU). The data description and its sources are outlined in Table 1.

Table 1. Description of Data

Abbreviation	Variable	Description	Expected Sign	References	Source
CL	Cost of Living	Cost of living, proxy by the Consumer Price Index (CPI) (2010=100)	+	World Bank Group's (2020). Shu'ara and Olaolu (2023)	World Bank
UR	Unemployment Rate	Unemployment rate in Malaysia (annual basis)	+	Latimaha et al. (2017)	World Bank
RER	Real Exchange Rate	Real Exchange Rate for RM against USD	+	Bahari et al. (2018); Wahab et al. (2018)	World Bank

HPI	Housing Price Index	Real residential property prices for Malaysia	+	Lacoviello, (2004)	FRED Economic
NT	Net Trade	The net trade for goods and services	+	Adetiloye (2010)	EPU
SUB	Subsidies	Government Subsidies	+	Julizah (2014). Latimaha et al. (2017)	EPU

3.2 Research Methodology and Model Specifications

To understand the factors influencing the cost of living in Malaysia, several analyses need to be done. These methods are a descriptive analysis, a normality test, a multiple regression analysis, and a diagnostic test. These analyses were done using Eviews 12.

3.2.1 Descriptive Analysis

In this study, descriptive analysis is measured by utilising the mean, median, maximum value, and minimum value, as well as the standard deviation.

3.2.2 Multiple Linear Regression Analysis

The time series analysis was carried out using a multiple regression model. It was able to analyze the factors that influence the cost of living in Malaysia using time series analysis. The following are the specification models used in this study as in Equation [1].

$$CL_t = \beta_0 + \beta_1 UR_t + \beta_2 RER_t + \beta_3 HPI_t + \beta_4 NT_t + \beta_5 SUB_t + \epsilon$$

[1]

Where CL is the cost of living, UR is the unemployment rate, RER is the real exchange rate, HPI is the housing price index, NT is the net trade and lastly, SUB is the subsidies; t is the time series and lastly ϵ represents the error term for the model.

3.2.3 Diagnostic Analysis

To ensure the regression to be as helpful as it can be, the diagnostic test really must be taken. This approach of controlling the quality of statistical data incorporates several different tests, including the normality test, multicollinearity test, autocorrelation test, and heteroskedasticity test.

4.0 RESULT AND DISCUSSION

4.1 Descriptive Statistics

The descriptive analysis provides an overview of the 6 variables dataset. It includes measures of central tendency (mean, median), measures of dispersion (maximum, minimum, standard deviation), and measures of the distribution's shape (skewness, kurtosis). The number of observations is consistent across all variables, with 33 observations in total. As presented in Table 2, the results provided by descriptive statistics illustrated that the means

and medians are not that much different from each other which implies that the cost of living (COL), net trade (NT), real exchange rate (RER), subsidies (SUB), unemployment rate (UR) and house price index (HPI) are normally distributed.

Table 2. Summary of Descriptive Statistic

	COL	NT	RER	SUB	UR	HPI
Mean	92.17381	-73993.86	114.3655	14696.68	3.418424	110.0831
Median	90.94053	-86959.01	114.6258	10481.22	3.410000	95.44593
Maximum	123.0545	19132.00	142.8267	44075.00	4.609000	165.2164
Minimum	56.81374	-171937.0	96.70000	494.0000	2.450000	61.59655
Std. Dev.	20.74839	54683.46	11.54137	14161.85	0.450018	30.94571
Skewness	-0.011248	0.460910	0.736879	0.642507	0.495238	0.661351
Kurtosis	1.769910	2.126125	3.297903	2.177565	4.224766	2.024787
Observations	33	33	33	33	33	33

4.1 Multiple Linear Regression

Table 3 summarizes the results from the fitting model as described in the equation below. The results indicated that the value of R^2 is equal to 0.9922 which means that 99.22 percent variation in the cost of living in Malaysia can be explained by total variation in selected explanatory variables. The adjusted R-squared value of 0.990794 considers the number of independent variables and penalizes excessive inclusion of variables.

Additionally, the presented models are free from the presence of autocorrelation after doing the remedies to remove the problem by lagging the dependent variable. Thus, the specification models for the cost of living in Malaysia employed in this study be written as in Equation [2].

$$CL_t = \beta_0 + \beta_1 UR_t + \beta_2 RER_t + \beta_3 HPI_t + \beta_4 NT_t + \beta_5 SUB_t + \epsilon \quad [2]$$

Table 3. Multiple Linear Regressions Analysis

Variable	Coefficient	Std. Error	t-Statistic	P
C	24.21500	8.292492	2.920112	0.0070***
NT	-0.000150	1.06E-05	-14.23817	0.0000***
RER	-0.003692	0.050891	-0.072556	0.9427
SUB	0.000117	4.30E-05	2.714651	0.0114**
UR	0.960000	0.851370	1.127595	0.2694
HPI	0.474689	0.019138	24.80349	0.0000***
R-squared	0.992233			
Adjusted R-squared	0.990794			
F-statistic	689.8224			

Notes: ***significant at 1%, ** significant at 5%.

Five hypotheses have been developed to study the relationship between macroeconomic determinants and the cost of living in Malaysia. As shown in Table 3, the hypothesis testing analysis of H1 showed that there is an insignificant association between UR and COL. The result revealed an insignificant positive relationship between UR and COL. Thus, the alternate hypothesis H1 is rejected. This means that UR does not influence COL. The result obtained

from this research is inconsistent with the previous study by Aziz (2020) found that there is a negative relationship between the unemployment rate and the increasing cost of living. Most of the previous studies have a significant result between the unemployment rate and cost of living, however, unemployment is detrimental because it lessens people's ability to make a living and, consequently, their standard of living. People's chances of falling into and staying in poverty due to their diminished standard of living owing to joblessness are high.

The hypothesis testing analysis of H2 indicated that the relationship between COL and RER is negative. However, the coefficient is not statistically significant. Therefore, it cannot be concluded that there is a significant relationship between RER and COL based on this analysis. Therefore, the alternate hypothesis for H2 is rejected. The result obtained is in line with a study by Latimaha et al. (2020). Although the real exchange rate has no effect on consumer prices and is statistically insignificant, it remains an important variable that affects prices when used as a recommendation or convincing argument. However, a study by Tan and Luu (2017) is vice-versa, which revealed that exchange rate fluctuations in Asian countries significantly impact the cost of living among residents.

There was a strong and significant positive relationship between COL and HPI, and the variable HPI has a positive coefficient of 0.474689, indicating that as HPI increases, the dependent variable COL also tends to increase. The coefficient is highly statistically significant. Thus, the alternate hypothesis, H3 is accepted. The result is positively supported by (Lacoveillo, 2004). The study reported that changes in housing prices positively impact consumer spending and overall inflation.

The hypothesis testing analysis of H4 indicated that the relationship between NT and COL is negatively and statistically significant at a 1% level of the significance level. Hence, the alternate hypothesis H4 is accepted. However, the results obtained from the regression contradict with the previous study by Cerdeiro and Komaromi (2017), Squalli and Wilson (2006), and Rodriguez (2000), which reported a positive relationship between trade openness and income.

The hypothesis testing analysis of H5 showed that there is a positive and statistically significant association between SUB and COL. Thus, the alternate hypothesis, H5 is accepted. This is supported by Hosan et al. (2023) and Livingston et al. (2022) who found energy subsidies significantly affect energy poverty and energy poverty as a mediator of social well-being significantly impacts social well-being. As a form of social welfare, energy subsidies reduce the overall cost of energy and facilitate access to modern energy services for a specific social group. As a result, impoverished households in society have greater access to modern energy products despite their limited income, resulting in the eradication of energy poverty and the enhancement of social welfare. Besides, there is a positive relationship between subsidies and household consumption expenditure, as total household consumption expenditure will increase if subsidies are phased out (Vandeninden et al., 2022).

4.2 Residual Diagnostic Test

The statistical method known as regression is predicated on a few assumptions, the most important of which are that the residuals will have a normal distribution, that their variance will remain constant, and that there will be a connection between the variables that explain the phenomenon in question. In the study, econometric tests such as normality, serial correlation, multicollinearity, and heteroscedasticity tests were used to determine the extent to which the regression analysis assumptions regarding residuals and the correlation between explanatory variables were satisfied. These tests were utilized to ensure that the regression analysis assumptions were satisfied.

4.2.1 Normality Test

Normality tests are used in statistics to examine if a data set is well-modelled by a normal distribution and to calculate the probability that a random variable underlying the data set is normally distributed. Fig. 2 below shows the normality test using Jarque Bera.

The Jarque Bera will be compared with a 5% level of significance. The test will reject the null hypothesis if the probability is less than 5% or 0.05 and accept the null hypothesis if the probability value is greater than 5% or 0.05. This indicates that the residual is normally distributed. The result shows that the probability is 0.654 or 65.4%, over the 5% significance level. Thus, the result will not reject the null hypothesis as the residual is normally distributed.

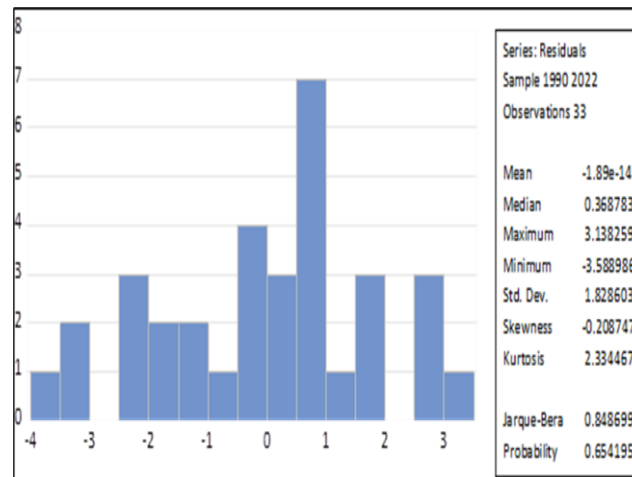


Fig. 2 Normality Test Results
Source: EVIEWS 12

4.2.2 Multicollinearity Test

To determine the existence of multicollinearity, this study used the Variance Inflation Factor (VIF). The findings shown in Table 4 make it abundantly evident that not a single VIF is more than 10. taking this into consideration, it may deduce that none of the variables are strongly collinear with one another.

Table 4. Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
NT	1.12E-10	7.780285	2.693837
RER	0.002590	284.8637	2.785672
SUB	1.85E-09	6.324698	2.996618
UR	0.724830	71.71579	1.185279
HPI	0.000366	39.79134	2.832163

4.2.3 Autocorrelation Test

The serial correlation describes the situation in which the error term from one period is shown to be associated with the error term from any other period. The traditional method of regression presupposes that there is no such association. To investigate the possibility of serial correlation, the Breusch–Godfrey serial correlation LM test was carried out. The findings

presented in Table 5 suggest that the null hypothesis of no serial correlation is rejected. Therefore, there is a correlation between the variables.

Table 5. Residual Serial Correlation LM Test

F-statistic	3.775063	Prob. F (2,25)	0.0369
Obs*R-squared	7.654476	Prob. Chi-Square (2)	0.0218

To solve this problem, the HAC (Heteroscedasticity and Autocorrelation Consistent) test was employed. The HAC tests refer to a series of statistical tests that are used to address possible concerns of heteroscedasticity and autocorrelation in regression models. This test is intended to offer robust and trustworthy inference even when such difficulties are present. This test adjusts the standard errors of the coefficient estimates in a regression model to provide valid and efficient inference. As a result of carrying out HAC tests on the data, the inferences drawn from those data in the presence of autocorrelation become more accurate and trustworthy, hence contributing to an increase in the validity of the regression analysis.

4.2.4 Heteroscedasticity Test

To determine the possibility that there was any heteroscedasticity, the study employed the Breusch-Pagan-Godfrey heteroskedasticity test. According to the findings shown in Table 6, there is no evidence of heteroscedasticity. This indicates the null hypothesis of no heteroscedasticity (homoscedasticity) is accepted at the 5% level of significance, which results in the residuals having a constant variance.

Table 6. Residual Heteroskedasticity Test Result

Prob. Chi-Square (5)	F-statistic
0.6971	0.543680

5.0 CONCLUSION

Conclusively, the findings presented give valuable insight into the society in Malaysia to plan life by looking at the factors that generally affect the cost of living. The rising cost of living will mitigate the standard of living for Malaysian households. For estimations, robust econometric techniques are applied. This study is essential to be done, to have a clear understanding of the components that go into determining the cost of living. Findings show that three variables are significant in determining Malaysia's cost of living: the housing price index, net trade, and subsidies. Rising house prices can redistribute wealth within an economy, increasing the wealth of homeowners but reducing effective living standards for those who do not own a house, especially youngsters. If the housing price rises, the wealth effect is likely to cause an increase in consumer spending, which also increases the cost of living.

Subsidies are one of the initiatives implemented by the government to ensure people's survival. The more subsidies are given, the higher the cost of living, but consumers will bear the less expenses. When government subsidies are implemented, an industry can produce more goods or services, increasing the quantity demanded of those goods or services at a lower price. The research found that net trade and cost of living have a negative and significant relationship, which shows that the trade surplus will lower the cost of living because the country will import less. People will focus on buying local products which are less expensive than imported products.

Based on the findings, the following recommendations should be considered, such as policy changes particularly to minimize or overcome the rising cost of living in Malaysia. The

price controls and subsidies are to be continued for both consumers and producers on certain essential items. The targeted subsidies need to be re-channeled to more productive purposes to ensure the one-off impact on the cost of living. Besides, the government should reconsider structural reforms that address both income and cost factors to strengthen households' resilience against future shocks.

Besides the addition to existing knowledge, this study also bears some limitations that can lead to further investigations as this research was conducted based on only a few variables to determine factors affecting the cost of living in Malaysia.

6.0 SUGGESTION FOR FUTURE RESEARCH

Several additional variables may be included in future research such as income growth, insurance rate, human capital, inflation rate, and so on which may bring more interesting and accurate results. It is also suggested to have more thorough research on the effect of low savings and heavy debt burdens (individual well-being) on the cost of living in Malaysia.

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CO-AUTHORS CONTRIBUTION

All authors contributed equally to the conception and design of the study.

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DETERMINANTS OF THE COST OF LIVING IN MALAYSIA

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ABSTRACT

Malaysia is a developing nation that has enjoyed economic growth for a few decades. Nevertheless, the previous years, starting from 2021, showed an extreme rise in the cost of goods and services for basic needs such as food, clothing, housing, and transportation. This is unavoidable for Malaysian households since the incidence is also a global phenomenon. The rising cost of living will alleviate the standard of living for Malaysian households. In Malaysia, perceived increases in the cost of living have been a subject of ongoing debate and discussion, despite the country's current low and unstable inflation rate. This research aims to investigate the determinants of the cost of living in Malaysia. Thus, it is important to know the factors influencing the cost of living and by performing this research, a good policy with a good solution will be suggested. This research used annual secondary data from 1990 to 2022 by applying multiple linear regression analysis. The result shows that there are three variables significant to the cost of living, which are the housing price index, net trade, and subsidies. The research proposes that policymakers and the government pay attention to the basic needs and expenditures of Malaysian households.

Keywords: cost of living, net trade, housing price index, government expenditure

1.0 INTRODUCTION

In the Asian Pacific region, Malaysia is considered a developing country. Malaysians have been enjoying high economic growth without sensing the cost of living before the market price showed a cumulative trend from year to year. The rising price of goods and services can affect the well-being of households due to the rising cost of living. According to Konüs (1939), the cost of living is the minimum amount of expenditure required by a family in each period to achieve the standard of living desired by the household. The cost of living is the amount of money needed to cover basic expenses such as food, healthcare, housing, and transportation. Malaysians are having a difficult time making ends meet because of the rising cost of living, which is having an impact on the affordability of essential goods and services such as food, housing, transit, education, and healthcare. Additionally, Saari et al. (2013) conducted research on the cost of living of households in peninsular Malaysia and found that the increase in electricity charges and petrol prices affected the cost of housing, food, and transportation expenses.

In general, the rising cost of living causes a change in the standard of living. The standard of living measures the quality of life, or the level of material prosperity enjoyed by individuals (Bank Negara Malaysia, 2015). On the other hand, the cost of living is the cost required to maintain some minimum basic needs and wants. Bank Negara Malaysia (2015) defines the cost of living as the amount of expenditure on goods and services incurred by households, including their financial obligations, to maintain a certain standard of living. Malaysia has no official cost of living index; thus, the best proxy is the Consumer Price Index (CPI). According to Wahab et al. (2018), the Consumer Price Index (CPI) is an indicator to determine the rising price and cost of living simultaneously, assuming there is no significant difference in the pattern of household spending. Based on the Department of Statistics Malaysia (DOSM) 2019, every quarter, Malaysia's inflation rate increases by 0.6 percent compared to the fourth quarter of 2022. Every month, inflation increased by 0.1 percent in March 2023 (February 2022: 0.2%). Meanwhile, core inflation, which measures changes in the prices of all goods and services, excluding volatile prices of items for fresh food as well as administered prices of goods by the government, remained high at 3.8 percent (February 2023: 3.9%, DOSM).

The first indicator to measure the cost of living is the Housing Price Index (HPI). The housing price index is used to differentiate the changes in living costs from one year to another by comparing the average price of a basket of goods between two periods. The HPI also indicates how much the house price has changed over time. According to The Deputy Finance Minister (2011), housing prices in Malaysia increased by up to 20 percent per year after 2007 on average. Malaysia experienced a dramatic increase in housing prices from 2009 until now. The increase in housing prices will affect the ability of households to demand debt and repay the debt. The second indicator is the exchange rate. The rising cost of living is also caused by the increase in the price of imported goods and services. It happens when the economy faces changes in foreign exchange rates and degree of economic openness. The third indicator is trade openness. According to the study done by Jalil and Zaharudin (2022), it concludes that macroeconomic indicators such as trade openness do not have any influence on economic growth, making the impact of trade on economic growth still ambiguous. Meanwhile, Islam et al. (2017) stated that between 1973 and 1974, imported goods also put pressure on inflation and raised the cost of living. The fourth indicator is the unemployment rate. In Malaysia, the unemployment rate has remained relatively unchanged and is generally seen as steady. This is done to prevent an uptick in inflation and a rise in the cost of living. On the other hand, when there is cyclical unemployment, this may have a beneficial effect on the cost of living. The last indicator is subsidies. Subsidies may increase a society's productivity and standard of living if there are external benefits. One of the most common justifications for fuel subsidies is that they promote the welfare of the poor by lowering fuel prices, enabling a greater quality of living for those individuals.

However, in the update, there is still a lack of studies covering the determinants of the cost of living in Malaysia (Latimaha et al., 2020) specifically macroeconomic determinants. Research by Wahab et al., (2018) does not clarify the causal relationship between the standard of living and the cost of living, even though the statement identifies the standard of living as the most significant contributor to the problems of rising costs of living. Thus, the determinant of the cost of living in Malaysia is still ambiguous. This study will investigate the factors contributing to Malaysia's high cost of living. The findings of this study provide valuable insights for guiding and informing policymakers to tackle the problem of inconsistent determinants affecting the cost of living. Therefore, it is essential to have a clear understanding of the components that go into determining the cost of living. If this study is carried out, a sound plan that addresses the issue will be proposed.

The rest of this paper is structured as follows: Section 2 reports the literature review based on the previous study done on the related topic. Section 3 discusses the data and methodology used to analyze the data. The procedure and justification of variables are explained in this

section. Next, section 4 discusses the findings and discussion of results, and finally, a concluding remark and recommendation are reported in section 5.

2.0 LITERATURE REVIEW

Faced with uncertain economic challenges every year, the cost-of-living issue is no longer new. The index of the cost of living was originally defined by Konüs (1939), which is the ratio of the minimum expenditures required to attain a particular standard of living at two different price regimes. The dynamics of a country contribute to various factors that affect the cost of living of the people. Wahab et al. (2018), Latimaha et al. (2020), and Shu'ara and Olaolu (2023), reported that various factors contribute to the increment in the cost of living in a country. To address issues and challenges related to the cost of living in Malaysia, the National Action Council on Cost of Living (NACCOL) was formed on 7 February 2018 even though this issue has been discussed for years.

Consumer Price Index (CPI) is the best proxy to measure the cost of living since Malaysia does not have an official index (Latimaha et al., 2020). This is in line with the other studies done by Julizah (2014), Wahab et al. (2018), and Shu'ara and Olaolu (2023). Wynne and Sigalla (1994) also support the use of the CPI to measure the rate of change in the cost of living. The CPI reflects an average increase in prices assuming uniformity in spending patterns across households and assuming the quantity and quality of goods and services in the consumption basket remain unchanged (Department of Statistics Malaysia, 2019). In theory, the higher the cost of living, the lower the consumer's purchasing power. When the CPI rises, the typical family must spend more ringgit to maintain their standard of living. The World Bank Group (2020) conducted a study on a sample of 500 goods and services found in Malaysian households from 2014 to 2018. The study encompassed 20,000 locations across Malaysia. The findings indicate that the CPI employed by the Department of Statistics Malaysia (DOSM) 2019 is generally robust and in line with internationally recommended standards. However, several studies concluded that the CPI is not the most accurate index to describe the cost-of-living index (David et al., 2014). This finding is supported by the existence of bias along with price changes, over-indexing government outlays, tax brackets, and an increase in the federal deficit or debt.

Unequal wages and urbanization are contributing factors to the increased cost of living. The value of wages is more depressing in urban areas due to the increase in the high rate of inflation. Shu'ara and Olaolu (2023) found that the purchasing power of consumers declined and the high poverty and unemployment level hurts poor people in parts of Nigeria. Chien and Mistry (2013) also found that living in a high-cost-of-living area will put more stress on a family even if two families have the same income but live in different areas. Moreover, Korkmaz and Abdullazade (2020) conducted a panel causality test for G6 countries to identify whether inflation affects unemployment when many governments implement contractionary fiscal and monetary policies to bring inflation under control. As a result, when inflation is high, the purchasing power and effect of the national currency decreases. Malaysia Quality of Life Index (MQLI) also known as the Malaysia Well-Being Index, as well as a lower unemployment rate, implies the rise in the standard of living of Malaysian people (Economic Planning Unit, 2013). Latimaha et al. (2017) conducted Autoregressive Distributed Lag (ARDL) using two models resulting in a significant relationship between the cost of living and unemployment. However, it still depends on the types of unemployment experienced by Malaysia at that time. However, not all studies show a significant relationship. Aziz (2020) found a negative relationship between the unemployment rate and the increasing cost of living.

H0: There is no significant relationship between the cost of living and the unemployment rate.

H1: There is a significant relationship between the cost of living and the unemployment rate.

For most economists, the exchange rate is an endogenous variable, whose contribution to growth (indirectly related to the cost of living) may be difficult to disentangle. Since it involves the relationship between countries, this variable can give different results to the researcher. Many findings show the relationship between the foreign exchange rate and the cost of living (Wahab et al., 2018; Latimaha et al., 2020). It can be concluded that both are interrelated, for example, the drops in world export prices impact trade and will cause the Malaysian Ringgit to worsen. Many studies relate the price of goods and the exchange rate through the theory of purchasing power parity (PPP). The theory of PPP states that exchange rates between any two currencies will adjust to reflect changes in the relative price levels of the two countries (Sarno & Taylor, 2002). So, the foreign exchange value will be calculated based on the same basket of goods. PPP can be used to compare the cost of living in different locations (Tan, 2016). In addition to the consumer's ability to buy goods, the real and nominal exchange rates must also be considered. Compared to the nominal exchange rate, the real exchange rate is more accurate to study. The real exchange rate shows how much purchasing power changes between countries when price levels are also considered. To compare purchasing power, economists usually measure the real exchange rate. This is because the price of such a basket normally takes the form of an index number as the CPI (Luis, 2007).

H0: There is no significant relationship between the cost of living and the real exchange rate.
H2: There is a significant relationship between the cost of living and the real exchange rate.

Housing is an important element of the urban center and is intimately intertwined with transportation networks, social infrastructure such as health and education facilities, community services, employment centers, and access to markets and information. As such, integrating housing development as part of urban and regional planning should help ensure the balance of supply and demand of affordable housing, either for ownership or rental to the targeted population. The National Housing Policy should be refined by prioritizing low-income and middle-income groups to ensure an adequate supply of affordable housing for those groups. This can be done through ongoing monitoring and analysis of the impact of different policies on the consistency of the real estate market so that policymakers can adjust as necessary. According to Omar et al. (2019), many residents cannot afford to own a house, especially in urban areas, because housing costs are so much higher than the average income level. This problem affects the middle-income group (Sulaiman et al., 2021). The housing price index (HPI) focuses on the changes in residential property prices (Bureau of Labor Statistics). The collaboration between ministries, agencies, and state and local governments in designing housing policies and planning for the target population (World Bank Group, 2020). An ideal cost of living index demonstrates that the poor have been disproportionately impacted by rising relative rents, which have greatly reinforced real income inequality (David et al., 2014). Housing costs and rental prices are included in the CPI's component. The changes in the rental prices captured by the HPI can indirectly impact on the overall CPI. According to Iacoviello (2004), changes in housing prices have a positive impact on consumer spending and overall inflation. This means that when housing prices increase, homeowners can potentially spend more, which can contribute to overall inflation, and vice versa. However, according to Savva (2018), this contrasts with the above. The finding suggests that inflation is a key factor in the increase in the housing price index. Moreover, construction costs are the main factor affecting the housing price index (Brunnermeier & Julliard, 2008).

H0: There is no significant relationship between the cost of living and the housing price index.
H3: There is a significant relationship between the cost of living and the housing price index.

Net trade refers to the difference between a country's exports and imports of goods and services, also known as the trade balance or balance of trade (Nguyen, 2020). When a country's imports exceed its exports, it has negative net trade, and conversely, when a country's exports exceed its imports. Net trade is an important indicator of a country's

economic performance in the global economy. Adetiloye (2010) found that there is a higher positive relationship between the import ratio and CPI using the techniques of correlation and Granger causality. An open economy is always directly linked with import and export activities, which means there is a positive relationship between the degree of openness and economic growth, (Rodriguez, 2000; Squalli & Wilson, 2006). Thus, there is a tendency for the degree of openness to influence the standard of living through the cost of living (Latimaha et al., 2017). Several factors affect the connection between net trade and the cost of living. Changes in the trade balance have implications for a country's overall economy, which in turn can impact the cost of living. A trade deficit, where imports are greater than exports, can lead to increased reliance on imported goods. If the cost of imported goods increases, it can contribute to higher prices for consumers, increasing the overall cost of living (Tsai, 2023). According to Bussière et al. (2016), exchange rate movements are important in addressing global trade imbalances. A country with a trade deficit may experience depreciation in its currency and make imports more expensive, which will contribute to higher prices for imported goods and, subsequently to the cost of living. The trade deficit can result in job losses or decreased wages caused by competition from imports. The employment and wage effect indirectly affects the cost of living (Egger et al. 2013).

H0: There is no significant relationship between the cost of living and the net trade.

H4: There is a significant relationship between the cost of living and the net trade.

Lastly, to compensate for the increase in the cost of living due to market uncertainty, one of the methods implemented by the government is to provide subsidies. Subsidies can be used to offset market failures and externalities to achieve greater economic efficiency. Good subsidies, for a competition authority official, are those that address market failures and increase economic efficiency (OECD, 2022). But, in some cases, subsidies are used as a tool to test competition problems in the economy. In cases of complaints against unfairly imported tires entering the EU, in October 2017, the European Commission (EC) conducted an anti-subsidy investigation. The results found China National Tyre and Rubber Company (CNRC) had benefited from several interventions by the Chinese State as the company did not have sufficient funds to finance the acquisition (OECD, 2022). In simple economic theory, when subsidies are granted, the cost of production will decrease so that producers can provide affordable prices to consumers. The significant relationship between subsidies and the cost of living has been proven through the findings of several studies (Latimaha et al., 2017; Nazri & Khalid, 2022). Furthermore, a study by the World Bank Group (2020) found that fuel subsidy rationalization in December 2014 and the introduction of the goods and services tax in April 2015 have impacted the increase in the cost of living in Malaysia. By examining the results of this study, we can make some hypotheses about the determinants that contribute to the pressure of the rising cost of living that burdens people. In addition, the findings of the study can be used to suggest the best intervention from the parties concerned to reduce this pressure.

H0: There is no significant relationship between the cost of living and the subsidies.

H5: There is a significant relationship between the cost of living and the subsidies.

Based on the literature review above, the proposed conceptual framework for this study is shown in Fig.1.

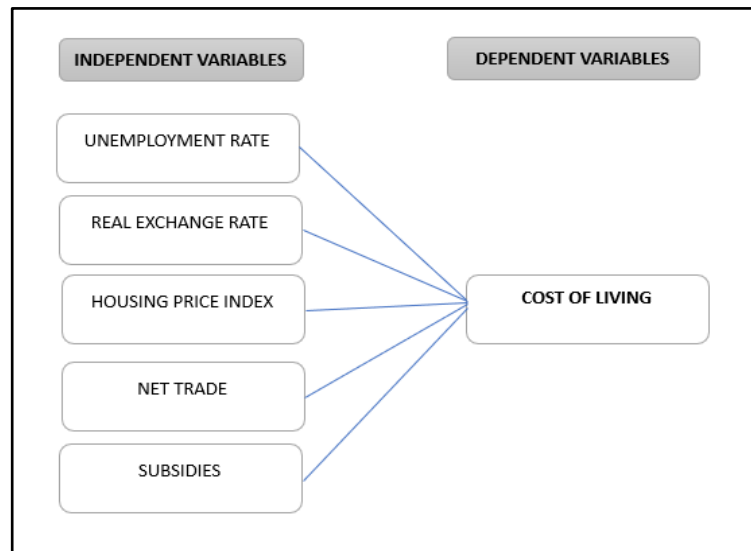


Fig. 1 Conceptual Framework

3.0 RESEARCH METHODOLOGY

3.1 Data Collection

This study adopts annual time series data over 33 years across six variables. The main data sources include Economic Planning Unit (EPU) Malaysia, World Bank data, and FRED Economic. In this research paper, 33 observations of annual data from 1990 to 2022 were used. The study is conducted in the context of the cost of living in Malaysia. In this study, the cost of living is considered the dependent variable. Since it is impossible to analyze every plausible macroeconomic driver to explain the cost of living variation in Malaysia, five macroeconomic determinants, namely the unemployment rate (UR), housing price index (HPI), the real exchange rate (RER), net trade (NT), and subsidies (SUB) – Adhere to the sequence depicted in Figure 1 have been chosen as independent variables in this study. The data for this study was obtained from World Bank data, FRED Economic and Economic Planning Unit (EPU). The data description and its sources are outlined in Table 1.

Table 1. Description of Data

Abbreviation	Variable	Description	Expected Sign	References	Source
CL	Cost of Living	Cost of living, proxy by the Consumer Price Index (CPI) (2010=100)	+	World Bank Group's (2020). Shu'ara and Olaolu (2023)	World Bank
UR	Unemployment Rate	Unemployment rate in Malaysia (annual basis)	+	Latimaha et al. (2017)	World Bank
RER	Real Exchange Rate	Real Exchange Rate for RM against USD	+	Bahari et al. (2018); Wahab et al. (2018)	World Bank

HPI	Housing Price Index	Real residential property prices for Malaysia	+	Lacoviello, (2004)	FRED Economic
NT	Net Trade	The net trade for goods and services	+	Adetiloye (2010)	EPU
SUB	Subsidies	Government Subsidies	+	Julizah (2014). Latimaha et al. (2017)	EPU

3.2 Research Methodology and Model Specifications

To understand the factors influencing the cost of living in Malaysia, several analyses need to be done. These methods are a descriptive analysis, a normality test, a multiple regression analysis, and a diagnostic test. These analyses were done using Eviews 12.

3.2.1 Descriptive Analysis

In this study, descriptive analysis is measured by utilising the mean, median, maximum value, and minimum value, as well as the standard deviation.

3.2.2 Multiple Linear Regression Analysis

The time series analysis was carried out using a multiple regression model. It was able to analyze the factors that influence the cost of living in Malaysia using time series analysis. The following are the specification models used in this study as in Equation [1].

$$CL_t = \beta_0 + \beta_1 UR_t + \beta_2 RER_t + \beta_3 HPI_t + \beta_4 NT_t + \beta_5 SUB_t + \epsilon$$

[1]

Where CL is the cost of living, UR is the unemployment rate, RER is the real exchange rate, HPI is the housing price index, NT is the net trade and lastly, SUB is the subsidies; t is the time series and lastly ϵ represents the error term for the model.

3.2.3 Diagnostic Analysis

To ensure the regression to be as helpful as it can be, the diagnostic test really must be taken. This approach of controlling the quality of statistical data incorporates several different tests, including the normality test, multicollinearity test, autocorrelation test, and heteroskedasticity test.

4.0 RESULT AND DISCUSSION

4.1 Descriptive Statistics

The descriptive analysis provides an overview of the 6 variables dataset. It includes measures of central tendency (mean, median), measures of dispersion (maximum, minimum, standard deviation), and measures of the distribution's shape (skewness, kurtosis). The number of observations is consistent across all variables, with 33 observations in total. As presented in Table 2, the results provided by descriptive statistics illustrated that the means

and medians are not that much different from each other which implies that the cost of living (COL), net trade (NT), real exchange rate (RER), subsidies (SUB), unemployment rate (UR) and house price index (HPI) are normally distributed.

Table 2. Summary of Descriptive Statistic

	COL	NT	RER	SUB	UR	HPI
Mean	92.17381	-73993.86	114.3655	14696.68	3.418424	110.0831
Median	90.94053	-86959.01	114.6258	10481.22	3.410000	95.44593
Maximum	123.0545	19132.00	142.8267	44075.00	4.609000	165.2164
Minimum	56.81374	-171937.0	96.70000	494.0000	2.450000	61.59655
Std. Dev.	20.74839	54683.46	11.54137	14161.85	0.450018	30.94571
Skewness	-0.011248	0.460910	0.736879	0.642507	0.495238	0.661351
Kurtosis	1.769910	2.126125	3.297903	2.177565	4.224766	2.024787
Observations	33	33	33	33	33	33

4.1 Multiple Linear Regression

Table 3 summarizes the results from the fitting model as described in the equation below. The results indicated that the value of R^2 is equal to 0.9922 which means that 99.22 percent variation in the cost of living in Malaysia can be explained by total variation in selected explanatory variables. The adjusted R-squared value of 0.990794 considers the number of independent variables and penalizes excessive inclusion of variables.

