Food and Non-Food Expenditure Trends Among the Poor and Needy in Kelantan, Malaysia

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Abstract - This article attempts to analyze the food and non-food expenditure among the poor and needy zakat recipients in Kelantan, Malaysia, which holds the lowest quartile of poor population. This study is motivated by the lack of concern in providing the perfect amount of food and non-food items in zakat distributions as a poverty alleviation program for these groups. The difference between food and non-food expenditure that does not reflect the true expenditure among the poor and needy can make poverty alleviation (zakat distribution) ineffective. The Kelantan state was selected because of their achievement of being among the highest zakat fund collectors and distributors (fourth in Malaysia and the highest among the government zakat agencies) (MAIK, 2014). Conversely, the state of Kelantan also has among the highest number of poor and needy in Malaysia (EPU, 2014). A sample of 505 households from the 2014 Household Expenditure Survey (HES) among the poor and needy zakat recipients in Kelantan is used in this study. Descriptive statistics is used to profile the pattern of household expenditure on food and non-food items, expenditure patterns of food and non-food items across poverty status and an estimation of the effects of household characteristics on food and non-food expenditures. Household characteristics include age, region (rural/urban), gender, size, and household head's marital status. The findings show that the expenditure pattern among the poor and needy is different based on food and non-food items' shares. The result of this study indicates that not all poor and needy in Kelantan spend most of their expenditure on food items. Thus, applying the same higher food items on each poor and needy household would overstate the food expenditure and devalue the cost of non-food items. Therefore, it will create a flawed poverty line which will further create a flawed poverty assessment.

Keywords: Expenditure, Zakat Distribution, Food and Non-Food Expenditure, Poor and Needy, Had Kifayah, Kelantan.

1. Introduction

Poverty is a global problem that is shared by every country whether it is a developed or underdeveloped nation. It causes huge socio-economic destruction in the society. Poverty can be explained in many dimensions, such as the lack of money for basic needs, lack of education, living in poor housing and unsafe living areas, lack of clothing, limited access to medical care, and an unsatisfactory social life (Shorris, 2000; Pauw et al., 2011). In 2015, a total of 1.6 billion people were living in multidimensional poverty. From this figure, 54 percent live in South Asia and 31 percent in Sub-Saharan Africa. Poverty is the

highest in terms of both incidence and intensity in Sub-Saharan Africa, but malnutrition is the highest in South Asia (Sabina Alkire et al., 2015). Moreover, poverty is a great physical deprivation, which not only affects socially but also psychologically (Ijaiya et al., 2011). Although the concept of poverty has evolved from the derivation of material needs, education, and health to a broader idea of vulnerability, exposure to risk, noiselessness and powerlessness, in poverty research, more attention is paid to facts and definitions and relatively less emphasis is given to its cause and strategies to overcome the poverty problems (Wilson, 1996; Spicker, P., 2013).
In order to overcome the poverty problem, Islam has brought a method called zakat[1]. Zakat is one of the five pillars of Islam. It is an obligatory form of worship (*Ibadah*) prescribed by Allah SWT as written in the Al-Qur'an:

"... so establish Salat and give Zakat, and hold fast to Allah ..." (Al-Qur'an 22:78)

Through zakat, money from the well-off is collected and then distributed among the poor and needy. It is a principle that all things belong to Allah SWT, and that wealth is therefore held by human beings in trust (Qardhawi, 2000). In Islam, the principles of poverty alleviation are based on social justice and belief in Allah SWT. Islam recognizes the different capabilities as each person is endowed with different skills and levels of human abilities. Even though each person is given equal opportunities, their economic outcome may not be equal (Hassan et al., 2010).

2. Zakat Distribution Mechanism (Zakat Poverty Line*)*

In determining qualified zakat recipients, most zakat institutions in Malaysia use the monetary approach based on the Zakat Poverty Line known as the *Had Kifayah*[2] (ZPLI) method. It is almost identical to the national Poverty Line Income (PLI) because it uses income and expenditure as the variable to determine whether an individual or household is poor or otherwise (Mohamed Saladin Abdul Rasool et al., 2012). In Malaysia, PLI is set by the Economic Planning Unit (EPU) of the Prime Minister Department, while ZPLI is determined by the respective state zakat institution. The Poverty Line Index (PLI) is based on the minimum requirements of a household for food, clothing, and other non-food items such as rent, fuel, and power[3]. ZPLI determines the level of necessity needed by the household based on their daily needs. It is calculated based on various variables such as the number of members in a household, age group of members, etc. In 2007, JAWHAR[4] (2007) outlined the main components in determining the ZPLI (necessity) of a household as food (food and drink) and non-food items (shelter, clothing, heath, education, and transportation) based on *Maqasid al Sharia* (human needs). The setting of ZPLI will ease the process of zakat application, whereby the committee will be able to identify the position of the applicants straightaway namely whether poor or hard core poor. Table 1 shows the amount of ZPLI in Kelantan.

[1] Zakat literally means purity, clarity, and rectification. Based on the *Shariah* terminology, it involves a certain amount of
[2] *Had al-kifayah* is the sustainable needs level according to Islamic principles, i.e., amount needed by a household to fulfill their basic needs in accordance with the *Shariah* point of view, hereafter termed as *Had Kifayah*.
[3] For the food component, the minimum requirement is calculated as a daily intake of 9,910 calories for a family of five, while the minimum requirements for clothing (including footwear) are based on standards set by the Department of Social Welfare for welfare homes. The other non-food items are based on the level of expenditure of the lower income households, as reported in the Household Expenditure Survey (Rogayah, 2002).
[4] Malaysia Department of Awqaf, Zakat, and Hajj (JAWHAR)

Table 1: Kelantan *Zakat* Poverty Line (*Had kifayah*) per Month (2018) (MYR)

Category	Urban	Rural
Family Head	[1]297.00/ [2]549.00	[1]182.00/ [2]380.00
Adults (Working)	236.50	146.00
Adult (Not working / not schooling)	139.50	87.50
Adult (Schooling)	274.00	203.50
Teenagers (Schooling)	236.50	166.50
Children (Schooling)	179.50	130.50
Children (Not Schooling)	103.00	77.50
Total	[1]1,169.00/ [2]1,718.50	[1]811.50/ [2]1191.50

Note: 1 Own House; 2 Rented House. Source: MAIK, 2018

Table 1 above shows the amount of the zakat poverty line based on the necessity of a household in Kelantan. For example, a family with both parents working, an employed adult above 18 years old, a teenager aged 16, a child aged 6, and living in a paid house in the urban area is suggested to need MYR 1147 for the household. If the monthly household income is RM 1500, then this family is not qualified for *zakat* distribution because the household income is more than the ZPLI of this household (above MYR 1147). Nevertheless, if the household income is MYR 1000, then this household is qualified for *zakat* distribution. Kelantan Zakat Centre (MAIK)[5] will distribute the shortfall (ZPLI gap) of MYR 147 to this family to fulfil their basic needs. In addition, if there is any situation such as households with a disabled individual or one with chronic sickness, the total amount of ZPLI increases.

