



***ASSESSING FOOD INSECURITY AMONG HOUSEHOLDS:
THE CASE OF NORTHERN PERAK REGION***

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**ASSESSING FOOD INSECURITY AMONG HOUSEHOLDS:
THE CASE OF NORTHERN PERAK REGION**

By

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A project report submitted to Faculty of Agriculture, Universiti Putra Malaysia, in fulfillment of the requirements of Project Paper, PPT4999B (Final Year Project) for the award of the degree of Bachelor of Science (Agribusiness)

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ABSTRACT

Food security is everyone's obligation as it involving household, national and global levels. Studies have shown that food insecurity has become a common issue that exists among low-income households. This study aims to assess the household food insecurity status and to explore the factors that affect the household food insecurity status in Northern Perak region. A sample of 200 respondents was collected through face to face interview and direct personal administration. The instrument used to assess food insecurity is the US Household Food Security Schedule Module (US HFSSM). A structured questionnaire was designed to collect the information on demographic profile and household food insecurity status. Respondents was randomly selected by using simple random sampling technique which among the households who having income within below RM 4000 (B40) in Kerian District. The data was analyzed using descriptive analysis and binary logistic regression. Results of the survey shows that 29% of the households were food secure, while 71% experienced some kind of food insecurity. The results of study revealed that age, occupation and school-going children are important factors determining the household food insecurity status. Thus, the government should implement a programme that focuses more on younger headed household who do not have a stable financial status.

ABSTRAK

Ketidakamanan makanan adalah kewajipan setiap orang kerana ia melibatkan tahap isi rumah, kebangsaan dan global. Kajian telah menunjukkan bahawa ketidakamanan makanan telah menjadi isu biasa yang wujud dalam kalangan isi rumah berpendapatan rendah. Kajian ini bertujuan untuk mengakses status ketidakamanan makanan isi rumah dan mengkaji faktor-faktor yang mempengaruhi status ketidakamanan makanan isi rumah di wilayah Perak Utara. Sampel sebanyak 200 responden dikumpulkan melalui temubual bersemuka dan pentadbiran peribadi langsung. Instrumen yang digunakan untuk menilai ketidakamanan makanan ialah Modul Jadual Keamanan Makanan Isi Rumah AS (US HFSSM). Soal selidik berstruktur direka untuk mengumpul maklumat mengenai profil demografi dan status ketidakamanan makanan isi rumah. Responden dipilih secara rawak dengan menggunakan teknik pensampelan mudah rawak dalam kalangan isi rumah yang mempunyai pendapatan kurang dari RM 4000 (B40) di Daerah Kerian. Data dianalisis menggunakan analisis deskriptif dan regresi logistik binari. Hasil kaji selidik menunjukkan bahawa 29% daripada isi rumah adalah makanan yang aman, sementara 71% mengalami beberapa jenis ketidakamanan makanan. Hasil kajian mendedahkan bahawa usia, pekerjaan dan kanak-kanak sekolah adalah faktor penting yang menentukan status ketidakamanan makanan isi rumah. Oleh itu, kerajaan harus melaksanakan program yang memberi tumpuan lebih kepada isi rumah muda yang tidak mempunyai status kewangan yang stabil.

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DECLARATION FORM

This project report entitled “Assessing Food Insecurity Among Households, The case of Northern Perak Region” is prepared by NUR ASILAH BINTI ASPALILA (176778) I.C Number 950319085886 and submitted to the Faculty of Agriculture in fulfilment of the requirement of PPT4999B (Final Year Project) for the award of the degree of Bachelor of Science (Agribusiness).

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CHAPTER 1

INTRODUCTION

In this chapter, we will overview food insecurity, food insecurity situation in Malaysia and lastly, government programme for poverty.

1.1 Food Insecurity

Food insecurity exists whenever people are unable to access adequate food at all times for an active and healthy life. It also includes the absence of adequate and safe food that acquired through acceptable ways of social and cultural (Life Sciences Research Office, 1990). According to FAO (2014), food insecurity is defined as a condition that occurs when people are less secure to access enough amounts of safe and nourishing food for an active and healthy life. At the household level, it may cause by insufficient food, low purchasing power, unsuitable distribution or insufficient consumption of food.