Additionally, the presented models are free from the presence of autocorrelation after doing the remedies to remove the problem by lagging the dependent variable. Thus, the specification models for the cost of living in Malaysia employed in this study be written as in Equation [2].

$$CL_t = \beta_0 + \beta_1 UR_t + \beta_2 RER_t + \beta_3 HPI_t + \beta_4 NT_t + \beta_5 SUB_t + \epsilon \quad [2]$$

Table 3. Multiple Linear Regressions Analysis

Variable	Coefficient	Std. Error	t-Statistic	P
C	24.21500	8.292492	2.920112	0.0070***
NT	-0.000150	1.06E-05	-14.23817	0.0000***
RER	-0.003692	0.050891	-0.072556	0.9427
SUB	0.000117	4.30E-05	2.714651	0.0114**
UR	0.960000	0.851370	1.127595	0.2694
HPI	0.474689	0.019138	24.80349	0.0000***
R-squared	0.992233			
Adjusted R-squared	0.990794			
F-statistic	689.8224			

Notes: ***significant at 1%, ** significant at 5%.

Five hypotheses have been developed to study the relationship between macroeconomic determinants and the cost of living in Malaysia. As shown in Table 3, the hypothesis testing analysis of H1 showed that there is an insignificant association between UR and COL. The result revealed an insignificant positive relationship between UR and COL. Thus, the alternate hypothesis H1 is rejected. This means that UR does not influence COL. The result obtained

from this research is inconsistent with the previous study by Aziz (2020) found that there is a negative relationship between the unemployment rate and the increasing cost of living. Most of the previous studies have a significant result between the unemployment rate and cost of living, however, unemployment is detrimental because it lessens people's ability to make a living and, consequently, their standard of living. People's chances of falling into and staying in poverty due to their diminished standard of living owing to joblessness are high.

The hypothesis testing analysis of H2 indicated that the relationship between COL and RER is negative. However, the coefficient is not statistically significant. Therefore, it cannot be concluded that there is a significant relationship between RER and COL based on this analysis. Therefore, the alternate hypothesis for H2 is rejected. The result obtained is in line with a study by Latimaha et al. (2020). Although the real exchange rate has no effect on consumer prices and is statistically insignificant, it remains an important variable that affects prices when used as a recommendation or convincing argument. However, a study by Tan and Luu (2017) is vice-versa, which revealed that exchange rate fluctuations in Asian countries significantly impact the cost of living among residents.

There was a strong and significant positive relationship between COL and HPI, and the variable HPI has a positive coefficient of 0.474689, indicating that as HPI increases, the dependent variable COL also tends to increase. The coefficient is highly statistically significant. Thus, the alternate hypothesis, H3 is accepted. The result is positively supported by (Lacoveillo, 2004). The study reported that changes in housing prices positively impact consumer spending and overall inflation.

The hypothesis testing analysis of H4 indicated that the relationship between NT and COL is negatively and statistically significant at a 1% level of the significance level. Hence, the alternate hypothesis H4 is accepted. However, the results obtained from the regression contradict with the previous study by Cerdeiro and Komaromi (2017), Squalli and Wilson (2006), and Rodriguez (2000), which reported a positive relationship between trade openness and income.

The hypothesis testing analysis of H5 showed that there is a positive and statistically significant association between SUB and COL. Thus, the alternate hypothesis, H5 is accepted. This is supported by Hosan et al. (2023) and Livingston et al. (2022) who found energy subsidies significantly affect energy poverty and energy poverty as a mediator of social well-being significantly impacts social well-being. As a form of social welfare, energy subsidies reduce the overall cost of energy and facilitate access to modern energy services for a specific social group. As a result, impoverished households in society have greater access to modern energy products despite their limited income, resulting in the eradication of energy poverty and the enhancement of social welfare. Besides, there is a positive relationship between subsidies and household consumption expenditure, as total household consumption expenditure will increase if subsidies are phased out (Vandeninden et al., 2022).

4.2 Residual Diagnostic Test

The statistical method known as regression is predicated on a few assumptions, the most important of which are that the residuals will have a normal distribution, that their variance will remain constant, and that there will be a connection between the variables that explain the phenomenon in question. In the study, econometric tests such as normality, serial correlation, multicollinearity, and heteroscedasticity tests were used to determine the extent to which the regression analysis assumptions regarding residuals and the correlation between explanatory variables were satisfied. These tests were utilized to ensure that the regression analysis assumptions were satisfied.

4.2.1 Normality Test

Normality tests are used in statistics to examine if a data set is well-modelled by a normal distribution and to calculate the probability that a random variable underlying the data set is normally distributed. Fig. 2 below shows the normality test using Jarque Bera.

The Jarque Bera will be compared with a 5% level of significance. The test will reject the null hypothesis if the probability is less than 5% or 0.05 and accept the null hypothesis if the probability value is greater than 5% or 0.05. This indicates that the residual is normally distributed. The result shows that the probability is 0.654 or 65.4%, over the 5% significance level. Thus, the result will not reject the null hypothesis as the residual is normally distributed.

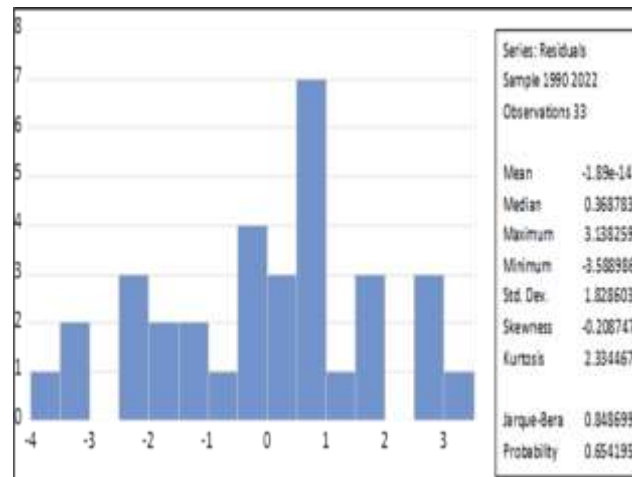


Fig. 2 Normality Test Results
Source: EViews 12

4.2.2 Multicollinearity Test

To determine the existence of multicollinearity, this study used the Variance Inflation Factor (VIF). The findings shown in Table 4 make it abundantly evident that not a single VIF is more than 10. taking this into consideration, it may deduce that none of the variables are strongly collinear with one another.

Table 4. Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
NT	1.12E-10	7.780285	2.693837
RER	0.002590	284.8637	2.785672
SUB	1.85E-09	6.324698	2.996618
UR	0.724830	71.71579	1.185279
HPI	0.000366	39.79134	2.832163

4.2.3 Autocorrelation Test

The serial correlation describes the situation in which the error term from one period is shown to be associated with the error term from any other period. The traditional method of regression presupposes that there is no such association. To investigate the possibility of serial correlation, the Breusch–Godfrey serial correlation LM test was carried out. The findings

presented in Table 5 suggest that the null hypothesis of no serial correlation is rejected. Therefore, there is a correlation between the variables.

Table 5. Residual Serial Correlation LM Test

F-statistic	3.775063	Prob. F (2,25)	0.0369
Obs*R-squared	7.654476	Prob. Chi-Square (2)	0.0218

To solve this problem, the HAC (Heteroscedasticity and Autocorrelation Consistent) test was employed. The HAC tests refer to a series of statistical tests that are used to address possible concerns of heteroscedasticity and autocorrelation in regression models. This test is intended to offer robust and trustworthy inference even when such difficulties are present. This test adjusts the standard errors of the coefficient estimates in a regression model to provide valid and efficient inference. As a result of carrying out HAC tests on the data, the inferences drawn from those data in the presence of autocorrelation become more accurate and trustworthy, hence contributing to an increase in the validity of the regression analysis.

4.2.4 Heteroscedasticity Test

To determine the possibility that there was any heteroscedasticity, the study employed the Breusch-Pagan-Godfrey heteroskedasticity test. According to the findings shown in Table 6, there is no evidence of heteroscedasticity. This indicates the null hypothesis of no heteroscedasticity (homoscedasticity) is accepted at the 5% level of significance, which results in the residuals having a constant variance.

Table 6. Residual Heteroskedasticity Test Result

Prob. Chi-Square (5)	F-statistic
0.6971	0.543680

5.0 CONCLUSION

Conclusively, the findings presented give valuable insight into the society in Malaysia to plan life by looking at the factors that generally affect the cost of living. The rising cost of living will mitigate the standard of living for Malaysian households. For estimations, robust econometric techniques are applied. This study is essential to be done, to have a clear understanding of the components that go into determining the cost of living. Findings show that three variables are significant in determining Malaysia's cost of living: the housing price index, net trade, and subsidies. Rising house prices can redistribute wealth within an economy, increasing the wealth of homeowners but reducing effective living standards for those who do not own a house, especially youngsters. If the housing price rises, the wealth effect is likely to cause an increase in consumer spending, which also increases the cost of living.

Subsidies are one of the initiatives implemented by the government to ensure people's survival. The more subsidies are given, the higher the cost of living, but consumers will bear the less expenses. When government subsidies are implemented, an industry can produce more goods or services, increasing the quantity demanded of those goods or services at a lower price. The research found that net trade and cost of living have a negative and significant relationship, which shows that the trade surplus will lower the cost of living because the country will import less. People will focus on buying local products which are less expensive than imported products.

Based on the findings, the following recommendations should be considered, such as policy changes particularly to minimize or overcome the rising cost of living in Malaysia. The

price controls and subsidies are to be continued for both consumers and producers on certain essential items. The targeted subsidies need to be re-channelled to more productive purposes to ensure the one-off impact on the cost of living. Besides, the government should reconsider structural reforms that address both income and cost factors to strengthen households' resilience against future shocks.

Besides the addition to existing knowledge, this study also bears some limitations that can lead to further investigations as this research was conducted based on only a few variables to determine factors affecting the cost of living in Malaysia.

6.0 SUGGESTION FOR FUTURE RESEARCH

Several additional variables may be included in future research such as income growth, insurance rate, human capital, inflation rate, and so on which may bring more interesting and accurate results. It is also suggested to have more thorough research on the effect of low savings and heavy debt burdens (individual well-being) on the cost of living in Malaysia.

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CO-AUTHORS CONTRIBUTION

All authors contributed equally to the conception and design of the study.

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ASSESSING THE PERCEIVED SKILLS OF TERTIARY ACCOUNTING STUDENTS BY EMPLOYERS

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ABSTRACT

The purpose of this study is to investigate employers' perceptions of accounting students' skills. The research was carried out using an online survey distributed to employers where accounting students are completing their internship programme. The sample consists of 90 accounting students who participated in the internship programme in various states during the 2022/2023 semester. The survey evaluates skills such as communication, critical thinking, and the ability to work independently. The findings of this study showed that students need to improve their skills in technical knowledge, technical report, and communication in English. The study's findings will have significant implications for higher learning institutions (HLI) and policymakers seeking to improve the alignment of education and the workforce. Through their academic curricula, HLI should provide more opportunities for students to develop soft skills.

Keywords: employer's expectation, graduate employability, internship, knowledge application, student skill

1.0 INTRODUCTION

Graduate students often encounter difficulties in developing job-market skills due to the emphasis of HLI programs on theoretical knowledge and research capabilities, which prove inadequate for them to attain practical experience or fully grasp the practical application of theory within real-world business contexts. Some programmes provide little exposure to industry, so students have little interaction with industry professionals to learn how to deal with real-world issues. Most HLI programmes assess communication skills in terms of writing and speaking through written projects and presentations, but the evaluation may be more on the contents, and communication is only a small portion of the overall assessment rubric. While mastering these skills holds utmost importance for the job market, potential solutions to enhance students' communication abilities might not receive adequate attention.

An internship holds significant educational value as it allows students to apply theoretical knowledge in practical settings. The primary aims of an internship encompass offering students hands-on learning chances and exposure to real-life situations within their chosen field of study or profession, thereby fostering the development of their work ethics and competencies (Laguador et al., 2020). Identifying employer perceptions of student skills can provide valuable insights to HLI to improve graduate quality and empower students' job marketability. HLIs can become more aware of what skills students lack and how those skills

can be developed through external training programmes or embedded into academic programmes. It can also help in identifying gaps between the needs of graduates and those of employers and use them in strategic planning. This information can be used as an input in curriculum design that allows soft skills to be emphasised in academic programmes, hence making them relevant for the workforce. Identifying how employers evaluate student performance during internship training, provides leads to HLI whether the internship programmes meet the standards and expectations of the industry. This can help HLIs maintain high-quality internship programmes that provide students with valuable learning experiences. Furthermore, understanding how employers evaluate student performance during internship training can also help HLIs develop partnerships with organisations that offer internship opportunities. By demonstrating an understanding of the skills and knowledge that employers value, HLIs can position themselves as valuable partners for organizations seeking to recruit and develop talent. HLIs can also ensure that their internship programmes are effective, relevant, and meet the needs of the industry. This knowledge can help HLIs develop better curricula, maintain high-quality internship programmes, build partnerships, and provide better support to their students.

Currently, empirical research on internships often lacks detailed quantitative examination of various dimensions related to employer feedback, leaving us with an incomplete understanding of its effectiveness and implications. While it's widely acknowledged that feedback is crucial for intern development, there is a dearth of studies that rigorously assess the nature of feedback interns receive during their internship. Quantitative research could delve into how often interns are provided with feedback, whether it is primarily constructive or positive, and whether it addresses specific skills or overall performance.

The aim of this study is to ascertain employers' perceptions of the skills possessed by accounting students in eight areas: adherence to work requirements (AWR), interpersonal skills (IS), responsibility (R), general skills and motivation (GSM), job competency (JC), ability to communicate ideas (ACI), knowledge and understanding of concepts (KUC), and report writing ability (RWA). The results from this study are beneficial in curriculum design. Firstly, to include assessment in accounting courses that focus on developing skills, specifically the contents of assigned projects and rubrics. Secondly, faculty can provide career counselling that is more focused on the skills that students need to develop for a specific industry or career. Thirdly, faculty can concentrate on critical training needed to improve students' skills, and to collaborate with employers to provide students with industrial experience and networking opportunities.

1.1 Theory

Connectionism theory by Edward Thorndike is discussed in several research papers (Islam, 2015; Karadut, 2012; Manik, 2023). It offers valuable insights into how students develop skills and knowledge that are relevant to the job market. By recognizing the interconnected nature of learning, promoting transferable skills, emphasizing meaningful connections between different elements of knowledge, and leveraging adaptive learning systems, educators can better prepare students to navigate and succeed in the professional world.

Connectionism views learning as the formation and strengthening of connections between nodes in a network. In the context of skill development, this theory suggests that students acquire skills by building connections between different elements of knowledge, experiences, and problem-solving strategies. Understanding this interconnected nature of learning can help educators design curricula and instructional approaches that facilitate skill acquisition. The theory states that learning in one context can influence performance and skill development in another context. When students learn and practice skills in specific situations, the connections formed within their neural networks become more robust. This facilitates the transfer of

learned skills to novel situations, such as the job market. By understanding the principles of connectionism, educators can design learning experiences that promote transferable skills, enabling students to apply their knowledge and abilities effectively in various professional settings.

2.0 LITERATURE REVIEW

Possessing relevant skills for the chosen career may increase opportunities for career advancement, job satisfaction, and job market competitiveness. HLI frequently focuses on graduate marketability, or the graduate's ability to find work after graduation. Nonetheless, the mission should go beyond simply finding a job and should focus on how far they can advance in their careers. Higher productivity and job satisfaction will result from improved performance. It is more likely that they are satisfied with their work, which leads to a higher quality of life and a positive outlook on their career. They will also have a competitive advantage over other candidates or employees if they have the necessary skills.

Misni et al.(2020) examined the impact of curriculum design on Malaysian graduate employability competencies following Alias et al. (2013) arguments on effectiveness of teaching and learning strategies in developing highly sought-after employability skills among graduates. They found that curriculum vision, curriculum vision operationalisation, and curriculum delivery were all found to positively correlate with employability competency. Many graduates are unable to apply the knowledge they gained at HLI in their jobs and are less proficient in the English language (Hisamudin, 2022). Alshare and Sewailem (2018) identified a gap between student skills and employer needs because educators in HLI emphasise hard skills while employers emphasise soft skills. Hard skills include domain knowledge and technical skills, whereas soft skills include teamwork and interpersonal skills (Garousi et al., 2018). According to Aryanti and Adhariani (2020), there is an expectation gap between students and employers because students believe that honesty, continuous learning, and work ethics are important skills, but employers place a greater emphasis on teamwork, work ethics, and time management. Aside from the need to revise the accounting course curriculum, Arquero et al. (2022) stated that students' overconfidence or overestimation of their abilities has resulted in an expectation gap between graduate and employer expectations. Boyce et al. (2019) examined the curriculum of Australian and New Zealand HLIs and discovered that, despite the ongoing call to broaden the educational approach, the curriculum remains in the form of traditional technical and vocational focus. Similar findings from Cunha et al. (2022) who examined Portuguese HLIs accounting course, identified that their HLIs predominantly concentrate their curricular efforts on technical competencies and hard skills, rather than transversal skills. Razak et al. (2022) introduced gamification as an inventive approach to teaching and learning. Their study revealed that while this method enhanced students' performance, it did not uniformly affect the intrinsic motivation of all students. This is significant because Kadous and Zhou (2019) emphasized the importance of auditors' intrinsic motivation in improving their capacity to make precise judgments regarding complex accounting estimates. When auditors are motivated, they display a tendency to broaden their attention to encompass a wider range of information, engage in more meticulous information processing, and actively pursue additional evidence that holds relevance to the given scenario. Iberahim (2021) showed that when Active, Inquiry, and Deep Learning (AID) pedagogical approach is incorporated into creative and critical thinking course, student performance improved from fundamental active learning to more complex inquiry-based and deep learning approaches by the end of the course. The study identified that the students emerged as models of transformation, embodying altered thinking styles characterized by curiosity, systematic thinking, realism, and innovation.

According to empirical evidence, HLIs should also focus more on developing students' confidence and improving their ability to apply theoretical knowledge and practice (Roy, 2022), and provide students with active learning activities such as project-based and work-integrated

training (Phan et al., 2020). Overconfidence, defined as an overly optimistic assessment of one's abilities, could be one of the possible causes (Arquero et al., 2022). To improve graduate marketability, students should seek career advice on the skills required in their chosen field (Steed, 2018).

3.0 METHODOLOGY

3.1 Research design

This study examines all 90 students who are UiTM Cawangan Johor's final-year accounting degree students in the 2022/2023 batch who attend intern programmes in the industry. The respondents of the survey are the supervisors who closely work with the students during the internship period in the organisation.

To fulfil the general objective of this paper, we employ a descriptive research design to obtain information about the employer's perception of the skills possessed by our students. The descriptive design does not answer the why question but answers the what, when, where and how questions. We collect data through survey questions that contain Likert scale items (1= Poor, 2= Moderate, 3= Satisfactory, 4= Good, and 5= Excellent) where the employer will assess the student's skills. We refer to this assessment as Internship Evaluation Criteria (IEC). There are three sections in IEC, the first section is on the demographic information of students including the name and address of the company where the students undergo the internship program. The second section assesses students' competency, students' skills, and their knowledge. The final section is open questions asking employers' opinions on students' strengths and weaknesses. In the second section, questions to assess students' skills are divided into eight categories, (1) General skill and motivation consists of 2 items; (2) Job competency consists of 2 items; (3) Interpersonal skills consists of 2 items; (4) Responsibility consists of 2 items; (5) Compliance with working requirements consists of 4 items; (6) Knowledge and understanding of concepts consists of 3 items; (7) Report writing ability consists of 2 items, and (8) Communicating ideas consists of 4 items. Details of the items are presented in Table 2.

4.0 RESULTS AND DISCUSSIONS

Table 1 reports the demographic statistics of the students. Most of the students are female. The internship is offered in six different locations, with Johor having the highest percentage of 35.6% and the lowest being only 4.4% in Wilayah Persekutuan.

Table 1. Demographic statistics

	N	%
Gender		
Male	15	16.7
Female	75	83.3
	90	100
Location		
Kuala Lumpur	9	10.0
Johor	32	35.6
Selangor	19	21.1
Negeri Sembilan	17	18.9
Melaka	9	10.0
Wilayah Persekutuan	4	4.4

Table 2 displays the average scores for items within each respective category. All feedbacks are above satisfactory. Mean values for some items under KUC, RWA and CI do not reach 4 (good), indicating that they were scored less than good. Under KUC, students scored low for business and technical knowledge; while under CI, communication in English received the

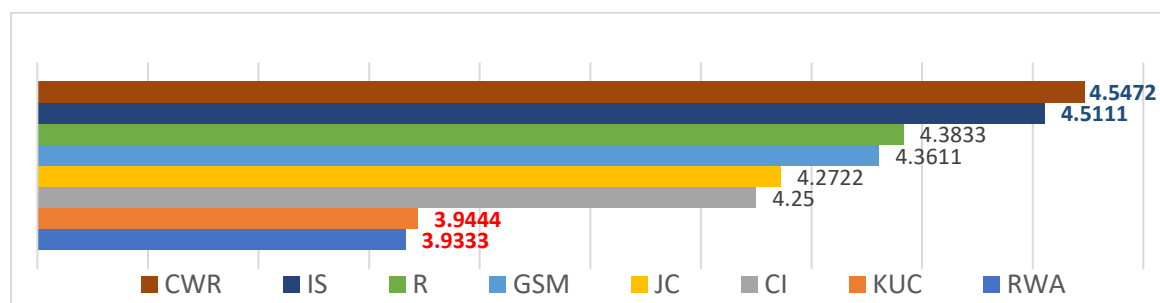
lowest mean value. These findings suggest that the students may not have extensive coursework in business and technical subjects leading to limited knowledge in these areas. If the internship requires a strong foundation in these fields, students with less exposure may struggle to meet the expected level of knowledge. While academic knowledge is valuable, practical experience plays a crucial role in developing proficiency in business and technical areas. Students who have not had previous opportunities to apply their theoretical knowledge in real-world scenarios may find it challenging to bridge the gap between theory and practice during their internship. Communication in English is a common challenge for non-native English speakers. If students' language is not English, they may face difficulties in expressing themselves fluently or accurately, leading to lower scores in communication. This can affect their ability to effectively convey ideas, collaborate with colleagues, or present information during the internship. This is why Evans and Suklun (2017) highlighted a disparity in communication regarding the extent of interaction between individuals who are native speakers and those who are not. Employers and industry experts emphasize that in today's dynamic business environment, possessing technical expertise alone is insufficient. Outstanding teamwork, good communication, and robust analytical abilities hold equal significance (Arquero et al., 2023). Some students may possess the required knowledge and skills but struggle with self-confidence, particularly in unfamiliar or high-pressure situations. This lack of confidence can affect their performance in business and technical tasks as well as their ability to communicate effectively.

Table 2. Descriptive statistics

	Mean	Std. Deviation
General skill and motivation (GSM)		
General capability to perform assigned tasks	4.2889	.58530
Willingness to learn and acquire knowledge	4.4333	.79394
Job competency (JC)		
Able to complete assigned tasks efficiently and effectively	4.2667	.66704
Able to meet assigned deadlines	4.2778	.67087
Interpersonal skills (IS)		
Relationship with peers/supervisor	4.4778	.65733
Ability to work in a team	4.5444	.62100
Responsibility (R)		
Job accountability of the trainee	4.3778	.78723
The trainee is committed to completing assigned tasks	4.3889	.77452
Compliance with working requirements (CWR)		
The trainee comes to work every working day	4.6333	.54977
Punctuality at work	4.6889	.57366
Willingness to work overtime	4.2000	.82380
The trainee is well-groomed and neat in appearance	4.6667	.51929
Knowledge and understanding of concepts (KUC)		
General knowledge	4.0778	.69067
Business knowledge	3.8556	.66300
Technical knowledge	3.9000	.67124
Report writing ability (RWA)		
Technical reports	3.9222	.70675
Non-technical reports	3.9444	.64235
Ability to communicate ideas (CI)		
In English (orally)	3.9000	.63688
In English (written)	4.0333	.67790
In Bahasa Malaysia (orally)	4.5667	.58155
In Bahasa Malaysia (written)	4.5000	.58540

Figure 1 illustrates the overall average for each of the eight categories. The highest mean received was CWR at 4.5472 suggesting that the students demonstrate positive attributes that are highly valued in professional settings. Their commitment to punctuality, willingness to work

extra hours, and attention to appearance indicate a strong work ethic, reliability, and professionalism, which can contribute to their success in the workplace in the future. Report Writing Ability (RWA) obtained the lowest mean score of 3.9333, indicating that faculty needs to identify method of improving these skills. Numerous studies have been undertaken to explore the potential efficacy of distinct pedagogical methods in enhancing students' writing abilities (Everaert & Safari, 2021; Hughes, 2017; Ong et al., 2022). Proficiency in writing is particularly crucial for accountants, given their involvement in composing annual reports, where the clarity of content may have implications for accounting integrity (Soepriyanto et al., 2021). Furthermore, the mean score of 4.03 for English writing suggests that students are proficient in general English writing; however, they may need to refine their abilities specifically in technical report writing. Non-native English speakers may encounter challenges in expressing themselves clearly and accurately in written form, which can stem from difficulties in grammar, vocabulary, and overall coherence. Additionally, students may have limited prior experience in report writing before their internship, which necessitates practise and familiarity with the format, structure, and language conventions associated with effective report writing. Practical knowledge is crucial for transitioning into industrial roles (Sirisha et al., 2020), yet technical knowledge is equally essential as it forms the bedrock for crafting effective technical reports. According to Haris et al. (2021), a strong knowledge of the subject empowers students to convey information accurately and comprehensively in their reports. For instance, they stated that teaching financial auditing is challenging due to the need to comprehend testing, financial and management accounting, taxes, and audit procedures. Technical expertise allows them to analyse data, present findings, and draw informed conclusions or recommendations effectively.



CWR-Compliance with working requirements, IS-Interpersonal skills, R-Responsibility, GSM- General skill and motivation, JC-Job competency, CI-Ability to communicate ideas, KUC-Knowledge and understanding of concepts, RWA- Report writing ability.

Fig. 1 Average value across the eight supervisor evaluation categories

Consistent with Misni et al.'s (2020) findings that curriculum design has a positive effect on students' skill, HLI should incorporate activities and assignments that promote the development of skills that are highly valued by employers. Offer workshops, seminars, or dedicated courses that focus on enhancing the essential employability skills. HLIs could consider implementing remedial courses or workshops to support students in improving their skills in areas where they struggle, particularly in trainers' knowledge and understanding of concepts and report writing ability, which received the lowest scores. These courses would provide focused instruction and practice to help students establish a solid foundation of knowledge and skills. Throughout the course, students' abilities can be assessed at various stages, allowing for appropriate corrective measures to enhance their skills. Moreover, academic advisors can play a strengthened role by not only providing academic guidance and support but also offering encouragement and assistance to promote professional success. Advisors can help students identify areas of weakness and provide advice on study habits, time management, and other strategies to enhance their performance. To further support students, HLIs may consider establishing writing centres providing writing tutors who can offer personalised assistance to those in need of help with their writing skills. These resources can

greatly contribute to improving students' proficiency in crafting effective reports and other assignments. By offering targeted support and resources, HLIs demonstrate their commitment to helping students develop the necessary skills to excel in their chosen fields.

5.0 CONCLUSIONS

The purpose of this study is to identify employers' perceptions of skills possessed by accounting students during their internship programmes. The skills are sorted into eight categories: Compliance with working requirements (CWR), Interpersonal skills (IS), Responsibility (R), General skill and motivation (GSM), Job competency (JC), Ability to communicate ideas (CI), Knowledge and understanding of concepts (KUC) and Report writing ability (RWA). The overall feedback received from the students is above satisfactory. However, it is worth noting that students need to improve their skills under the categories KUC, RWA, and CI as they fall below good rates. Specifically, within the KUC category, students scored low in terms of business and technical knowledge and RWA category, students scored low in technical report ability. Similarly, in the CI category, communication in English received the lowest mean value. These findings suggest that the students may have limited knowledge in business and technical subjects, and limited exposure could present challenges when the internship requires a strong foundation in these fields, as students may struggle to meet the expected level of knowledge. This study may suggest that HLI should develop training and development programmes that are closely aligned with the most in-demand skills and competencies. It will ensure that the HLI can produce holistic graduates who excel in both academics and job market quality.

While academic knowledge holds significance, practical experience plays a vital role in developing proficiency in business and technical areas. Students who have not had previous opportunities to apply their theoretical knowledge in real-world scenarios may find it difficult to bridge the gap between theory and practice during their internship. Furthermore, communication in English poses a common challenge for non-native English speakers that may have an impact on their ability to effectively convey ideas, collaborate with colleagues, or present information during the internship. Building up confidence is also important as it may influence their performance in business and technical tasks, as well as their ability to communicate effectively. These weaknesses can be addressed through targeted interventions and support. Providing additional training, mentorship, language support, and opportunities for practical application can help students overcome these challenges and improve their performance during internships. The findings of this study indicate that the students exhibit a strong commitment to work requirements, reflecting their work ethic, reliability, and professionalism, which can contribute to their future success in the workplace. Given appropriate support and training, the students have the capacity to demonstrate commendable qualities and reach their full potential. Students have diverse learning styles and preferences. If the internship programme does not cater to their specific learning needs or fails to provide varied instructional methods, some students may struggle to grasp and apply business and technical knowledge effectively.

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THE EFFECTS OF WORK-LIFE CONFLICT, ORGANIZATIONAL COMMITMENT, MENTORING, AND ORGANIZATIONAL CULTURE ON FEMALE CAREER ADVANCEMENT

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ABSTRACT

The 2021 Malaysian Code on Corporate Governance highlights a recommended corporate governance practice for publicly listed companies, which entails having a minimum of 30% women directors on their board. However, the present scenario indicates an insufficiency in women's representation in senior management roles, even though women outnumber male graduates from educational institutions. This study aims to investigate the factors that impact the career progression of female employees, specifically work-life conflict, organizational commitment, mentoring support, and organizational culture. A total of 106 UiTM alumni responded to our online survey, which was randomly distributed. Using an OLS regression model, we discovered that all factors, except work-life conflict, affect female career advancement. Organizational commitment emerges as the most influential factor shaping female career development, while a negative organizational culture significantly hampers the progress of women in their careers. Our results can offer insight to universities, employers, and policymakers on the factors that hinder women from reaching leadership positions. Our findings suggest that universities may want to develop suitable training or curriculum to enhance the soft skills of female students, and organizations need to improve their policies and implement improved mechanisms that encourage women's active participation in organizations.

Keywords: female career, work-life conflict, organizational commitment, mentoring, organizational culture

1.0 INTRODUCTION

The Malaysian government has taken various steps to promote the participation of women in the workforce, particularly in leadership roles. These efforts include initiatives in the 11th and 12th Malaysian Plans, as well as the inclusion of women's significant role in the labor force in Sustainable Development Goals. Additionally, the Malaysian Code on Corporate Governance (MCCG) 2021 now requires all listed companies to have a minimum of 30% women on their boards, and there is a focus on promoting gender diversity policies that support women's participation at senior management levels, beyond the board room. As of July 1, 2023, based on the Corporate Governance Monitoring Report released by the Securities Commission Malaysia (SCM) in 2022, the leading 100 listed companies in Malaysia have attained a

representation of 30% women on their boards. However, the overall percentage of women directors on the boards of all listed Malaysian companies remains below 30%. This necessitates the addition of 362 more women to board positions. The demographic information from the leading 100 listed companies reveals that men constitute a majority, holding 77% of the senior management positions, while women's representation as CEOs is notably minimal, comprising just 2%.

This raises questions about the quality of graduates produced by universities, as female graduates outnumber male graduates (Azuar, 2022) but do not appear to be landing in top managerial positions. More data is needed to understand the reasons behind this shortfall and to address the issue of gender diversity in the workplace. To explore the limited involvement of women in upper management roles, we analyzed four factors that could hinder the career progression of female graduates, namely work-life conflict (WLC), organizational commitment (OC), mentoring support (MS), and organizational culture (C). The research outcomes may provide actionable insights for universities to enhance female graduates' preparation, for employers to foster an inclusive workplace, and for governments to implement policies that support gender diversity in leadership roles. Collectively, these efforts can contribute to a more equitable and balanced representation of women in top management positions.

The rest of the paper continues as follows. The following section briefly discusses the relationship between female career advancement with four factors: work-life conflict, organizational commitment, mentoring support, and organizational culture. Section 3 provides details of the data measurement and explains our research methods. Details of our descriptive statistics and empirical results are in Section 4, and Section 5 concludes.

2.0 LITERATURE REVIEW

2.1 Theories

Two theories that are relevant to women in leadership: the implicit leadership theory and the role congruent theory. The implicit leadership theory developed by Lord et al. (2020), explains that people have preconceived notions about the characteristics and qualities of a leader. This mental representation of a leader is like stereotypes and influences how people expect a leader to behave. Although everyone has different perceptions, they commonly agree that a leader who is in control, determined, and influential possesses the necessary task skills and characteristics, which are closely associated with men. This theory suggests that the perception of a leader impacts the evaluation of the leaders and the amount of effort people are willing to support them. Therefore, the impact of women in leadership is critical, as this theory explains how roles are assumed and how to act in the workplace. However, this theory varies across distinct cultural backgrounds, as a characteristic of an effective leader may be valid in one culture but perceived differently in another culture. The role congruity theory explains how incongruity between female gender roles and leadership roles results in two types of prejudice (Eagly & Karau, 2002). Gender roles are categorized as communal and agentic attributes under the social role theory developed by Eagly (1987). Communal attributes relate to caring for others, such as being helpful, kind, sympathetic, affectionate, sensitive, and gentle. These traits are strongly associated with women. In contrast, agentic attributes, such as being aggressive, dominant, forceful, independent, self-confident, and self-sufficient, are strongly associated with men and are perceived as important traits for leaders. Many societies historically associated leadership qualities with stereotypically masculine attributes, such as assertiveness and dominance. As a result, there might be a bias in favor of men when considering candidates for top leadership roles, since these roles are seen as requiring qualities traditionally associated with masculinity. This bias can lead to the underrepresentation of women in such positions, despite their qualifications and capabilities.

The role congruity theory explains how social perceptions of gender roles impact whether women are allowed to hold leadership positions. However, when women do occupy leadership positions and display agentic attributes, people view it as a violation of social roles. The warmth-competence theory by Dupree and Fiske (2017) further explains the negative perception of women with dominant leadership styles. People form impressions of others based on two dimensions: warmth (likeability and trustworthiness) and competency (respect and efficiency). Women who exhibit dominant leadership styles are seen as competent but not warm because their behavior contradicts communal attributes typically associated with women. Therefore, female leaders should exhibit narrow agentic attributes to direct people's perceptions toward the warmth dimension. The Role Congruent Theory suggests that individuals are more likely to be accepted and successful in roles that align with societal expectations of their gender. In the context of leadership, if the perception persists that leadership roles are traditionally occupied by men, women might encounter barriers when pursuing top management positions. This is because these roles might be seen as incongruent with traditional gender roles and expectations. As a result, women might be less likely to be considered for or actively seek out these positions, contributing to the lack of representation at the top management level.

