

DETERMINATION OF POVERTY USING MULTI-FACETED MEASURES: EVIDENCE FROM ZAKAT APPLICANTS

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ABSTRACT

Background and Purpose: Poverty, despite being a multifaceted concept, is commonly measured in either absolute or relative monetary terms. However, it can also be measured subjectively, as people form perceptions on their relative income, welfare, and life satisfaction. Poverty measurement based on objective indicators such as official poverty lines is often used to orient and prioritize policy actions. However, such ‘standard’ poverty measures based on household consumption or income aggregates have several shortcomings. This objective indicator does little to inform policy makers about public preferences. The main goal of this paper is to investigate multifaceted poverty measurement by combining objective and subjective measures to provide useful insights into poverty in Malaysia. In addition, this study explored the multifaceted poverty incidence among the low-income household from the perspective of zakat applicants.

Methodology: Data was collected using a survey and interviews of zakat applicants under the category of poor and needy in the State Islamic Religious Council (SIRC) of Melaka, one of the states in Malaysia. Three poverty measurements, i.e., Poverty Line Income (PLI), *Haddul Kifayah* and Subjective Poverty Index (SPI), are utilized in this study.

Findings: The PLI and *Haddul Kifayah* are categorized as objective poverty measures, while SPI is categorized as a subjective poverty measure. The different measures of poverty would produce different analytical results that, in turn, call for a different set of policy interventions.

Contributions: These findings point to the needs of tailor-made strategies for the society to cope with multifaceted poverty.

Keywords: Multifaceted poverty, objective poverty, subjective poverty, poverty measurement, zakat recipients.

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1.0 INTRODUCTION

Poverty is a multifaceted phenomenon. Commonly, poverty is measured using objective measures, such as absolute and relative measures. However, it can also be measured using subjective measures. Poverty is also a complex concept. A widespread view argues that to successfully address poverty, it needs to include, not only monetary terms but also all its facets. Understanding this multifaceted poverty is important as it will lead to efficient intervention schemes and strategies to reduce poverty (Othman, 2018). Poverty in Malaysia is commonly determined by using the poverty line based on a monetary approach which assesses minimum consumption levels for survival. A household is considered poor if its income falls below that line.

Starting from the Household Income and Expenditure Survey (HIES) in 2014, the Department of Statistics Malaysia no longer releases Extreme Poverty figures since the figures are too small and insignificant (Buku Perangkaan, 2019). The Statistics of Zakat Distribution for the year 2020 showed that the number of poor and needy in the statistics of zakat distribution still exist (JAWHAR Portal). For example, in Melaka, since 2014, there have been no hardcore records based on HIES figures. On the other hand, the statistics provided by the zakat institution in Melaka in 2020 alone indicated that there were 206 needy (*al fuqara*) and 7,830 poor (*al masakin*) households. Hence, there exist inconsistencies of data on poverty which can have consequences on government interventions in eradicating poverty.

Questions arise as to why the official data from Economic Planning Unit (EPU) and Department of Statistic Malaysia continuously report a decline in the overall poverty rate while

the zakat authorities are experiencing increases of zakat applications especially from the poor and needy. Is it possible that there is inefficiency in the measurement of poverty? In such cases, households who are actually experiencing poverty may be considered as non-poor due to the current measurement of poverty (Othman et al., 2018).

Economists have argued that the current poverty measures using monetary approach are not able to reflect the multidimensional nature of poverty which has developed due to the rapid economic development process and changes in the economic structure (Alkire, 2011; Narayanan & Patel, 2000). Moreover, monetary often lacks in providing measures of deprivations in other dimensions. On the other hand, multidimensional poverty takes into consideration non-monetary deprivations experiences of poor people such as poor health, income deficiency, insufficient living standard and inadequate education and how they interrelate (Abd Manap et al., 2017).

Thus, there is a need to look at poverty from a wider viewpoint, so that poverty could be analysed in a more comprehensive dimension by the policy makers by adding objective and subjective measures in identifying the poor. Nevertheless, studies that examine poverty measurement from the subjective approach are still lacking. In addition, there are still limited studies that focus on poverty measurement from a zakat perspective. Therefore, the main objective of this paper is to investigate multifaceted poverty measurement by combining objective and subjective measures to provide useful insights into poverty in Malaysia, particularly among zakat applicants.