In 2009, the World Summit on Food Security stated that the "four pillars of food security are availability, access, utilization, and stability" (cited from FAO, 2009). Abdullah et al. (2017) point out that food availability refers to sufficient food available through personal production. This means that food must be available in sufficient quantities and appropriate quality in order to fulfill the demand of the population for a country, so that the food security can be attained for a long time. Food accessibility means poverty reduction, only inadequate availability, thus poor households should have the ability to buy food. It indicates that the poor households should have the ability to gain the access to the food once it is available. The third pillar is food utilization that refers to food that has all the nutrients needed for it. Thus, it depends on the knowledge of food

storage among the household. Stability is the fourth pillar of the food security concept. It refers to food security being maintained over time. It is the stability of both availability and access to food (Dube, 2013).

Several condition and situation can be described to show and determine whether someone are food secure or food insecure. Zalilah and Tham (2002) describe that the low severe conditions of food insecurity may refer to the feeling worry about the lack of adequate food for consumption. It also includes running out of food or have no money to buy more food. As the result, the adults may skip their meals, cut their meal's portion or go without food for one or more days. Meanwhile, Tarasuk, Mitchell & Dachner (2014) state that the condition of experiencing food insecurity can vary such as worries about running out of food before having more money to buy more food, inability to get balanced food, going hungry, skip meals, and not eating all day is a severe cases. This phenomenon happened because people are lack of money to buy the food.

There are several effects of the food insecurity. Norhasmah et al. (2012) note that food insecurity can affect dietary intake, nutritional status and physical well-being of individuals. The consequences of food insecurity may include inadequate dietary intake, poor nutritional status or poor quality of life. Plus, food insecurity also may lead to inadequate dietary intakes and nutrient deficiencies (Zalilah & Tham, 2002). According to Bhattacharya et al., poverty had negative effects on food security, dietary quality, and micronutrient levels among adults and younger children (cited in Sulaiman et al., 2015). Meanwhile, Nord and Kantor (2006) found that food insecurity condition is closely related to food insufficiency that associated with poorer diets in adult, lower intakes of nutrients for adults, the health status of adults with diabetes, poorer cognitive, academic and psychosocial development of children, depression and obesity.

The food insecurity exists due to several factors. Many studies indicate that low socioeconomic status as the common contributor to the food insecurity issue. The increased risk factor for food insecurity are like limited income combined with the certain disabilities, poor health and increasing living expenses such as housing, electricity, medical etc. (Zalilah & Tham, 2002). Campbell (1991) conclude that any ones that limit household resources like money, time, information, health or even the proportion of those resources available for food acquisition are considered as risk factors of food insecurity. Norhasmah et al. (2012) discover that household food insecurity is also associated with demographic and socioeconomic status like poverty, low income households, number of school children, household size and low per capita income. Sharif and Ang (2001) study show that poverty is a major cause of food insecurity that commonly becomes a problem among low-income households. These households are concentrated due to their low socioeconomic status and vulnerability in food shortages that could affect the provision of household resources, especially food, to household members (Ahmed & Siwar, 2013). Plus, household financial conditions are a key factor in determining when food is available and the type of food consumed (Sharif & Ang, 2001). Poverty is almost inevitable which leads to a lack of power and choice and a serious lack of resource volume and control (Sulaiman et al., 2011).

1.2 Food Insecurity Situation In Malaysia

Table 1.1: Malaysia's Global Food Security Index (GFSI) 2016 and 2017

Year	GFSI	
	Rank	Score
2016	35	69.4
2017	41	66.2

(Source: The Economist Intelligence Unit's (EIU), 2017)

Global Food Security Index (GFSI) indicates the level of food security score for a country in terms of affordability, availability, food quality and safety indexes. In 2016, Malaysia is at 35th ranking on GFSI as shown in Table 1.1. However, the GFSI on 2017 shows that Malaysia's ranking dropped to 41 out of 113 countries. The GFSI score fell as much 3.2 points, from 69.4 in 2016 to 66.2 in 2017. As a result, Malaysia also become one of the country among the top ten countries with the highest drop in the GFSI score. The fall in the score and ranking is largely because of a deterioration for 'availability' score. This 'availability' index represents the sufficiency of supply, agricultural infrastructure, public expenditure on agricultural R&D, volatility of agricultural production, urban absorption capacity, political stability risk, corruption, and food loss.