2.2 Female career advancement

Female career advancement refers to the advancement and development of women's careers within an organization or industry. It entails women moving up the career ladder, gaining promotions, and assuming leadership roles, as well as acquiring the skills and knowledge required for career advancement. Female career advancement is critical to promoting gender diversity and achieving gender equality in the workplace. Women continue to encounter unique obstacles when it comes to breaking into the male-dominated realm of leadership. Despite outnumbering men in terms of graduates, women's involvement in decision-making positions remains low (Saadin et al., 2016).

The goal of having 30% female representation on boards of directors has yet to be achieved, revealing the persistence of the gender gap in the workplace (Ang, 2018). The issue is particularly acute in middle management and at the board level, where female participation is even lower (Chin, 2021). Women's limited participation in the labor force also hinders their development as leaders, with male participation exceeding female participation by 40% (NST, 2019). Moreover, women are more likely to choose low-paying careers and work in jobs that do not align with their qualifications (Gu, 2018; Malay Mail, 2020). Although women's participation rate in the 25-34 age group is high at 75.1%, it drops to 57% in the 45-54 age group, indicating the challenges women face as they juggle multiple roles in their careers, family, and home responsibilities (Department of Statistics Malaysia, 2021). Women's opportunities for growth in a male-dominated workplace are further limited by gender discrimination (Victor & Shamila, 2018). These challenges are compounded by the impact of family and caregiving responsibilities on women's career advancement, as well as their underrepresentation and token status at higher organizational levels (O'neil et al., 2015). In this study, we examined whether work-life conflict, organizational commitment, mentoring support, and organizational culture affect female career advancement.

2.2.1 Work life conflict and female career advancement

Work-life conflict, also known as work-life imbalance or work-life interference, refers to a situation in which the demands and responsibilities of an individual's work or career negatively impact their ability to effectively manage and engage in their personal and family life (Schieman et al., 2021). Katz and Kahn's (2015) role theory proposes that individuals have various roles in their work and personal lives, with work roles being necessary for earning a

wage and living roles being related to family life, such as partnering, parenting, and personal activities (Greenhaus & Beutell, 1985). When household responsibilities interfere with work roles, work-life conflict arises, which is a common occurrence for working women who carry more domestic duties than men and spend more time caring for children (Arham et al., 2019; Bureau of Labor Statistics, 2021). With the added burden of homeschooling during the COVID-19 pandemic, working mothers face the difficult task of balancing work and family life (Spagnoli et al., 2020). As a result, many women opt to work part-time or commit to flexible hours for lower wages and closer proximity to home, which hinders their opportunities for promotion, particularly when the primary reason for working is economic necessity rather than career ambition (Vaghefi, 2018). Furthermore, the responsibility of child-rearing and the lack of affordable childcare make it challenging for women to pursue leadership roles (Bardekjian et al., 2019). Pregnancy is another obstacle faced by careered women, and the guilt of working beyond normal hours, especially with children, leads many to leave their demanding jobs which ultimately hampers their professional advancement (Al-Asfour et al., 2017; Arslaner & Boylu, 2017; Harniyati et al., 2021; Toffoletti & Starr, 2016). Huo et al. (2023) demonstrated that the interaction between work-role overload and employees' trait emotional stability played a role in influencing their experience of work-life conflict. This, in turn, had consequences on career advancement. We proposed that,

Hypothesis 1: Work-life conflict has a negative effect on female career advancement.

2.2.2 Organizational commitment and female career advancement

Organizational commitment (OC) is the emotional connection, loyalty, and dedication employees have toward their organization. It reflects their identification with the organization's values and goals, and their willingness to contribute their best efforts to its success. This commitment can take different forms, including emotional attachment, perceived costs of leaving, and a sense of moral obligation to stay (Loan, 2020). Commitment is a binding force that compels an individual to pursue a particular course of action. As employees' emotions are satisfied, they become driven to fulfill their responsibilities. Consequently, an employee's performance is profoundly influenced by their motivation levels, making it prudent for organizations to sustain these levels of motivation within their workforce (Munir et al., 2021).

Within an organizational context, OC is the degree to which employees identify with and actively participate in achieving an organization's goals and values (Mowday et al., 1979). Allen and Meyer (1990) further developed the concept of organizational commitment into three dimensions: affective attachment (affective commitment), perceived costs (continuance commitment), and obligation (normative commitment). Affective commitment is an emotional attachment, identification with, and involvement in the organization (Allen & Meyer, 1990). Continuance commitment is based on the costs associated with leaving the organization, and normative commitment refers to an employee's sense of obligation to remain in the organization. Although each employee in an organization is expected to experience all three types of commitment simultaneously, the degree of each commitment may vary. Affective organizational commitment is the most studied among the three dimensions of organizational commitment. Researchers have found that job satisfaction has a positive impact on affective organizational commitment (Chordiya et al., 2017) and that there are differences in organizational commitment and career commitment between male and female employees (Ayodele et al., 2020). Studies have also shown that a high level of affective commitment reduces the tendency to leave an organization and that employees with a strong sense of affective commitment are more likely to stay in the organization because of the potential for career advancement (Bell & Sheridan, 2020; Guzeller & Celiker, 2020). Liu et al. (2020) found that female employees within the hospitality sector who had higher organizational commitment are associated with higher career advancement.

The style of leadership, along with training and development initiatives driven by employee engagement, had a substantial impact on enhancing employee productivity (Rozanna & Adriansyah, 2023). Therefore, organizations should provide suitable training programs to increase employees' attachment to the organization, which will lead to better employee retention and attract talented employees to progress their careers within the organization. We posit that,

Hypothesis 2: Organizational commitment has a positive effect on female career advancement.

2.2.3 Mentoring support and female career advancement

Mentoring is interweaving a personal-professional rapport into an educational journey, embedding it within the organizational, cultural, and worldwide framework, and incorporating it as a strategic approach for systemic reform that enhances human potential (Mullen & Klimaitis, 2021). Mentoring is commonly used as a managerial approach to convey the principles and culture of an organization, manage stress, encourage employee engagement, and decrease employee turnover (Chang & Busser, 2017; Eissner & Gannon, 2018; S. S. Kim et al., 2015; Uen et al., 2018). Through mentoring, chronic issues such as motivation, commitment, and retention can be addressed, resulting in improved outcomes (Sharples & Marcon-Clarke, 2019). Specifically designed mentoring programs for women can help promote their career progress (Dashper, 2018). However, such programs can also be viewed as paradoxical because they acknowledge the underachievement of women in comparison to male employees but attribute it to individual women's shortcomings rather than gendered organizational structures, practices, and norms. As a result, formal women's mentorship programs may both challenge and promote gender inequality (Dashper, 2019). In formal mentoring programs, career-specific support is significantly related to career goals rather than other functions such as psychosocial support and role modeling. Female managers, whose personal identities are closely tied to their families, are given psychosocial support to improve their work-family relations. Female managers place more value on the interpersonal aspect of mentoring relationships since their family identities are more important to them than their corporate work. The benefits of mentoring for female managers are not strongly linked to achieving greater career goals, but rather to relational support and emotional empathy (Kim, 2017). Nevertheless, formal mentoring programs can have a positive impact on women's retention, professional development, and leadership opportunities, particularly in male-dominated industries like IT (Cho et al., 2019; O'Meara et al., 2019).

Mentoring can provide women with a support network, eliminate information gaps, and offer role models (Buckles, 2019), which can lead to personal and professional growth, improved job productivity, and job satisfaction. Successful mentorship can help women increase their confidence, establish objectives, and broaden their network, leading to career advancement and improved working performance (Dashper, 2018). French et al. (2021) and Mcilongo and Strydom (2021) revealed a positive correlation between mentorship and career advancement. Additionally, a deeper analysis unveiled that female employees receive comparatively less engagement from male managers in contrast to female managers. Despite this, it was observed that the gender of the mentor does not have a direct influence on career progression.

Hypothesis 3: Mentoring support has a positive effect on female career advancement.

2.2.4 Organizational culture and female career advancement

Organizational culture refers to the shared values, beliefs, norms, attitudes, behaviors, and practices that shape the collective identity and character of a particular organization. It encompasses the unwritten rules, social dynamics, and overall atmosphere that influence how

employees interact, make decisions, and perform their work within the organization. Organizational culture plays a significant role in shaping the organization's values, goals, and the way it conducts business. It can be influenced by the organization's history, leadership style, industry, and the people who work within it (Morcos, 2018). Among many factors, commitment from upper management, support systems within the organization, training and growth opportunities, and the prevailing organizational culture all play a role in facilitating the progress of women in their careers (Asumadu & Owusu, 2022).

An unfavorable organizational culture can manifest through various factors like lack of diversity and inclusivity, discrimination, harassment, and unfair treatment of employees. Iradukunda et al. (2021) in a study focusing on female employees in the mining industry, identified that gender bias and instances of sexual harassment impede the career advancement and workplace safety of women. Consequently, these challenges have repercussions on the overall sustainable development of this industry. Negative organizational culture can have adverse effects on female employees, such as reduced job satisfaction, lower commitment to the organization, and increased likelihood of leaving the company (Suvaci, 2018; Tlaiss & Kauser, 2010). Moreover, such factors can directly hinder the career development of women by restricting their access to advancement opportunities, mentorship and networking, and exposure to key decision-makers in the organization. Research has demonstrated that an unfavorable organizational culture can significantly impede the career growth of women (WIC, 2019), who already confront significant obstacles in the workplace due to gender bias and stereotypes. Kholis (2017) conducted a study on female academicians and discovered that they encounter barriers to career advancement due to discrimination and a masculine culture prevalent in universities.

Gender gap presence in professional career advancement is not due to differences in performance (Filandri & Pasqua, 2019) and African American women face difficulties in reaching the C-suite because of negative stereotypes and the intersectionality of sexism and racial discrimination (Munson, 2018). In the case when the superior is a woman, gender discrimination is lesser, and female employees get more flexibility in their work schedule to promote better work-life balance (Lucifora & Vigani, 2022). We proposed that,

Hypothesis 4: Organizational culture has a negative effect on female career advancement.

3.0 METHODOLOGY

3.1 Sample and data collection

The study's population consists of female graduates from Universiti Teknologi Mara (UiTM). The alumni register of each UiTM campus serves as the population frame, and a simple random sampling approach, meaning that each accounting alumni has an equal chance of being selected for this study. Questionnaires were distributed online via WhatsApp and Facebook groups. Participants included working UiTM alumnae. This study had a total of 106 respondents.

3.2 Data measurement

The survey included a question on career advancement (CA) 7 items, work-life conflict (WLC) 10 items, organizational commitment (OC) 10 items, mentoring (MR) 15 items, and organizational culture (C) 8 items. CA scale was adapted from Jawahar and Hemmasi (2006), the WLC, OC, and C scales were adapted from Afza and Newaz (2008) and Lyness and Thompson (1997), and the MR scale was adapted from Dreher and Ash (1990). The survey questions utilized a five-point Likert scale (1-strongly disagree, 2-disagree, 3-neutral, 4-agree,

and 5-strongly agree) for each statement. This assessment has significantly impacted the creation of research questionnaires (Sangthong, 2020). Respondents were asked to indicate their perceptions about working in their present organization. A higher score (strongly agree) on the CA indicates a higher degree of potential for career advancement. The summed total of CA responses was calculated and used as a score for career advancement. A higher score (strongly agree) on the WLC, OC, MR, and C indicates a higher degree of work-life conflict, a higher degree of organizational commitment, great monitoring, and a higher level of negative organizational culture towards female employees. The summed total responses were used to measure the variables of interest.

3.3 Data Analysis

Reliability statistic on the variables is highly based on Cronbach's Alpha; 0.896 for career advancement (CA), 0.884 for work-life conflict, 0.922 for mentoring (MR), and 0.917 for organizational culture (C), except for low value at 0.651 for organizational commitment (OC). Cronbach's Alpha less than 0.8 has low internal consistency and needs to consider removing items with low item-total correlation. OC was initially assessed based on 10 items, but 2 items were removed: "I could just as well be working for a different organization if the type of work were similar" and "It would take very little change in my present circumstances to cause me to leave this organization". These items have negative values in the Inter-Item Correlation Matrix. Removing them has increased the value of Cronbach's Alpha from 0.651 to 0.818. Multiple regression analyses were used to test the hypotheses using SPSS Statistics 29.

4.0 FINDINGS AND DISCUSSIONS

4.1 Descriptive statistics

An analysis of the data shows that a majority of the 106 respondents were married without dependent children, with over 45% falling in the age range of 26 to 35 years. Additionally, the educational qualifications of the respondents varied, with over 60% holding a bachelor's degree and smaller percentages holding higher qualifications such as a master's degree, diploma, or postgraduate degree. Most of the respondents were found to be in middle (40%) or senior (45%) level positions, with only 15% at a junior level. The analysis also revealed that most of the respondents had worked in either private or public sectors for a period exceeding four years, as demonstrated in Table 1.

Table 1. Respondents' profile

Demographic indicator	N	%
Age (n= 106)		
20-25 years old	8	7.5
26-30 years old	30	28.3
31-35 years old	19	17.9
36-40 years old	17	16.0
41-45 years old	10	9.4
46-50 years old	15	14.2
>50 years old	7	6.6
Marital status (n= 106)		
Single	41	38.7
Married	62	58.5
Divorced	3	2.8
Education level (n= 106)		
Professional	2	1.9
Doctorate	5	4.7
Master	19	17.9
Degree	72	67.9
Diploma	8	7.5

Experience (n= 106)		
6m - 1y	7	6.6
1-3y	12	11.3
4-6y	26	24.5
7-10y	14	13.2
>10y	47	44.3
Position level (n= 106)		
Junior	16	15.1
Middle	42	39.6
Senior	48	45.3
Type of companies (n= 106)		
Government	33	31.1
Listed companies	19	17.9
Private companies	52	49.1
Self-employed	2	1.9

Referring to Table 2, the mean score of 4.01 for CA shows that most participants agree that women get support from the organization they currently work at to enhance their careers. The higher the WLF score, the more conflict there is between work and personal life. The mean value of 2.80 for WLC indicates that most participants feel that there had little conflict between the two. The mean value of 3.65 and 3.88 for OC and MR indicates that most participants are less than agreeable about their commitment to the organization and receiving mentorship in their careers.

Table 2. Mean value of variables

Variable	Mean	Std Deviation
Career advancement (CA)	4.01	0.81
Work life conflict (WLC)	2.80	0.78
Organizational commitment (OC)	3.65	0.62
Mentoring (MR)	3.88	0.53
Organizational culture (C)	2.60	0.85

The mean value of each item instrument is presented in Table 3. The mean value for all items assessing career advancement suggests that they do not experience issues that may hinder their career development. The response also suggests they are not being discriminated against in terms of getting opportunities to develop their career. Nevertheless, the mean scores between scale 3 (neutral) and 4 (agree) indicate that they do not strongly feel they get to advance to managerial positions. Of the 10 items measuring work-life conflict, the highest mean score of 3.2 indicates a neutral perception about personal life being negatively affected due to tiredness at work. It suggests that they are unconcerned about being tired from work and are unable to do things they enjoy. The lowest mean score for WLC is 2.44 indicating that they have no difficulty carrying out personal roles as a spouse or parent while working and a mean of 2.64, that their work schedule does not conflict with their family life. Of the eight items measuring organizational commitment, only 1 item has a mean of 4 that the respondents agree to put effort to succeed in the organization. Scores ranging from 3 (neutral) to 4 (agree) for the remaining items indicate an opportunity for the organization to proactively foster greater commitment. The mean value for mentoring indicates that respondents are more likely to choose between neutral and agree when evaluating whether or not they receive mentoring at work. They are given challenging tasks and opportunities to learn new skills, according to the highest score of 4.16. The lowest score of 3.55 indicates that most participants are between neutral and agree that their superior assists greatly in guiding their career interests. The respondents also agree that they are encouraged to put growth in their careers with assignments given, building networking, and sharing of experience. All items measuring organizational culture have low mean scores (less than neutral) indicating that they are less likely to agree culture in the organization discriminates against female employees. The highest

mean score is 2.97 indicating that women need to be more accomplished compared to men, to get promoted.

Table 3. Mean value of instruments

Variable	Mean	Std Deviation
Career advancement		
1. Sufficient opportunities exist in my organization for women to advance into senior management positions.	3.95	1.072
2. In my organization, there are equal career development opportunities for men and women.	4.12	0.953
3. According to the way my organization operates, a woman can become a senior manager in the future.	4.32	0.981
4. Women and men are respected equally in my organization	4.25	0.934
5. In my organization, the number of women penetrating the hierarchy and achieving senior positions is steadily increasing.	3.97	1.028
6. In my organization, women are primarily encouraged to apply to managerial roles.	3.92	0.987
7. The men network in my organization limits women's opportunities for promotion to the senior position (reverse)	3.56	1.196
Work-life conflict		
1. While working at my current workplace, I have taken a huge amount of time off for childbearing, child-raising, parental care or similar family responsibilities.	2.87	1.079
2. Staying longer than the regular office time is highly appreciated by my family members.	2.44	1.061
3. My work schedule often conflicts with my family life.	2.64	1.097
4. After work, I come home too tired to do some of the things I like to do.	3.20	1.133
5. On the job, I have so much work to do that it takes away from my personal interests.	3.10	1.137
6. My family dislikes how often I am preoccupied with my work while I am home.	2.68	1.074
7. Because my work is demanding, at times I am irritable at home.	2.87	1.180
8. The nature of my job makes it difficult to be relaxed all the time at home.	2.75	1.161
9. My work takes up time that I like to spend with my family.	2.83	1.100
10. My job makes it difficult to be the kind of spouse or parent I like to be.	2.63	1.132
Organizational commitment		
1. I am willing to put in much effort to help this organization be successful	4.01	0.799
2. I talk up this organization to my friends as a great organization to work for	3.81	0.841
3. I would accept almost any type of job assignment to keep working for this organization	3.58	1.004
4. I find that my values and the organization's values are very similar	3.74	0.854
5. This organization inspires the very best in me in the way of job performance	3.75	0.914
6. I am extremely glad that I chose this organization to work for	3.91	0.931
7. There is not too much to be gained by sticking with this organization indefinitely	3.12	1.030
8. It is difficult to agree with this organization's policies on important matters relating to employees	3.25	1.085
Mentoring		
1. I am given or recommended for challenging assignments that present opportunities to learn new skills.	4.16	0.678
2. I am given or recommended for assignments that require personal contact with managers in different parts of the company.	3.98	.756

3. I am given or recommended for assignments that increase my contact with higher-level managers.	3.94	.871
4. I am given or recommended for assignments that help me meet new colleagues.	4.09	.697
5. I am assisted to finish assignments/tasks or meet deadlines that otherwise would have been difficult to complete.	3.91	.799
6. My colleagues/superiors went out of their way to promote my career interests.	3.55	.852
7. My colleagues/superiors conveyed feelings of respect to me as an individual.	3.91	.737
8. My colleagues/superiors conveyed empathy for the concerns and feelings that I have discussed with them.	3.88	.739
9. I am encouraged to talk openly about anxiety and fears that detract me from my work.	3.60	.933
10. My colleagues/superiors shared personal experiences as an alternative perspective on my problems.	3.92	.719
11. My colleagues/superiors shared the history of their careers with me.	4.00	.690
12. I am encouraged to prepare for advancement.	4.07	.680
13. I am encouraged to try new ways of behaving on the job.	4.05	.709
14. I have served as a role model.	3.54	.853
15. My colleagues/superiors displayed attitudes and values similar to mine.	3.64	.830
Organizational culture		
1. I think women receive more unfair judgment regarding their work performance compared to men.	2.48	1.053
2. I think I have been unfairly judged because of my gender.	2.19	.947
3. Negative perceptions and stereotypes about women's professional capabilities constitute barriers to women's advancement.	2.83	1.191
4. I think working life is characterized by negative attitudes toward women	2.41	.993
5. Men fail to pay attention to what women say at meetings	2.42	1.032
6. I feel that I have to be extra well prepared to talk professionally to men to make them pay attention to what I say.	2.95	1.124
7. I think women have to be more accomplished in their work compared to men in order to be promoted	2.97	1.150
8. As a woman, I think I must be more accomplished and "pushy" to be promoted	2.58	1.077

4.2 Multiple Regression Analyses

We performed standard multiple regression analysis to test the hypothesized relationship among the variables. Table 4 presents the standardized regression coefficients (beta weight, b), t-value, and the coefficient of determination (R^2).

Table 4. Multiple regression analysis for female career advancement

DV= Career advancement		
Independent variable	Beta	t-value
Work-life conflict	0.007	0.084
Organizational commitment	0.330***	2.992
Mentoring	0.186*	1.807
Organizational culture	-0.287***	-3.280
Adjusted R square = 0.335, F = 14.2***		

***p<.01, **p<.05

According to the findings, organizational commitment was found to have the greatest impact on the advancement of women in their careers, as indicated by its highest beta value. On the other hand, work-life conflict does not influence female career progression, implying that personal commitments are less of a hindrance to their career growth. Our result does not

support previous evidence (Arslaner & Boylu, 2017; Harniyati et al., 2021; Lim et al., 2013; Matot et al., 2020; Toffoletti & Starr, 2016; Vaghefi, 2018) that work-life conflict contributes to slow career progression among female, and hence reject hypothesis 1. The outcomes imply that while the struggles of juggling work and personal life do not hinder women's career advancement, this situation could stem from the essential influence of their dedication to the organization they are employed by on their career development.

We found that organizational commitment and culture have a significant influence on the career development of women at a 1% significance level, while mentoring has a significant influence at a 10% significance level. Our findings support hypotheses 2, 3, and 4. Consistent with previous studies (Cho et al., 2019; Dashper, 2018; Perumal & Dastane, 2017; Remington & Kitterlin-Lynch, 2018), we identified that greater commitment to the organization and receiving more mentoring support are positively associated with better career advancement for female employees, whereas experiencing a negative organizational culture towards female employees is linked with poorer career development. Our results are consistent with WIC (2019) that organizational culture is a significant factor in women's career development as compared to work-life conflict.

5.0 DISCUSSION AND CONCLUSION

The purpose of this study is to investigate whether women's career advancement is associated with work-life conflict, organizational commitment, mentoring, and organizational culture. Our findings suggest that women's commitments, such as being a mother or a wife, do not necessarily hinder their success in their careers. Even though they may have busy personal lives and give priority to their families, it does not indicate that they are less interested in career advancement and success at work. Women are gifted with the ability to multitask and know how to stay focused on their work. Despite this, organizations need to take steps to ensure that female employees can give their full commitment to the organization, as our study found that commitment is the strongest factor in determining career advancement. Various measures can be taken, including creating cultural diversity through policies that promote diversity in recruitment, giving equal opportunities to female employees for job assignments and leadership roles, supporting their work-life balance through flexible working arrangements, and offering professional development through training and educational programs. Organizations need to prioritize creating a positive and inclusive culture that supports the career development of all employees, regardless of their gender. Addressing any instances of discrimination or harassment promptly and effectively is also crucial for promoting diversity within the organization.

6.0 SUGGESTION FOR FUTURE RESEARCH

Future research can delve into the influence of leadership and management practices on women's career advancement in the workplace by examining the behaviors, attitudes, and decision-making processes of managers and leaders. This investigation can also explore the impact of gender diversity in leadership positions on women's career prospects and the overall organizational climate. Additionally, studying performance evaluation and feedback processes can provide valuable insights into how they affect female career advancement, including identifying and addressing potential biases and stereotypes. This research can further assess the effectiveness of performance management systems in promoting gender equity and recognizing the potential of female employees.

CO-AUTHOR CONTRIBUTION

The authors affirmed that there is no conflict of interest in this article. Author1 conceived the research idea, designed the questionnaires, and overlooked the writeup of the whole article.

Author 2 contributed to the experimental design, data analysis, and interpretation of results. Author3 searched articles and did the data entry. Author4 provided feedback on the research design. Author5 carried out the fieldwork. They also contributed to the writing and revision of the manuscript.

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INCORPORATING SOCIAL COGNITIVE LEARNING INTO LEARNING ENVIRONMENT OF MATHEMATICAL SCIENCE STUDENTS

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ABSTRACT

It is essential to establish a classroom environment in which students feel safe and motivated to collaborate, cooperate, and pursue mathematical understanding. Mathematics is a core subject that all science and technology students must earn at least a grade C. This study was conducted by distributing questionnaires to 163 students enrolled in Malaysian institutions of higher education. The respondents were Mathematical Science students aged 18 to 32 with study levels ranging from diploma to master. The questionnaires include thirty questions organised into four sections: learner-centered, community-centered, assessment-centered, and knowledge-centered. The purpose of this study is to investigate how the three components of social cognitive learning (SCL) influence the learning environment for mathematical science students by utilising correlation and regression analysis to determine the relationship between the variables. Incorporating the principles of SCL into the learning environment had a positive effect on student and educator engagement, as demonstrated by the findings.

Keywords: Learning environment, Mathematical science, Social Cognitive

1.0 INTRODUCTION

A learning environment is more than a classroom; it is a place where students feel safe, supported, and inspired in their pursuit of knowledge. Consequently, the teacher needs to create a learning environment in which students are motivated to learn within the parameters and expectations of a safe classroom.

Donovan and Bransford (2005) highlighted that students perform best in settings that emphasise the learner, the community, assessment, and knowledge. For example, before introducing new material, teachers can address students' prior knowledge and beliefs in the classrooms. Thus, to address what, why, and how of instruction, teachers can structure students' mathematical knowledge around fundamental concepts. Teachers can encourage students to ask questions, listen to one another, and take intellectual risks by providing daily

opportunities for students to demonstrate their comprehension of course material. This view coincides with the theory of social learning, individuals acquire social norms and conventions by observing and imitating the actions of others. It seems that incorporating the theory into the learning environment is essential to create a conducive classroom. Hence, this study is to investigate the connection between the learners, the community, assessment, and knowledge in the learning environment of mathematical science students in the context of undergraduate students in Malaysian universities.

The theory of social learning was first developed by Bandura in 1977. Bandura acknowledged that people gain significant insight from observing the rewards and punishments meted out to others.

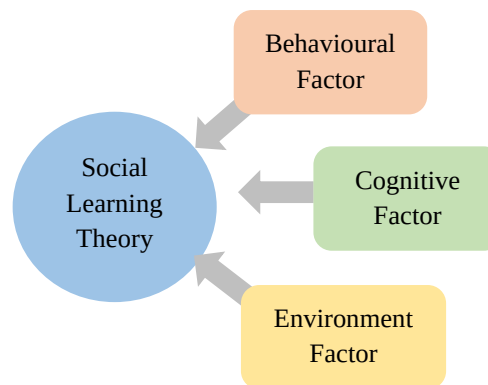


Fig. 1 Social Learning Theory by Bandura (1977)

Fig. 1 depicts the key components of Bandura's 1977 social learning theory. Later developed in 1986, the social cognitive theory asserts that learning occurs in a social context with constant and shared interaction between the individual (cognitive), the environment, and behaviour. Consequently, social cognitive learning (SCL) refers to the process by which a person learns by observing and imitating the actions of others in various contexts (Kouroubas & Galanakis, 2002).

Content knowledge (knowing what to teach) and pedagogical knowledge (knowing how to teach and how to address students' problems and learning difficulties) are the two main knowledge required in teaching mathematics (Yigit, 2014). The environment connects students' learning to the core concepts of the mathematical discipline. Another opinion came from Kirikcilar and Yildiz (2018) stated that learning mathematics can only be successful if students construct their knowledge rather than merely extending their knowledge through memorization. Therefore, teachers should assist students in applying and enhancing their existing knowledge as well as creating new information, hence the teaching approach shifts from being centred on the teacher to being more student-centred (Tondeur et al., 2017).

Recently, the technology-related approach in the learning environment of mathematics class presents new pedagogical challenges for teachers. A survey of 29 mathematics teachers from nine European countries (15 females and 14 males) was conducted and employed semi-structured interviews, the Approaches to Teaching Inventory (ATI-16), and the Technological Pedagogical Content Knowledge (TPACK) questionnaires were used to test technology-related pedagogical competencies. According to the results, one-third of teachers use a more student-centred approach, one-third a more teacher-centred approach, and one-third a mixed approach (Nantshev et al., 2020). It means a variety of approaches can be used to create a learning environment and teachers should understand the appropriate educational technologies and their potential. On top of that, Bringula et al., (2017) implemented mobile-

assisted learning which resulted in the complexity of the problems on linear equations being solved by the students more than fifty percent of the problems correctly.

Moreover, the study by Hongbiao et al. (2020), found that the mathematics classroom environment was associated with affective and cognitive mathematics outcomes by taking the role of mathematics beliefs including mathematics conceptions and efficacy as mediators in the context of mainland China. Analysis of a sample of 1443 undergraduate students from a university in northern China found that a desirable classroom environment was related to students' cohesive conceptions, enhanced self-efficacy, and higher mathematics achievement.

Based on the above, this study is done to examine the relationship between the three components of social cognitive learning (Behavioural – learner and knowledge, Cognitive – assessment, Environment – community), and learning environment in the context of mathematical science classrooms in Malaysian Universities. The following conceptual framework serves as the foundation for this study.

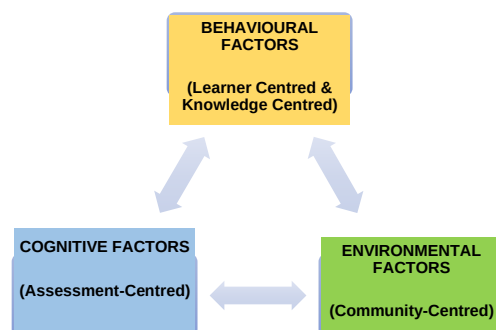


Fig. 2 Conceptual Framework of the Study – Social Cognitive Learning in the mathematics classroom

Fig. 2 presents the conceptual framework of the study. This study is adapted from Bandura's (1977) social cognitive theory and the environmental factors by Hassan et al. (2020).

2.0 METHODOLOGY

This quantitative study aims to examine social cognitive learning in a mathematics learning environment. Public and private universities in Malaysia have contributed 163 participants, of which 35% are male and 65% are female. 95.1% of respondents attended a public university, while 88.8% held a diploma. The instrument is a modified version of a survey by Hassan et al. In addition to Section A's demographic profile, there are four additional sections which include 30 questions. Section B includes seven items that are learner-centred, Section C includes seven items that are community-centred, Section D includes eight items that are assessment-centred, and Section E includes eight items that are knowledge-centred.

The data is collected through a Google form and analysed using SPSS version 23 for Windows. The Cronbach Alpha for learner-centred, community-centred, assessment-centred, and knowledge-centred questions is 0.855, 0.877, 0.925, and 0.928, respectively. The fact that the Cronbach Alpha is greater than 0.70 indicates that every questionnaire item is valid. Thus, the data in this study can be categorised as good and sufficient for the research.

3.0 RESULTS

This study employs correlation and regression analysis to examine the relationship between variables and estimate the influence of behavioural, environmental, and cognitive factors on the learning environment of Mathematical Science students.

3.1 Correlation

Correlation analysis determines the relationship between variables. This study involved the relationship between behavioural factors, environmental factors, and cognitive factors that influence the learning environment.

3.1.1 To Determine the Behavioural Factors that Influence the Learning Environment

Table 1 shows that learner centred ($r = 0.891$, $p = 0.000$) and knowledge-centred ($r = 0.913$, $p = 0.000$) have a significant value of 0.000 which is below 0.05. Thus, there is a significant relationship between behavioural factors that influence the learning environment.

Table 1. Relationship between behavioural factors influence the learning environment

		Learning Environment	Learner Centred	Knowledge Centred
Learning Environment	Pearson Correlation	1	.891**	.913**
	Sig. (2-tailed)		.000	.000
	N	163	163	163
Learner Centred	Pearson Correlation	.891**	1	.721**
	Sig. (2-tailed)	.000		.000
	N	163	163	163
Knowledge Centred	Pearson Correlation	.935**	.721**	1
	Sig. (2-tailed)	.000	.000	
	N	163	163	163

3.1.2 To Determine the Environmental Factors that Influence the Learning Environment

According to the results shown in Table 2, community-centred ($r = 0.935$, $p = 0.000$) has a significant value of 0.000 which is below 0.05. Thus, there is a significant relationship between environmental factors that influence the learning environment.

Table 2. Relationship between environmental factors influence the learning environment

		Learning Environment	Community Centred
Learning Environment	Pearson Correlation	1	.935**
	Sig. (2-tailed)		.000
	N	163	163
Community Centred	Pearson Correlation	.935**	1
	Sig. (2-tailed)	.000	
	N	163	163

3.1.3 To Determine the Cognitive Factors that Influence the Learning Environment

Results shown in Table 3, assessment centred ($r = 0.930$, $p = 0.000$) has a significant value of 0.000 which is below 0.05. Thus, there is a significant relationship between cognitive factors that influence the learning environment.

Table 3. Relationship between cognitive factors influence the learning environment

		Learning Environment	Assessment Centred
Learning Environment	Pearson Correlation	1	.930**
	Sig. (2-tailed)		.000
	N	163	163
Assessment Centred	Pearson Correlation	.935**	1
	Sig. (2-tailed)	.000	
	N	163	163

3.2 Regression

Regression analysis is the analysis in which it investigates how independent variables are linked to a dependent variable. It can be explained by model summary, ANOVA model, and multi-regression coefficient table.

3.2.1 To Determine the Behavioural Factors that Influence the Learning Environment

Table 4 represents the overall sample learning environment with the learner-centred and knowledge-centred. These factors explain 97.3% of the variance of the learning environment. The R^2 (94.7%) of the learning environment is mainly due to the learner centred and knowledge centred and the 5.3% indicates another factor.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973 ^a	.947	.946	.12665

According to Table 5, the ANOVA Table shows $F(2,160) = 1416.443$, $p = 0.000$ for the overall regression relationship for learner-centred and knowledge-centred with learning environment is $p < 0.05$. Therefore, the research model has proved that the learner-centred and knowledge-centred are significantly affecting the learning environment. The variable significant value can be continued testing under the coefficient table.

Table 5. ANOVA Table

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	17.598	3	5.866	1416.443	.000 ^b
Residual	16.349	116	.141		
Total	33.947	119			

Table 6 shows the results of coefficient for learning environment with the learner centered and knowledge centered. The significant values according to Table 6 are 0.000 and 0.000. Based on the result learner centered and knowledge centered have relationship with learning environment when $p < 0.05$.

Table 6. Coefficient Table

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.063	.075		0.846	.399
Learned Centred	.452	.0025	.486	18.434	.000
Knowledge Centred	.531	.0025	.562	21.317	.000

3.2.2 To Determine the Environment Factors that Influence the Learning Environment

Table 7 represents the overall sample learning environment with the community centered. These factors explain 93.5% of the variance of the learning environment. The R^2 (87.3%) of the learning environment is mainly due to community centered and the 12.7% indicates another factor.