The Kelantan State Islamic Religious Department (MAIK) revises the ZPLI periodically based on the information from the national Poverty Line Index (PLI) (MAIK, 2013). At present, the Kelantan Zakat Centre uses the cost of basic needs (CBN) method to estimate the zakat poverty line (MAIK, 2018). The CBN method involves specifying a set of food consumption bundle based on the minimum human calorie requirements. The cost for the set of food consumption bundle is then added to the non-food expenditure of the poor households to attain the total poverty line that satisfies the basic needs of a human. However, from Figure 1, it is obvious that higher zakat distributions are on non-food items in both urban and rural areas, although previous studies reveal that most of the rural area's expenditure is higher on food items compared to the urban area. Thus, analyzing the same pattern between food and non-food items' expenditure in both areas will create an erroneous poverty line. Therefore, it is important to analyze the pattern of food and non-food expenditure among this group. Ignoring the importance of food and non-food expenditure can make the poverty alleviation (i.e., ZPLI) in Kelantan ineffective.

[5] Majlis Agama Islam Kelantan

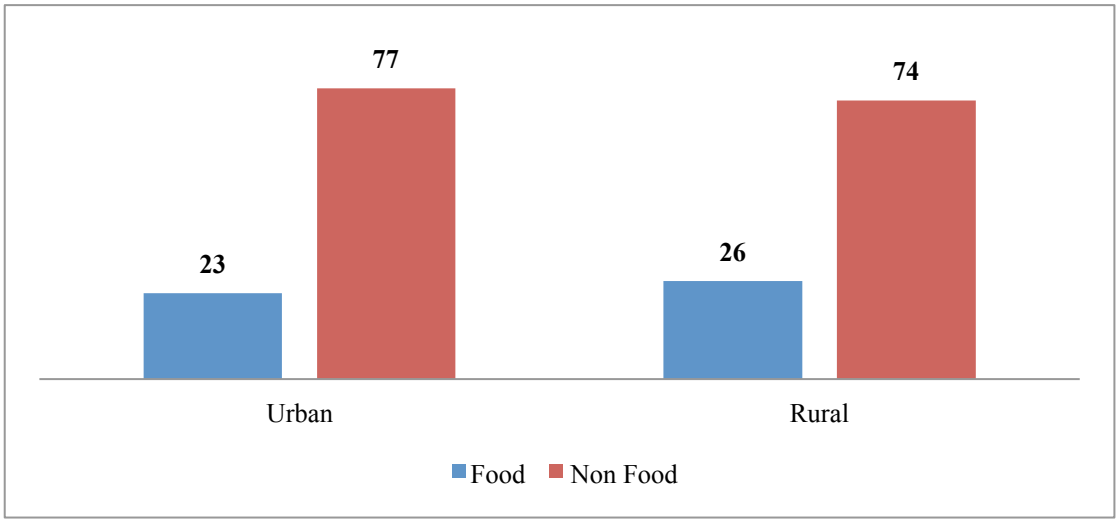

Figure 1: Percentage of Food and Non-Food Zakat Distribution (%) in Kelantan
Source: MAIK, 2014

From Figure 1, we can see that most of the expenditures among the poor and needy in Kelantan are higher on non-food items. The figure indicates that based on urban and rural poor and needy, they have the same pattern amount of food and non-food expenditure ratio. Based on percentage, the urban area has a higher percentage of expenditure on non-food items while the rural area has a higher percentage of expenditure on food items.

3. Food and Non-Food Expenditure Pattern

Household needs and wants are determined by a number of internal and external factors (Prospere Backiny-Yetna et al., 2014). These factors are related to their geographic and activities conditions. Thus, the difference between their needs and wants affect their expenditure on food and non-food consumption. It is important to distinguish the amount of food and non-food expenditure in estimating the ZPLI. In estimating the poverty line, the food share has significant implications which can determine the cost for minimum food requirements that fulfil the standard individual daily requirement determined by nutritionists. Moreover, the share of total household expenditure spent on food is an indicator of household food security because it is widely documented that the poorer and more vulnerable a household, the larger the share of household income spent on food. Thus, higher food share estimation will misjudge the cost for food and at the same time, it can underrate the cost of non-food items.

Report from the 2016 Malaysian Expenditure pattern (Figure 2) shows that the main expenditure for Malaysian households are for house, water, electricity, gas and other fuel while health and education expenditure are the least amount of expenditure (Malaysia Statistics, 2017).