2.0 LITERATURE REVIEW

2.1 Multifaceted Poverty

Problems associated with the definition and measurements of poverty have been debated over decades (Dartanto & Otsubo, 2015; Voukelatou et al., 2021). Poverty is a multifaceted phenomenon and different societies have different perceptions of poverty. Differences in the measurements of poverty might produce different analytical results and consequently, would call for a different set of policy interventions (Othman, 2018). Akhtar et al. (2022) noted that policies designed for poverty alleviation in developing countries have not made much progress. An arguable explanation for policy failure is that these policies were developed with a narrow view of poverty, overlooking that low financial income is an indicator of poverty and not the poverty itself. Generally, poverty measurement has caused public concern on what poverty really means, as different types of poverty need different methods to measure it.

In Malaysia, most of the existing research on poverty is dominated by the objective-types absolute and relative poverty approaches. In practice, zakat institutions in Malaysia also utilise the absolute measures, such as Poverty Line Income (PLI) and *haddul kifayah* to determine the poor households. *Haddul kifayah* refers to the income of an individual or household, used by zakat authorities, in determining whether an individual or household are eligible to be categorized as poor (*al fuqara*) or needy (*al masakin*) (Rashid et al., 2015). Both methods used income as the variable to determine whether the individual or household is poor or non-poor. PLI is set by the Economic Planning Unit (EPU) of the Prime Minister's Department while each zakat institution determines their *haddul kifayah* respectively. Nevertheless, it can also be measured subjectively, as people form perceptions on their relative income, welfare and life satisfaction.

2.2 Zakat and Poverty Alleviation

Islam has its own method to manage the problem of poverty in the form of *zakat* (alms), *sadaqat* (donations) and *waqaf* (endowment). Zakat is an obligatory charity involving the issuance of a certain amount of wealth which is required by Allah SWT to be given to those who are entitled (Alshater et al., 2021) while *sadaqat* and *waqaf* are voluntary charity. Zakat is one of the main economic resources for the Islamic country. The distribution of the zakat fund is to help *asnaf* (zakat recipients), especially the poor and needy to have better opportunities to uplift themselves to a higher socioeconomic level.

Zakat institutions are responsible as a medium to redistribute the wealth from the rich to the poor Muslims and to ensure the rightful zakat recipients or the *asnaf* could attain a minimum quality of life from the zakat received. Likewise, the zakat payment can purify the wealth of the well-off by setting aside a proportion for those in need (Ali et al., 2022). Zakat is also a vital mechanism to help the government combat poverty (Taha et al., 2017).

Thus, efficient and systematic management of zakat is able to boost the potential of zakat as an instrument for the development of Muslims. Utilising zakat funds optimally is indeed important to improve the quality and potential of every Muslim. In Malaysia, the administration and management of zakat is run by the State Islamic Religious Council (SIRC) or Majlis Agama Islam Negeri (MAIN). Therefore, the zakat institution under MAIN is responsible in determining the eligibility of recipients and the form of assistance that is appropriate to the background of each recipient so that the assistance provided can be utilised as much as possible. It is a challenge for zakat institutions to assist all *asnafs*, especially the

poor and needy to be able to change their lives and remove these groups from the cocoon of poverty.

In determining the eligible zakat recipients, most of the zakat institutions use the monetary approach in measuring poverty based on *haddul kifayah*. Poverty is measured not only when the poor individual lives at and below the poverty line but also those who have not achieved sufficiency level. The *haddul kifayah* is determined based on shelter, food, clothing, health, education and transportation based on *Maqasid al Sharia* (JAWHAR, 2007). Nevertheless, different states have different *haddul kifayah* based on different variables used and prices difference according to location and area (Ali et al., 2022).

In another perspective, Rasool and Salleh (2014) analysed the poverty measurement in zakat institutions by three monetary indicators, namely income, poverty line income (PLI) and *haddul kifayah*. They also introduced the poverty measurement from an Islamic perspective that comprises monetary and non-monetary components using *maqasid al-shariah*, named as Islamic Poverty Index (IPI). Subsequently, Othman (2018) proposed the measurement of poverty by implying the subjective poverty approach to complement the objective poverty approach in identifying the zakat recipients.

2.3 Multifaceted Poverty Measurements

There are three main classifications of poverty. The first classification is the absolute poverty concept. Absolute poverty is defined as having less than a fixed threshold of income or basic needs satisfaction. Sen (1983) defined absolute poverty as a failure to achieve certain minimum capabilities. Absolute poverty approach was pioneered by Rowntree in the early 20th century until the early 1970s and later the relative poverty approach was introduced by Townsend (1979).

The second classification is the relative poverty concept where one having less than others have in the same society or as relative poverty referring to a specified proportion of median incomes of the population. The most well-known definition of relative poverty was by Townsend (1979, p. 31): “Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged, or approved, in the societies to which they belong.” Both absolute and relative poverty approaches were obviously measuring poverty using the income approach.