Table 7. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 ^a	.873	.873	.19432

According to Table 8, the ANOVA Table $F(1,161) = 11110.338$, $p = 0.000$ for the overall regression relationship for community centered with learning environment is $p < 0.05$. Therefore, the research model has proved that the community centered are significant affecting the learning environment. The variable significant value can be continued testing under the coefficient table.

Table 8. ANOVA Table

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	41.927	1	41.927	11110.338	.000 ^b
Residual	6.079	161	.038		
Total	48.006	162			

Table 9 shows the results of coefficient for learning environment with the community centered. The significant value according to Table 9 is 0.000. Based on the result community centered have relationship with learning environment when $p < 0.05$.

Table 9. Coefficient Table

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.598	.103		5.806	.000
Community Centred	.853	.026	.935	33.322	.000

3.2.3 To Determine the Cognitive Factors Influence the Learning Environment

Table 10 represents the overall sample learning environment with the assessment centered. The factors explain 93.0% of the variance of the learning environment. The R^2 (86.6%) of the learning environment is mainly due to assessment centered and the 13.4% indicates another factor.

Table 10. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.930 ^a	.866	.865	.20008

According to Table 11, the ANOVA Table $F(1,161) = 1038.194$, $p = 0.000$ for the overall regression relationship for assessment centered with learning environment is $p < 0.05$. Therefore, the research model has proved that the assessment centered are significantly affecting the learning environment. The variable significant value can be continued testing under the coefficient table.

Table 11. ANOVA Table

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	41.561	1	41.561	1038.194	.000 ^b
Residual	6.445	161	.040		
Total	48.006	162			

Table 12 shows the results of coefficient for learning environment with the assessment centered. The significant value according to Table 12 is 0.000. Based on the result assessment centered have relationship with learning environment when $p < 0.05$.

Table 12. Coefficient Table

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	.697	.104		6.728	.000
Assessment Centred	.824	.026	.930	32.221	.000

4.0 DISCUSSION AND CONCLUSION

The purpose of this study is to investigate Bandura's social cognitive learning (SCL) in the learning environment of students of mathematical sciences. Hassan et al. (2020) investigated the influence of three components of SCL (behavioural factors, environmental factors, and cognitive factors) on learning environment factors. A learning environment is a physical or digital space that facilitates the process of acquiring, constructing, and applying knowledge. For instance, it is designed to be interactive and offers opportunities for learners to participate in meaningful and active interactions with one another. Learner-centred, knowledge-centred, community-centred, and assessment-centred learning environments are the focus of this investigation.

The correlation and regression analyses revealed that all factors, including behavioural, cognitive, and environmental, have a significant impact on the learning environment. Therefore, to solve the problem teachers who create learner-centred environments develop practices such as discovering what students think, discussing students' misconceptions, and planning learning experiences that assist students in readjusting their ideas and developing stronger, more robust mathematical concepts and ideas. Students are more likely to develop deeper understandings and new knowledge if they are permitted to make mistakes and then examine their repercussions.

In knowledge-centred environments, learning focuses on fewer topics, but students develop a deeper understanding of the concepts and learn to communicate their understandings in a variety of ways (Neuman, 2000). Moreover, students are given the opportunity to solve difficult mathematical problems in a manner that requires them to grapple with and struggle with, to engage with the subject. Students are permitted to share their ideas, improve each other's ideas, challenge and be challenged, seek advice from peers, explain their thinking, provide evidence for their solutions, and investigate evolving ideas and hypotheses.

On top of that, students in an assessment-centred classroom are routinely expected to demonstrate their comprehension of essential mathematical concepts and ideas by writing answers to every question on tests and final exams. Traditionally, assessment practices have tended to emphasise the mastery of procedures and facts; therefore, taking the assessment as learning has been shown to improve teaching and learning.

5.0 SUGGESTION FOR FUTURE RESEARCH

Based on the findings in this study, the research can be extended to determine the students' performance in mathematics by incorporating SCL in the learning environment of mathematics class by using experimental methodology. The pre-post analysis should be utilised.

CO-AUTHOR CONTRIBUTION

The authors affirmed that there is no conflict of interest in this article. The first author carried out the fieldwork, prepared the literature review, and overlooked the writeup of the whole article. The second author wrote the research methodology and did the data entry. The third author carried out the statistical analysis and interpretation of the results.

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BOARD'S IMPACT ON THE FIRM'S STRATEGIC CHANGE

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ABSTRACT

We investigate whether board attributes affect strategic change of Malaysian listed companies from 2013 to 2020. Our findings indicate that board independence, board tenure, board ethnicity and multiple directorships significantly influenced strategic change. This study underscores the importance of board diversity and directors' commitment to strategic change, providing valuable insights for companies seeking performance improvement. The MCCG 2021 emphasizes the significance of implementing best practices for board structure, and our research suggests that board attributes play a vital role in a company's ability to respond and adapt to a dynamic business environment, essential for growth and survival in a competitive market.

Keywords: Board independent, board tenure, board size, board age, strategic change.

1.0 INTRODUCTION

In today's world, businesses are facing more complexity due to globalization, technology, and how society behaves. Traditional methods are inadequate for success, necessitating the exploration of new strategies considering internal and external conditions (Mintzberg & Lampel, 1999). Malaysia's recent decline in private equity and mergers and acquisitions, along with a slow increase in the globalization index, highlights the need to investigate strategic change in the country. Strategic change is crucial in today's dynamic business environment to remain competitive (Choi et al., 2021; Triana et al., 2019). Boards of directors are vital in leading and supervising these changes. They set the company's direction and make sure it adjusts to market shifts, technology, and customer needs. They do more than oversee – they make smart choices that drive growth and lasting success. So, their role in planning and implementing strategic changes is crucial. During strategic changes, boards of directors face significant challenges. One challenge is resistance, where members may hesitate due to uncertainty and depart from familiar strategies which can slow adaptation to new approaches (Samara & Yousef, 2023). Diversity in backgrounds and skills is helpful but can create gaps in crucial expertise for understanding changes. This gap might slow decision-making and risk identification (Zaharudin & Jalil, 2022). Groupthink, where everyone agrees, hampers new ideas while disagreements also hinder decisions about big changes. Effective oversight by the board is crucial for successful changes. Without it, actions might stray, endangering outcomes.

This study seeks to explore the impact of a company's board of directors' composition on the success of strategic change efforts. There is currently a dearth of existing research on this topic. Specifically, it seeks to explore the extent to which board independence, tenure, age, multiple directorships, educational background and ethnicity among board members affect the strategic change efforts in corporations. The paper is organized as follows: Firstly, we review the literature and propose hypotheses to test the relationship between board attributes and strategic change.

Secondly, we describe our methodologies and present the results. Finally, we discuss the paper's implications and limitations in the conclusion.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Theories

Agency theory examines the dynamics between owners (shareholders) and managers (including the board) in organizations, focusing on how conflicts between them influence decisions and performance (Kasbar et al., 2023; Maznorbalia et al., 2023). The theory underscores the significant information asymmetry that exists, where shareholders possess less understanding of operations compared to the better-informed board and management (Sun et al., 2023). This knowledge gap impacts the board's assessment and supervision of planned strategic changes (Fama & Jensen, 1983). Within agency theory, this role becomes crucial, as boards must diligently ensure that management's choices align with shareholders' interests and are free from personal biases. Effective governance hinges on aligning shareholders' and management's interests, a concept tightly linked to board composition. The variety of skills and experiences on the board acts as a catalyst, empowering directors to understand the nuances of strategic changes and advocate for shareholders (Saad, 2022). Transparent decision-making and effective communication are vital for minimizing conflicts between principals and agents. The board's composition shapes transparency and accountability mechanisms, influencing how strategic changes are communicated and justified to shareholders. Agency theory emphasizes that agency costs, stemming from potential conflicts between principals and agents, significantly impact a company's performance. The composition of the board directly influences these costs, potentially shaping the effectiveness and success of strategic change endeavours (Ben & Padilla, 2019). Resource Dependence theory (RDT) emphasizes directors' strategic roles in linking the firm with external resources (Masud et al., 2019). According to RDT, organizations aim to minimize their dependency on external resources by establishing control mechanisms. Boards play a key role in this by guiding strategic changes that might lead to the acquisition of new resources or a reduction in dependence on existing ones. Their decisions can determine whether the organization seeks new partnerships, diversifies revenue streams, or accesses novel capabilities.

2.2 Strategic change

In today's competitive environment, taking risks and making bold strategic moves are crucial for firm development and survival (Wang et al., 2018). Hence, keeping up with the ever-changing business environment requires strategic change (Sidhu et al., 2021), which is vital for competitive advantage and goal achievement (Hsu et al., 2019). Board attributes, such as skills, experience, knowledge, and networking relationships, are related to strategic change (Perez-encinas et al., 2021), suggesting that their roles have evolved from oversight and advice to active participation in strategic decision-making (Langan et al., 2022).

This study focuses on the resource allocation type of strategic change, using the Strategic Resource Allocation Profile (SRAP) model developed by (Mintzberg ,1978;Finkelstein & Hambrick ,1990). SRAP measures six elements of financial indicators within the company, namely advertising intensity, R&D intensity, plant and equipment renewal, non-production overhead, inventory levels, and financial leverage. Following Díaz-Fernández et al. (2019), for each indicator, the difference between the current year and the previous year is computed and adjusted using industry medians. The resulting industry-adjusted differences are transformed into absolute values and standardized. The extent of strategic change (SC) is then determined by calculating the mean of these standardized values. Strategic Change is calculated as [(advertising/sales) + (R&D/sales) + (new plant and equipment/gross plant and equipment) + (SGA expenses/sales) + (inventory/sales) + (debt/equity)]_t and year t-1.

2.3 Board of Directors attributes

We examined six board attributes in our study, which are as follows:

Board independence: Independent directors play a crucial role in promoting strategic change within a company. Their independence from the management and ownership of the company allows them to provide unbiased and objective insights, contributing to more informed decision-making and effective strategic change implementation. The board of directors is responsible for monitoring management, establishing corporate policies, and approving the firm's strategic plan (Mirone et al., 2021; Rebeiz, 2018), and independent directors address opportunistic practices, enhance efficacy in curtailing earnings manipulation, and result in a more watchful board that actively works towards minimizing excess cash reserves (Cambrea et al., 2021; Saona et al., 2020). Existing evidence shows that independent directors are a strong governance tool as they are associated with higher performance, improve protection of shareholders' interest and effective in the adoption of CSR policy (Mirone et al., 2021), and increase investment efficiency and innovation (C. Y. Hsu et al., 2021; Li et al., 2022; Mirza et al., 2020). We posit that,

H1: A higher proportion of independent directors on the board is positively related to strategic change.

Board tenure: Vafeas (2003) introduced two concepts, management friendliness and expertise concerning long board tenure. Recent studies support the expertise view of longer tenure as they are effective in reducing leverage, improving transparency, and increasing financial performance (James et al., 2021; Tahir et al., 2020; Tejerina-Gaite & Fernández-Temprano, 2021). Livnat et al. (2019) stated that longer tenure allows directors to identify unique opportunities and design better policies, thus limiting managers' opportunistic behaviour. Directors with longer tenure also excel in problem-solving, information processing, decision-making, and risk mitigation (Bhat et al., 2020). They also have a better understanding of the firm's activities, economic environment, and financial reports (Fernández-Temprano & Tejerina-Gaite, 2020). As directors gain more experience over an extended period, it is commonly believed that they acquire a notable capacity to actively participate in driving strategic changes (Lungeanu & Zajac, 2019).

Despite the advantage of accumulated expertise, some studies showed that longer tenure is associated with lower financial performance and has caused mispricing of shares (Livnat et al., 2021). Longer tenure is also associated with weak monitoring and board entrenchment (Ji et al., 2021), lower disclosure on corporate social responsibility (Ratri et al., 2021), lower investment efficiency (Tran Phuong et al., 2022), lower R&D investment (Azzam & Alhababsah, 2022) and lower financial leverage (Bazhair, 2023; Tahir et al., 2023). Consistent with the management-friendly view, it is anticipated that extended tenures could compromise the board's ability to effectively oversee and contribute to strategic initiatives. We posit that prolonged tenure might not be conducive to driving significant strategic changes within the organization.

H2: Longer board tenure is negatively related to strategic change.

Board age diversity: Young directors may bring new perspectives and diverse backgrounds that foster innovation and creativity despite their lack of experience (Abu Qa'dan & Suwaidan, 2019; Lamichhane, 2021), but older directors having experience and expertise, they may contribute to elevated levels of financial performance (Fernández-Temprano & Tejerina-Gaite, 2020; C. S. Hsu et al., 2019). There is mixed evidence on whether age diversity is beneficial to firms. Some evidence showed that age diversity does not improve corporate social responsibility practice, strategic change, and dividend policy (Prudêncio et al., 2021; Tahir et al., 2020) while others found it increased strategic change frequency, reduced corporate risk, improved social performance, lower the risk of future stock crashes (Bhat et al., 2020; Jebran et al., 2020), enhance the positive relationship between corporate social responsibility and firms' performance, and enhance the U-shaped relationship between government subsidy and corporate green innovation (Ozdemir et al., 2021; Wu et al., 2019; Xia et al., 2022). The relationship between age diversity and strategic change within firms is nuanced and multifaceted. While both positive and negative effects of age diversity may exist within the context of strategic change, the focus on the positive effects is justified due to the potential benefits it offers. Age-diverse teams can lead successful strategic changes by utilizing

multigenerational knowledge, creative problem-solving, balanced decisions (Perez-encinas et al., 2021), complementary skills, better problem identification, and fostering a lasting organizational culture, promoting long-term growth and success (Zaharudin & Jalil, 2022; Zoellner & Sulikova, 2021). We posit that,

H3: Diverse board age is positively associated with strategic change.

Board ethnicity: The composition of a company's board of directors has gained significance as a potential driver of strategic decision-making and organizational transformation. Exploring the dynamic interplay between board ethnicity and the process of strategic change, delving into how the ethnic diversity of a board can influence the formulation, implementation, and outcomes of strategic initiatives. Waweru (2018) found that diverse boards are associated with lower earnings management. Diverse boards positively affect strategy design (Tee & Rassiah, 2020), and enhance the effect of goodwill impairment decisions on market capitalization (Abdul-Majid, 2020; Attia et al., 2021). Quintana-Garcia et al.(2022) found that having a mix of ethnicities in management positions strongly correlated with better innovation abilities.

In contrast, Madni (2019) observed that ethnic diversity in Pakistan weakens institutions and affects economic growth. Ethnic diversity leads to delayed goodwill write-offs (Abdul-Majid, 2020), and ethnic diversity within a local area has a detrimental effect on investment efficiency. This is because such diversity is linked to reduced levels of social trust, a crucial factor in making investment decisions (Zou et al., 2021). Based on the literature, while ethnic diversity increases, the social fabric could potentially weaken, leading to challenges in fostering trust and collaboration among diverse individuals. This, in turn, could harm the overall effectiveness of decision-making processes and potentially hinder the achievement of common goals. Cheong's (2022) findings of a curvilinear relationship between ethnic diversity and firm performance affirmed that diversity's influence may be positive initially but decline over time. We posit that,

H4: Diverse ethnicity on board is negatively related to strategic change.

Board education: Formal education in fields like business administration, strategic management, or related disciplines allows directors to develop a deep understanding of how businesses operate, the complexities of various industries, and the factors that drive success in a dynamic market landscape. Education equips directors with the knowledge, tools, and frameworks to engage in strategic thinking (Lin et al., 2022). It can be done by shaping their strategic thinking, informed decision-making, industry knowledge, change management skills, adaptability, global perspective, risk assessment, ethical considerations, communication abilities, and long-term vision (Zaharudin & Jalil, 2022). A well-educated director brings advanced insights into complex business environments, effectively manages change-related challenges, considers industry-specific nuances, and fosters innovation (Leung & Sane, 2023), ultimately guiding the organization through successful strategic transformations.

Incorporating diverse educational backgrounds into the board of directors fosters creativity, innovation, and effective problem-solving. Educational diversity brings varied perspectives, talents, and experiences, challenging conventional thinking and leading to well-informed decisions. Studies have shown that boards with varying education levels enhance corporate social disclosure, boost competitive advantage, and provide diverse knowledge and information-processing behaviours for better assessment of environmental changes and strategic options (Azam et al., 2019; Katmon et al., 2019). We posit that,

H5: Diverse education level is positively associated with strategic change.

Multiple directorships: Holding multiple directorships can make directors experts by bringing insights from various firms. On the other hand, some argue that being overly busy can result in reduced focus and limited participation in meetings. While multiple directorships may provide access to diverse ideas and experiences, recent evidence indicates potential harm to a firm's performance. Multiple directorships can lead to conflicts of interest as directors prioritize one board's interests over others.

Limited time and energy may result in reduced involvement and dedication, leading to ineffectiveness and losses in companies (Latif et al., 2020; Lusiana et al., 2020). This practice may expose firms to higher earnings management practices and delay recognition of loan loss provisions (Kutubi et al., 2021). Reducing multiple directorships can improve firms' operating performance, monitoring, and strategic advising (Brown et al., 2019) and avoid negative abnormal returns and underinvestment (Park, 2019). However, multi-board directors in firms with higher agency problems may make better cash acquisitions (Chou & Feng, 2019). We posit that,

H6: Multiple directorships are negatively associated with strategic change.

3.0 METHOD

3.1 Data and sample

Our research examined a total of 736 non-financial firms listed on the main board of Bursa Malaysia. The study period extends from 2013 to 2020, and a separate investigation might be necessary to analyse post-2020 data. This would allow for a comprehensive understanding of the shifting behaviours and characteristics of boards, potentially influenced by the implementation of MCCG 2021. We excluded finance-related firms due to their distinct characteristics and regulatory requirements (Islam et al., 2020). The sample included companies from nine sectors: industrial products (240), consumer (173), property (99), trading and services (80), construction (51), plantation (41), technology (31), REIT (17) and IPC (4). Data on strategic changes and board attributes were collected from the Bloomberg database and annual reports of the companies. We include firm size (FS) and board size (BS) as control variables because they influence strategic decisions (Cucari et al., 2018; Singh et al., 2018).

3.2 Regression model

The following regression model is used to test Hypotheses 1 to 6.

$$SC_{it} = \alpha + \beta_1 BID_{it} + \beta_2 BT_{it} + \beta_3 BA_{it} + \beta_4 BE_{it} + \beta_5 BEd_{it} + \beta_6 Md_{it} + \beta_7 FS_{it} + \beta_8 BS_{it} + \varepsilon_{it} \quad (1)$$

where:

For each firm (i) and each year (t),

- SC_{it} = [(advertising/sales) + (R&D/sales) + (new plant and equipment/gross plant and equipment) + (SGA expenses/sales) + (inventory/sales) + (debt/equity)] t and year t-1;
- BID_{it} = The proportion of independent members to the board's total members
- BT_{it} = The average number of years the hat board directors has served in a firm in the year t
- BA_{it} = The standard deviation of the ages of the board members in each sample company divided by the mean
- BE_{it} = The proportion of Bumiputera directors to total directors on the board
- BEd_{it} = Blau's Index data on the proportion of board of directors in each category of educational level (Ph.D., master's degree, undergraduate degree, diploma, and others)
- Md_{it} = The proportion of directors on the board who hold directorships in other listed companies
- FS = Natural logarithm of total assets
- BS_{it} = Total number of directors on the board of the company;
- ε_{it} = error term

$$BI = 1 - \sum_{i=1}^n P_i^2 \quad (2)$$

Blau's Herfindahl Index used to measure BEd_{it}, a widely used index for measuring heterogeneity,

where,

- BI = Blau's Index;
- P = The proportion of board members in each category of educational level;
- i = represents category;
- n = Total number of board members in each category.

4.0 RESULTS AND DISCUSSIONS

4.1 Descriptive statistics

Table 1 summarizes statistics for SC and board characteristics, with continuous variables bounded by the 1st and 99th percentiles. The average relative strategic change score is 12%, compared to -59% (Kalasin, 2021) and -9% (Back et al., 2020). The standard deviation of 1.11 indicates significant variation in strategic change implementation among sample companies. Some companies have fewer than the required 50% independent directors (min. BIND value: 0.25, Malaysian Code on Corporate Governance). Director tenures vary (0.5 to 24 years), while board age diversity and education levels are low (mean values: 0.18 and 0.30). On average, 30% of directors hold multiple positions. The largest sample board has 16 directors.

Table 1. Descriptive statistics

Variables	Obs	Mean	Med	Std. Dev	Min	Max
SC	4963	-0.004	-0.042	-0.05	-0.12	18.33
BIND	4963	0.49	0.50	0.13	0.14	1.00
BT	4963	9.02	8.38	4.7	0.69	28.58
BA	4963	0.18	0.17	0.06	0.01	0.49
BE	4963	0.30	0.25	0.27	0	1.00
BEd	4963	0.59	0.54	0.16	0	0.8
Md	4963	0.52	0.50	0.27	0	1.00
FS (million)	4963	RM 6.31	RM 6.17	RM 1.57	RM 6.21	RM 12.11
BS	4963	6.83	7.00	2.76	0.00	16.00

SC=Strategic change; BIND= Board independence; BT= Board tenure; BA= Board age; BE= Board ethnicity; BEd= Board education level; Md= Multiple directorships; FS= Total asset (firm size); BS= Board size.

4.2 Empirical result

Table 2 displays the outcomes of the board attributes' impact on strategic change. BIND, BT, and Md variables show significance at the 1% level, while BE is significant at the 5% level. These results validate hypotheses 1, 2, and 4, showing that more independent directors lead to increased strategic change. In contrast, longer tenures and diverse ethnic compositions result in reduced strategic change. Findings disprove hypothesis 6, indicating multiple directorships do not lower strategic change. Conversely, directors with multiple roles, drive higher strategic change. Neither BA nor BEd influences strategic change.

Our findings indicate that independent directors, who serve as vigilant monitors in organizations, have a crucial role in both overseeing and instigating strategic change. These directors contribute an external viewpoint and diverse expertise, allowing them to evaluate organizational performance

impartially. This observation aligns with prior research findings (C. Y. Hsu et al., 2021; Li et al., 2022; Mirone et al., 2021; Mirza et al., 2020; Rajkovic, 2020) that their oversight guarantees the allocation of necessary resources.

Table 2 Multiple Regression Results

Variable	Coefficient	t-value
Constant	-0.0815	-1.69
BIND	0.1531	2.78***
BA	-0.1686	-1.62
BT	-0.0042	-2.96***
BE	-0.0859	-2.23**
BE _d	0.0327	1.42
M _d	0.0511	2.82***
FS	-0.0060	-2.25**
BS	0.0122	2.05**

Notes: *p<0.10, **p<0.05, ***p<0.01

Consistent with Livnat et al. (2021), Tran Phuong et al. (2022), Azzam and Alhababsah (2022) and Bazhair (2023), we find that longer tenure is associated with less strategic change, supporting the management friendliness perspective. Directors with extended tenures may become aligned with management's ideas, focusing on stability over challenges of change. This friendliness might hinder their objective evaluation of change necessity. Longer-tenured directors know the company's history well, which could lead to resistance to altering established procedures. The negative effect of ethnic diversity is consistent with Abdul-Majid (2020), Zou et al. (2021) and Cheong (2022), on the downside of ethnic diversity. This adverse effect could be due to other factors such as cultural misalignment and trust issues which lead to communication problems, making strategic change less effective. Ramasamy and Yeung (2016) suggest that firms should emphasize promoting diversity based on values rather than exclusively focusing on ethnic diversity. It's important to distinguish between ethnic diversity and diversity of values. While the former has a detrimental impact on innovation, the latter has a beneficial effect on it. Our results differ from Brown et al. (2019), Park (2019) and Kutubi et al. (2021) who argued that multiple directors might become occupied overseeing businesses. Instead, our findings indicate that the accumulation of knowledge and experience is advantageous, contributing positively to such changes. Our findings align with the expert perspective as their extensive outlook and experience position them as change drivers, bringing vigour to organizations to excel in evolving business environments. The effects of board attribute BA and BE_d were determined to be insignificant. This could be attributed to a relatively milder impact, possibly stemming from the absence of other interplays of skills or leadership capabilities. The combined influence of board diversity, which interacts with age and education, contributes to the degree to which these attributes affect strategic change in organizations. FS and BS displayed statistical significance at a 5% level. This suggests that those attributes significantly influence the extent of strategic change within a company.

5.0 CONCLUSIONS

This study extends the conventional role of board fiduciary duty to explore the board attributes and their impact on strategic change. We investigate the influence of board attributes on strategic change. Results reveal positive links between board independence, multiple directorships, and increased strategic change. Conversely, longer tenures and diverse ethnic compositions are associated with lower strategic change, while board age and education show no significance. Independent directors are not just monitors but also drivers of change, enhancing initiatives,

decision-making, and countering biases. They promote transparency, accountability, and governance, ensuring sound implementation of strategic changes for long-term value.

Our findings prompt re-evaluation of longer director tenures and ethnic diversity. Addressing these is vital for effective strategic change efforts. As age and education diversity lack clear advantages, strategies should leverage their benefits while tackling challenges. Future research may look into how strategic integration, training, and cultural transformation can make age and education diversity drivers of successful strategic change. Our research illuminates how board composition influences strategic change, deepening our grasp of governance dynamics. These insights guide governance practices, with implications for succession planning, diversity initiatives, and regulatory frameworks, aiding industries in transformation. Our study informs how board attributes impact strategic change across sectors, noting it's limited to six attributes and predates MCGG 2021 changes.

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UNDI18: Analisa Keperluan Literasi Politik Pengundi Muda Melayu Johor di Institusi Pengajian Tinggi Awam Pasca PRN Johor Ke-15

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ABSTRAK

Pilihanraya Negeri Johor ke-15 merupakan satu ujian pertama kepada pelaksanaan penurunan had mengundi daripada 21 tahun kepada 18 tahun atau dikenali Undi18. Namun, berlaku kemerosotan peratusan yang keluar mengundi berbanding ketika Pilihanraya Umum Ke-14 apabila hanya 54.92% pengundi yang layak telah melaksanakan tanggungjawab masing-masing. Antara faktor menyumbang kepada kemerosotan ini adalah berpunca kepada pelaksanaan Undi18 yang gagal menarik minat golongan berkenaan untuk terlibat dalam proses demokrasi politik negara kerana tahap literasi politik adalah sederhana. Pengundi muda Melayu di institusi pengajian tinggi awam (IPTA) dianggap mempunyai tahap literasi politik yang tinggi apatah lagi tahap keperluan literasi politik dalam kalangan mereka, namun tiada bukti mengesahkannya. Lantaran itu, kajian ini dilakukan bertujuan untuk mengenalpasti sejauhmana keperluan literasi politik ke atas pengundi muda Melayu di IPTA. Satu set soal selidik dibangunkan untuk mendapatkan maklum balas daripada responden. Seramai 558 responden yang berasal dari negeri Johor telah memberikan maklum balas dalam kajian ini dan kaedah penyelidikan kualitatif digunakan untuk menganalisa maklum balas yang diberikan. Hasil maklum balas yang telah dianalisa dibahagikan kepada tiga kategori iaitu pandangan positif, negatif dan berkecuali. Hasil dapatan kajian menunjukkan bahawa 83.5% daripada keseluruhan responden memberikan pandangan positif kepada keperluan literasi politik dalam kalangan pengundi muda Melayu di IPTA. Oleh demikian, terdapat keperluan dan penerimaan yang positif dalam kalangan pengundi muda Melayu di IPTA terhadap apa-apa usaha yang mampu meningkatkan literasi politik kepada mereka

Kata Kunci: Literasi Politik, Pengundi Muda, PRN15 Johor, Undi18

1.0 PENGENALAN

Parlimen Malaysia telah pun meminda Perlembagaan Malaysia yang membolehkan perubahan kepada lanskap politik negara yang mengamalkan sistem politik Demokrasi Berparlimen, Raja Berperlembagaan. Antara intipati pindaan ini ialah dengan menurunkan had kelayakan umur rakyat sebagai pengundi dalam pilihanraya parlimen, menjadi calon dan wakil rakyat untuk Dewan Parlimen malah terlibat aktif dalam politik daripada berumur 21 tahun kepada 18 tahun serta pelaksanaan pendaftaran pengundi secara automatik. Perubahan yang paling menarik perhatian ialah penurunan had kelayakan mengundi yang dilaksanakan secara. Ini selaras dengan negara-negara maju lain seperti di United Kingdom, Amerika Syarikat, Jerman, Jepun dan Perancis yang telah lebih lama melaksanakannya. Malah, negara-negara membangun seperti India, Pakistan, Vietnam, Thailand dan lain-lain juga turut melaksanakan penurunan had kelayakan mengundi dan terlibat aktif dalam politik pada usia 18 tahun. Tidak keterlaluan mengatakan bahawa terdapat juga negara lain yang telah lama menurunkan had kelayakan rakyat mereka sebagai pengundi sehingga seawal 17 tahun seperti di Indonesia malah negara seperti Austria, Brazil, Cuba dan Malta telahpun membenarkan rakyat seawal usia 16 tahun untuk turun mengundi.

Namun, Malaysia mengamalkan sistem demokrasi berasaskan kepada sistem persekutuan. Di peringkat persekutuan, sistem demokrasi dilaksanakan menerusi dua dewan iaitu dewan rakyat dan dewan negara. Hanya ahli dewan rakyat sahaja yang dipilih oleh pengundi mengikut bahagian parlimen yang telah ditetapkan oleh Suruhanjaya Pilihanraya Malaysia (SPR). Manakala di peringkat negeri pula hanya diwakili oleh satu dewan iaitu Dewan Undangan Negeri (DUN) atau Dewan Negeri (DN). Pemilihan ahli dewan ini juga dilakukan sama seperti memilih ahli dewan rakyat iaitu menerusi pilihanraya mengikut bahagian DUN masing-masing yang juga diselaraskan oleh SPR. Selaras dengan perubahan perlembagaan di persekutuan, adalah menjadi kebiasaannya negeri-negeri dalam persekutuan juga turut mengikut jejak langkah agar ia selari dengan kehendak sistem demokrasi berkenaan. Untuk itu, Dewan Negeri Johor pada 5 Januari 2022 telah meluluskan draf pindaan perlembagaannya iaitu Undang-undang Tubuh Negeri Johor yang membawa maksud yang sama dengan pindaan perlembagaan di peringkat persekutuan.

Perubahan ini semestinya memberikan impak kepada sejauhmana kesediaan pengundi-pengundi muda seawal umur 18 tahun setelah sekian lama polisi pengundi berusia 21 tahun ke atas dilaksanakan sejak tahun 1955. Pelaksanaan kelayakan pengundi seawal 18 tahun ini atau dikenali Undi18 telah pun dilaksanakan pertama kali dalam Pilihanraya Dewan Negeri (PRN) Johor pada Mac 2022. Namun, ia tidak memberikan implikasi yang positif terhadap peratusan yang turun mengundi apabila hanya 54.92% sahaja yang turun melaksanakan tanggungjawab untuk mengundi (Junaidi et al., 2022). Pelbagai faktor yang menyumbang kepada permasalahan itu berlaku antaranya penglibatan pengundi muda. Berdasarkan kajian yang dilakukan oleh Mohd Azmir dan Afi Roshezry (2022) pada PRN Johor mendapati tahap sosialisasi politik dalam kalangan pengundi muda adalah rendah, selain tidak konsisten dan komitmen yang jitu terhadap parti politik dan sistem pilihanraya.

2.0 KAJIAN LITERATUR

2.1 Polemik Penurunan Had Mengundi

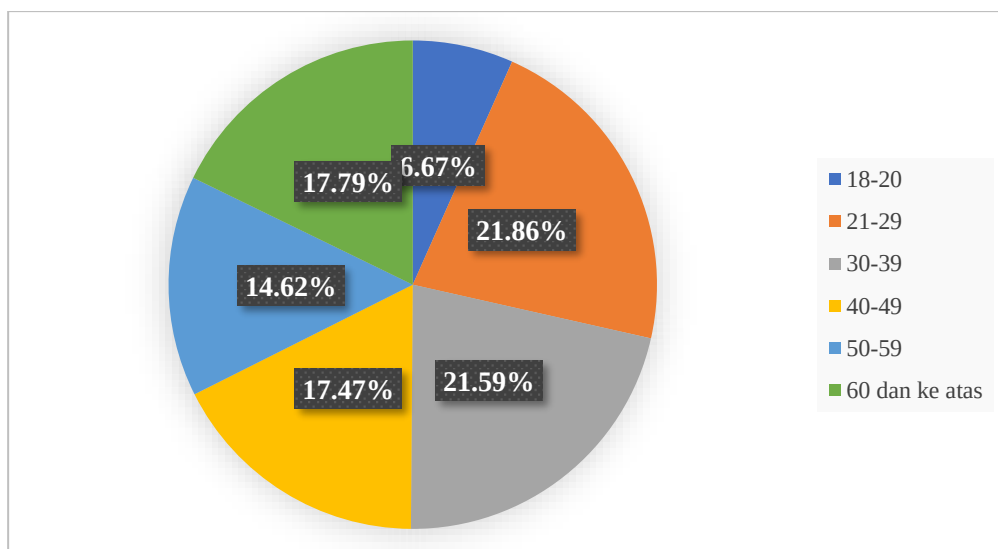
Walaubagaimanapun, terdapat kecenderungan pengundi untuk turun mengundi berdasarkan beberapa faktor. Antara faktor yang mempengaruhi pengundi untuk turun mengundi ialah calon, manifesto, isu, calon perdana menteri oleh parti, polisi/dasar kerajaan dan parti (Noor Amira & Junaidi, 2022). Namun ia tidak semestinya mempengaruhi pengundi muda yang merupakan golongan yang pertama kali turun mengundi dan memilih pemimpin yang pada hemat mereka sesuai untuk memimpin negara (Yazid et al., 2020). Pengundi muda didakwa cukup kritikal untuk dijangka sejauhmana penyertaan mereka terhadap keperluan mengundi. Golongan ini sebenarnya memberikan kesan yang signifikan terhadap sebarang keputusan pilihanraya. Menurut Ramli et al., (2018),

golongan ini tidak teragak-agak untuk memberikan sokongan kepada parti pembangkang sekiranya pihak kerajaan gagal memberikan maklum balas segera ke atas aspirasi mereka.

Namun, tidak semua bersetuju dengan dasar penurunan had pengundi daripada 21 tahun kepada 18 tahun. Ini kerana golongan berumur 18-19 tahun masih lagi belum matang dan mudah terpengaruh janji-janji politik yang tidak masuk akal walaupun golongan berkenaan menyambut baik penurunan had mengundi (Khairunnisa'a & Junaidi, 2020). Pengundi muda merupakan golongan yang paling terkesan dengan perubahan teknologi maklumat dan komunikasi. Mereka lebih terdedah kepada apa-apa sahaja maklumat yang dilaporkan dalam media-media baharu (Amer et al., 2010). Menurut Mohd Azmir & Afi Roshezry (2022), pengundi muda amat berisiko dengan akses maklumat yang pelbagai dalam medial sosial yang akhirnya mudah mempengaruhi perubahan corak pemikiran mereka sehingga mampu menggugat keselamatan negara. Lantaran itu, amat penting penerapan literasi politik bertujuan memberikan pemahaman yang baik dalam sistem politik demokrasi negara dalam kalangan pengundi muda.