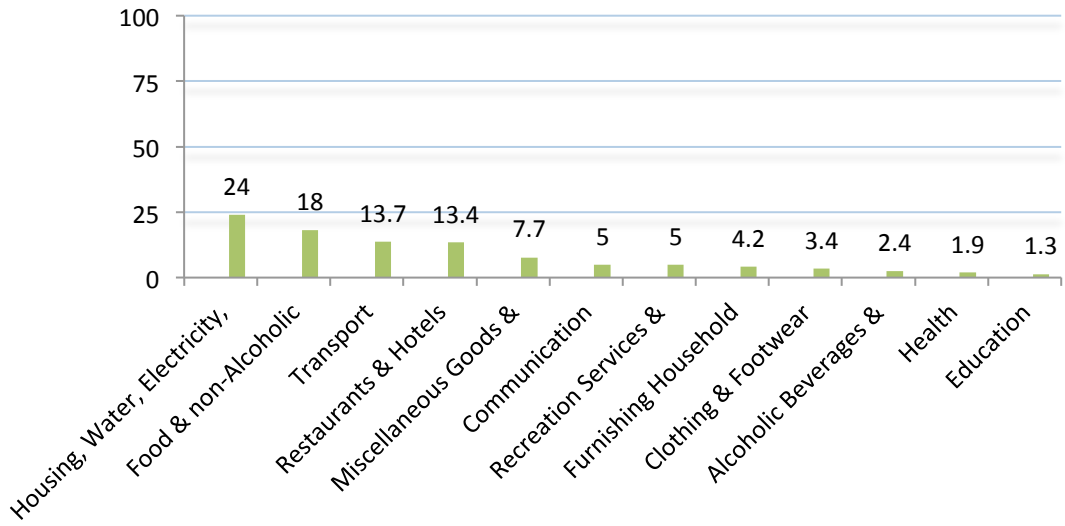

Figure 2: Percentage Expenditure per Household in Malaysia, 2016
Source: Report on Household Expenditure Survey 2017

From the figure, we can also see the difference in consumption pattern among Malaysian households which shows that the Malaysian household spends about 66.2 percent of their income on non-food items while the food items only account for 33.8 percent of their expenditure. Most of the non-food expenditure are on house, transportation, and miscellaneous goods and services. Nevertheless, in most ZPLI practices in Malaysia, the zakat center is only concerned with the amount of food and house consumption and they violate the differences in the ratio of food and non-food items between regions and gender of the household. If the ZPLI fails to capture a true urban and rural consumption, it will then violate the actual urban rural consumption pattern that creates an ambiguous picture of the distributional impact of zakat. In defining poverty lines among urban and rural areas, the zakat center should ensure that they take into account the differences in the cost of living as well as the expenditure pattern across these areas. This suggests the need for properly determined ratios of urban to rural food and non-food items.

Kakwani (2001) argued that fixing the same food and non-food expenditure ratio for different regions will make the poverty line less sensitive to the different food and non-food basket between regions. The food and non-food share should vary across regions and gender based on their relative prices in different regions (John Brotchie, 2017; Z. Anang et al., 2017). In addition, fixing a same ratio would cause difficulty in measuring poverty over time and across regions. Food and non-food consumption are a necessary prerequisite which is needed in measuring poverty, defining the variation of consumption patterns, calculating the aggregate consumer price index, and determining the short-run and long-run availability of food and non-food items to the household (HNLSS, 2012). The urban residence will have a higher expenditure on non-food items while the expenditure of rural residence mostly concentrates on food (Nugent, R., 2000; Tan Poo Chang & Ng Sor Tho, 2003; Adeoye .O., 2015).

Nik Mustapha, R. A. (1994) found that in Malaysia, 28 percent of the highest expenditure groups allocate their expenditure on transport. Meanwhile, H. L. S. et al. (2007) found that the Malaysian household on a monthly average spent about MYR 327 in 2007 compared to RM168 in 1993, which is an increase of more than 90 percent. These results suggest that the level of food and non-food expenditure has changed overtime in addition to the change

in socio-life among urban and rural areas. Change in working conditions which require travelling suggests a new insight in determining the food and non-food expenditure on constructing the poverty line as many of the poor are starting to allocate more of their spending on non-food items (Davis & Serrano, 2016; Mills et al., 2017). Z. Anang et al. (2017) found that Malaysian households headed by elders, unemployed, endowed, and low level of education spend more on food expenditure. He also found that factors, which influence expenditure for both urban and rural areas in Malaysia, vary between states depending on the covariates.

Most poverty alleviation agencies use definitions of poverty that are unrealistic or inappropriate for urban regions. There are two reasons for this to happen. First, most of poverty lines are low especially in terms of the cost of non-food essentials such as the transportation cost for work, housing, access to water and sanitation, health care, fuel, and education for children (Babalola D A & Isitor S U, 2014; Ahmad Fahme, 2016a). Second, they give little or no attention to non-monetary aspects of poverty such as number of adults and children in family, head's health condition, number of working hours and number of jobs daily and weekly which affects the poorer income and expenditure (Noraziah et al., 2012; Beatty et al., 2014). The importance of urban-rural adjustment in poverty study has been acknowledged by most previous academics (Sicular et al., 2007; Sahn et al., 2003; Ravallion, 2007; Dodoo et al., 2007; Yanliang Yang, 2018). However, in previous poverty measurement studies, the absence of separate poverty lines between urban and rural areas had made some researchers adopt a rough adjustment based on the average prices difference between urban and rural areas and based on the official poverty line (Patmawati, 2006; Patmawati & Rahisam; 2010; Zarina Kader et al., 2012).

The process of urbanization also influences the food consumption of the poor. There are some aspects of food security that are related to the urban context such as the necessity to purchase most of the food and a higher dependency on the market system and on finished food (Z. Anang et al., 2017; Ahmad Fahme et al., 2016b). Factors such as employment and income are the main prerequisites for achieving food security among the urban (Beatty et. al., 2014). Nevertheless, majority of urban dwellers especially in developing countries, are highly disadvantaged with limited purchasing power that most them are engaged in very low-paying employment in the informal sector. The fact is that most of the food consumed in cities has to be purchased and poor families have to spend as much as 60-80% of their income on food (Tabatabai, 1993; Maxwell et al., 1999; Obisesan et al., 2016).

The issue of food consumption is important in developing countries because food expenditure accounts for a large share of the poor household's income (Obayelu et al., 2009; Fiedler, J. & Mwangi, D., 2016). Access to food and non-food commodities is an important issue since it has a direct link to poverty and insecurity which is directly related to living standards, income accumulation and depletion during short-run and long-run periods. Furthermore, the importance of food and non-food demand ratio has increased because it relies on the population, income, dietary habits of the population, and the taste or preference of the people (Olubukunmi, O. et al., 2012).