Self-sufficiency level (SSL) plays an important role when debating the food security issues in the country. Malaysia's main food security concern is to achieve a certain level of self-sufficiency in rice (Bala et al., 2014). The average rice consumed by a person is 80 kg per year. In addition, Malaysia needs to import rice from neighboring countries as supply generated by the local market is insufficient and to meet the amount of food consumed (Paul, 2013). Alam et al. (2016) remark that the government has implemented two strategies, namely by creating a self-sufficiency level and forming the stock of rice, both locally and overseas to ensure food security in this country. Nonetheless, Malaysia has never reached the food self-sufficiency level. The amount of rice which needed about 10-35% is imported from neighboring countries, such as Thailand, Vietnam, Myanmar, India, and Pakistan. The highest level of self-sufficiency for Malaysia was 95% in year 1975 and the lowest was 65%, recorded in the year 1990.

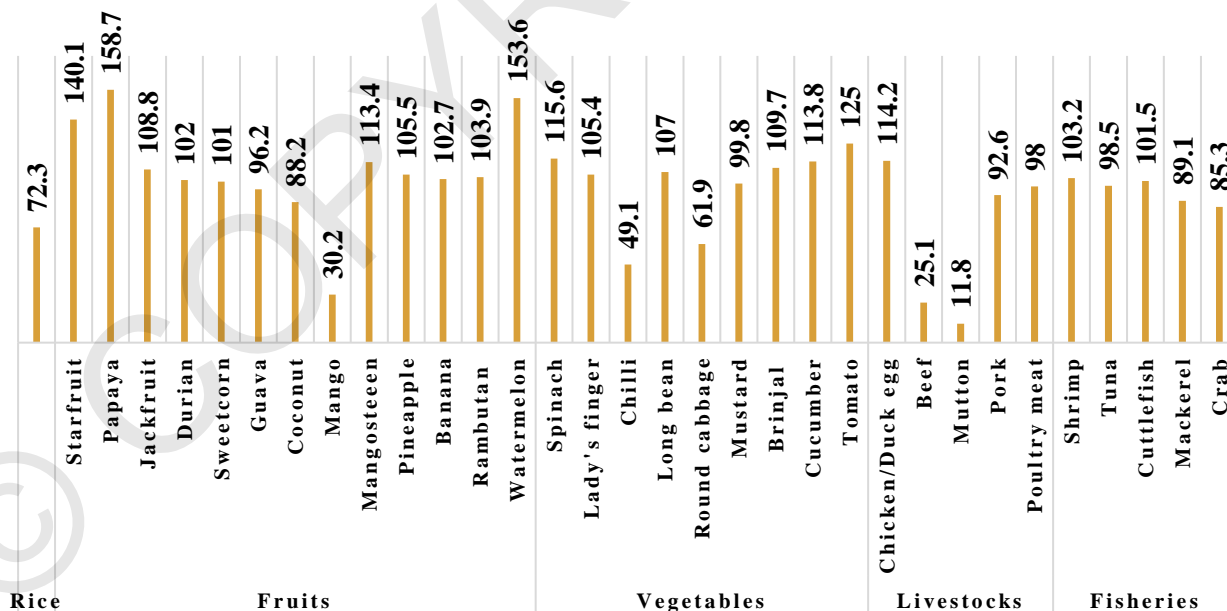


Figure 1.1: Self-sufficiency ratios for selected agricultural commodities, 2016

(Source: Department of Statistics: 2017)

As shown in Figure 1.1, Malaysia is not self-sufficient in many food commodities. There are about 19 of 33 selected agricultural commodities recorded self-sufficiency ratio (SSR) more than 100% in 2015. The self-sufficiency ratio for rice is 72.3 %. Self-sufficiency level is still low. Malaysia is self-sufficient in poultry, pork, and fish. This means that for these commodities, Malaysia is able to meet the domestic consumption needs from its own production rather than from importing. However, Malaysia relies on imports of beef, dairy products, vegetables and fruits, and mutton.