2.2 Pengundi Melayu Johor

Berdasarkan Buku Laporan Anggaran Penduduk Semasa Malaysia 2023 yang diterbitkan pada Julai 2023 oleh Jabatan Perangkaan Malaysia melaporkan bahawa orang Melayu membentuk 54.83% daripada jumlah penduduk di negeri Johor iaitu 2,208,600 orang daripada 4,028,300 orang jumlah keseluruhan penduduk (Jabatan Perangkaan Malaysia, 2023). Menurut Junaidi (2020), pengundi Melayu membentuk 54.67% daripada keseluruhan jumlah pengundi di negeri Johor dan menjadikan bangsa berkenaan kelompok terbesar berbanding kaum Cina (37.58%), India (6.52%) dan etnik lain (1.24%). Manakala berdasarkan infografik yang dikeluarkan oleh Suruhanjaya Pilihanraya (SPR) (2022) mengenai pemilih yang berdaftar ketika Pilihanraya Umum Dewan Negeri Johor ke-15 menyaksikan golongan pengundi muda merupakan golongan terbesar berdasarkan Rajah 1. Kelompok pengundi muda yang berusia 18-20 dan 21-29 tahun yang masing-masing menyumbang kepada 6.67% dan 21.86% daripada jumlah pengundi di Johor.



Rajah 1. Taburan pengundi mengikut kelompok umur (Suruhanjaya Pilihanraya Malaysia, 2022)

Bilangan pengundi Melayu yang besar ini telah menyebabkan banyak perkara dan isu-isu berkaitan bangsa ini turut menjadi perhatian utama dalam isu-isu politik yang dimainkan oleh mana-mana parti politik. Biarpun isu-isu berkaitan 3R iaitu agama, bangsa dan raja masih menjadi faktor yang mempengaruhi kebanyakan pengundi Melayu selain isu-isu pembangunan dibangkitkan, namun naratif baharu seperti tadbir urus yang baik, pendemokrasian, integriti dan ketelusan mula mendapat tempat dalam kalangan pengundi Melayu di Johor (Shah Mohd Akmal, 2022). Menurut Zawiyah

(2021), wujud perubahan budaya politik orang Melayu daripada budaya politik *subject* kepada budaya politik *participant* sejak 2007 dan kemuncaknya ketika PRU ke-14. Ini dibuktikan dengan berlaku perubahan pola sokongan sebilangan pengundi Melayu Johor ketika PRU ke-14 terutamanya pola perubahan dalam kalangan pengundi muda yang dipengaruhi oleh media sosial. Walau bagaimanapun, pendekatan politik berteraskan Melayu dan mempunyai nilai sentimental masih lagi kekal relevan dalam kalangan pengundi Melayu di Johor (Muhammad Marwan & Supyan, 2022).

2.3 Senario Politik Johor Pasca PRU ke-14 sehingga Pasca PRN ke-15

Ketidaktentuan situasi politik di Johor berlaku sejak perubahan tampuk pemerintahan kerajaan negeri Johor lantaran kekalahan parti Barisan Nasional (BN) yang ditunjangi oleh parti UMNO buat pertama kalinya dalam sejarah kepada parti Pakatan Harapan (PH) dalam PRU Ke-14 pada tahun 2018. Ia disusuli dengan beberapa Ahli Dewan Negeri daripada parti BN telah mengisytiharkan keluar parti dan kemudiannya melompat ke parti Bersatu yang merupakan salah satu parti komponen PH beberapa bulan selepas itu. Adegan melompat parti ini telah menjadikan kedudukan parti PH sangat kukuh di Johor. Situasi yang tidak menyebelahi parti BN ini telah membuatkan mereka berkompromi dengan parti PAS. Namun, timbul persepsi bahawa beberapa keputusan kerajaan yang dilihat seolah-olah tidak memihak kepada orang-orang Melayu telah menyebabkan kegusaran wujud dalam kalangan orang Melayu ketika itu (Zawiyah, 2021). Manifestasi daripada kegusaran itu telah memberikan manfaat kepada gabungan parti BN dan PAS yang seterusnya berjaya memberikan kesan dengan mencipta kemenangan demi kemenangan dalam pilihanraya kecil bagi kawasan mempunyai peratusan majoriti yang tinggi pengundi Melayu selepas itu.

Pengukuhan kelangsungan politik orang-orang Melayu dilihat seringkali mendapat perhatian oleh parti UMNO/BN dan PAS yang seterusnya berjaya mengekalkan hagemoni mereka (Ilyas, 2021). Siri kemenangan yang diperolehi oleh gabungan parti BN dan PAS telah menggugat kedudukan parti Bersatu yang merupakan parti berteraskan Melayu dalam PH apabila turut kalah dalam pilihanraya kecil di Dewan Undangan Negeri Semenyih di Selangor pada Mac 2019. Klimaks kemenangan bergaya parti BN dalam pilihanraya kecil di Tanjung Piai pada September 2019 telah memberikan tamparan yang hebat kepada parti Bersatu. Parti Bersatu berada dalam dilema untuk terus kekal dalam gabungan PH apabila menyedari orang-orang Melayu semakin menjauhi PH (Wan Saiful, 2020). Rentetan itu, perubahan tampuk kepimpinan negara berubah pada tahun 2020 apabila parti Bersatu mengumumkan keluar daripada gabungan PH bersama-sama sebahagian ahli parlimen PKR dan seterusnya membentuk kerajaan baharu bersama BN dan PAS dan Perdana Menteri yang dipilih adalah dari parti Bersatu (Junaidi, 2021). Keadaan yang serupa berlaku kepada beberapa negeri-negeri di Malaysia termasuklah di Johor tetapi jawatan Menteri Besar bertukar kepada UMNO/BN.

Namun, gabungan politik ini tidak mampu mengekalkan kestabilan politik seperti mana diharapkan apabila keseteruan antara parti UMNO dan Bersatu yang berlaku sejak penubuhan Bersatu tidak berjaya ditangani dengan baik oleh kedua-dua pihak. Ia juga berikutan penubuhan gabungan parti Perikatan Nasional (PN) yang terdiri daripada parti Bersatu dan PAS. Pada tahun 2021, negara sekali lagi menyaksikan perubahan kepimpinan apabila jawatan Perdana Menteri bertukar kepada parti UMNO/BN tetapi gabungan parti PN kekal dalam kerajaan. Ia juga memberikan implikasi kepada situasi politik di Johor. Kemelut politik ini berterusan sehinggalah parti UMNO/BN dan Perikatan Nasional (PN) bertanding secara berasingan dan wujud pertembungan tiga gabungan politik dalam PRN Negeri Melaka pada November 2021.

Situasi politik di Johor dilihat tidak stabil memandangkan gabungan parti memerintah iaitu parti BN dan PN hanya memiliki kelebihan satu kerusi berbanding jumlah kerusi yang dikuasai oleh PH dan tiada undang-undang mengekang ahli dewan negeri untuk melompat parti selain perseteruan UMNO dan Bersatu semakin membarah. Ketidakstabilan politik di Johor ini cuba diredakan menerusi titah Sultan Johor, namun ia akhirnya dirungkaikan dengan perkenan Sultan Johor untuk pembubaran Dewan Negeri Johor bagi memberikan laluan kepada Pilihanraya Negeri Johor ke-15. Pengundi di Johor telah membuat pilihan dengan menoktahkan ketidakstabilan politik dengan memberikan

kemenangan kepada parti BN. Menurut Suhaimee, [Mohd Khairuddin & Ahmad Danial Fariset al. \(2021\)](#), faktor ketidakstabilan politik merupakan salah satu faktor utama yang memberikan kesan psikologi kepada pengundi di Johor. Walaupun demikian, ketidaktentuan politik di peringkat nasional masih lagi melingkari senario politik sehingga hari ini apabila tiada satu gabungan parti yang berjaya memenangi majoriti mudah dalam Pilihanraya Umum Ke-15. Ini seterusnya memberikan kesan kepada pengundi terutamanya kepada pengundi muda dalam membuat keputusan mengenai politik.

2.4 Kepentingan Literasi Politik

Literasi politik merujuk kepada kemampuan pengundi untuk memahami, menganalisis, dan terlibat dalam proses politik. Ini termasuk pemahaman terhadap sistem politik, institusi politik, proses membuat keputusan politik, dan isu-isu politik yang relevan (Denver & Hands, 1992). Literasi politik juga melibatkan pengetahuan pengundi tentang struktur dan fungsi pemerintahan, hak dan tanggungjawab warganegara, serta pemahaman terhadap konsep-konsep politik seperti demokrasi, hak asasi manusia, keadilan sosial, dan kebebasan bersuara. Selain itu, literasi politik juga membolehkan pengundi untuk menganalisa maklumat berkaitan politik, memahaminya dalam pelbagai perspektif dan dapat mengenalpasti propaganda atau manipulasi politik. Literasi politik yang baik dalam kalangan pengundi muda memberikan kesan yang sangat baik dalam sistem demokrasi (Jasmi et al., 2018).

Secara tradisi, literasi politik diterapkan oleh ibu bapa mahupun golongan yang dipercayai oleh para pengundi seperti pendidik, rakan-rakan mahupun masyarakat setempat. Namun, ledakan teknologi maklumat telah memberikan kesan secara langsung kepada pengundi muda kerana pelbagai maklumat disajikan kepada pengundi muda tanpa sebarang batas mahupun tanpa bimbingan daripada golongan yang mampu memberikan input berguna sebelum mereka membuat sebarang keputusan politik. Kajian yang dilakukan oleh Abdul Salim (2018), membuktikan bahawa kepercayaan pengundi Melayu sangat dipengaruhi oleh faktor media massa atau media sosial. Selain itu, ia dapat membendung implikasi buruk daripada pendedahan maklumat yang pelbagai daripada media sosial. Mereka dapat memahami kempen atau isu politik disampaikan melalui media dan membezakan antara fakta, pendapat, atau propaganda (Jasmi et al., 2018). Kemahiran ini membantu mereka membuat keputusan yang lebih rasional dan tidak mudah dipengaruhi oleh manipulasi politik atau maklumat serta mengambilkira pelbagai aspek keunikan negara Malaysia ketika memilih calon atau parti politik.

Namun, dalam kajian yang dilakukan oleh Khairunisa'a dan Junaidi (2022) menunjukkan bahawa kadar literasi politik dalam kalangan pengundi muda adalah pada tahap sederhana. Ini memerlukan usaha daripada semua pihak dalam memastikan golongan ini mampu menyumbang kepada pembentukan negara yang mampan dan progresif selain mengekalkan ciri-ciri tradisi yang merupakan keunikan negara Malaysia. Walaupun, pengundi muda yang terdiri daripada pelajar di institusi pengajian tinggi dilihat seolah-olah memiliki kadar literasi politik yang tinggi disebabkan tahap pendidikan mereka. Namun ia tidak boleh dijadikan ukuran secara andaian dalam mengukur tahap literasi politik dalam kalangan mereka. Lantaran itu, satu analisa perlu dibangunkan untuk mengenalpasti sejauhmana keperluan pendidikan literasi politik dalam kalangan pengundi muda di Institusi Pengajian Tinggi Awam (IPTA).

3.0 METODOLOGI

Kajian ini dibangunkan bertujuan untuk menganalisa sejauhmana keperluan literasi politik ke atas pengundi muda Melayu di IPTA. Kajian ini dilakukan dengan menggunakan pendekatan kualitatif iaitu responden bebas untuk menjawab soalan yang diajukan tanpa apa-apa nilai tertentu diukur secara objektif seperti perwakilan nombor bagi mewakili sesuatu dapatan.

3.1 Populasi dan Saiz Sampel

Satu set soalan dibangunkan dengan menggunakan aplikasi Google Form dijadikan sebagai instrumen kajian. Penggunaan aplikasi Google Form digunakan berbanding menggunakan kaedah temubual bersemuka untuk membolehkan kajian kualitatif dilakukan pada skala yang lebih besar iaitu melibatkan lebih ramai responden tetapi dalam masa yang sama dapat menjimatkan kos dan masa kajian. Seramai 558 responden telah dipilih secara persampelan mudah dan memberikan maklum balas ke atas persoalan dalam aplikasi Google Form yang diedarkan kepada responden menerusi aplikasi Whatsapp. Bagi memudahkan penelitian ke atas responden dari bangsa Melayu, pemilihan responden dari Universiti Teknologi MARA ([UiTM](#)) dilihat mempunyai signifikan yang baik. Pemilihan ini memudahkan penyelidik untuk terus mendapatkan sebanyak mungkin responden tanpa memerlukan saringan berdasarkan kaum yang ketat. Hanya responden dari [Universiti Teknologi MARA iTM Johor](#), [Universiti Teknologi MARA iTM Melaka](#) dan [Universiti Teknologi MARA iTM Pahang](#) yang terlibat dalam kajian ini selain daripada lokasinya berada atau berdekatan dengan negeri Johor yang terlibat sebagai subjek kajian, ia juga bertujuan memudahkan penyelidik untuk turun lapangan dan membuat kaji selidik.

3.2 Instrumen Kajian

Set soalan yang dikemukakan terbahagi kepada dua bahagian iaitu bahagian pertama bagi mengetahui demografi umum responden iaitu umur, jantina, negeri tempat tinggal, lokasi tempat tinggal, pernah mengundi dalam mana-mana pilihanraya sama ada PRU atau PRK sebelum ini dan tempat mengundi. Bahagian kedua pula untuk mendapatkan respon daripada responden mengenai kepentingan literasi politik (atau pendidikan pilihanraya) terhadap pengundi muda Melayu di IPTA. Hanya satu soalan terbuka diajukan dalam bahagian ini diajukan kepada responden mengenai kepentingan pendidikan pilihanraya/literasi politik terhadap pengundi muda. Untuk menjawab soalan ini, responden hanya perlu menyatakan apa-apa pandangan atau pendapat dalam set soalan berkenaan. Bagi menjaga kerahsiaan dan membolehkan responden untuk memberikan pandangan tanpa rasa bimbang, responden tidak diminta untuk menyatakan apa-apa pengenalan diri seperti nama mahupun nombor kad matrik pelajar. Lantaran itu, identiti responden hanya dilabelkan sebagai responden 1 hingga responden 546 sebagai identiti rujukan untuk perbincangan kajian ini.

3.3 Analisis Data

Data yang diperolehi dianalisa dengan menggunakan perisian MS Excel dan dibahagikan kepada tiga kategori pandangan iaitu pandangan positif, pandangan berkecuali dan pandangan negatif. Pandangan responden yang cenderung kepada menyokong atau bersetuju dengan persoalan kajian telah dikelaskan sebagai pandangan positif. Manakala, sekiranya pandangan yang diberikan oleh responden lebih cenderung kepada menolak atau tidak bersetuju dengan persoalan kajian pula dikategorikan sebagai pandangan negatif. Sebaliknya kategori pandangan berkecuali pula merupakan pandangan yang diberikan tidak menunjukkan kecenderungan bersifat memihak sama ada bersetuju atau tidak bersetuju terhadap persoalan kajian. Terdapat juga responden yang tidak memberikan apa-apa respon terhadap soalan yang diutarakan dan ia juga dikategorikan sebagai pandangan berkecuali. Namun, 6 daripada 558 responden tidak diambilkira dalam kajian ini kerana memberikan jawapan yang di luar konteks kajian. Oleh demikian hanya 546 responden sahaja iaitu 98% hasil maklum balas sahaja dikaji, diselidik dan seterusnya dikelaskan kepada tiga jenis pandangan iaitu pandangan positif, pandangan negatif dan pandangan berkecuali.

4.0 DAPATAN KAJIAN

4.1 Bahagian Pertama: Demografi responden

Secara keseluruhannya, semua responden iaitu seramai 546 responden merupakan pelajar yang sedang melanjutkan pengajian di institusi pengajian awam. Peratusan mengikut jantina pula memperlihatkan bahawa 76.2% atau 416 responden merupakan pelajar perempuan. Manakala bakinya iaitu 24.8% ialah pelajar lelaki. Rata-rata responden yang terlibat adalah berumur seawal 16 tahun sehinggalah ke usia 22 tahun. Namun, seramai 470 responden yang mewakili 86% atau menjadi majoriti daripada keseluruhan responden ialah mereka berusia 18 tahun dan 40 responden (7.3%) ialah berumur 19 tahun.

Jadual 1. Demografi responden

Latar belakang responden	Bilangan	Peratus
Jantina		
Lelaki	130	24.8%
Perempuan	416	76.2%
Umur		
16	1	0.2%
17	12	2.2%
18	470	86.1%
19	40	7.3%
20	18	3.3%
21	1	0.2%
22	4	0.7%
Taburan lokasi		
Bandar	283	51.8%
Luar Bandar	263	48.2%
Pernah mengundi		
Ya	39	7.1%
Tidak	507	92.9%

Jadual 1 di atas juga menunjukkan mengenai taburan lokasi responden. Terdapat 283 responden atau 51.8% menetap di kawasan bandar dan 48.2% pula menetap di kawasan luar bandar. Selain itu, agak menarik untuk diulas ialah sejauhmana responden pernah mengundi di kawasan pilihanraya masing-masing. Hanya 7.1% iaitu 39 daripada 454 responden sahaja mengakui bahawa mereka pernah mengundi sebelum ini. Malangnya sejumlah besar iaitu 507 responden atau 92.9% menyatakan bahawa mereka tidak pernah mengundi walaupun pendaftaran automatik sebagai pengundi juga telah berkuatkuasa beberapa bulan sebelum itu. Namun, ia tidak boleh dijadikan indikator kerana boleh jadi ketika PRN Johor yang lalu, mereka masih belum cukup usia 18 tahun sepertimana disyaratkan dalam peraturan pilihanraya.

4.2 Bahagian Kedua: Keperluan Literasi Politik kepada Pengundi Muda Melayu di IPTA

Hasil analisa kualitatif dengan merumuskan kecenderungan daripada maklum balas yang diterima oleh responden-responden yang diterima, maka maklum balas dibahagikan kepada tiga iaitu pandangan positif, pandangan negatif dan pandangan berkecuali. Jadual 2 di bawah menunjukkan kategori pandangan responden iaitu seramai 454 responden atau mewakili 83.2% dari jumlah keseluruhan responden memberikan pandangan yang positif. Manakala seramai 83 responden atau 15.2% sahaja yang memberikan pandangan yang berkecuali iaitu tidak memberikan apa-apa komen atau maklum balas mahupun hanya memberikan simbol terhadap soalan ini seperti tanda palang (-) ataupun simbol bagus. Sebaliknya cuma 1.6% daripada jumlah responden iaitu 9 orang sahaja yang memberikan pandangan yang negatif terhadap persoalan kajian ini.

Jadual 2. Pembahagian Kategori Pandangan Responden

Kategori Pandangan	Responden	Peratus
Positif	454	83.2%
Berkecuali	83	15.2%
Negatif	9	1.6%

Sejumlah 454 responden atau mewakili 83.2% daripada keseluruhan responden telah memberikan pandangan yang positif terhadap kepentingan literasi politik dalam kalangan pengundi muda Melayu di IPTA. Kebanyakan responden memberikan komen-komen yang lebih cenderung kepada bersetuju dan secara langsung membantu mereka dalam membuat keputusan yang tepat dalam politik seperti;

“Membantu kami membuat pilihan dengan lebih bijak dan profesional”
(Responden 23)

“Pengundi muda mampu membuat keputusan untuk mengundi dengan tepat.”
(Responden 46)

“Untuk menjadikan pengundi muda berfikiran terbuka untuk membuat keputusan yang tepat”
(Responden 132)

“Supaya pengundi muda boleh mengundi dengan menggunakan akal nya”
(Responden 220)

“Pengundi muda perlu memilih calon yang tepat dan berwibawa bukan hanya dari percakapan dan manifesto sahaja, malah melakukan yang terbaik demi kesejahteraan rakyat serta menjamin masa depan generasi akan datang. Kemajuan negara dalam bidang politik bergantung atas pilihan rakyat dalam memilih calon.”
(Responden 62)

Ada juga berpendapat literasi politik juga mampu memberikan kesedaran kepada mereka akan kepentingan untuk turun mengundi seperti;

“Pilihanraya penting untuk memilih pemimpin yang tepat dalam mentadbir dan memajukan negara serta memajukan dan memodenkan kehidupan rakyat”.
(Responden 112)

“Pendidikan ini amatlah bagi mereka mengetahui apakah sebab utama mereka mengundi kerana pilihanraya juga adalah untuk diri sendiri”.
(Responden 222)

“Pada pendapat saya, pengundi muda perlulah diberi penjelasan tentang pilihan raya terutamanya kepada pengundi yang pertama kali mengundi. Hal ini kerana, pengundi muda terdiri daripada golongan yang berumur dari 18 tahun. Pada pandangan saya,

tidak kesemua pengundi yang berumur 18 tahun bersifat matang dalam pemikiran. Sebahagian daripada mereka mudah dipengaruhi oleh rakan sebaya atau mudah untuk menerima sogokan untuk mengundi parti tertentu. Oleh itu, pendidikan pilihan raya amatlah penting bagi pengundi muda untuk mengajar mereka tentang tatacara serta peraturan-peraturan berkaitan pilihan raya memandangkan golongan muda kurang informasi tentang pilihan raya. Hal ini juga bagi mempersiapkan diri mereka untuk mengundi serta memilih parti yang betul.”

(Responden 239)

Ini menunjukkan kepercayaan mereka terhadap kepentingan literasi politik dalam menanam rasa warga negara yang bertanggungjawab dengan turun mengundi ketika berlangsungnya sesuatu pilihanraya. Responden juga menaruh kepercayaan bahawa literasi politik yang baik juga perlu mempunyai pengetahuan yang cukup dalam sistem pilihanraya dan bagaimana ia dilaksanakan. Selain itu, menerusi literasi politik juga membolehkan mereka mempunyai pengetahuan dalam memilih pemimpin yang terbaik untuk mereka seperti pandangan berikut;

“Supaya pengundi muda bijak mengundi calon yang layak.”

(Responden 43)

“Pada pendapat saya, pengundi muda mestilah terbuka dengan pendidikan pilihanraya ini agar dapat memilih pemimpin yang akan berjaya memajukan negara.”

(Responden 50)

“Pengundi muda perlu memilih calon yang tepat dan berwibawa bukan hanya dari percakapan dan manifesto sahaja, malah melakukan yang terbaik demi kesejahteraan rakyat serta menjamin masa depan generasi akan datang. Kemajuan negara dalam bidang politik bergantung atas pilihan rakyat dalam memilih calon.”

(Responden 62)

“ Penting kerana;

1. Supaya mereka memilih pemimpin berdasarkan tindakan yang bakal dilakukan bukan dengan hanya berjanji kata kosong sahaja. Anak muda tidak mudah terpedaya dengan kata-kata manis sahaja.
 2. Supaya anak tidak memilih rupa agar mengelakkan terumbang-ambing pentadbiran dijalankan oleh pemimpin baharu.
- Itu sahaja pendapat saya. Untuk meneraju kemajuan negara perlu memilih pemimpin yang amanah, bijak serta adil. Bukan berkata manis dan menerima rasuah atau memberi rasuah kepada mana-mana pihak”.

(Responden 151)

“Memberi kesedaran kepada pengundi muda untuk menjadikan negara kita negara yang bebas dari sebarang masalah politik yang akan menyebabkan berlakunya perbalahan di antara satu sama lain.”

(Responden 113)

“Supaya mereka tidak dipengaruhi dengan propaganda”

(Responden 311)

Menerusi literasi politik, responden percaya mereka mampu membuat penilaian yang berkesan dengan mengambilkira pelbagai aspek dan tidak mudah terpedaya dengan propaganda yang dimainkan oleh calon atau parti politik yang bertanding. Responden juga berpandangan bahawa literasi politik juga mampu memberikan ruang dan peluang kepada mereka untuk terbuka dalam membincangkan isu-isu politik dan bersikap rasional terhadapnya. Ini dibuktikan dengan;

“Kepentingan pengundi muda perlu mengambil berat terhadap pilihan raya kerana suara anak muda zaman sekarang sangat terpengaruh dan tanggungjawab atas pentadbiran yang stabil dan aman serta boleh meningkatkan ekonomi negara kita yang semakin merosot.”

(Responden 162)

“Penting agar pengundi muda dapat melibatkan diri dalam mengetahui hal ehwal semasa politik”.

(Responden 539)

Implikasi daripada senario politik yang tidak stabil juga memangkin keperluan literasi politik kepada golongan pengundi muda. Ketidakstabilan politik yang berpanjangan secara langsung telah memberikan kesan kepada responden. Responden percaya bahawa literasi politik yang baik juga mampu menjamin kestabilan politik untuk jangka panjang. Ini diakui dengan pandangan berikut;

“Untuk mewujudkan kestabilan politik dan kemakmuran negara agar semua pengundi muda cakna tentang satu undi memberi kesan kepada negara dan dapat beri kesedaran kepada anak muda”.

(Responden 124)

“Pada pandangan saya, kepentingan pendidikan pilihanraya terhadap pengundi muda ialah dapat memastikan pengundi muda memilih pemimpin yang boleh menstabilkan dan memajukan negara dengan aman”.

(Responden 519)

“Dapat menyumbang pendapat dan menjalankan tanggungjawab sebagai rakyat Malaysia untuk memajukan sistem pentadbiran negara agar menjadi lebih mantap.”

(Responden 554)

Secara keseluruhannya, boleh disimpulkan bahawa responden-responden kategori ini memberikan satu tanggapan bahawa literasi politik mampu memberikan impak yang baik kepada pengundi-pengundi muda agar bukan sahaja mempunyai pengetahuan yang cukup dalam politik malah memiliki kemahiran-kemahiran yang diperlukan dalam mendapatkan maklumat yang tepat dan betul.

Sebaliknya, sebanyak 83 pandangan responden dikategorikan sebagai pandangan berkecuali. Antara contoh respon yang diberikan oleh responden seperti “entah” (Responden 310) dan “tidak tahu” (Responden 546) apabila menjawab soalan mengenai kepentingan literasi politik. Ini menunjukkan bahawa sebilangan kecil pengundi muda kurang mengambil berat akan kepentingan literasi politik dalam membantu mereka dalam membuat keputusan yang bijak dalam politik tanahair.

Ada juga yang tidak memberikan apa-apa komen terhadap soalan yang dikemukakan. Pelbagai kemungkinan-kemungkinan yang boleh dilontarkan bagi merungkai pandangan mereka ini antaranya disebabkan kelelahan politik, rasa tidak mahu terlibat dalam politik, bahkan boleh jadi tanggapan mereka bahawa literasi politik tidak diperlukan dalam membuat keputusan politik.

Namun, hanya 9 pandangan responden atau hanya 1.6% pula dikategorikan sebagai pandangan negatif terhadap kepentingan literasi politik dalam kalangan pelajar Melayu muda di IPTA. Antara pandangan yang boleh disimpulkan dalam respon mereka adalah seperti ‘tidak penting’ (Responden 65) dan ‘tidak perlu’ (Responden 199). Ada responden juga berpendapat;

“pengundi muda berumur 18 tahun adalah tidak sesuai bagi mengikuti proses pengundian kerana tidak semua pelajar lepasan SPM mengetahui isu semasa sama ada luar dan di dalam negara dan kebanyakan mereka akan mengundi mengikuti pengaruh rakan rakan mereka”.

(Responden 191)

Ini seolah-olah responden ini bukan sahaja tidak bersetuju dengan persoalan kajian, malah tidak bersetuju dengan pelaksanaan penurunan had umur mengundi pada usia 18 tahun. Ia juga hampir sama dengan salah satu respon daripada responden iaitu;

“Tidak digalakkan kerana pengundi muda masih tidak mendapat gambaran yang jelas tentang apa yang perlu mereka undi .”

(Responden 399)

Malah ada responden agak beremosi dengan menyatakan pendapat bahawa sistem politik tidak memberikan apa-apa perubahan kepada Malaysia. Seolah-olah memberikan gambaran bahawa sistem politik negara tidak memberikan apa-apa kesan langsung kepada pengundi. Malah ada pandangan yang memberikan input yang agak menarik walaupun bersifat negatif seperti;

“Sangat tidak setuju. Belum bersedia. Sepatutnya diberikan pendedahan dahulu di peringkat sekolah menengah”

(Responden 182)

Walaupun pendapat itu seolah-olah memberikan konotasi negatif terhadap kepentingan literasi politik di IPTA, namun responden juga berpendapat ia sepatutnya dilakukan di peringkat lebih awal ketika zaman sekolah.

Namun, pandangan daripada responden yang ditolak dalam kajian ini adalah cukup menarik untuk dibincangkan. Terdapat 12 responden tidak menjawab persoalan yang diberikan sebaliknya menjawabnya memberikan maklum balas yang di luar konteks seperti;

“Saya bangga menjadi anak muda”

(Responden 22)

“Pengundi muda lebih ramai”

(Responden 127)

Ini seolah-olah wujud kesedaran dalam diri mereka bahawa mereka juga mempunyai peranan dalam menentukan jatuh bangun sesebuah negara. Namun, ia tidak mencerminkan secara jelas kepentingan literasi politik kepada mereka. Selain itu, maklum balas lain seperti;

‘Jadilah orang yang bertaqwa dalam memimpin sesuatu amanah’

(Responden 31)

“Saya rasa perlu perbanyakkan peruntukan untuk siswa dan siswi”

(Responden 55)

“Jangan rasuah”

(Responden 142)

“Dapat bersua juga”

(Responden 480)

dan lain-lain. Respon-respon ini pada pendapat penyelidik adalah lebih kepada luahan emosi ataupun mengelak untuk menjawab persoalan kajian. Ini kemungkinan sebahagian mereka mengalami kelelahan atau kecelaruan politik disebabkan situasi politik negara yang tidak stabil ketika kajian ini dilakukan.

5. PERBINCANGAN

Berdasarkan dapatan kajian menunjukkan bahawa majoriti besar pengundi muda Melayu di IPTA yang berusia lingkungan 18 tahun memberikan reaksi yang positif terhadap kepentingan literasi politik kepada mereka. Memandangkan kecelaruan dan ketidakstabilan politik yang berlaku pasca Pilihanraya Umum ke-14 dan akhirnya Pilihanraya Dewan Negeri Johor ke-15 telah menjadi titik noktah kepada ketidakstabilan ini apabila parti Barisan Nasional telah menang dengan majoriti 2/3 dan menjadikannya satu kerajaan yang sangat kukuh. Ia telah menjadi satu pengajaran yang amat berharga kepada pengundi terutamanya pengundi muda. Maklum balas yang diberikan menunjukkan bahawa pengundi muda amat terkesan dengan ketidakstabilan ini dan mengharapkan literasi politik mampu membantu mereka untuk memahami sistem, pelaksanaan dan situasi politik di Malaysia. Walaupun pengundi muda Melayu yang masih baharu dalam selok-belok dunia politik yang rata-rata masih dikuasai oleh golongan yang lebih berusia daripada mereka, namun wujud kebimbangan dan keprihatinan dalam kalangan mereka terhadap situasi semasa. Kebimbangan ini adalah relevan memandangkan situasi politik bercelaru bakal memberikan impak yang besar kepada kehidupan mereka kelak, lebih-lebih lagi sebaik sahaja tamat pengajian.

Kajian juga membuktikan bahawa program-program literasi politik yang dilaksanakan diharapkan dapat memberikan kesedaran mengenai tanggungjawab setiap warganegara untuk terlibat dalam sistem politik terutamanya dalam pilihanraya. Jika dilihat kepada perkembangan di luar negara dan apa yang berlaku ketika PRN Johor baru-baru ini, menunjukkan bahawa golongan pengundi muda kurang berminat terhadap politik dan terbukti dengan peratusan yang turun mengundi yang rendah. Lantaran itu, menerusi penerapan literasi politik ini dapat menjadikan mereka lebih berminat serta mengambil tahu mengenai politik dan akhirnya diterjemahkan ke peti undi. Selain memupuk rasa tanggungjawab, ia juga diharapkan dapat menanamkan semangat jati diri dan patriotisma terhadap negara. Mereka juga menyedari hubungkait antara politik dengan keselamatan dan kedaulatan negara.

Ini bukan sahaja membantu mereka dalam membuat keputusan politik demi kelangsungan negara malah mendidik mereka untuk membezakan antara isu politik dan isu membabitkan keselamatan negara.

Mereka berasakan bahawa mereka sepatutnya diberikan ilmu dan kemahiran dalam literasi politik dengan jujur. Kemahiran dan ilmu yang diperolehi ini yang membantu mereka mengamati, menganalisa dan seterusnya untuk membuat pilihan yang terbaik dalam membuat keputusan politik terutamanya di atas kertas undi. Kemahiran yang diperolehi juga mampu menangkis mereka daripada terikut-ikut dengan rakan sebaya selain tidak mudah terpedaya dengan pelbagai janji manis atau manifesto mahupun sogokan daripada parti-parti yang bertanding tanpa mengetahui kesan dan akibatnya. Tidak dinafikan pengaruh rakan sebaya, media sosial dan tawaran yang menarik adalah faktor-faktor yang berupaya memukau pemikiran mereka sehinggakan membelakangi keupayaan rasional mereka dalam membuat keputusan. Situasi berkenaan bukanlah omong-omong kosong tetapi ia diperkukuhkan lagi dengan penemuan-penemuan oleh kajian-kajian terdahulu. Namun, menerusi literasi politik, ia boleh menjadikan mereka lebih bertanggungjawab, yakin dan matang dengan mengambilkira pelbagai aspek sebelum membuat sebarang keputusan bukan sahaja dalam politik malah dalam apa bentuk keputusan pada masa hadapan.

Pengundi muda Melayu juga beranggapan bahawa peranan mereka dalam pembentukan negara tidak perlu dipandang enteng. Menerusi literasi politik ini membolehkan mereka untuk bebas mengutarakan dan berbincang mengenai isu-isu semasa dan politik secara ilmiah, berfakta, matang dan bertindak rasional ke atas sebarang permasalahan yang wujud dalam masyarakat. Lantaran itu, literasi politik bukan sahaja diharapkan mampu menjadikan mereka rasional dalam membuat keputusan-keputusan berkaitan politik malah intipati selera pengundi muda juga perlu diberikan perhatian sewajarnya.