The studies on welfare analysis mostly focus on inter-household distribution. Since most of the studies viewed the household as one unit and provided equal treatment and assumed that household members did not have any conflict of interests, there are problems with this equal allocation rule. First, it deviates from the true dispersion of the data since it can under or over-state the incidence of poverty. Issues such as differences between men and

women's needs can arise because of systematic differences in the ratio of males to females in households (Lampietti, J. A., 2000; Horning et al., 2015). Second, the rule also neglects the different needs among household members. For example, younger children will consume less food compared to adults (Deaton, A., & Paxson, C., 1998; Fiese et al., 2016). Third, due to equal treatment among household members, this rule can create inefficiency in household expenditure and cultural biases. The poor households may be averse to increase their expenditure in health, high nutrition food and education of females than males because the private returns of these investments are lower for females than males (Dunbar, et al., 2013).

Study on poverty lines in Philippines by Balisacan (1999) shows that food poverty lines are higher in richer areas because these areas would prefer better quality food that are more expensive. Thus, measuring poverty would rely on their location and their standard of living rather than their basic consumption needs. This spatially consistent poverty estimates lead to different regional poverty rankings than the ones based on the official estimates (Asra & Francisco, 2000; Balisacan, 1999; Ahmad Fahme, 2014). Asra (2000) estimates that in Indonesia, the poverty incidence is always higher in rural areas compared to urban areas. This is due to the old methodology of estimating the official poverty line. Ravallion (1992) and Ravallion and Bidani (1994) criticized this method by pointing out that the urban-rural difference in poverty lines is far beyond the true urban-rural cost of living differences. Ravallion and Bidani (1994) also claimed that it creates ambiguous poverty measures. They stressed that 'consistency' is an important issue in poverty line as it enables an important meaningful urban-rural comparison of the poverty profile. Ravallion and Bidani (1994) show that the implicit urban and rural food bundles yielding 2,100 calories per person per day for 1990 differ considerably from each other, which suggests that standard of living also differs between urban and rural areas.

4. Research Methodology

This study utilizes household expenditure survey (HES) data, conducted from May to December 2014 where 505 respondents from the poor and needy zakat recipient category were involved. A method of stratified multi-stage is applied. This method was selected because the selection process of respondents involved three stages which relate to district (ten districts), region (urban-rural), and gender of household head (male-female). The method is appropriate because it requires the total population to be divided into strata or sub-population after which samples are selected randomly, but independently from one another (Randall et al., 2013). The sampling frame was stratified by region and headship gender. The list of poor and needy, which is the poorest people in the population is gathered from the Kelantan Zakat Department's (MAIK) zakat recipients and it will be used as a reference for respondent information in order to locate the respondent.

A set of questionnaire is set up as the survey module. There are three major parts in the questionnaire. The first part (Part A) is based on demographic background, size and basic information of the head of household, and the members of the household. This includes the gender, relation to the head of household, marital status, and occupation of all the household members. Information on household size and number of dependents of the household's head is also gathered in this part. The items under this part were adapted from Fuadah et al. (2014) and Fahme (2011). The second part (Part B) is on the sources of monthly household income. Sources of income are divided into four, i.e., income from wages or salary, transfer payment and contribution from others (such as their relatives),

income from property, and income from any economic activities. To get the amount of total household income, all types of household's income are transformed into money value. The items under this part were adapted from Patmawati (2006) and Fahme (2011). The third part (Part C) is on monthly food and non-food expenditure of the household. Expenditure data for food are acquired from two sources: (1) food purchases, including food purchased and (2) consumed away from home. The non-food expenditure is collected from non-food items acquired from nine sources (EPU, 2006): (1) Housing, including household utilities and housing contents and services; (2) Clothing and Footwear; (3) Medical; (4) Transportation; (5) Education; (6) Religious activity; (7) Miscellaneous goods and services, including recreation and insurance; and (8) Other Expenditure, including other payment, saving, fines and money given to others. The items under this part were adapted from Malaysia's Statistics Household Expenditure Survey (2015); Gibson, J., et al. (2003); and Bigsten, A., et al. (2003).

The Kelantan state was selected because of its achievement as the fourth highest zakat collector and distributor in Malaysia but at the same time, the state has also among the highest number of poor and needy in Malaysia (see Table 2) (JAWHAR, 2018; MAIK, 2018; Malaysia Statistics, 2018). Thus, with the highest amount of resources (zakat fund) and poor and needy, it is important for Kelantan Zakat Department (MAIK) to manage and distribute the zakat fund wisely.

Table 2: Malaysia: Zakat Collection, Zakat Distribution, and Poverty Incidence

States	Collection[1]	Rank	Distribute[1]	Rank	Poverty Incidence[2]	Rank
Selangor	674	1	698	1	0.0	14
Wilayah Persekutuan	590	2	445	2	0.0	15
Johor	251	3	283	3	0	13
Kelantan	163	4	173	4	0.4	3
Kedah	141	5	163	6	0.2	6
Terengganu	133	6	166	5	0.4	4
Perak	-	-	143	7	0.2	9
Pahang	123	7	134	8	0.2	8
Negeri Sembilan	105	8	103	9	0.2	7
Pulau Pinang	97	9	101	10	0.1	10
Sarawak	72	10	48	13	0.6	2
Melaka	71	11	76	11	0.0	12
Sabah	64	12	65	12	2.8	1
Perlis	-	-	-	-	0.1	11

Source: 1 – Jabatan Waqaf, Haji dan Zakat (JAWHAR) - http://intranet.jawhar.gov.my/spmj/public/zkt_statistik_stat.php
2 – Malaysia Department of Statistics (2018)

4.1. Unit of Observation

This study utilized per capita expenditure as its unit of observation. Deaton (1997) underlined that poverty and welfare measures should be based on households since surveys collect data at the household level instead of the individual level. However, the different size and composition among households can give misleading conclusions about the well-being of individuals in the household (Jenkins, S. P., 1991). Meanwhile, most previous scholars support the implementation of the per capita household expenditure as the welfare measurement to be assigned to each member of the household. This is because an equal division among the household would understate the true dispersion of consumption among individuals, and thus understate poverty (Haddad & Kanbur, 1990).

4.2. Sample Selection

Samples selection ranged 66 percent (334) for urban and 34 percent (171) for rural area (Table 3). Based on gender of the household head, the female headed household represents 45 percent (227 families) while male headed household represents 55 percent (278 families) thus, giving a total of 505 respondents. Generally, from the household unit, 293 (58 percent) respondents are from urban female headed household and 210 (42 percent) are rural female headed household. The remaining 480 household units come from the male urban (255 household members) and male rural (225 household members).