A report by the United Nations' Food and Agriculture Organisation (FAO) showed that global population was expected to reach 9.6 billion people by 2050 from the current 7.2 billion. Malaysia is largely dependent on imports to satisfy its domestic consumption requirements. If this situation continues, Malaysia will be unable to render a continuous food supply to its people and most likely to face food crisis in near future.

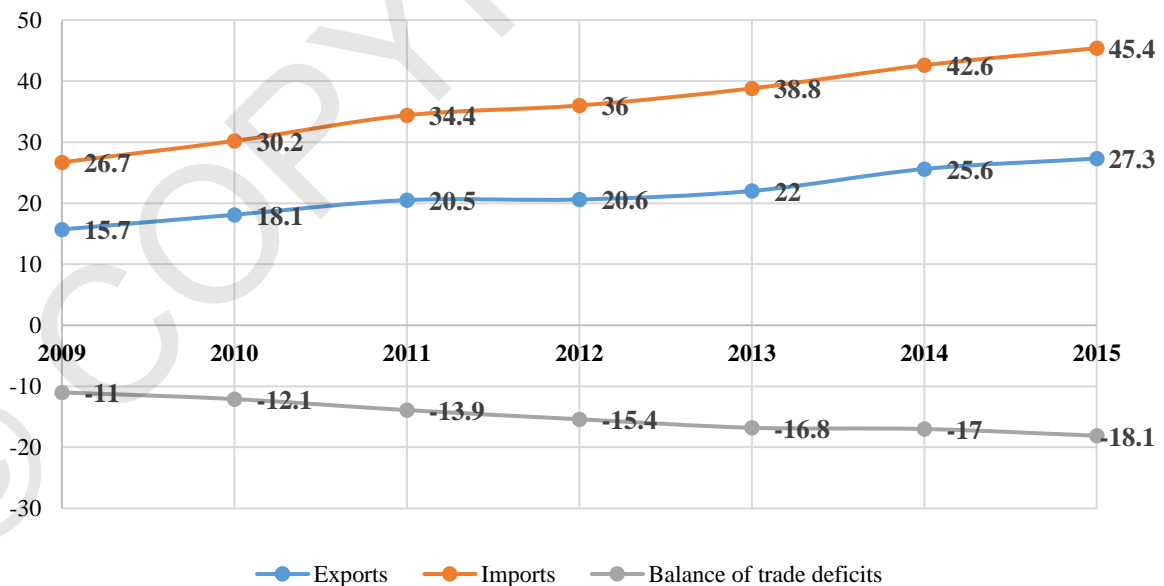


Figure 1.2: Malaysia food balance of trade (RMbil)

(Source: Department of Statistics: 2017)

The Figure 1.2 indicates that Malaysia has always been a net importer of food. The sources of food imports are highly concentrated in our country. Recently, the food import bill was almost RM45.4 billion in while the exports only RM 27 billion leaving a deficit of over RM18 billion in 2015. As the result, negative food balance of trade pattern is produced throughout the year.