6. KESIMPULAN

Secara umumnya, PRN Johor ke-15 merupakan satu titik noktah kepada ketidakstabilan politik yang berlaku di negeri Johor. Ia memberikan implikasi yang sangat besar bukan sahaja kepada pengundi-pengundi malah kepada golongan pengundi muda terutamanya pengundi yang akan mengundi buat pertama kalinya. Berdasarkan kajian yang dilakukan terbukti bahawa ramai pengundi muda Melayu pertama kali tidak turun mengundi ketika PRN Johor ke-15 dan respon yang diberikan oleh mereka lebih kepada kepentingan literasi politik. Literasi politik yang baik bukan sahaja mendidik dan memberikan pengetahuan serta kemahiran yang diperlukan dalam memahami situasi politik, malah mampu memberikan nilai tambah kepada mereka seperti jati diri, rasa tanggungjawab kepada negara dan menanam semangat patriotisma.

Justeru, literasi politik dilihat mempunyai keperluan amat penting kepada pengundi muda Melayu di IPTA dalam membantu mereka bersemuka dengan realiti politik tanahair yang ada pasang dan surutnya. Bahkan, apa-apa usaha meningkatkan tahap penguasaan literasi politik yang baik adalah wajar didukung dan merupakan tanggungjawab yang perlu dilaksanakan dengan jujur oleh semua pihak. Tidak keterlaluan mengatakan bahawa literasi politik yang baik mampu membantu negara dalam mendepani cabaran globalisasi, mengurus sosio-ekonomi dengan lebih cekap, meningkatkan daya integriti dalam masyarakat dan menangkis pelbagai ancaman yang mampu mengugat keselamatan negara.

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EXPLORING OF PERCEPTION OF MOTIVATING FACTORS AND BURNOUT AMONG STUDENTS LEARNING ISLAMIC-RELATED COURSES

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ABSTRACT

Improving student learning outcomes depends on the type of motivation and the application of learning strategies. The academic performance of students in higher education institutions has always been an important factor of significant concern. In reality, the learning activities of students are experienced differently in terms of enthusiasm and how students learn. Previous studies have shown that learning burnout among students in higher learning education arises from excessive enthusiasm to achieve academic success, academic pressure, or other personal psychological issues such as emotional exhaustion and negative attitudes. Therefore, the purpose of this research is to identify how students taking Islamic-related courses perceive their motivation and burnout. The research sample was chosen using simple random technique from 311 students participated in the study course through questionnaires. The data were analyzed descriptively using mean scores, and Pearson correlations. As a result, the analysis of the data shows that the majority of the respondents were (i) understanding and students' satisfaction with courses content, (ii) acquiring a good grade (iii) hard work and belief in self-worth contributed to their success. Despite these concerns, respondents have some doubt about failure and fear of not doing well when compared to others. Meanwhile, respondents' exhaustion after class and need for relaxation contributed significantly to burnout in this study. Additionally, learners may be facing a challenge in the course itself, if disengaged from the learning process. The last finding shows there is a moderate relationship between value and expectancy components and causes of burnout, except in the case of the relationship between causes of burnout and affective components is low significant. The study has ramifications for motivating students learning Islamic-related courses in higher education institutions. This research yields a few suggestions in improving the motivation to face burnout.

Keywords: motivating factors, burnout, Islamic-related courses

1.0 INTRODUCTION

1.1 Background of Study

Motivation is a form of encouragement or inner drive towards the aspiration to improve oneself in attaining a goal or success besides avoiding failure (Hamjah et al., 2011). It can

influence behaviour to move towards specific objectives, boost effort and energy, increase activity initiation and persistence, improve cognitive processing, identify which consequences are reinforcing, and improve performance. Since students aren't always intrinsically driven, they occasionally require contextual motivation, which can be found in the learning environments that teachers design. In addition, motivation is always related to the goal to be achieved. Motivation is an essential element in the learning process because it can affect the level of learning attainment (Yahaya et al., 2005; Vu et al., 2022; Urhahne & Wijnia, 2023). Students with high levels of motivation enable them to understand the lesson and perform learning activities effectively. Motivation in education can have several effects on how students learn and how they behave towards subject matter.

In an endeavour to create an effective education for generating knowledgeable people, Malaysia's educational system has undergone a variety of changes. In an increasingly demanding world, students must be prepared to use new technologies, exposed to highly competitive environments, improve social cohesion, cultural expectations of high academic achievement and also quality of life. Consequently, various of pressures and difficulties may be associated with university life among students. It is no surprise that students may experience symptoms of academic burnout such as emotional exhaustion, cynicism, and inefficacy (Chang et al., 2015). As a result, graduates who want to be produced not only have strong motivating values and are skilled in their academic work, but also have a method for applying the core principles that are ingrained in their souls.

1.2 Statement of Problem

In this challenging world of education, students, especially those who study at the higher education level, are often seen as tired and lethargic due to several factors. However, this issue can be overcome if an approach such as giving motivation to students is done regularly and the involvement of all parties also cooperates in curbing this student problem from continuing.

As the study conducted by Gil-Monte (2003) explained that university life can contribute to fatigue regardless of whether the fatigue comes from physical or mental fatigue or other psychological well-being disorders which have a relationship with the level of happiness and personal development student (Veliz-Burgos, 2012). Next, the student can be free from the psychological illness that can harm his full potential. Problems in the topic, and challenges that make it difficult to achieve the ideal situation above.

If it is seen from the previous studies stated that there is a theoretical gap in the study related to exploring of perception of motivating factors and burnout among students. Past studies do not discuss and focus on studies related to Islamic Studies on students related to motivation and fatigue.

1.3 Objective of the Study and Research Questions

This study is done to explore perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions:

- How do students perceive their motivational constructs?
- How do students perceive their causes of burnout?
- Is there a relationship between motivational constructs and causes of burnout?

2.0 LITERATURE REVIEW

2.1 Motivation to Learn

Motivation to learn is a critical factor that can impact a learner's engagement, effort, and academic success. It can be broadly categorized into two types: intrinsic and extrinsic. Intrinsic motivation refers to the internal drive to learn and achieve for the sake of personal satisfaction and fulfilment. Extrinsic motivation, on the other hand, refers to the drive to learn and achieve based on external rewards such as grades, recognition, or financial incentives (Deci et al., 1999). Numerous factors can influence a learner's motivation to learn. Research has identified three basic psychological needs that underlie intrinsic motivation: autonomy, competence, and relatedness (Ryan & Deci, 2000). Autonomy refers to the learner's sense of control over their learning, competence relates to the learner's belief in their ability to learn and achieve, and relatedness refers to the learner's sense of connection with others. Additionally, environmental factors such as teacher-student relationships, classroom climate, and instructional methods can impact a learner's motivation to learn (Wentzel, 1999).

2.2 Cause of Burnout

Maslach (1998) explained in his study that burnout is a syndrome of excessive stress in a work context where emotional exhaustion and lack of emotional resources are clear and can be seen with negative reactions such as disinterest in other people; loss of idealism (depersonalization); and a reduction in feelings of competence and job performance (low personal achievement). This researcher also explained that the fatigue that occurs stems from a continued irreconcilability between an individual and workload where there is excessive workload and demands, and recovery cannot be achieved.

2.3 Past Studies on Motivation to Learn

Many Studies have been done to investigate motivation to learn. In Nova Asvio (2017) the study was started from the students' achievement in Strata I Management of Islamic Education of IAIN Batusangkar in the academic year 2016. This study was aimed at finding the influences of students' learning motivation and learning environment on students' learning achievement. The findings revealed that learning motivation and environment together have significant positive influence on undergraduate students' learning achievement of Islamic Education Management of IAIN Batusangkar in 2016.

Another study done by Muhammed-Lawal et al. (2018) aimed to determine the level of secondary school students' motivation in learning Islamic Education subject, and to examine the factors influencing their motivation using the cross-sectional survey design. The results show that students' motivation in learning Islamic Education subject is quite high. The Islamic Education subject is important for students as it helps them appreciate and improve their life. Moreover, there were significantly positive relationships between the three factors (i.e., Parental Influence (PI), Teachers' Morality (TM), Teaching Pedagogy (TP) and Students' Motivation (SM)).

2.4 Past Studies on Burnout

In this section, past studies related to fatigue are also included in this writing. If you look at it, there are many studies done related to fatigue related to the learning of Islamic Studies for students. The first study is from Felaza et al. (2020) who explained in their study the relationship between types of motivation and fatigue towards students. This study uses a cross-sectional study involving 1,036 students involved in this study. Data was collected using Academic Motivation Scale to determine the type of motivation, and Maslach Burnout

Inventory to measure burnout's components (emotional exhaustion, cynicism, and perception of personal accomplishment). Correlation and analysis are done to see the relationship between motivation, fatigue components, and performance. The result of the study found that there is a negative significance between motivation type and perception of personal accomplishment. This negative correlation indicates that the more external the motivation, the lower the perception of personal achievement.

Next, the study Evers et al. (2004) explains that this study tries to explore the perception of students and teachers towards teacher fatigue in relation to the occurrence of teacher's behavior in the classroom. In this study, it was found that the Maslach Burnout Inventory, the Coping with Disruptive Behavior Scale, and the Perceived Disruptive Behavior Scale could be adapted to students to report perceived burnout symptoms among their teachers. Findings also show students' perceptions do not differ according to their age. next, found there was a significant difference between the perceptions of male and female students in respect of emotional exhaustion and depersonalization, but not in respect of personal accomplishment.

The results also show from the regression analysis that competence to cope with disruptive student behavior significantly contributed to depersonalization and personal accomplishment, whereas the teachers' age was significantly related to personal accomplishment.

Based on these past studies concluded that, there was a significant relationship between burnout, students' motivation and personal accomplishment are examined.

2.5 Conceptual Framework

Figure 1 shows the conceptual framework of the study. According to Rahmat (2021), demotivation at work can be traced back to a person's view on motivational components. It may begin with how the person value the task at hand. Hence, burnout can be traced from a person's view of his/her motivational components. According to Campos et al. (2011), burnout can be caused by (i) exhaustion and (ii) disengagement. In the context of this study, according to Pintruch and DeGroot (1990), a person's motivation can be traced from his/her view on value components such as (i) intrinsic goal orientation, (ii) extrinsic goal orientation and (iii) task value beliefs. Next, some also depended on expectancy components such as (i) perception of self-efficacy and also (ii) control beliefs. Finally, some are also influenced by their affective components when it comes to motivations.

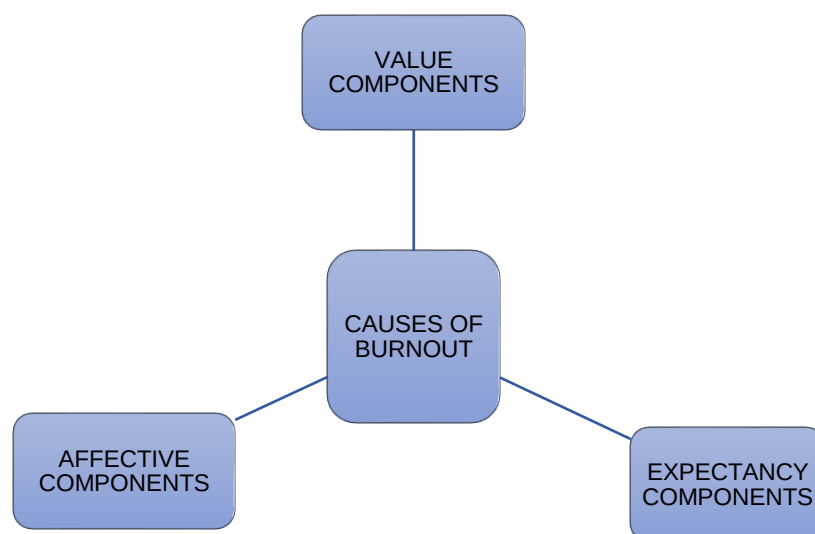


Figure 1: Conceptual Framework of the Study- Is there a relationship between causes of burnout and motivating factors? (Source by author)

3.0 METHODOLOGY

This quantitative study was done to explore motivation factors for learning among undergraduates. A purposive sample of 311 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from the causes of burnout by Campos et al. (2011) and motivational constructs by Pintrich and De Groot (1990) to reveal the variables in table 1 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 12 items on value components. Section C has 7 items on expectancy components and section C had 5 items on affective components.

Table 1- Distribution of Items in the Survey

SECT	CONSTRUCT		VARIABLE	No Of Items	Total Items
B	VALUE COMPONENT	(i)	Intrinsic Goal Orientation	4	12
		(ii)	Extrinsic Goal Orientation	3	
		(iii)	Task Value Beliefs	5	
	EXPECTANCY COMPONENT	(i)	Perception of Self- Efficacy	5	7
		(ii)	Control Beliefs	2	
C	AFFECTIVE COMPONENTS				5
D	BURNOUT-EXHAUSTION				8
E	BURNOUT-DISENGAGEMENT				8
	TOTAL NO OF ITEMS				40

(Source by author)

Table 2: Reliability of Survey

Reliability Statistics

Cronbach's Alpha	N of Items
.858	40

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .858, thus revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is conducted to present findings to answer the research questions for this study.

4.0 FINDINGS

4.1 Findings for Demographic Profile

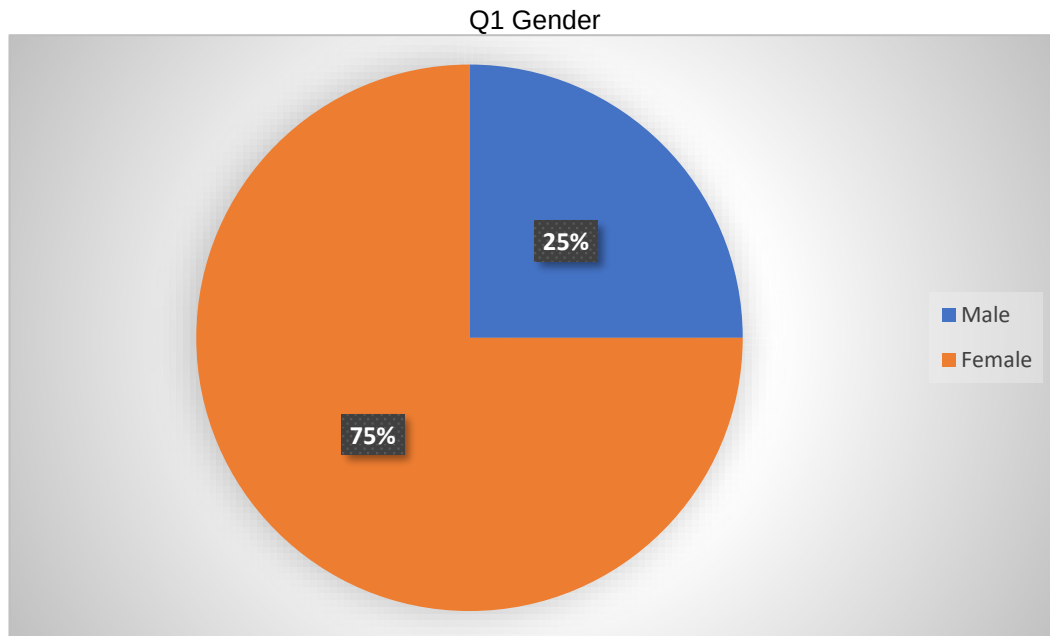


Figure 2: Percentage of Gender

Figure 2 shows the percentage for gender. The table reported that there are 25% of males and 75% of females the respondents among students in this study.

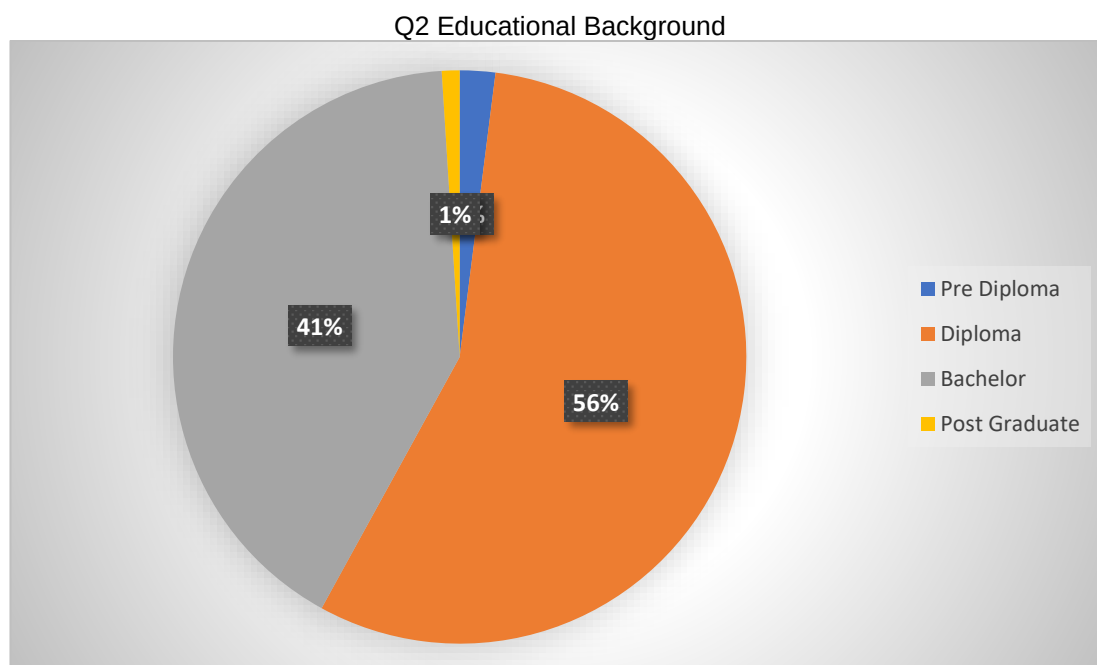


Figure 3 Percentage of Educational Background

Figure 3 indicates the percentage of the educational background of respondents. There are 2% of Pre-Diploma, 56% of Diploma, 41% of Bachelor, and 1% of Postgraduate.

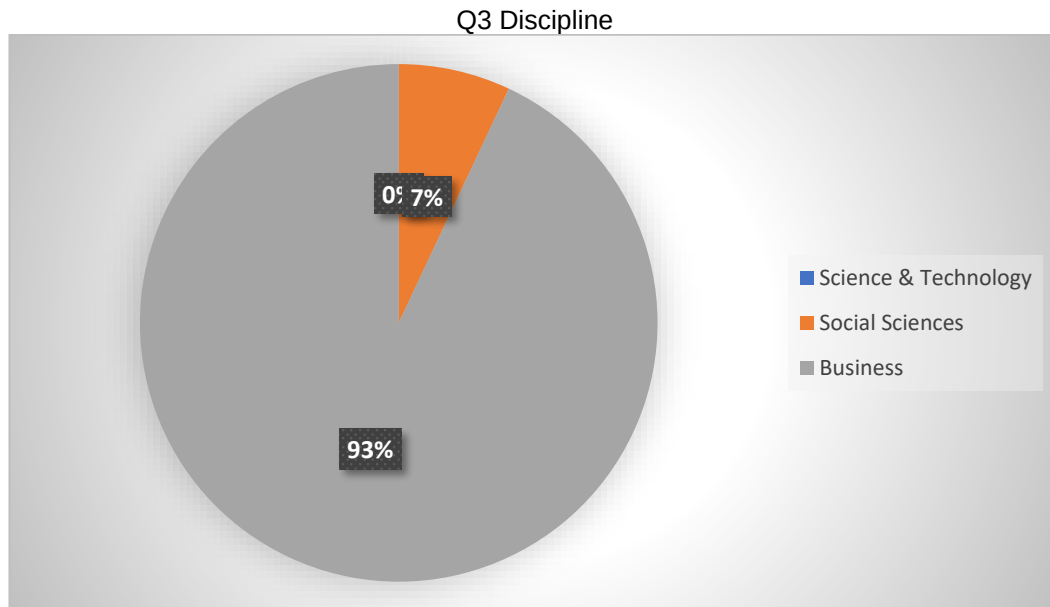


Figure 4: Percentage of Discipline

Figure 4 shows the percentage of faculty for the respondents. The results show that there are 0% of Science and Technology, 7% of Social Sciences and Humanities, and 93% of Business.

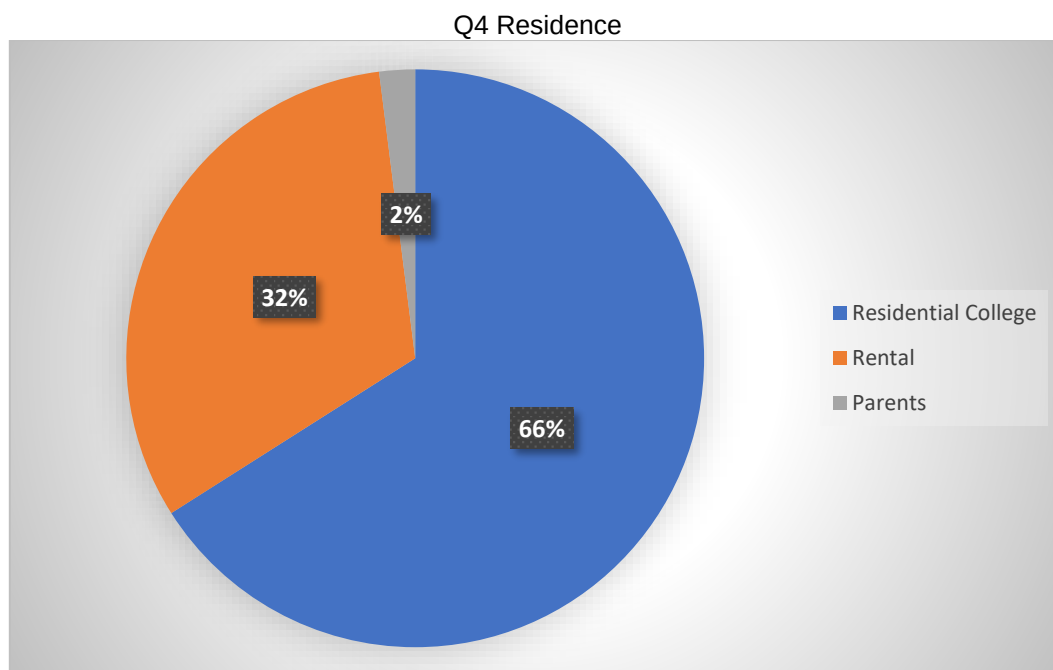


Figure 5: Percentage of Residence

Figure 5 shows the percentage of residence for the respondents. The results show that there are 66% of Residential College, 32% of Rental, and 2% of Parents.

4.2 Findings for Motivational Constructs

This section presents data to answer research question 1- How do students perceive their motivational constructs? In the context of this study, motivational scales are measured by (A) Value components and they are sub-divided into (i) intrinsic goal orientation, (ii) extrinsic goal orientation, and (iii) task value beliefs. Next, motivation involves (B) Expectancy and they are sub-divided into (i) students 'perception of self-efficacy and (ii) control beliefs for learning; and (C) Affective components.

(A) .VALUE COMPONENT

(i) INTRINSIC GOAL ORIENTATION (4 items)

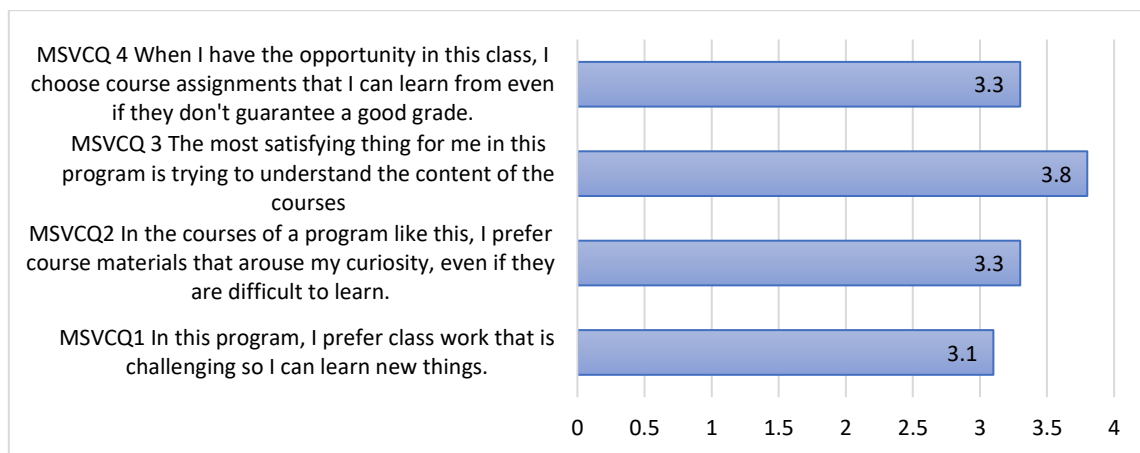


Figure 6: Mean for Intrinsic Goal Orientation

From the figure 6 above, the results show that understanding the content of the courses recorded the highest mean with a total of 3.8 followed by a greater liking for course material that arouses curiosity even though it is difficult to learn with a mean total of 3.3. This amount is also the same as the course assignments that student's study even though they do not promise excellent exam results with a mean of 3.3. The lowest mean result is when students prefer challenging classes to gain new experiences with a mean of 3.1.

(ii) EXTRINSIC GOAL ORIENTATION (3 items)

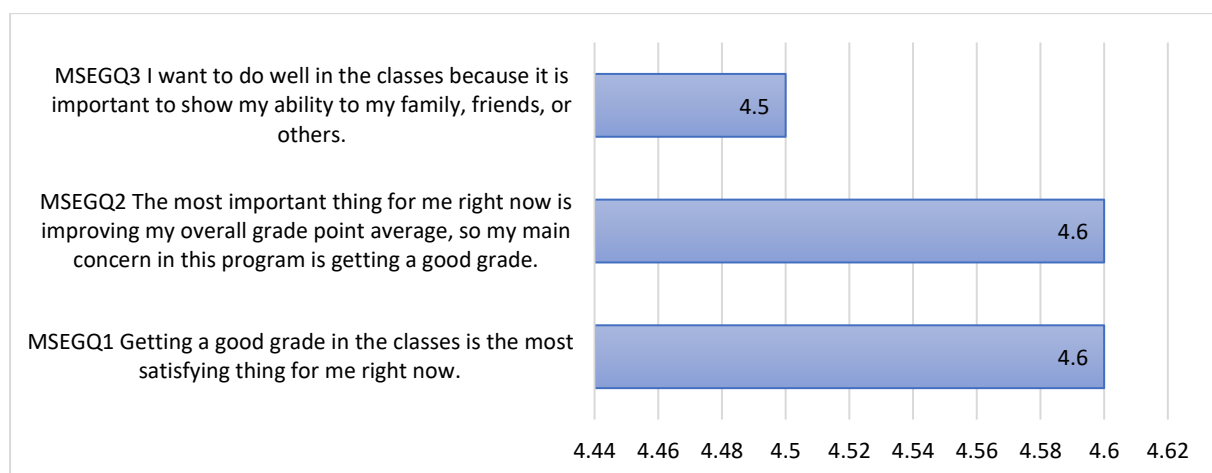


Figure 7: Mean for Extrinsic Goal Orientation

Referring to the figure 7 above, the results show that there are questions that show the same mean result, with a mean total of 4.6. Getting the best grades in the class is the main thing and it is often a worrying thing. So, the result of the grade point average is the main challenge when studying. Meanwhile, the lowest mean is with a total mean of 4.5 where success in class is very important to show the ability to family, friends, or others.

(iii) TASK VALUE BELIEFS (5 items)

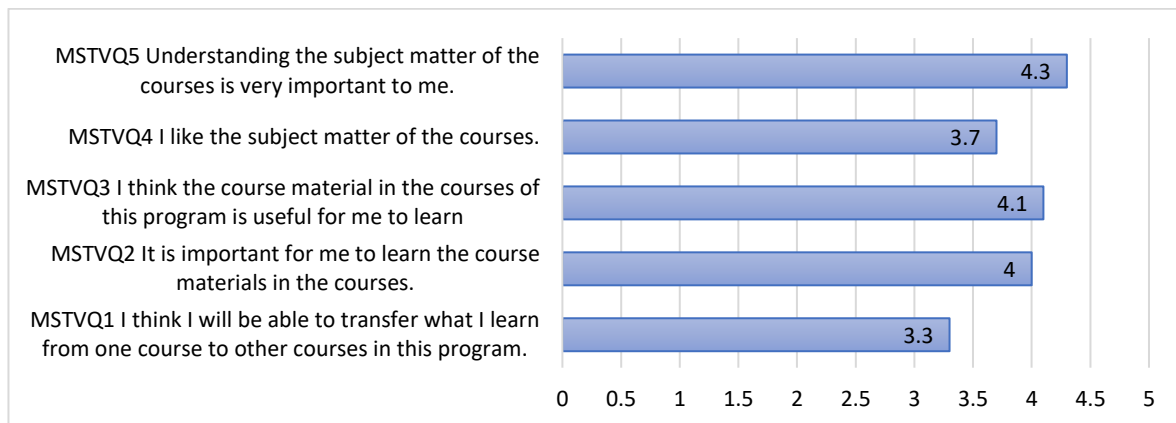


Figure 8: Mean for Task Value Beliefs

From the figure above, the highest result is related to understanding the subject which is the most important thing with a mean of 4.3 and the lowest mean is the ability to transfer what is learned from one cost to another in this program with a mean of 3.3.

(B) -EXPECTANCY COMPONENT- 7 items

(i) STUDENTS 'PERCEPTION OF SELF-EFFICACY (5 items)

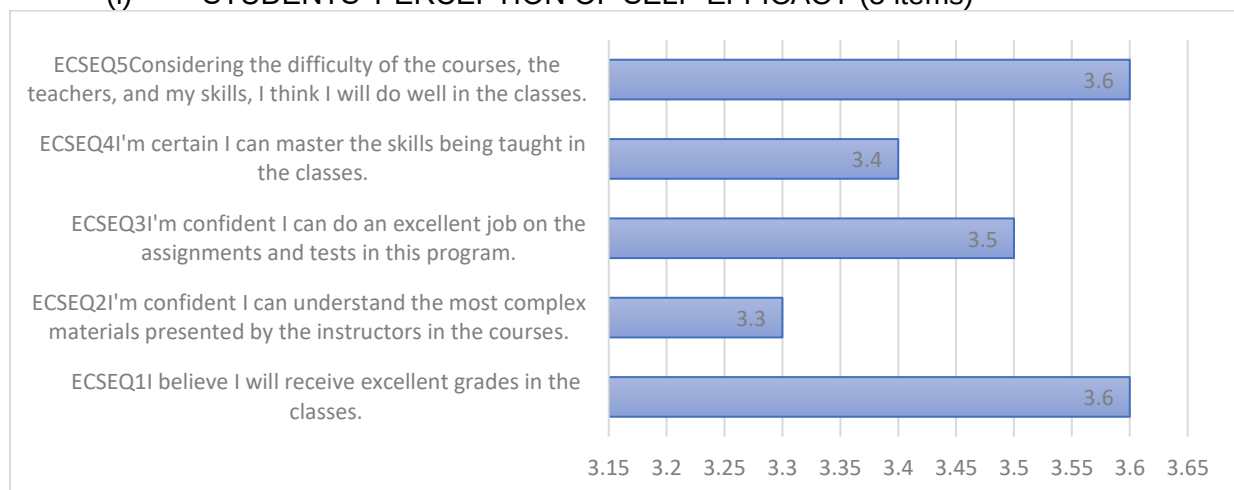


Figure 9: Mean for Students' perception of Self-Efficacy

Figure 9 shows the mean score for students' perception of self-efficacy. The highest mean score is 3.6, ECSEQ1 I believe I will receive excellent grades in the classes and ECSEQ5 Considering the difficulty of the courses, the teachers, and my skills, I think I will do well in the classes. This indicates that students believed that they will receive excellent grades and do well in classes. The second highest mean score are 3.5 and 3.4 referring to ECSEQ3 I'm confident I can do an excellent job on the assignments and tests in this program and ECSEQ4 I'm certain I can master the skills being taught in the classes respectively. This shows that students have confident that they can do excellent job in the assignment and test as they

can master the skills being thought to them in class. Students are confident that they can understand the most complex materials presented by the instructors in the course as these facts represent the lowest mean score 3.3 ECSEQ2 I'm confident I can understand the most complex materials presented by the instructors in the courses.

(ii) CONTROL BELIEFS FOR LEARNING (2 items)

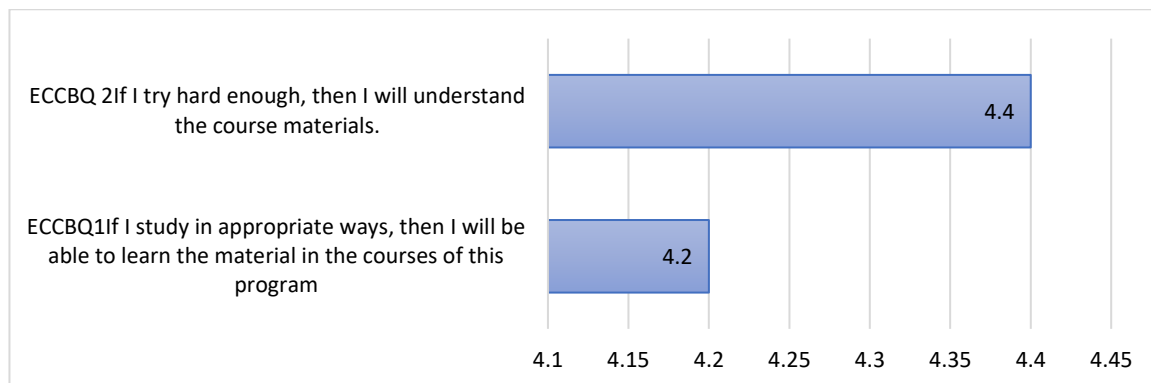


Figure 10: Mean for Control Beliefs for Learning

Figure 10 shows that students have a strong belief that if they try hard enough, they will understand the course materials and if they study in appropriate ways, they will be able to learn the material in the courses of this program. The mean score for this part is 4.4 and 4.2 respectively.