Table 3: Number of Respondent

		GENDER							
		Female[1]	%	Male[1]	%	Female[2]	%	Male[2]	%
REGION	Urban	164	72	170	61	293	58	255	53
	Rural	63	28	108	39	210	42	225	47
Total		227	100	278	100	503	100	480	100

Source: Research questionnaire, [1]Individual unit; [2]Household unit

4.3. Variable Selection

The selection of variables in this study was based on the conceptual and theoretical framework operationalized in the studies. Variables that are used in this study are 1) Age; 2) Region; 3) Gender; 4) Family Size; and 5) Household Head Marriage Status. Analysis of the results is based on expenditure of food and non-food items of these variables' categories.

5. Results and Discussion

Analysis on poor household in Kelantan shows that most of the expenditure is spent on food items (Figure 3). Poor households spend on average MYR 385 per month on food, which accounts for roughly 44 percent of their total household expenditure. Higher percentage of total expenditure on food indicates that the poor tend to fulfil their basic needs (food) before spending on other items. Housing expenditure is the second highest expenditure (18 percent), followed by expenditure for education (11 percent), transportation (8 percent), other items (8 percent), clothes (6 percent), and expenditure for medication is 4 percent.

Based on the age variable, the lowest age group (below age 6) and the 13 to 18 age group show the highest percentage of food expenditure with 71 and 62 percent of their total expenditure is on this item (Figure 4). Age variable shows that the 25 to 59 age group spends the highest amount of expenditure on food (MYR224) compared to the other age ranges. The food and non-food ratio shows that age below 6, 7 to 12, 13 to 18 and 19 to 24 have a higher food expenditure ratio while age 25 to 59 and above 60 have a higher non-food ratio in their spending.

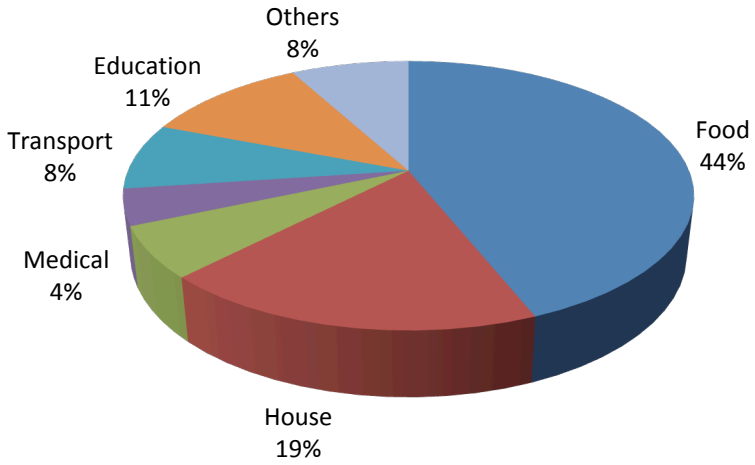

Figure 3. Per Capita Expenditure among Zakat Recipient in Kelantan for Selected Items, 2014 (MYR per month)

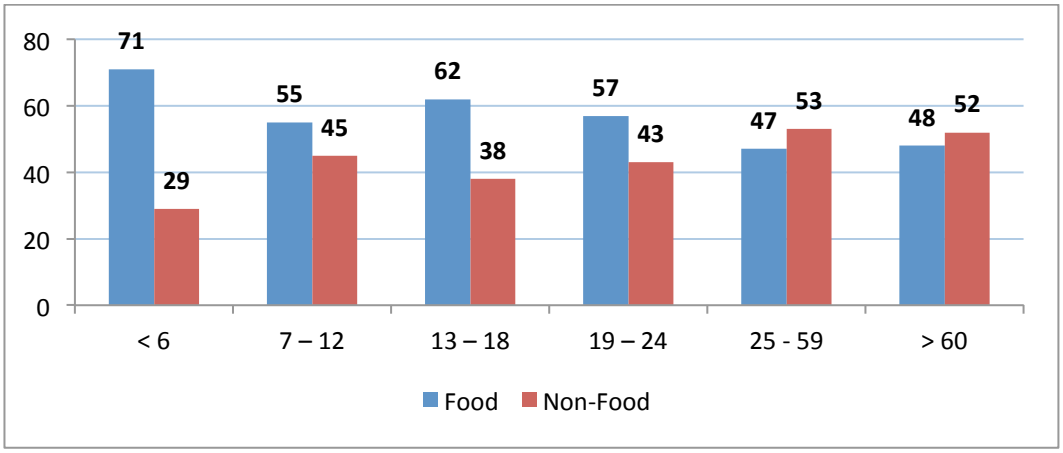

Figure 4: Kelantan Food- Non Food Ratio Expenditure based on Age (Percent)

Analysis on housing expenditure shows that as the household age increases, the amount spent on housing also increases. Age group of 25 to 59 spend about 30 percent (MYR 144) of their expenses on housing which is the highest among the age variables. This is caused by paying rent, utility bills, repairing house (old house), and renovation due to the growing family size and having a disabled member in a family which requires the house to be renovated (i.e., bathroom and house with less stairs). For clothes, those who are aged 6 and below have a slightly higher percentage of clothes expenditure (10 percent) which includes baby clothes and diapers. Transportation shows that households with the age group of 25 to 59 years old require the highest expenditure (MYR 37). This is because of travelling for work and other household purposes (e.g., school transport). Education expenditure shows that those who are aged 13 to 18 have the highest amount of expenditure (MYR 31). Higher amount of expenses on education shows that the poor and needy in Kelantan do not neglect the importance of education for their children as a long term plan for them to move out of poverty. Those aged 13 to 18 (MYR 23) years old spend most of their expenditure on the Others item, while those who are aged below 6 spend less on these items (MYR 2). Table 4 shows the food and non-food expenditure based on age in Kelantan.