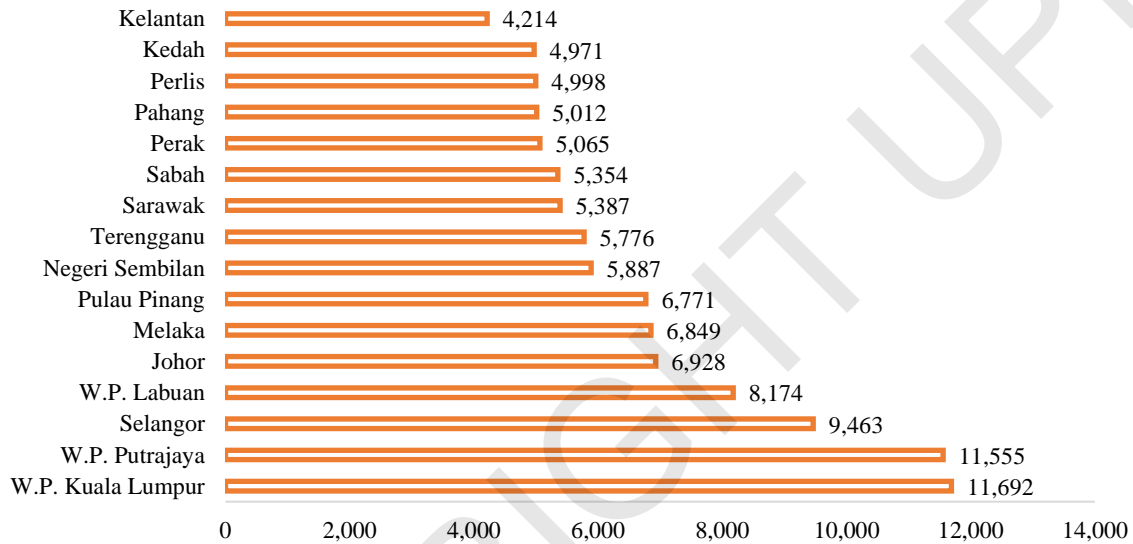


Figure 1.3: Mean monthly household income by state, Malaysia, 2016 (RM)

(Source: Department of Statistics: 2017)

In 2016, W.P. Kuala Lumpur recorded the highest mean monthly household income which is RM11,692 followed by W.P. Putrajaya (RM11,555), Selangor (RM9,463) and W.P. Labuan (RM8,174). Other states recorded mean monthly household income below the national level (RM6,958). The households in other states include **Perak** will have the tendency of feeling food insecurity. Moreover, more families are struggling to put on the table as the growth in their real wages and disposable income are unstable or slower. Several studies revealed that the percentage of households with food insecurity in Malaysia is higher among low income households: 65.7% (Zalilah and Ang, 2001), 82.2% (Zalilah and Tham, 2002) and 58% (Shariff and Khor, 2008).

Table 1.2: Composition of Monthly Household Consumption Expenditure, 2016

MAIN GROUP	2014	2016
Housing, Water, Electricity, Gas & Other Fuels	23.9	24.0
Food & Non-alcoholic Beverages	18.9	18.0
Transportation	14.6	13.7
Restaurants & Hotels	12.7	13.4
Furnishing Household Equipment & Routine Household Maintenance	3.8	7.7
Recreation Services & Culture	4.9	5.0
Communication	5.3	5.0
Miscellaneous goods & service	7.4	4.2
Clothing & Footwear	3.5	3.4
Alcoholic Beverages & Tobacco	2.3	2.4
Health	1.6	1.9
Education	1.1	1.3

(Source: Department of Statistics: 2017)

In 2016, Malaysian households mostly spent on items i.e. housing, water, electricity, gas and other fuels, food and non-alcoholic beverages, transportation, as well as restaurants and hotels, all of which accounted for 69.1% of their expenditure. Most of the household expenses were concentrated on 24% housing utilities, with food and non-alcoholic beverages (18%), transportation (13.7%), and restaurants and hotels (13.4%). The composition of Restaurant & hotel increased by 0.7 percent in 2016 as compared to 12.7 percent in 2014. However, the composition of Main Group of Food & non-alcoholic beverages declined by 0.9 percent in 2016 as compared to 18.9 percent in 2014. As the result, totally the households are spending about more than 30% of their monthly expenditure on food. The food insecure households usually spend less money on food than other households. This suggests that most of the complexities that are often difficult for poor households are to choose whether to spend on food and other goods or services that are essential to health and wellbeing.