(C) -AFFECTIVE COMPONENT -reversing (5 items)

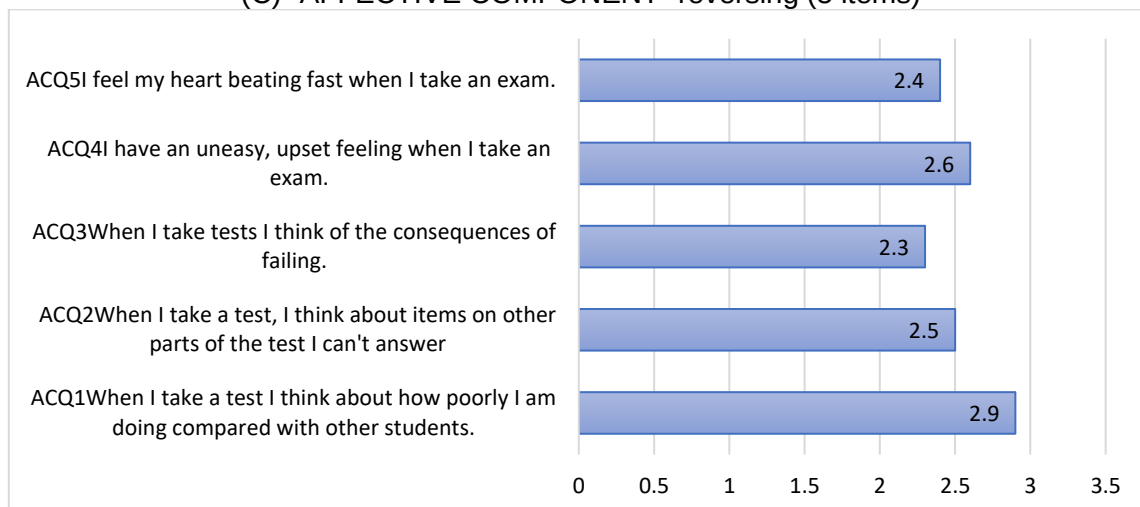


Figure 11: Mean for Affective Components

Figure 11 shows the lowest affective component mean score is 2.9, ACQ1 When I take a test, I think about how poorly I am doing compared with other students. Students like to compare themselves to others and this can lead low self-esteem. The highest affective mean score is 2.3, ACQ3 When I take tests I think of the consequences of failing.

4.3 Findings for Causes of Burnout

This section presents data to answer research question 2- How do students perceive their causes of burnout? In the context of this study, burnout among students can be caused by (i) exhaustion and (ii) disengagement.

(i) EXHAUSTION

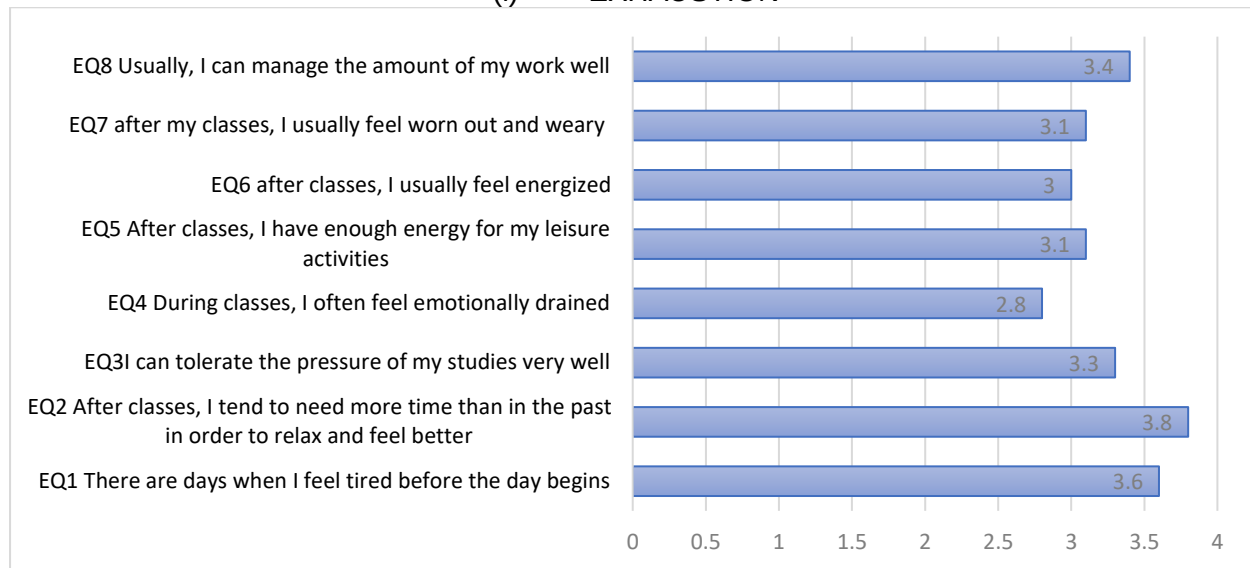


Figure 12: Mean for Causes of Burnout-Exhaustion

From figure 12, the highest mean result is 3.8 where students need more time to rest and feel better. The lowest result is with a mean of 2.8 where the students will feel emotionally exhausted during the class.

(ii) DISENGAGEMENT

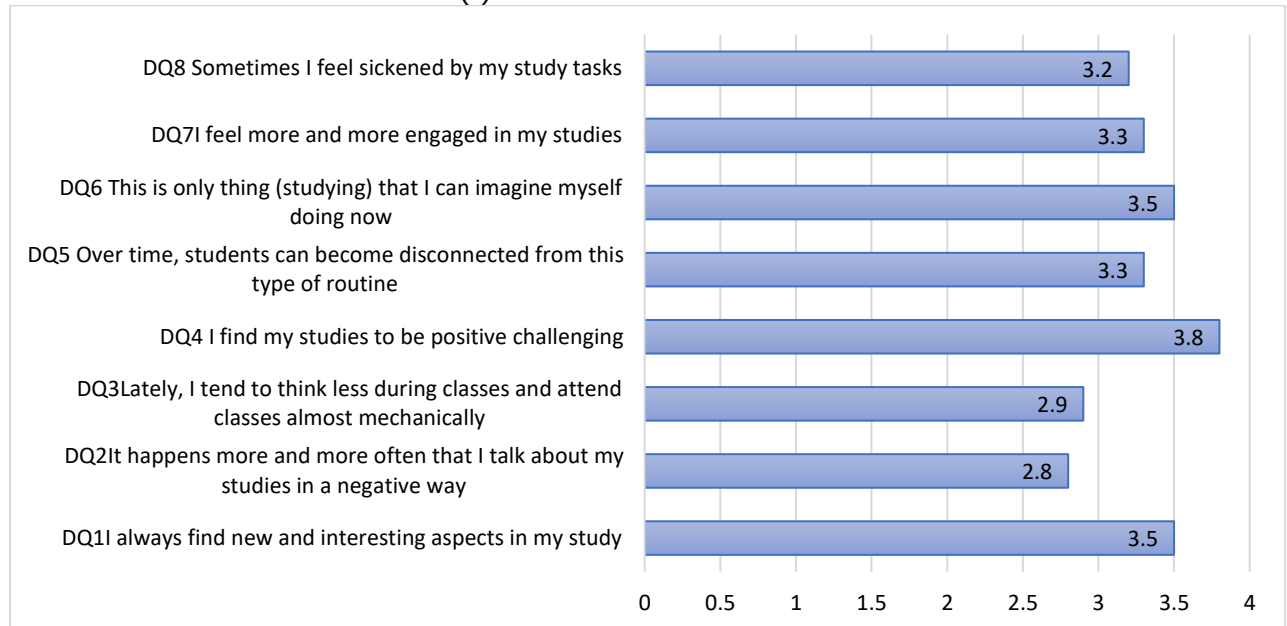


Figure 13: Mean for Causes of Burnout-Disengagement

Figure 13 shows the mean score for causes of burnout which is disengagement. The highest mean score is 3.8, DQ4 I find my studies to be positive challenging. The second highest mean score is 3.5 which refers to DQ1 I always find new and interesting aspects in my study and DQ6 This is only thing (studying) that I can imagine myself doing now. The lowest mean score is 2.8 which refers to DQ2It happens more and more often that I talk about

my studies in a negative way. If the student always talks negatively about their studies, this will lead to burnout.

4.4 Findings for Relationship between Motivational Constructs and Causes of Burnout

This section presents data to answer research question 3- Is there a relationship between motivational constructs and causes of burnout? To determine if there is a significant association in the mean scores between causes of burnout and motivational constructs, data is analysed using SPSS for correlations. Results are presented separately in table 3, 4, and 5 below.

		Correlations	
		TOTALALLBURNOUT	TOTALVALUECOMPONENTS
TOTALALLBURNOUT	Pearson Correlation	1	.465**
	Sig. (2-tailed)		.000
	N	311	311
TOTALVALUECOMPONENTS	Pearson Correlation	.465**	1
	Sig. (2-tailed)	.000	
	N	311	311

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows there is an association between causes of burnout and value components. Correlation analysis shows that there is a moderate significant association between causes of burnout and value components ($r=.465^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a moderate positive relationship between causes of burnout and value components.

Table 4: Correlation between Causes of Burnout and Expectancy Components

		Correlations	
		TOTALALLBURNOUT	TOTALEXPCTNACYCOMPONENTS
TOTALALLBURNOUT	Pearson Correlation	1	.403**
	Sig. (2-tailed)		.000
	N	311	311
TOTALEXPCTNACYCOMPONENTS	Pearson Correlation	.403**	1
	Sig. (2-tailed)	.000	
	N	311	311

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows there is an association between causes of burnout and expectancy components. Correlation analysis shows that there is a moderate significant association between causes of burnout and expectancy components ($r=.403^{**}$) and ($p=.000$). According

to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a moderate positive relationship between causes of burnout and expectancy components.

Table 5: Correlation between Causes of Burnout and Affective Components

Correlations		TOTALALLBU RNOUT	TOTALAFEC TIVECOMPO NENTS
TOTALALLBURNOUT	Pearson Correlation	1	.166**
	Sig. (2-tailed)		.003
	N	311	311
TOTALAFFECTIVECOMP ONENTS	Pearson Correlation	.166**	1
	Sig. (2-tailed)	.003	
	N	311	311

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows there is an association between causes of burnout and affective components. Correlation analysis shows that there is a low significant association between causes of burnout and affective components ($r=.166^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a weak positive relationship between causes of burnout and affective components.

5.0 CONCLUSION

5.1 Summary of Findings and Discussions

To sum up, the findings revealed that motivation and burnout significantly gave contribution to the learners' perception on Islamic-related course. The finding evidenced that satisfaction of understanding the course may motivate learners to obtain high achievement. This supported by number of previous studies (Marko & Makovec, 2015; Radovan & Makovec, 2015; Anthonysamy & Singh, 2023). Also, Guthrie et al. (2007) and Walker et al. (2006) found that in the learning process, intrinsic motivation can improve students' understanding because it leads to an increased ability to discuss and understand more about what is being learned. Students' understanding of content knowledge is considered very important to individual's achievement because it can provide some satisfaction with their work.

It also has been found within the research that students have self-doubt and demotivated when they perceive not doing well in exam. Motivation level does not remain constant if they perceive a test may be difficult for them and predicts will affect academic achievement. The findings of this study were consistent with Dalia Bedewy and Adel Gabriel (2015) stated that students experience of academic stress related to teachers' and parents' high expectations and associated with the intense competition with peers. The results, however, are contradictory when there are well reported scores showing that students were highly optimistic about their academic achievement and future careers and were confident in their ability to make academic decisions.

Next, the findings about correlation between perception of causes of burnout and three components of motivational which are value, expectancy and affective among Islamic studies learners were in line with those studies (De Castella et al., 2013; Gbollie and Keamu, 2017; Pourkarimi and Mobinrahi, 2018; Felaza et al., 2020; Atik and Çelik, 2021; Güngör & Sari, 2022). They revealed that causes of burnout correlated with learners' motivational factors. When students are more motivated in learning, their academic burnout decreases, and when they are less motivated, the more severe the learning burnout. Cause of burnout of students learning Islamic-related course can be reduced by correcting and stimulating their learning motivation and improving their learning self-efficacy. Thus, the self-efficacy variable may use as a tool to boost students' motivation and mitigate their academic burnout.

5.2 Implications and Suggestions for Future Research

The findings of this research have important implications for incorporating motivation learning into the curriculum of Islamic-related course of faculty a. Doing so can protect learners from academic burnout that may reflect them from negative psychology and affects their mental health, academic performance, and interpersonal relationships. Another practical implication of the results shed further light on the relationship between some of the emphasising on growing spirituality or religiosity in motivating and improving students' academic attainment. This variable of motivation is needed to be one of new approach so that they can increase motivation and better achievement in grade. Dorothea (2021) stated that spirituality can improve the orientation of individual achievements and decreasing burnout. Meanwhile, in term of religiosity, individuals who show a higher relationship with God and the universe have a low level of emotional exhaustion and depersonalization and a high level of personal achievement.

Future studies could also examine other potential variables on the relationships between motivation and burnout. Other potential variables can be suggested integrated model of motivation from Islamic perspective. The result may cope academic stress on student's cognitive, emotional and behavioural well-being. Such investigations would help better understand the predictive factors of academic burnout.

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FACTORS INFLUENCING THE PUBLIC'S INTENTION TO CONTRIBUTE IN HEALTH WAQF

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ABSTRACT

The health sector is crucial as it supports the population in maintaining good health. To ensure sustainability in the future, the health sector needs to be supported by adequate financial resources. To cater to the needs of the underprivileged and those in need, health waqf is seen as a potential instrument to assist the government in channelling community contributions to finance the escalating medical costs each year. Therefore, this study aims to investigate the relationship between attitude, subjective norm, perceived behavior control, level of understanding, financial and the public's intention to contribute in health waqf. A total of 137 respondents from the public in Johor and Melaka participated in this survey. Convenience sampling was used to measure attitude, subjective norm, perceived behavior control, level of understanding, financial and the public's intention to contribute in health waqf. Pearson correlation was used to assess the relationships between variables. Furthermore, the findings also revealed that only two variables which are attitude and financial has a significant influence on the public's intention to contribute in health waqf. Lastly, the findings from this study will be beneficial to the State Islamic Religious Council (SRIC), Department of Awqaf, Zakat and Hajj (JAWHAR), relevant ministries, and policymakers in improving this health waqf instrument in the future.

Keywords: Waqf, Health, Intention, Health waqf, Contribute

1.0 INTRODUCTION

The health of citizens is imperative for the development and competitiveness of a country. In Malaysia, the Ministry of Health (MOH) is accountable for managing the public healthcare sector, which includes government hospitals, health clinics, and medical institutions (Yorulmaz & Mohamed, 2019). These public healthcare facilities are operated and made available to the majority of people through subsidies from the federal government (Abd Khalim & Sukeri, 2023). Furthermore, the public healthcare sector is complemented by the vibrant private healthcare industry that provides more specialized and better services (Yorulmaz & Mohamed, 2019). Together, these components provide comprehensive and efficient healthcare for many citizens in Malaysia.

However, the rising cost along with the increasing demand for high-quality healthcare have imposed significant challenges towards the future performance and viability of Malaysia's healthcare sector. Primarily, the rising cost of healthcare places a substantial burden to the government's healthcare budgets (Ismail et al., 2020). This is evidenced by the allocation of RM36.3 billion to the Ministry of Health in Budget 2023 for the management and development

of local healthcare facilities, which is 11.51 percent more than the previous allocation in Budget 2022 (Ismail, 2022). Additionally, these issues have been pressuring many people, particularly those from the low-income group, to find cheaper and affordable means of obtaining health services (Saripudin et al., 2018). Among the contributing factors to the hike in healthcare prices include the rising cost of living, demographic patterns of the population, and the increase in service charges associated with changes in medicines and medical technologies. This subsequently establishes an urgent need for alternative resources that can provide Malaysian citizens with quality healthcare without having much dependency over government subsidies.

For the past few years, there has been a growing interest in using waqf as an alternative funding source for the Malaysian healthcare industry. From the Islamic perspective, waqf plays an important role towards a country's economic strength by providing monetary assistance as well as establishing basic infrastructure and important services for the community's benefit (Atan & Johari, 2017). This includes, but not limited to, religious facilities (e.g., mosques), education institutions (e.g., schools, madrasah, and universities), and healthcare facilities (e.g., clinics, hospitals, and dialysis centers). In Malaysia, the management of waqf mainly accounts across three main institutions: the State Islamic Religious Council (SRIC), Department of Waqf, Zakat, and Hajj (JAWHAR), and Malaysian Waqf Foundation (YWM). The administration and management of waqf has been clearly stated in the State Waqf Enactment, which delegates authority to State of Religious Council (SRIC) as the sole trustee (Omar et al., 2023). Each state in Malaysia has its own rules and regulations regarding waqf, and SRIC has the authority to appoint or give official approval to any party to manage and administer any asset (mawquf) on its behalf. On the other hand, JAWHAR is responsible for the proper administration of waqf, zakat, and hajj properties throughout the country while YWM, founded under JAWHAR, is accounted for mobilizing waqf resources and augments SRIC's efforts to promote waqf in Malaysia, particularly within the healthcare sector.

The idea of utilizing waqf as an alternative source of funding for the healthcare industry thus introduces the concept of health waqf. It allows able-bodied Muslims to donate (waqf) their money, time, energy, and knowledge based on their experience and capacity that will be managed by the SRIC in giving healthcare benefits back to the community. Apart from having the potential to reduce government spending, health waqf enables the redistribution of wealth in easing the burden of those who cannot afford the rising cost of healthcare (Akmal et al., 2021). This will promote universal access to high-quality healthcare, ultimately improving the well-being of the general society. Realizing its importance, this study explores the factors that influence the public's intention in contributing to health waqf.

1.1. Research Objectives

- a) To examine the relationship between attitude, subjective norm, perceived behavior control, financial and level of understanding with the public's intention to contribute in health waqf
- b) To identify the most significant factors between attitude, subjective norm, perceived behavior control, financial and level of understanding with the public's intention to contribute in health waqf.

1.2 Research Questions

Based on the research objectives given, this study seeks to address the following questions:

- a) What are the relationships between attitude, subjective norm, perceived behavior control, financial and level of understanding with the public's intention to contribute in health waqf.

- b) What are the most significant factors that contribute to the public's intention to contribute in health waqf?

2.0 LITERATURE REVIEW

2.1 Defining Waqf

The term “waqf” originates from the Arabic language, which means “to detain” or “to prevent”. From the Islamic law perspective, waqf generally refers to property donation that is done either publicly (*sarih*) or privately (*kinayah*) where the property is retained and only used for charitable purposes (Rahman, 2009). Waqf can be divided into two categories, namely (1) general waqf (*wakaf am*), which is the formation of waqf for charitable purposes according to *syarak*, and (2) special waqf (*waqf khas*), which is founded with a specific purpose (Md Dahlan et al., 2022).

According to Mahamood (2006), the arabic meaning of waqf (to detain) describes anything that is designated (known as *Mauquf*) and cannot be sold, mortgaged, or transferred to another party. waqf recipients are known as “*Mawquf Alayh*” and are entitled to receive benefits from waqf properties without having any ownership over it. This type of ownership is known as *Al Naqis* (incomplete ownership). Different *mazhab* (Islamic schools of thought) offer various interpretations of waqf. Ibnu Al Humam from the Hanafi *mazhab* defines waqf as the “*ain*” (physical) detention of properties possessed by a contributor and the donation of its benefits to anyone seeking a charitable cause.

2.2 Concept of Waqf for Health

Waqf also continues to expand its role in financing the healthcare of the community (Abg Marzuki et al., 2021). The concept of health waqf focuses on aiding the less fortunate by providing healthcare services at affordable costs and within their means. Waqf institutions receive contributions in various forms, including cash, assets, and others, from the community. The collected funds are used for various development activities such as hospitals and clinics to help the community access quality healthcare services. Furthermore, waqf institutions also utilize these waqf contributions for acquiring other assets like medical support equipment and hemodialysis machines (Mohamed & Mohd Aris, 2021).

Medical costs nowadays are significantly high and pose a serious concern, particularly for the B40 group, mainly due to the exorbitant expenses (Ismail et al., 2020). It becomes a fundamental necessity for them, especially when there are family members suffering from illnesses that demand expensive treatments. Therefore, they are in dire need of financial assistance and medical equipment support. This is where the role of health waqf institutions comes into play, dedicated to helping fulfill the needs of those in need.

2.3 Waqf for health

Islam perceives health as a priceless gift from Allah SWT that allows human beings to survive and live a precious life. The establishment of health services in Malaysia has begun since the 19th century and comprises both public and private healthcare providers. The public health sector is currently facing a challenge mainly on the ability to provide good services and experts (Thomas et al., 2011). This is because many medical professionals are joining the private sector due to attractive remuneration packages, leaving the public healthcare sector with a lack of professionals, high workload, and overcrowding in public health facilities - these issues subsequently have an impact over its sustainability.

Furthermore, the global increase in medical and healthcare costs also presents a challenge to the government in providing adequate allocation for the Malaysian healthcare sector (Ahmad & Hasan, 2016). A report by the Ministry of Health showed an increase in government spending for the local healthcare sector from RM26.58 billion (2018) to RM28.678 billion (2019) and RM30.6 billion (2020). Not only that, the total financial expenditure for the national healthcare sector accounts for 4.7% of the gross domestic product (GDP). Such an increase causes the Malaysian government to bear a substantial burden in providing subsidized treatment to the people. The issue is made worse by the annual increase of the Malaysian population and the rate of disease, which contribute to the high demand for healthcare facilities in Malaysia (Ministry of Health Malaysia, 2018). The overcrowding issue in government health facilities as well as the lack and inability of staff further distort the efforts to provide efficient public healthcare services to Malaysians.

The recent years have seen a significant increase in the trend of chronic diseases (Budreviciute et al., 2020). In response to the issue, the Malaysian government has been providing aid in the form of medicine, hemodialysis facilities, and financial assistance to various non-governmental agencies (NGOs) associated with these diseases (M. Ismail et al., 2020). Nevertheless, the costs incurred further add to the financial burden born by the government and are insufficient to cover the high cost of treatment (National Health & Morbidity Report, 2019). Therefore, establishing a public fund, such as waqf, is considered a promising mechanism to achieve the goal and alleviate the government's burden of financing the public healthcare sector (Mohamed et al., 2014).

In the history of Islam, waqf has functioned as a source of relief and healthcare for victims during the Battle of Khandaq, and it continues its role through the development of Islamic hospitals based on modern waqf principles from the 10th to the 14th century. According to Ascarya and Tanjung, (2021), these hospital services not only provide free healthcare to patients but also offer incentives for families.

In Malaysia, the practice of health waqf has been implemented by various government and private institutions. For instance, the State Islamic Religious Councils (SRIC) have carried out health waqf initiatives such as the construction of hemodialysis centers, provision of medical dialysis machines, and waqf clinics. Furthermore, health waqf is also managed by Wakaf An-Nur Corporation Berhad, which now operates both social and business units comprising 24 clinics, 26 hospitals throughout Malaysia, and 4 hospitals abroad (Fahrurroji, 2020). These healthcare facilities charge a minimal fee of around RM5, inclusive of medications, making it highly affordable and beneficial to all segments of society.

2.4 The Theory of Planned Behavior and Antecedents of Intention

2.4.1 Attitude

The Theory of Reasoned Action (1975) claims that ideas produce attitudes (Ajzen, 2021). In other words, individuals who believe that participating in a certain action will result in good outcomes will have a favorable attitude to engage in that behavior. However, they are likely to have a negative attitude upon believing that a certain action will result in unfavorable outcomes. According to this theory, a person's attitude towards an activity is influenced by their evaluation of its negative and positive consequences. Furthermore, positivity towards a behavior increases a person's chance of engaging in that behavior. This is supported by Blackwell et al. (2006) who said that the evaluation of conducting a particular task is correlated with the attitude towards the respective task.

Armstrong and Kotler (2009) assert that an individual's attitude consists of a positive or negative evaluation. Furthermore, attitude is a psychological disposition that is conveyed via the evaluation of specific items based on little agreement or disagreement with the judgment.

Meanwhile, Chen's (2007) view attitude as a behavior that reflects a person's intrinsic wariness as well as their likes and dislikes. Additionally, self-perception and the extent to which individuals view themselves are part of its nature, with positive outlook often promotes a stronger motivation to initiate activities, and vice versa.

2.4.2 Subjective Norms

Subjective norms describe the cultural pressure that a person directly perceives before engaging in a certain action. Individuals experiencing higher social pressure to participate in a behavior will often have a greater possibility to engage in that behavior. Subjective norms are often measured by the social pressure that one perceives from certain individuals, such as parents, friends, relatives, or those with strong influence (Ajzen, 1991).

Furthermore, subjective norms discuss how societal pressure alters a person's outlook to conduct an activity. This indicates that subjective norms are associated with the influence that individuals may have over others' behavior. Furthermore, the Theory of Planned Behavior asserts that subjective norms are functions of belief that can affect one's intention to engage in a behavior if they believe that others will influence them to do so. Ajzen (2002) further reaffirms that perceived behavior control may lead to substantial differences in behavioral intention and performance. Additionally, factors like time, money, and abilities may raise and regulate people's perceptions and encourage them to take action (Kim & Chung, 2011).

2.4.3 Perceived Behavior Control

The final antecedent of intention in the Theory of Planned Behavior is perceived behavior control. It refers to the degree of control that an individual perceives in performing a particular behavior (Chen, 2007). Ajzen (2001) describes perceived behavior control as the extent to which individuals feel in control of their conduct. This is discussed further from two perspectives, namely how much control a person has over a behavior and how confident they feel in their ability to do or refrain from performing the activity. According to Ajzen (2002), perceived behavior control may result in substantial differences in behavioral intentions and behaviors. Additionally, one's perception and motivation to take action can be influenced by factors like time, money, and abilities (Kim & Chung, 2012).

2.4.4 Level of understanding

Researchers believe that the effective implementation of health waqf in Malaysia will not be achieved without creating a deep understanding of this instrument. The appropriate level of understanding in waqf is very important especially among the community (Aziz et al., 2017a). This is because the community stands as residents and economic agents of the country. However, previous studies show that individual understanding of the role and function of waqf institutions remains at a moderate level (Mohamad Suhaimi et al., 2017). It proves that the majority of Malaysians are not aware of the true value of waqf institutions, with many of them still confused about the difference between waqf and charity. In addition, the eligibility of non-Muslims to receive waqf benefits is still questionable, thus making the scope of waqf smaller than it should be. According to Alias (2011), lack of understanding is an obstacle for the community to understand the prohibition of donating or investing one third of their total assets and property during their lifetime. Furthermore, awareness regarding the practice of waqf has long been integrated into the life of Malaysian society. In fact, a deep understanding of waqf is important because it indirectly helps build a belief in each individual to continue to contribute based on their level confidence in this instrument.

2.4.5 Financial

Another influential factor that affects one's decision to perform waqf is financial capabilities. According to Aziz et al. (2017), financial challenges and constraints often stand as a cause that halts the majority of poor people from getting basic necessities. From the Islamic perspective, waqf can improve the distribution the local economy as the endowments can help to alleviate poverty in the community. Amuda and Embi (2013) believe that among the factors hindering waqf are lack of awareness, stinginess, selfishness, and ineffective implementation by Islamic countries. According to Latiff et al. (2008), financial management is among the core backbones in ensuring the success of health waqf. Furthermore, the income factor is seen as a major contributor to the practice of endowment among Muslims in Malaysia (Ismail, 2015). This is because their limited and unstable financial conditions stand as a prominent challenge for them to contribute towards waqf as they prioritize on meeting the basic needs of themselves and their families.

2.4.6 Proposed conceptual framework.

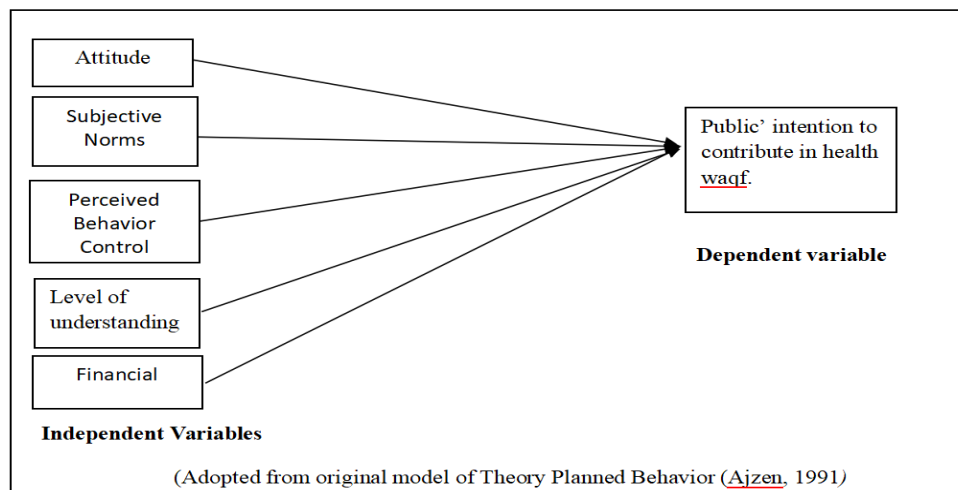


Fig 1. Proposed model: The factors influencing public's intention to contribute in health waqf.

2.4.7 Hypotheses constructs between independent and dependent variables.

H1: There is a significant relationship between Attitude and public's intention to contribute in health waqf.

H2: There is a significant relationship between Subjective Norms and public's intention to contribute in health waqf.

H3: There is a significant relationship between Perceived behavior control and public's intention to contribute in health waqf.

H4: There is a significant relationship between level of understanding and public's intention to contribute in health waqf.

H5: There is a significant relationship between Financial and public's intention to contribute in health waqf.

3.0 METHODOLOGY

In this study, the researchers aimed to gather comprehensive information by employing a descriptive research design. The primary method utilized for data collection was the distribution of questionnaires, which were personally administered to the participants. This approach ensured a higher response rate as the researchers could provide clarifications and encouragement for completing the questionnaires. Convenience sampling was employed to select the participants for this study. A total of 137 respondents from Johor and Melaka, representing the general public, participated in the survey. This sampling method was chosen due to its practicality and accessibility, allowing for a relatively quick data collection process.

Furthermore, this study employed the Pearson correlation coefficient to examine the relationships between different variables. This statistical measure helped to identify and quantify the strength and direction of associations between the study's variables of interest. By establishing these relationships, the researchers gained insights into the patterns and connections within the data. Moreover, the researchers assessed the reliability and validity of the research instrument through Cronbach's Alpha. This statistical test evaluates the internal consistency of the questionnaire items, ensuring that they measure the intended constructs accurately. The results of the analysis of Cronbach's Alpha revealed an acceptable range of 0.601 to 0.904 for the overall questionnaire, indicating that the instrument reliably measured the variables under investigation.

4.0 Data Analysis

4.1 Profile of Respondents

Table 1. Profile of Respondents

		Frequency	Percentage (%)
Gender	Male	46	33.8
	Female	90	66.2
Age	18 -20 years old	80	58.8
	21-30 years old	41	30.1
	31 -40 years old	11	8.1
	41-50 years old	4	2.9
Occupation sector	Private Sector Employee	87	64.0
	Government Sector Employee	36	26.5
	Self-employed	6	4.4
	Unemployed	7	5.1
Household income	Below RM1000	2	1.5
	RM1001-RM2000	26	19.1
	RM2001-RM3000	36	26.5
	RM3001-RM4000	31	22.8
	RM5000 and above	41	30.1

Table 1 provides information about the respondents' profile. Overall, the majority of the respondents are women, with a total of 90 individuals (66.2%), compared to men, who accounted for 46 individuals (33.8%). Furthermore, most of the respondents fell within the 18-20 age range, comprising 80 individuals (58.8%), followed by 41 individuals (30.1%) in the 21-

30 age group, 11 individuals in the 31-40 age group (8.1%), and 4 individuals (2.9%) in the 41-50 and above age group.

Regarding occupation, 87 respondents (64%) were employed in the private sector, followed by 36 respondents (26.5%) in the government sector, 6 individuals (4.4%) were self-employed, and 7 individuals (5.1%) were unemployed. As for household income, the majority of respondents indicated that their household income fell within the category of RM5000 and above, accounting for 30.1%. The second highest category was around RM2001-RM3000 (36 individuals, equivalent to 26.5%), and the third category was between RM1001-2000 (26 individuals, equivalent to 19.1%). Only 2 respondents (1.5%) had a household income below RM1000.

4.2 Reliability Analysis

Table 2. Reliability Analysis

	Number of items	Cronbach's Alpha
Intention to contribute for health waqf	8	0.904
Attitude	4	0.737
Subjective Norms	4	0.694
Level of understanding	4	0.601
Perceived Behavior Control	4	0.851
Financial	4	0.719

The reliability of questionnaires is determined by assessing both consistency and stability. Consistency refers to the extent to which the items within a questionnaire effectively measure a concept when grouped together as a set. To evaluate the reliability of the instrument, a reliability analysis is conducted using Cronbach's Alpha score. The reliability of measure indicated the stability and consistency of the instruments in measuring concept and helps to assess the goodness of measure. The minimum acceptable reliability is 0.60 (Sekaran & Bougie, 2010).

To achieve consistent measurement across all items, the questionnaire's negatively worded items were initially reversed. The measurement instruments underwent a reliability analysis, specifically assessing internal consistency, by analyzing the factors. For this study, a minimum acceptability threshold of 0.6 was established. The results indicate that each reliability coefficient falls within the range of 0.601 to 0.904. Consequently, all variables examined in this study were deemed valid.

4.3 Correlation Analysis between independent variables and dependent variables.

Table 3. Correlation Analysis

Variables	1	2	3	4	5	6
1. Attitude	-					
2. Subjective norm	0.418 **					
3. Perceived behavior control	0.520 **	0.195 **				
4. Financial	0.419 **	0.503 **	0.445 **			
5. Level of understanding	0.516 **	0.298 **	0.487 **	0.381 **		
6. Intention	0.696 **	0.427 **	0.448 **	0.522 **	0.398 **	-

Based on the findings presented in table 3, the outputs of six variables were determined to be statistically significant. The correlation between all variables ranged from $r = 0.195$ ($p < 0.05$) to $r = 0.696$ ($p < 0.05$). Specifically, the correlation between perceived behavior control and subjective norm ($r = 0.195$, $p < 0.05$) exhibited a lower but still positive and significant relationship. These results align with a previous study by Shukor (2017), which investigated factors influencing the attitudes of Muslims in Malaysia toward contributing to waqf and confirmed that donation convenience significantly predicted waqf collection, thereby impacting individuals' willingness to participate in the donation.

Regarding Perceived Behavior Control, Ajzen (1991) explained that it refers to individuals' perception of the ease or difficulty associated with performing a particular behavior. This perception is influenced by past experiences as well as anticipated obstacles and impediments (Ali et al., 2014). However, these findings contradict a study by Hasbullah (2016), which found that perceived behavior control did not serve as a predictor for waqf contribution.

Moreover, the correlation between subjective norm and attitude ($r = 0.418$, $p < 0.05$), perceived behavior control and attitude ($r = 0.520$, $p < 0.05$), intention and attitude ($r = 0.696$, $p < 0.01$), intention and subjective norm ($r = 0.427$, $p < 0.05$), intention and perceived behavior control ($r = 0.448$, $p < 0.05$), intention and financial ($r = 0.522$, $p < 0.05$), and intention and level of understanding ($r = 0.398$, $p < 0.05$) indicating that all variables are independent of each other and exhibit positive relationships.