Table 4. Kelantan Food-Non Food Expenditure based on Age (MYR & Percent)

Age	Food	House	Cloth	Medical	Transport	Education	Other	TOTAL
< 6	83 (71%)	13 (11%)	12 (10%)	3 (2%)	1 (1%)	5 (4%)	2 (1%)	117 (100%)
7 – 12	104 (55%)	17 (9%)	16 (8%)	7 (4%)	5 (3%)	23 (12%)	16 (9%)	189 (100%)
13 – 18	209 (62%)	35 (10%)	28 (8%)	8 (2%)	5 (1%)	31 (9%)	23 (7%)	339 (100%)
19 – 24	215 (57%)	80 (21%)	8 (2%)	6 (2%)	36 (9%)	28 (7%)	6 (2%)	379 (100%)
25 - 59	224 (47%)	144 (30%)	28 (6%)	15 (3%)	37 (8%)	11 (2%)	17 (4%)	475 (100%)
> 60	219 (48%)	90 (20%)	18 (4%)	90 (20%)	14 (3%)	9 (2%)	18 (4%)	457 (100%)

Source: Research Question

Based on region (Figure 5), those who live in rural areas spend a higher percentage on food (54 percent) compared to urban people (47 percent). However, analysis on the amount spent shows that the urban area has a higher amount of food spending compared to the rural area. It shows that the rural area enjoys saving on food items by planting or through their livelihood. The urban area also has a higher non-food expenditure such as housing and transportation expenditure that contribute to higher non-food expenditure.

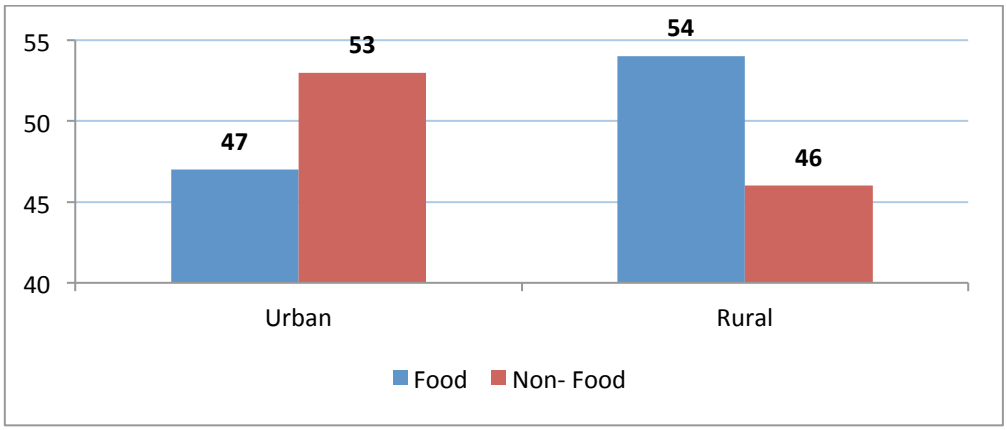

Figure 5: Kelantan Food- Non Food Ratio Expenditure based on Region (Percent)
Source: Research Question

The urban resident spends about MYR 256 (27 percent) per month for housing expenditure while those in the rural area spend MYR 131 (22 percent) monthly. Thus, it shows higher expenses for housing expenditure in the urban area. For clothes, medical, and education, the urban and rural areas spend the same portion of expenditure (5 percent, 1 percent, and 2 percent). For transport, the urban area (10 percent) spends a higher amount of expenses compared to the rural area (8 percent) while for others items, the urban area (8 percent) spends a higher amount of expenditure compared to the rural area (7 percent). Overall, the Kelantan poor and needy in the urban area spend about MYR 965 per month while the rural poor spend about MYR 591 per month. Table 5 shows the food and non-food expenditure based on region in Kelantan.

Table 5: Kelantan Food- Non Food Ratio Expenditure based on Region (MYR & Percent)

Variables	Food	House	Cloth	Medical	Transport	Education	Others	TOTAL
Urban	449 (47%)	256 (27%)	48 (5%)	13 (1%)	100 (10%)	16 (2%)	82 (8%)	965 (100%)
Rural	316 (54%)	131 (22%)	32 (5%)	8 (1%)	49 (8%)	14 (2%)	40 (7%)	591 (100%)

Source: Research Question

For household head's gender (Figure 6), the female household head spends a higher amount of expenditure on food (MYR 494), clothes (MYR 58), medical (MYR 15), and education (MYR 39) while the male household head spends more on housing (MYR200), transport (MYR 31), and other items (MYR50). It shows that the female household head is more concerned about food which is a basic need of the family and education of the children. Another factor suggests that female-headed household has higher family members which require a higher amount of food.

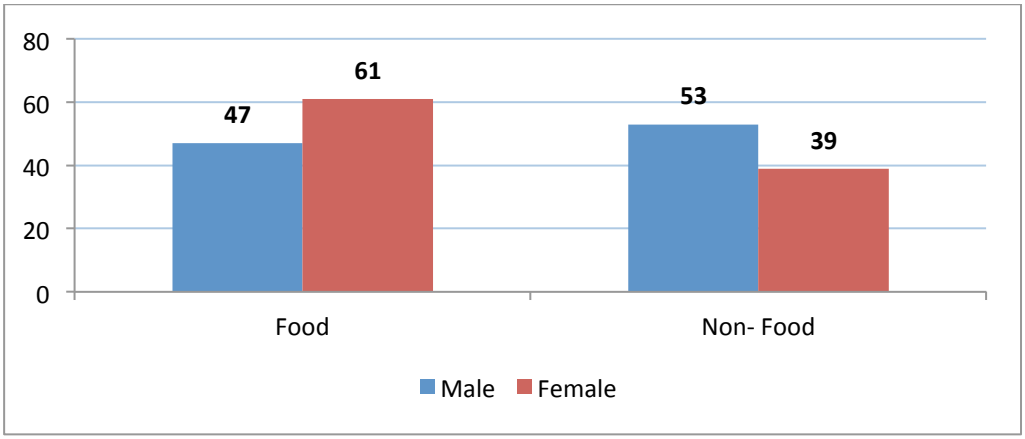

Figure 6: Kelantan Food- Non Food Ratio Expenditure based on Household Head's Gender

Source: Research Question

The male household head has higher expenses for transportation which shows that they require more travelling expenses because of work and family matters. For female household head, they are more concerned with fulfilling the required nutrition for household members and require additional expenses for clothes. Female household head is also concerned about education as they spend more compared to the male household. Overall, the male household head spends about MYR 742 per month while the female household head spends about MYR 804 per month which shows a higher expenditure among the female headed household compared to the male headed household. Table 6 shows the food and non-food expenditure based on household head's gender in Kelantan.