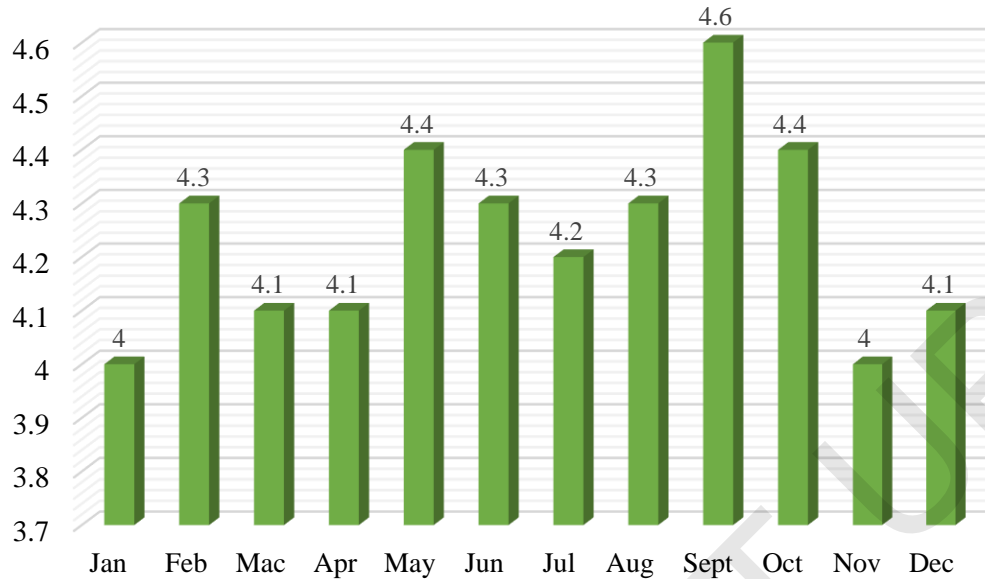


Figure 1.4: Malaysia Food Inflation, 2017

(Source: Department of Statistics: 2017)

The Figure 1.4 shows that percentage of Malaysia's food price inflation is at the high level. In general, inflation referred to the rising cost of items. The increase in the cost of food will cause the large effect on the cost of living for households, especially for low income household (Khazanah Research Institute, 2014). In addition, food is a major expenditure item for most of the households. The inflation causes the power of purchasing among the low income household decrease due to the rising food cost. Most of them unable to spend on nutritious foods. The rising food costs phenomenon can contribute to the tendency of feeling food insecurity among them.

1.3 Government Programme for Poverty

Since food insecurity is meant as a result of lack of money, it is strongly associated with household income (Che & Chen, 2001). Poverty is a driving factor that can cause the lack of resources to buy or obtain food especially among the low income households. Since these groups tend to spend higher than their total income on essential goods such as food and utilities, they are often less able to save.

The 1Malaysia People's Aid Program (BR1M) was first planned by Prime Minister Datuk Seri Najib Razak in 2012. BR1M is also one of the government's Economic Transformation Program (ETP) to make Malaysia as a high income nation. Due to the high cost of living in the country, there is an idea for BR1M assistance. Hence, it became a part of the Government's efforts to ease the burden of the lower income group in Malaysia. Kamaruddin et al. (2013) point out that the qualified BR1M applicants are any households earning RM3,000 and less per month and those who are in the e-Kasih program.

Table 1.3: Malaysia People's Aid Program (BR1M) Distribution

Year	2012	2013	2014	2015	2016	2017
Household below RM 3,000	RM 500	RM 500	RM 650	RM 950	RM 1,000	RM 1,200
Household, RM3,001 – RM 4,000	-	-	RM 450	RM 750	RM 800	RM 900
E-Kasih recipients, <RM1,000 in 2016, <RM3,000 in 2017	-	-	-	-	RM 1,050	RM 1,200

(Source: Ministry of Finance, Malaysia Economic Report 2016/2017 & 2017/2018, 2017)

From the Table 1.3, the total amount of BR1M distributions for the household who having to earn below RM3, 000 are increases from RM 500 in 2012 to RM 1, 200 in 2017. The increasing pattern in the amount of BRIM distribution also can see from the table for the household that having income from RM 3, 001 – RM 4,000. Likewise, the households who also are E-Kasih recipients.

Table 1.4: Total BR1M Disbursed and Number of Recipients (2012 – 2017)

Year	2012	2013	2014	2015	2016	2017
Number of recipients* (Million)	4.2	6.8	7.0	7.4	7.3	7.2
Average per recipient	RM500	RM 427	RM 523	RM 719	RM 740	RM875
Total BR1M disbursed (Billion)	RM 2.1	RM2.9	RM 3.7	RM 5.3	RM 5.4	RM 6.3

*Includes both households and individuals

(Source: Ministry of Finance, Malaysia Economic Report 2016/2017 & 2017/2018: 2017)

Initially, in 2012, the government only provided about RM2 billion BR1M scheme assistance to 4.2 million low-income households, who having to earn below RM3, 000 a month, but the number of categories receiving this assistance increased from year to year. As the Table 1.4 shows that the total number of recipients including individuals in subsequent years has hovered between 6 million to over 7 million. This also makes a result in increasing of the total amount of BR1M allocations over a year, as recently the amount gone up over RM 6 billion.