All correlations among the variables were found to be significant and demonstrated positive relationships. Specifically, the correlations between Perceived Behavior and Subjective Norm ($r = 0.195$, $p < 0.05$), financial and subjective norm ($r = 0.503$, $p < 0.05$), financial and perceived behavior control ($r = 0.445$, $p < 0.05$), level of understanding and attitude ($r = 0.516$, $p < 0.05$), level of understanding and subjective norm ($r = 0.298$, $p < 0.05$), level of understanding and perceived behavior control ($r = 0.487$, $p < 0.05$), and level of understanding and financial ($r = 0.381$, $p < 0.05$) were all statistically significant.

Despite the significance of the correlations between variables, none of them exceeded 0.90, indicating the absence of serious multicollinearity issues (Hair et al., 1998). The correlation analysis was conducted to address the second research objective, which aimed to examine the relationship between attitude, subjective norm, perceived behavior control, financial, and level of understanding with the public's intention to contribute to health waqf. Based on these results, it can be concluded that there are significant relationships among these variables.

4.4 Regression Analysis on Coefficient of Determination (R^2)

The outcomes of the multiple regression analysis, depicting the relationship between the independent and dependent variables, are presented in Table 4. The coefficient of determination (R^2) is a measure used to assess the degree to which changes in the dependent variable can be accounted for by the independent variables. It indicates the goodness of fit of the regression line to the data, ranging from 0 to 1 ($0 < R^2 < 1$). Specifically, R^2 represents the proportion of the total variation in the dependent variable that can be explained by the regression equation.

Table 4. Analysis on Coefficient of Determination (R^2)

Model	1
R	0.744
R Square	0.554
Adjusted R Square	0.537
Std. Error of the estimate	0.42745

a. Predictors: (Constant), Level of understanding, Financial, Subjective Norms, Attitude, Perceived Behavior

b. Dependent Variable: Intention to contribute.

According to the model summary table 4, the value of R, which represents the regression of five independent variables (Attitude, subjective norm, perceived behavior control, financial, and level of understanding), is 0.744. The inter-correlation R square (R^2) generated is 0.554, indicating that approximately 53.7% of the variance in the dependent variable can be explained by these five independent variables. However, based on the rule of thumb, it is observed that the remaining 46.3% of the variance cannot be accounted for by the regression analysis alone. This suggests that there might be other factors, such as the promotion of health waqf, that could potentially influence the intention to contribute in health waqf.

4.5 Multiple Regression Analysis of Coefficient

The regression analysis presented in Table 5 examines the coefficients between the independent variables and the dependent variable. The results indicate that the Beta value for financial is 0.243, followed by attitude with 0.576, perceived behavior control with 0.057, subjective norm with 0.068, and level of understanding with -0.028. These findings suggest that attitude has the greatest impact on the public's intention to contribute to health waqf, as indicated by its Beta value of 0.576.

Furthermore, only two variables emerge as significant predictors of the intention to contribute to health waqf: attitude ($p = 0.00$) and financial ($p = 0.02$). However, subjective norm, perceived behavior control, and level of understanding are not significant predictors of intention to contribute in health waqf ($p = 0.309$, $p = 0.481$, and $p = 0.732$, respectively).

Table 5. Regression Analysis of Coefficient

Model		Coefficients ^a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	.508	.323		1.575	.118
	Attitude	.576	.081	.550	7.089	.000
	Subjective Norms	.068	.067	.073	1.021	.309
	Perceived Behavior Control	.057	.080	.053	.707	.481
	Financial	.243	.075	.241	3.220	.002
	Level of understanding	-.028	.082	-.025	-.343	.732

a. Dependent Variable: intention

Regression analysis was conducted to fulfil the second research objective in this study, which is to identify the most significant factors between attitude, subjective norm, perceived behavior control, financial and level of understanding that influence public's intention to contribute in health waqf. Based on the regression analysis results, it can be concluded that attitude is the factor that mostly influence public intention to contribute in health waqf, with t-value (7.089) and Beta value (0.550) the highest among all variables.

5.0 CONCLUSION

This study found that attitude and financial are two major factors influencing the public's intention to contribute in health waqf. Attitude had the greatest influence on people's views, beliefs, and values about health waqf and their desire to contribute. These results have significant implications for relevant parties, including the Department of Waqf, Zakat, and Hajj (JAWHAR), when it comes to creating efficient plans for the progress of health waqf. By recognising the critical role of attitude, these stakeholders may create suitable ways to improve the public's view of and participation in health waqf programmes. This may involve targeted awareness campaigns, educational programs, and communication efforts that emphasize the significance of health waqf to assist those in need.

In addition, the State Islamic Religious Council (SRIC) also has a vital role to play in promoting health waqf. The findings suggest that raising awareness among the community is crucial and can be achieved through both aggressive and consistent promotional activities. Furthermore, State of Religious Council (SRIC) can successfully convey information about health waqf, its purpose, and the beneficial affects it may have on the community by using several channels such as social media, community activities, and website. This effort will assist to raise people's awareness of how important waqf is as a social fund that meets the needs of the community.

It is imperative to view health waqf as more than just a financing instrument for healthcare services. Rather, it should be recognized as a powerful tool for socio-economic development within the Ummah. A channelling resource into health waqf will not only provide direct support to the healthcare sector but will also contribute to the overall economic growth of the community. This point of view shows the wider effects and possibilities of health waqf, which go beyond its immediate benefits in providing healthcare. In facilitating the contribution process, it is essential for parties involved (e.g., State of Religious Council) to establish accessible and convenient channels for donors to contribute to health waqf. Providing appropriate platforms, both online and offline, can encourage more individuals to donate and ensure that their contributions reach the intended beneficiaries. Additionally, streamlining the donation process and offering transparency in the utilization of funds will further strengthen the trust and confidence of potential donors.

While financial considerations are often regarded as the primary factor influencing contributions to health waqf, it is important to recognize that there are individuals who have a genuine voluntary desire to donate. These individuals may not solely prioritize financial factors but instead have a deep-seated motivation to support the ummah through waqf contributions. For this reason, it is crucial to provide clear information on available channels and options for contributing to ensure that these voluntary donors can easily find avenues to fulfil their intentions.

In conclusion, the findings of this study offer valuable insights into the factors that influence the public's intention to contribute to health waqf. By understanding the significance influence of attitude and financial towards public intention, stakeholders can develop targeted strategies to strengthen the planning and development of health waqf initiatives. Through proactive awareness campaigns, appropriate channels for contributions, and a holistic perspective on the impact of health waqf, this social fund can be established as a crucial resource in meeting the needs of the community. It also highlights the importance of fostering commitment and garnering support from implementers and the wider society in order for the potential of health waqf in supporting those in need to be fully realized.

6.0 Suggestion for Future Research

The study has raised several questions that need further investigation. Furthermore, similar research is considered important to explore the potential of health waqf implemented by the State Islamic Religious Council (SRIC). As a suggestion, there are several elements that can be explored for future research. The first element encompasses religion. Future researchers can attempt to examine the potential of religious factors as motivators for the community to contribute to health waqf. Religion can be a significant factor that encourages people to donate waqf because waqf has deep roots in certain religious teachings. For individuals who are religiously devout, waqf can be a form of obedience to religious teachings. In certain religions, contributing a portion of one's wealth as waqf is considered a spiritual responsibility and part of the commanded worship.

Furthermore, marketing can also be an additional factor that can be studied in the future. Marketing refers to the methods that can be implemented by the State Islamic Religious Council (SRIC) to attract interest and attention from the community to contribute to health waqf. With the advancements in current technology, the SRIC can carry out advertisements and marketing promotions through social media platforms such as TikTok, Facebook, Twitter, and many more. This is because the majority of the community frequently browse these social media platforms to obtain information and updates. Therefore, creative marketing ideas can effectively disseminate information about health waqf to the community.

Finally, future studies can focus on examining the sustainability of health waqf institutions. This is because several State Islamic Religious Councils (SRIC) have started developing their own health waqf-based institutions through hemodialysis centers in Johor, Pahang, and Perak. Hence, it is important to study the sustainability of these health waqf institutions to ensure their continued functioning and significant contributions to the community, especially for disadvantaged groups such as the B40.

CO-AUTHOR CONTRIBUTION

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PENJANAAN EKONOMI ORANG ASLI DI NEGERI JOHOR: KAJIAN KES DI KAMPUNG SUNGAI MERING

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ABSTRAK

Penjanaan ekonomi di kalangan Orang Asli menjadi isu utama menentukan keupayaan mereka keluar daripada tahap kemiskinan, iaitu kalangan B40. Kekuatan dan kebolehpayaan komuniti Orang Asli berbeza mengikut lokasi penempatan dan daya usaha yang mereka lakukan. Bagi Orang Asli Temuan yang menetap di Kampung Sungai Mering, Tangkak, kebolehpayaan mereka menjana ekonomi yang lebih baik adalah suatu yang luar biasa dan boleh dijadikan contoh kepada penempatan Orang Asli lain. Kajian ini bertujuan mengenalpasti kemudahan infrastruktur di lokasi kajian, keupayaan ekonomi dalam mewujudkan daya saing, dan daya keusahawanan kalangan penduduk setempat. Berbantuan kajian kualitatif temubual dengan Tok Batin, Pengerusi Jawatankuasa Pembangunan dan Keselamatan Kampung dan beberapa individu berpengaruh, dan dengan pemerhatian langsung penyelidik, perkampungan Orang Asli Kampung Sungai Mering boleh dijadikan model pembangunan ekonomi kepada komuniti lain. Dengan 36 buah rumah yang didiami seramai 262 penduduk yang dibuka sejak 1996, ternyata ia sebuah perkampungan yang lengkap dan kelihatan sempurna. Perwajahan kampung ini ternyata berbeza yang setanding dengan perkampungan Melayu lain. Sikap berani mencari ruang, mahu berusaha dan terbuka kepada persaingan antara kekuatan yang mereka miliki yang akhirnya mereka berupaya berdikari dan mencapai kestabilan ekonomi sendiri. Perubahan sikap dan dorongan kehendak yang kuat selain kerjasama utuh dalam kalangan komuniti terpencil, berjaya merubah bentuk kediaman daripada rumah-rumah buluh beratapkan bertam kepada rumah batu dan berkenderaan sendiri. Ia adalah satu model yang seharusnya diungkap dalam usaha memajukan komuniti Orang Asli secara menyeluruh sesuai dengan konsep Malaysia Madani.

Kata kunci: Ekonomi, Infrastruktur, Orang Asli, Temuan, Strategi keusahawanan

1.0 PENGENALAN

Pecahan komuniti Orang Asli yang terdiri daripada Negrito, Senoi dan Melayu Proto bertebaran luas di seluruh Semenanjung Malaysia. Jadual 1 menunjukkan suku kaum utama dan pecahan Orang Asli di Semenanjung Malaysia.

Jadual 1: Suku kaum Orang Asli Semenanjung Malaysia

Negrito	Senoi	Melayu Proto
Kensiu	Temiar	Temuan
Kintaq	Semai	Jakun
Jahai	Jah Hut	Semelai
Mendriq	Che Wong	Orang Kuala
Bateg	Semog Beri	Orang Seletar
Lanoh	Mah Beri	Orang Kanaq

Sumber: Jabatan Kemajuan Orang Asli (JAKOA)

Populasi Orang Asli kian meningkat setiap tahun. Laporan Kementerian Kemajuan Luar Bandar dan Wilayah, 2016 menyebut pada Januari 2002 Orang Asli di Malaysia mencecah 150,000 orang. Ia mewakili 0.5% daripada jumlah penduduk Malaysia (Ali et al., 2022). Tiga kelompok utama Orang Asli dikenalpasti iaitu Negrito, Senoi dan Melayu Proto yang masing-masing mempunyai bahasa, kepercayaan, gaya hidup dan susun lapis sosial yang berbeza (Benjamin, 2004; Khor & Mohd Shariff, 2008; Law et al., 2018). Golongan Melayu Proto mempunyai rupa paras serupa dengan orang Melayu, mewarisi budaya dan amalan Melayu walaupun berasal dari pelbagai daerah. Mereka tinggal di sepanjang Selat Melaka dan di selatan Johor dan terdiri daripada beberapa etnik iaitu Temuan, Jakun, Semelai, Orang Kuala, Orang Seletar, Orang Kanaq dan Orang Laut (Ramli, 2005).

Menurut Masron et al. (2013), etnik yang dikenalpasti menetap di Negeri Johor ialah Temuan, Semelai, Jakun, Orang Kanaq, Orang Kuala, Orang Seletar dan Orang Laut. Komuniti Temuan pula boleh ditemui di beberapa perkampungan kecil di sekitar Gunung Ledang, Johor. Suku Temuan tergolong dalam etnik Melayu Proto yang tinggal di Selangor, Melaka, Pahang, Daerah Muar, Johor dan Negeri Sembilan. Komuniti Temuan di Negeri Sembilan kebiasaannya mengamalkan Adat Papatih sebagai cara hidup mereka (Masron et al, 2013; temu bual Cikgu Lila, 21 September 2022).

Perkampungan tersusun yang telah dilaksana sejak 1990-an memberi kesan besar kepada kemudahan infrastruktur dan status sosial Orang Asli. Gagasan penglibatan dan pembuat dasar oleh mereka yang berkepentingan dengan Orang Asli berjaya membangunkan kawasan penempatan, khasnya kawasan Taman Negara yang dilindungi sepenuhnya (Borrini-Feyerabend et al., 2012; Bakar et al., 2022).

2.0 ISU KAJIAN

Kemiskinan menjadi isu utama dikalangan Orang Asli. Mereka dikenalpasti adalah kelompok termiskin dalam negara pada 50.9% dengan kadar kemiskinan tegar pada 15.4% berbanding dengan data kebangsaan berada pada 7.5% dan 1.4% miskin tegar negara berdasarkan laporan Unit Perancang Ekonomi tahun 2007. Menurut catatan The Star (1997), 80% Orang Asli berada dibawah paras kemiskinan jika dibandingkan dengan populasi kebangsaan pada 8.5% dan separuh daripada mereka berada dibawah paras miskin tegar berbanding 2.5% data kebangsaan (Masron et al., 2013).

Menurut Manaf dan Ibrahim (2017), Orang Asli mencatatkan jumlah kemiskinan dan kemiskinan tegar tertinggi di Malaysia iaitu masing-masing sebanyak 81.45% dan 48.85% pada tahun 2000. Tetapi nilai ini telah menurun pada tahun 2005 dimana jumlah kemiskinan

dikalangan Orang Asli berkurangan kepada 50.9% dan kemiskinan tegar berkurangan kepada 15.4%. Berdasarkan kajian Islam et al. (2017) pula, ia menunjukkan bilangan penduduk miskin adalah tinggi kerana lebih 90% kemiskinan di Malaysia daripada masyarakat Orang Asli.

Kemiskinan masih menjadi isu utama biarpun dana dan peruntukan daripada kerajaan melimpah ruah pada saban tahun. Bilakah kemelut ini akan berakhir, adakah tiada jalan keluar bagi menangani kemiskinan tegar di kalangan Orang Asli? Namun suatu yang luar biasa apabila penyelidik bertemu komuniti Temuan di Kampung Sungai Mering pada keupayaan mereka menjana ekonomi dan mewujudkan peluang kerjaya yang lebih baik kepada penduduk setempat. Isu ini menjadi fokus kajian ke atas komuniti Temuan di Kampung Sungai Mering yang seharusnya boleh dijadikan contoh kepada model pembangunan perkampungan Orang Asli di Negeri Johor.

2.1 Matlamat Kajian

Matlamat utama kajian ini adalah untuk:

1. Mengenalpasti kondisi infrastruktur dan fizikal perkampungan Sungai Mering sebagai asas utama kebolehpayaan berdikari.
2. Mengenalpasti keupayaan ekonomi di Kampung Sungai Mering dari sudut keperluan asas, daya saing dan peluang semasa.
3. Mengenalpasti strategi keusahawanan sebagai agenda utama penjanaan ekonomi bagi penduduk setempat.

3.0 METODOLOGI KAJIAN

Pendekatan kajian adalah berbentuk kualitatif yang dijalankan hasil daripada pemerhatian, penyertaan bersama dan temu bual dengan tokoh-tokoh setempat. Kajian kualitatif menggunakan berbagai pendekatan seperti pendekatan rasional, ethnografi, penilaian dalam perbincangan, kajian rintis, soalan berbentuk *open-ended*, penglibatan bersama, psikoanalisis, teori-teori yang telah dibangunkan, profil responden, justifikasi penyelidik, kumpulan sasaran (*focus group*) dan lain-lain bentuk kajian (Cibangu, 2012).

Dalam kajian seperti ini, pendekatan yang lebih jelas ialah bagi menjawab 'bagaimana' dan 'kenapa' kepada persoalan yang setara, kepada sesuatu program atau pencapaian yang spesifik dalam satu situasi. Ia juga melibatkan bagaimana kesedaran itu muncul dan berkembang, penerimaan sosialisasi yang diamalkan dalam kehidupan, malah pada kenapa mereka hidup seperti itu, dalam keadaan yang sebegitu (Polkinghorne, 2005). Dalam kajian ini, penyelidik menggunakan kaedah penyertaan bersama, pemerhatian dan temu bual bersama tokoh-tokoh setempat dan mereka yang berkepentingan dengan komuniti Orang Asli Temuan.

Untuk kajian ini, penyelidik menemubual Aslin Bin Ulai (Tok Batin Kampung Sungai Mering), Aziz Bin Sulai (Pengerusi Jawatankuasa Pembangunan dan Keselamatan Kampung Sungai Mering), Agus Bin Ulai (Timbalan Pengerusi Jawatankuasa Pembangunan dan Keselamatan Kampung Sungai Mering), Mery Pau Me Li (isteri Tok Batin), Cikgu Jamaludin Bin Kasim (Guru Besar Sekolah Kebangsaan Asahan), Cikgu Lila (Guru Tabika KEMAS Sungai Mering) dan Tuan Haji Faizal Bin Long (Pengarah JAKOA Negeri Johor). Beberapa siri lawatan dilakukan penyelidik dari 18 Mac 2022 hingga September 2022 di samping beberapa pertemuan tidak rasmi di Buloh Kasap.

3.1 Orang Asli Temuan di Tangkak

Pada ketinggian 4,186 kaki (1,276 meter) Gunung Ledang menjadi tarikan tersendiri untuk diterokai. Taman Negara Ledang yang diurusadbir oleh Perbadanan Taman Negara

Johor (PTNJ) merupakan agensi kerajaan yang berautoriti sepenuhnya ke atas pembangunan Taman Negara dan kawalan kawasan sekitarnya. Di sekitar kawasan Taman Negara dihuni oleh komuniti Orang Asli Temuan dan beberapa perkampungan Melayu tradisi. Orang Asli Temuan menetap di Kampung Air Tawas, Kampung Tanah Gembuh dan Kampung Sungai Mering, seperti Jadual 2 di bawah.

Jadual 2: Nama kampung, jumlah rumah, jumlah keluarga, jumlah isi rumah dan Tok Batin Orang Asli Temuan di Tangkak

Nama Kampung	Jumlah Rumah	Jumlah Keluarga	Jumlah Isi Rumah	Tok Batin
Air Tawas	27	35	104	Menggek Anak Acai
Tanah Gembuh	75	85	420 (Blok A, B, C)	Mohd Jengking Bin Jani
Sungai Mering	36	56	262	Aslin Bin Ulai

Sumber: Temu bual Tok Batin

Pekerjaan tradisi Orang Asli Temuan bergantung pada sumber alam seperti mencari rotan, akar kayu, damar, haiwan hutan, buah-buahan hutan dan dusun buah-buahan. Tetapi kini telah berkembang sesuai dengan perkembangan semasa yang kebanyakan mereka menjadi pekerja ladang sawit dan getah, pekerja kilang dan sebahagian kecil di sektor awam. Namun tidak dinafikan di kalangan Orang Asli Temuan ada yang berjaya dalam sektor pertanian dan berada pada tahap berpendapatan tinggi.

3.2 Pembangunan Infrastruktur Sungai Mering

Kampung Sungai Mering dalam daerah Tangkak dihubungkan dari Asahan melalui Laman Tiga Budaya sebagai mercu tanda kepada persempadanan tiga negeri; Johor, Melaka dan Negeri Sembilan. Ia dilengkapi jalan raya bertar, bekalan air bersih (dari empangan air gunung), elektrik, balai raya, tadika dan kedai runcit. Sekolah Kebangsaan Asahan adalah sekolah terdekat dalam jangkauan 8 kilometer, manakala sekolah menengah di Pekan Bekoh. Sebuah replika rumah tradisi kaum Orang Asli Temuan berkonsepkan buluh dan atap bertam dibina di Sekolah Kebangsaan Asahan. Orang Asli Temuan menggunakan buluh dan bertam, berbeza dengan orang Asli Jakun yang menggunakan atap daun pencerang, lantai dan dinding daripada kulit pokok kepong (kulit kayu) untuk membina rumah.

Kampung Sungai Mering didiami 262 penduduk Orang Asli Temuan dengan 36 buah rumah, bersempadanan dengan kawasan Taman Negara Ledang yang diurusadbir oleh Perbadanan Taman Negara Johor (PTNJ). Perkampungan ini dibuka pada tahun 1996 atas inisiatif kerajaan bagi mewujudkan penempatan setempat Orang Asli di sekitar Gunung Ledang. Pada peringkat awal, mereka mendirikan rumah-rumah buluh beratapkan bertam di lereng bukit berdekatan kawasan hutan tempat mereka mencari makan. Penempatan yang terpisah dan saling berjauhan menyukarkan pembangunan disalurkan kepada penduduk. Oleh itu, penempatan setempat seperti ini diwujudkan bagi memudahkan rancangan pembangunan sosioekonomi dibuat kerajaan.

Kemudahan infrastruktur tersedia di sini membantu penduduk untuk menjana pendapatan di samping memudahkan urusan perhubungan dengan komuniti luar. Prasarana utama yang diusahakan oleh pihak Jabatan Kemajuan Orang Asli (JAKOA) melebar luas ke penempatan orang asli di seluruh negara. Ia menjadi titik tolak utama kepada pembangunan dan perubahan sosio-ekonomi komuniti Orang Asli.



Rajah 1 Projek ibu sawat elektrik dan pencawang telekomunikasi di Kampung Sungai Mering



Rajah 2 Balai Raya, jalan raya dan Tabika KEMAS Kampung Sungai Mering

3.3 Keupayaan Ekonomi Orang Asli Kampung Sungai Mering

Keupayaan ekonomi tidak hanya bergantung kepada kemudahan dan alatan, namun kebijakan dan sikap komuniti itu menjadi teras utama. Menurut Sabran (2003), empat tujahan teras pembangunan masyarakat melibatkan pembangunan komuniti, andaian dan sikap, nilai kepercayaan dan amalan baik setempat. Ia memerlukan rangka kerja yang jelas untuk membolehkan komuniti bertindak bagi mendapat dan saling menyokong antara satu sama lain, berkongsi visi dan bertanggungjawab untuk kebaikan dan kemajuan bersama (Samah & Aref, 2009). Usaha pembangunan masyarakat boleh dikategorikan berdasarkan beberapa faktor iaitu membimbing kerja, faedah yang dihasilkan, dan penglibatan pihak berkepentingan (Matarrita-Cascante & Brennan, 2012). Pembangunan masyarakat adalah usaha gigih daripada semua pihak, terutamanya yang terlibat dalam meningkatkan taraf dan kualiti hidup. Unsur-unsur kerjasama dan penggunaan semua sumber yang ada adalah penting untuk kejayaan meningkatkan kualiti hidup orang yang terlibat (Abas et al., 2020).

Kebanyakan penduduk di sini berada pada tahap sederhana dan berada. Dilihat pada reka bentuk rumah dan kenderaan yang dimiliki, menunjukkan mereka telah berupaya berdikari, rajin dan mampu merebut peluang dalam kegiatan ekonomi seharian. Tok Batin sendiri memiliki jentera pembajak, kenderaan pacuan empat roda dan kenderaan lain. Encik Aziz Bin Ulai selaku Pengerusi Jawatankuasa Pembangunan dan Keselamatan Kampung, memiliki sebuah kenderaan pelbagai guna, dua buah kereta dan tiga buah motosikal.

Dari sudut rumah kediaman, rumah-rumah batu beratapkan genting dan asbestos dengan keluasan yang sederhana membuktikan keupayaan penduduk dalam ekonominya. Di sekeliling rumah mereka dipenuhi dengan pokok durian dan kelapa sawit yang menjadi sumber pendapatan. Ianya memperlihatkan keupayaan diri memajukan ekonomi keluarga.

Rumah kediaman penduduk kebanyakannya adalah rumah batu yang dibina sendiri dikit berdikit. Kepakaran dalaman dipergunakan sebaiknya kerana ada di kalangan mereka yang

biasa dengan kerja pertukangan dan pembinaan. Bagi yang bekerja dengan kerajaan atau swasta, mereka menggunakan simpanan Kumpulan Wang Simpanan Pekerja (KWSP) untuk membina rumah baharu. *“Selalu orang sini buat rumah sendiri. Kalau upah pun upah orang dalam. Kira dapat balik, orang kampung dapat balik”* (temu bual Agus Bin Ulai, 21 September 2022).

Landskap persekitaran Kampung Sungai Mering begitu indah lagi menarik dengan hiasan jajaran pokok bara api, pinang dan hiasan bunga plastik serta batu sungai yang disusun dengan sangat kreatif. Mereka hanya menggunakan barang terpakai untuk tidak melibatkan kos yang tinggi dan ianya hasil kerjasama gotong-royong penduduk kampung.

Pemerhatian fizikal kehebatan wajah Kampung Sungai Mering sememangnya memukau. Berlatar belakang Gunung Ledang, perkampungan tersusun di atas bukit ini, indah permai dengan rumah kediamannya bersih dan tersusun dan keupayaan berdikari penghuninya terzhahir dengan kelengkapan yang ada.



Rajah 3 Kondisi rumah penduduk dan landskap perhiasan Kampung Sungai Mering



Rajah 4 Fasilitas dan kenderaan penduduk Kampung Sungai Mering

Dari sudut daya saing, penduduk Kampung Sungai Mering tiada lagi yang bergantung hidup dengan sumber hutan secara tradisi seperti mencari rotan, akar kayu, damar dan gaharu. Hanya pada musim petai, mereka kembali ke hutan untuk memetik hasil. Mereka juga memajak tanah sawit dan durian untuk tanaman pisang, yang kebiasaannya bagi tempoh tiga tahun pertama. Keluasan tanah bergantung kepada pemilik, ada yang lima ekar dan ada yang melebihi sepuluh ekar. Usaha ini dilakukan sehingga sampai ke Buloh Kasap, Segamat. Malah ada masanya mereka tidak perlu memajak, hanya membersihkan sawit dan durian dengan tanaman pisang. Daya usaha seperti ini berupaya menghasilkan pendapatan yang agak tinggi.

Komuniti ini juga bijak merebut peluang semasa. Mereka yang berhijrah ke luar kampung berupaya berdikari dan menempatkan ekonomi pada tahap yang membanggakan. Adik bongsu Encik Aziz Bin Ulai (temu bual 21 September 2022) yang bekerja dengan syarikat

penapis air Cuckoo berupaya membeli rumah di Johor Bahru pada harga RM450,000. Lebih membanggakan apabila Sekolah Kebangsaan Asahan menjalankan aktiviti sukan, piala pusingannya daripada Tok Batin Aslin, dan sebahagian besar tajaan dibiayai oleh Tok Batin Aslin, Encik Aziz dan Encik Agus. Menurut Guru Besar Sekolah Kebangsaan Asahan, Encik Jamaludin Bin Kasim (temu bual 26 September 2022) Kampung Sungai Mering banyak membiayai aktiviti sekolah walaupun murid Orang Asli hanya 23 orang sahaja. *“Hendak mengajar Orang Asli tidak susah. Sama sahaja dengan murid Melayu, ada yang pandai dan ada yang perlu diberi perhatian berat”*.

Bidang pendidikan terus diberi perhatian berat. Encik Agus Bin Ulai selaku Naib Yang Dipertua PIBG menyatakan empat orang anak-anak mereka yang tamat sekolah rendah pada tahun lalu, hanya seorang yang tidak menyambung ke sekolah menengah. Keciciran persekolahan menjadi isu utama di kalangan Orang Asli, namun ia terkawal dan boleh ditangani di perkampungan Sungai Mering.

3.4 Strategi Keusahawanan

Menceburi bidang pertanian memerlukan pendekatan tertentu bagi mendapat pulangan yang lumayan. Tok Batin Aslin Bin Ulai mengusahakan ladang sawit dan dusun durian. *“Sebulan keluar sawit 20 tan, dia tak panggil orang luar pun. Dia bagi budak-budak kampung kerja”* (temu bual Aziz Bin Ulai, 26 September 2022). Malah Tok Batin membuka pusat rawatan tradisional yang beroperasi tiga hari seminggu; Jumaat, Sabtu dan Ahad. Bayaran rawatan juga telah ditetapkan untuk kemudahan pengunjung. Khidmat perbomohan kendalian Tok Batin bukan sahaja untuk Orang Asli, malah pelbagai bangsa dan agama dari Johor, Negeri Sembilan, Melaka dan daerah berdekatan. Ia menghasilkan pulangan yang memberangsangkan kepada usaha daya Tok Batin.

Bimbingan keusahawanan banyak diajarkan oleh Encik Aziz Bin Ulai. Kebanyakan remaja di sini suka berkerja di kebun durian orang Cina. Peluang memperolehi pendapatan lumayan terbuka luas. Contohnya upah mengikat tali pada buah durian antara RM60 hingga RM80 sepokok. Jika 200 pokok bererti pendapatan mereka mencecah RM12,000. Encik Aziz tidak menggalakkan mereka berkerja dengan dibayar gaji bulanan atau harian. Ia lebih rendah berbanding dengan kaedah ‘kontrak’ berkerja di ladang durian dengan mengenalpasti keluasan sebelum *mark-up* upah untuk tempoh satu musim durian. *Mark-up* bayaran bergantung kepada keluasan dan bilangan pokok durian. Kontrak RM3,000 hingga RM5,000 semusim adalah perkara biasa dan ia memberi pendapatan lebih lumayan kepada penduduk Kampung Sungai Mering berbanding gaji bulanan atau harian berjumlah RM1,500 sahaja.

Kebijaksanaan merebut peluang ekonomi menjadi kekuatan penduduk setempat. Mereka mengambil kontrak memetik buah manggis, dokong dan mangga di perkampungan Melayu di Muar dan Tangkak. Upah memetik ditetapkan pada harga satu ringgit untuk setiap kilogram, dan kebiasaannya sehari mereka memperolehi RM100 hingga RM150 seorang atas kemahiran yang dimiliki. Hasil tuaian terus dijual kepada penjual buah yang dikenalpasti sejak awal.

Durian mendatangkan pulangan yang lumayan. Baka durian yang baik menjadi pilihan pekebun di Kampung Sungai Mering. *“Kita nak kejar durian yang baik-baik (jenis baik, jenis mahal). Setahun ada yang pernah dapat RM70,000 hingga RM80,000 semusim. Macam tahun lepas saya dapat RM20,000”* (temu bual Aziz Bin Ulai, 18 Mac 2022 dan 26 September 2022). Menceburi bidang pertanian memerlukan kemahiran dan pengetahuan dalam selok belok perniagaan; permintaan dan tawaran. Perkara ini dikuasai dikalangan Orang Asli Kampung Sungai Mering.

Penduduk Kampung Sungai Mering kebanyakannya rajin berkerja. *“Kita semua pagi-pagi memang tak ada kat rumah, semua pergi kebun. Kalau macam ini (waktu pagi) memang tak*

ada di rumah, janganlah cari. Suami isteri pergi kebun, ada yang tanam serai, ada yang merumput” (temu bual Mery Pau Me Li, 21 September 2022). Malah anak-anak muda juga berlumba-lumba mencari pekerjaan bagi menampung kehendak peribadi seperti motosikal dan telefon pintar. “Budak-budak muda, malas tu tak adalah. Dia semua kerja. Yang sekolah, sekolahlah. Yang bujang-bujang ni dia pergi kebun Cina ada yang meracun, jaga durian. Dia orang dah bawa motor besar, dia kena bayar, dia kena kerja” (temu bual Mery Pau Me Li, 21 September 2022).



Rajah 5 Aktiviti keusahawanan di Kampung Sungai Mering seperti senarai rawatan tradisional oleh Tok Batin dan kedai runcit

4.0 RUMUSAN KAJIAN

Kekuatan Kampung Sungai Mering terletak kepada kepimpinan Tok Batin Aslin Bin Ulai dan Pengerusi Jawatankuasa Pembangunan dan Keselamatan Kampung, Encik Aziz Bin Ulai. Selain itu, kerjasama penduduk yang utuh, strategi keusahawanan dalam pertanian, pendidikan yang tersusun, dan daya keusahawanan yang tinggi (rajin). Ianya lahir daripada keterbukaan pemimpin dan komunitinya untuk berubah dan menjadi lebih baik. Kampung Sungai Mering berupaya keluar daripada kepompong kemiskinan dan mampu berdikari. Hasil kelapa sawit, durian dan getah menjadi sumber utama ekonomi setempat.

Pemilikan ladang getah seluas empat hingga lima ekar adalah normal, malah lebih luas daripada jangkaan penyelidik. Tok Batin Aslin, Encik Aziz dan Encik Agus memiliki kemampuan dan bijak merebut peluang dalam industri pertanian. Tidak semua Orang Asli miskin, bahkan ada yang lebih kaya daripada orang Melayu seperti mana Tok Batin Ah Soi di Kampung Kudong, Bekok (temubual 25 September 2022) memiliki 200 ekar ladang sawit yang diusahakan.

Dapatan ini menunjukkan Kampung Sungai Mering bukanlah sebuah kampung biasa Orang Asli Temuan, tetapi ia hebat dengan keutuhan dan kemampuan menguasai ekonomi setempat dan berupaya menjadi contoh kepada perkampungan lain. Penglibatan komuniti Orang Asli Temuan dalam perladangan di persekitaran Taman Negara Ledang boleh dibanggakan dengan harapan pertanggungjawaban menjaga kelestarian Taman Negara kekal terpelihara (Yaakob A.N. et al., 2021).

5.0 KAJIAN LANJUTAN

Keupayaan ekonomi komuniti Temuan di Kampung Sungai Mering seharusnya menjadi contoh kepada Orang Asli lain di negeri Johor. Sehubungan itu, kajian lanjutan berkaitan pengupayaan ekonomi orang Asli Temuan di Kampung Tanah Gembuh atau Kampung Air Tawas boleh dijalankan bagi mengenalpasti situasi yang sama. Ia bagi mengukur julat perbezaan dan permasalahan dalaman (sosial-komuniti) yang membezakan antara Kampung Sungai Mering dan perkampungan yang lain.

SUMBANGAN PENULIS

Penulis 1 menjalankan kajian di lokasi dan menetapkan objektif kajian secara jelas. Penulis 2 menyediakan bahan literatur, Penulis 3 membina metodologi kajian, Penulis 4 dan Penulis 5 membuat analisa dan kesimpulan kajian.

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