Table 6: Kelantan Food- Non Food Expenditure based on Household Head's Gender

Variables	Food	House	Cloth	Medical	Transport	Education	Others	TOTAL
Male	352 (47%)	200 (27%)	37 (5%)	11 (2%)	80 (11%)	11 (1%)	50 (7%)	742 (100%)
Female	494 (61%)	91 (11%)	58 (7%)	15 (2%)	66 (8%)	39 (5%)	41 (5%)	804 (100%)

Source: Research Question

The household size (Figure 7) shows that a higher size household requires a higher consumption mostly on basic items such as food. It can be seen that households with 9 and above size spend 55 percent of their expenses on food items while those whose families have 1 to 4 size spend less with only 49 percent from their expenses.

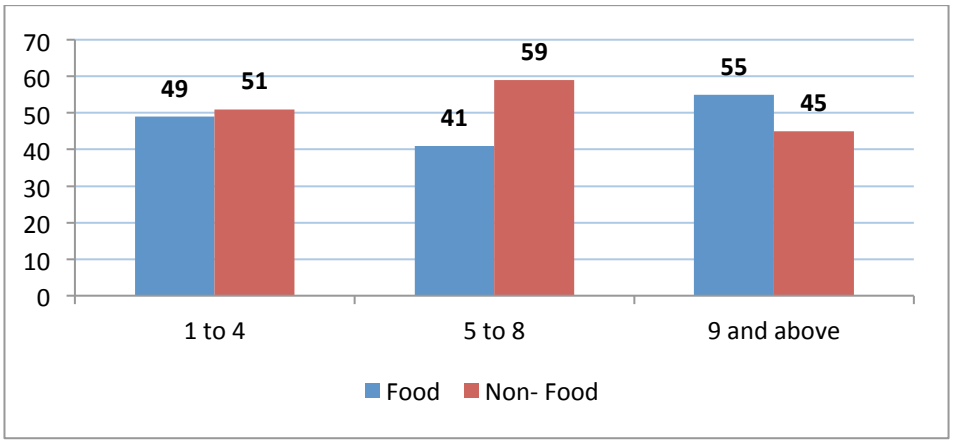

Figure 7: Kelantan Food- Non Food Ratio Expenditure based on Household Size (Percent)
Source: Research Question

Based on non-food items, those who have 5 to 8 household family members spend a higher amount (30 percent) on housing expenses. For clothes, a small size family spends a higher amount (8 percent). Further, surprisingly a smaller family spends more expenses on transport (8 percent) compared to a bigger family size (6 and 4 percent). These can be a reason for saving in a bigger family (economies of scale) where they tend to minimize their transportation expenses by sharing vehicles or using vehicle that does not cost them much (i.e., motorcycle). For education expenses, a smaller size family spends a higher amount (10 percent) compared to a bigger size family (6 and 4 percent). Generally in Kelantan, a family size of 1 to 4 has the highest spending (MYR 571 per month), 5 to 8 (MYR413), while a bigger sized family spends less at only MYR 262 per capita per month. Table 7 shows the food and non-food expenditure based on household size in Kelantan.

Table 7: Kelantan Food- Non Food Expenditure based on Household Size (MYR & Percent)

Variables	Food	House	Cloth	Medical	Transport	Education	Others	TOTAL
1 - 4	279 (49%)	106 (19%)	47 (8%)	13 (2%)	44 (8%)	49 (9%)	33 (6%)	571 (100%)
5 - 8	169 (41%)	123 (30%)	23 (6%)	16 (4%)	26 (6%)	26 (6%)	24 (6%)	413 (100%)
9 and above	143 (55%)	47 (18%)	22 (8%)	11 (4%)	10 (4%)	10 (4%)	19 (7%)	262 (100%)

Based on marital status (Figure 8), those who are married have the highest spending on food (MYR 252) while widows/widowers (MYR214) have the lowest food expenditure. The married but living separately and divorced have a higher expense of non-food items compared to the food items.

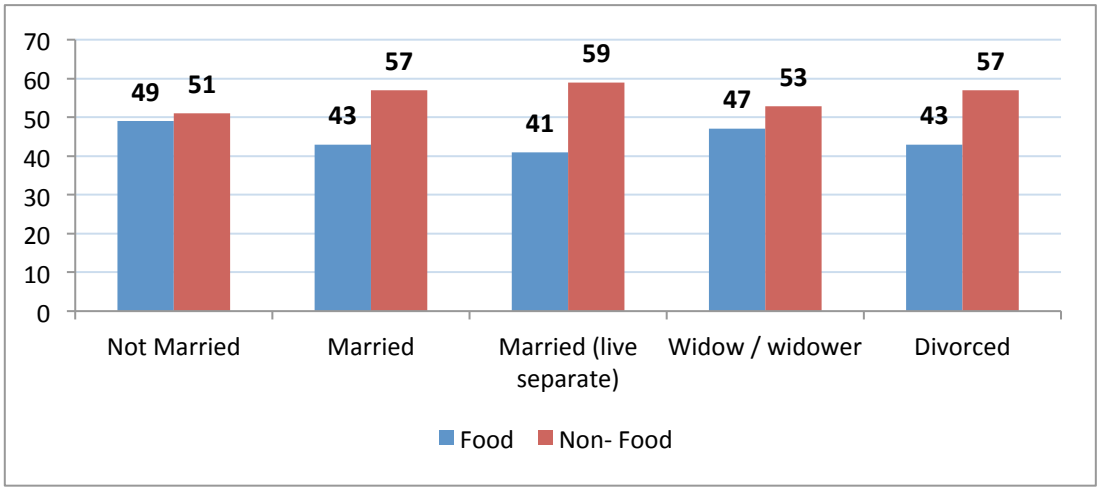

Figure 8: Kelantan Food- Non Food Ratio Expenditure based on Household Head's Marital Status

The higher amount of non-food items among the married but living separately and divorced is caused by the higher expenditure on housing (rent house) and transportation. Those who are widows/widowers spend the lowest amount on housing expenses because they are living in their own house (inheritance) and do not pay rent. For transportation, those who are married and widow/widower spend almost 11 percent of their expenditure on this item. It shows that those who are married work outside their region and require higher travelling expenses. Education shows that those who are married but live separately and divorced spend more on education items (6 percent). Lastly, those who are married spend about 15 percent of their expenditure on other items which is the highest among all the marital status. Table 8 shows the percentage of food– non-food expenditure for household head's marital status in Kelantan.