"The immediate impact of BR1M is reflected by an increase in household disposable income of the B40, which in turn translates into the higher purchase of essential items such as food and housing," according to a Finance Ministry report in its Malaysia Economic Report 2016/2017. However, there are different levels of needs among households with income of B40. Therefore,

the government needs to identify every need of this group, especially those with disabilities or retirees in an effort to eradicate poverty and help these groups address issues of rising cost of living. The government needs to find out on what their home needs are and how their children are (Kamaruddin et al., 2013).

1.4 Problem Statement

The issue of food insecurity is getting more attention by the world today. When the increased population is in imbalance with national food production, it will indicate that a country will face food insecurity threat. The self-sufficiency level for Malaysia is decreasing year by year even it is a small country. However, the Malaysian population is expected to increase and clearly will increase the food demand. The issue is whether Malaysia has enough food if the economic crisis is occurring because it relies heavily on imported agricultural products.

In general, Malaysia is at food security status. However, it does not automatically guarantee that every household is able to access nutritionally adequate food and sustained food security status. In certain cases, there are might be a tendency of feeling food insecurity especially among the low income people in this country. The feeling whether enough or not the household spend their money on food for their family become an issue because the food insecurity may exist due to lack of money which strongly related to household income. Some of them also may experience food insecurity at several times during the year because their access to sufficient food is limited by a lack of money and other resources.

Perak is one of the states which recorded mean monthly households income below the national level. This trend emphasizes that most of the household in Perak are low income group. In fact, the households in this country may spend as much as 30 percent of their monthly incomes on food. When prices go up, they must spend even more of their meager resources on food. This indicates that they have less spending for their other needs, such as clothes, shelter, medicines, and school books for the children. And while some households are eating less and going hungry, more often people shift to lower quality and less diverse diets.

The rise in food prices poses a serious threat to food security problem at the household and country levels. This can have a huge impact on food security of the country. This situation also may have a significant negative impact on nutritional status and health, especially among the low income households.

Since the total amount of BR1M allocations increase over a year, it will exist the question on the effectiveness of government mechanism to the targeted household. From the distribution of BR1M especially among the low income households, it will provide information on who are they actually feel food insecure. There are different levels of needs among the households that can be seen based on their income or household size as an example. There also might be the households who do not spend their BR1M on food but for other things. As the result, they are fewer resources to buy or obtain food since they tend to spend it on other essential utilities. They also are often less able for saving. The real issue at hand here is whether or not the government initiatives are actually assisting the residents in coping with rising living costs and ultimately an effective tool in poverty reduction. This also emphasizes whether mechanism government initiatives effective or not in order to cope the food insecurity among the household.

Hence, in order to identify the household food insecurity situation in Perak state, we need to find out the food insecurity status among the households. This study also will be conducted to find out the factors affecting the food insecurity among the households.

1.5 Research Questions

1. What are the food insecurity status among the households in Northern Perak region?
2. What are the demographic characteristics of food insecure households in Northern Perak region?
3. What are the factors affecting food insecurity among the households?

1.6 Objectives

The general objective of this study is to assess food insecurity among households in Northern Perak.

The specific objectives are:

- a) To identify food insecurity status among the households;
- b) To analyze the demographic characteristics of food insecure households in Northern Perak region; and
- c) To determine the factors affecting food insecurity among the households.

1.7 Significant of Study

This study will reveal important information about the current situation of food insecurity among household in Northern Perak region. This study also provides the knowledge on factors that influence household who are food insecure and then it will facilitate efforts to address this problem effectively and efficiently. The study's outcome can help for describing the effective government policy in term of targeting the households who are food insecure. The result of this study also will be beneficial to others and as a guideline for the researcher of food insecurity study in future.

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