Table 8: Kelantan Food- Non Food Ratio Expenditure based on Household Head's Marital Status

Variables	Food	House	Cloth	Medical	Transport	Education	Others	TOTAL
Not Married	231 (49%)	121 (26%)	44 (9%)	17 (4%)	28 (6%)	9 (2%)	21 (4%)	470 (100%)
Married	252 (43%)	129 (22%)	29 (5%)	11 (2%)	66 (11%)	13 (2%)	90 (15%)	590 (100%)
Married (live separate)	240 (41%)	165 (28%)	27 (5%)	20 (3%)	53 (9%)	35 (6%)	45 (8%)	585 (100%)
Widow / widower	214 (47%)	108 (24%)	16 (4%)	25 (5%)	50 (11%)	18 (4%)	25 (6%)	456 (100%)
Divorced	251 (43%)	111 (19%)	66 (11%)	24 (4%)	59 (10%)	37 (6%)	36 (6%)	584 (100%)

Source: Research Question

6. Conclusion

This study shows that most of the expenditure among the poor and needy in Kelantan are on food items. Younger age has a higher amount of food expenditure while the older people have higher expenses on non-food items (i.e., housing). The expenses of the lower aged family members for goods and services are considered to be necessities (e.g., food and clothing) and does not vary as much as those considered to be discretionary (e.g., other

expenses) among other ages. Older aged people are more likely to be single households that produce different types of spending patterns according to preferences and needs. At a younger age, when a higher fraction of the households are couples, any gender variation in consumption cannot be observed because of the absence of any specific assumption on household sharing, assigned to both men and women as couples based on their average spending.

The region variable shows that those who live in the rural area (54 percent) spend a higher portion of their expenditure on food items compared to the urban people (47 percent). Lower income among the rural area has made their food expenditure shares bigger than the urban area. Despite the analysis on the amount spent, it shows that the urban area has a higher amount of food spending compared to the rural area. The difference in diet between these regions is that urban households usually consume more variety that includes more expensive food such as meat while the rural area enjoys saving on food items by planting or through their livelihood. Lower income among the rural area compared to the urban area tends to crowd out expenditure on other non-essential goods. However, as the households' incomes increase, their percentage on food becomes smaller while a large portion goes into non-food items (Engel, E, 1857; Donkoh, S. A., et al., 2014).

Most empirical and theoretical studies have found that food expenditure has a negative relationship with income, suggesting that the higher the income of a household, the lower the percentage of the income spent on food, and *vice versa*. Results in this study shows that the poorer households spend a greater percentage of their income on food compared to richer households, which indicate a negative relationship between their income and food expenditure. It is in line with Engel (1885), Umeh and Asogwa (2012), and Basole and Basu (2015) who mention that poorer households spend large percentage of their incomes on necessities, including food. Higher food cost for rural area in Kelantan which results from higher transport cost to the rural areas leading to higher prices of goods has increased their expenditure on food. While for urban residents, a variety of instant food and higher cost for non-food items has made their expenses less on food items. Most households purchase a portion of their dietary requirements depending on need and affordability. This type of food acquisition represents economic access. The rural household (i.e., farming) regularly purchase a proportion of food commodities which they do not produce themselves while urban households purchase most of their food commodities. Urban households in Kelantan are provided with larger markets of food retailers, more options, and more diverse range of foods. The variety of foods available therefore tends to be greater in urban areas. The difference between the range of cultural and behavioral aspects among these regions also affect the cost for food expenses.

The female household head shows a higher amount of expenditure compared to the male household head in Kelantan. Previous studies on gender consumption differences show that a female household head has a higher spending on children's welfare, particularly education and health (Deepankar et al., 2017; Natividad Yabut-Bernardino, 2010; Holt-Gimenez et al., 2012; Thomas 1990; Quisumbing & Maluccio, 2003). High dependency ratio among the female headed households has increased the expenditure among these families. Furthermore, higher expenditure among the female headed household is caused by their greater preference to invest in children, which is more easily realized in a household she heads, where there are no conflicts or negotiations with a male partner over the use of household resources. The male headed household tends to spend higher portions of its expenditure on private use. Most wives/partners do not mind their husbands keeping

back money for private use and tend to accept the idea that men have a right to personal spending which they do not have themselves (T.J. Sekhampu & F. Niyimbanira, 2013; Chant, Sylvia H., 2003).

Size of the family shows that a bigger sized family is more well-off compared to a small sized family. The existing economies of scale in housing expenses through saving and sharing among the family members reduce their per capita cost (Dreze, J., & Srinivasan, P. V., 1997; Deaton, A., & Paxson, C., 1998; Browning, M. et al., 2013; Mok. T.Y et al., 2007). Similarly, the finding by Engel (1857) shows that the proportion of income allocated to food is directly related to household size, where larger households spend a higher share of their income on food than smaller households.

The married household head has higher expenses on food and other non-food items whereas those who are not married have lower expenses. As a parent, they have a higher dependency ratio compared to other marital status; they have higher expenses (Lichter, D. T., 1997). Higher expenditure among the married couple signifies that having two adults generally increases their purchasing power which will create a greater opportunity to avoid poverty, since the second adult on average adds more to potential income than to needs (Brown, S. L., 2004). Thus, the results indicate that decline in marriage and increase in divorce will increase poverty in Kelantan since there is low expenditure among those with the non-married and widow/widower marital status. The results also suggest that most of the marital status have a higher non-food ratio. Food items will be perceived as normal goods after their basic food needs are fulfilled. However, because of higher cost for non-food expenditure, their expenditure on these items would be higher than their basic food needs.

In this vast changing economic condition, understanding how the household spends its resources can help the poverty alleviation policy makers understand the current situation and problems. Therefore, it is pertinent that the relevant bodies, be it the public or private sectors, understand the poor and their different needs and expenditures.

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