The final classification is the subjective poverty concept. Goedhart et al. (1977) originally introduced subjective poverty. It means that one is feeling that he or she does not

have enough to get along. Goedhart et al. (1977) indicated the person is said to be poor if their actual income level is less than the amount they consider as sufficient. Van Praag and Ferreri-Carbonell (2006) stated that poverty is not an objective status based exclusively on the level of income necessary to satisfy needs but depends on people's perceptions and feelings. The subjective poverty means that individuals evaluate their poverty status by themselves subjectively (Niemi, 2011). Empirically, subjective poverty is identified through questionnaire surveys by evaluating social individuals for their welfare condition and minimum needs (Wang et al., 2020).

Currently, Malaysia measures poverty using the Poverty Line Income (PLI). PLI is an income approach in one dimension, generally measuring the gross monthly household income. Similarly, the *Baitulmal* or zakat institutions in Malaysia measure and identify the poor using absolute PLI methods. However, recently, the *haddul kifayah* (necessities of a household) approach has been adopted by few zakat institutions such as Johor, Sarawak, Selangor, Wilayah Persekutuan and Negeri Sembilan. Both PLI and *haddul kifayah* are categorized as objective or absolute measures. These methods are almost identical as they use income as the variable to determine whether the individual or household is poor or otherwise. The PLI is set by the Economic Planning (EPU) of the Prime Minister Department whereas the *haddul kifayah* is determined by zakat institutions respectively.

In another perspective, Abdul Rahman et al. (2021) emphasized the realistic approach to identify the poor by numerous poverty dimensions. In their study, the proposed six new Multidimensional Poverty Indicators namely literacy, highest education level and grade, housing, access to television services, assets (water filter, refrigerator, washing machine, personal computer, iPod/PDA) and work to be considered by the policymakers as a valuable addition to the current MPI to establish a more meaningful picture of the current poverty trend in Malaysia.

3.0 RESEARCH METHODS

Data for the study are gathered through a formal survey using a structured questionnaire. Following the preparation of the questionnaire, a pre-test was conducted to allow for improvement of the instrument to ensure high internal consistency of the instrument. Subsequently, the final version of the questionnaire set is distributed to the selected respondents. In addition, several semi-structured interviews were conducted to gain additional insights into the research issues. This is consistent with Reeves et al. (2019) which suggest that it is important to define poverty from the perspective of those who experience poverty. They

proposed that poverty scholars embrace qualitative methodology, including interviews, as a way to highlight the voices of those experiencing poverty. In this study, a series of interviews were conducted in face-to-face manner. During the interviews, the interviewer read the questions to the interviewee and wrote down his or her answers onto the questionnaire offering additional explanations if necessary to ensure clear and unambiguous responses to questions.

3.1 The Data

This study focused on poverty measurement used by zakat institutions in Malaysia, specifically in the state of Melaka. The Melaka state was announced as a developed state within Malaysia in 2010. Notwithstanding its developed status, Melaka still uses objective measurement that is Poverty Line Income (PLI) as a tool to measure the poor condition. Literature has shown that as the countries/regions get richer, absolute poverty may disappear, but the relative deprivation and subjective poverty would persist (Dartanto & Otsubo, 2015). Thus, Melaka should shift to subjective measurement rather than objective measurement.

From September until November, 2019 questionnaires were distributed to respondents. The empirical analysis was based on 507 zakat applicants of the poor and needy residing in Melaka. More specifically, the survey involved the three districts of Melaka, i.e., Melaka Tengah, Alor Gajah and Jasin. The demographic profile of respondents is shown in Table 1.

Table 1: Demographic of respondents

Items	Frequency	Percent
Age		
20 and less	6	1.18
21-25	22	4.34
26-30	39	7.69
31-35	45	8.88
36-40	68	13.41
41-45	74	14.60
46-50	59	11.63
51-55	68	13.41
56-60	38	7.49
61-65	27	5.33
66 and above	62	12.23
Gender		
Female	238	46.9
Male	269	53.0
Marital Status		
Bachelor	64	12.6
Married	267	52.66
Divorced	76	15.0
Widow	100	19.7
Districts		
Melaka Tengah	291	57.4
Alor Gajah	155	30.6
Jasin	61	12.0
Level of Education		
No Formal Education	50	9.9
Primary Education	236	46.5
SRP/PMR/PT3	46	9.1
SPM/SPVM	150	29.6
STPM/Diploma	14	2.8
Degree	7	1.4
Vocational and Technical	4	.8
Job status		
Work	260	51.3
Unemployed	47	9.3
Retired	9	1.8
Not Active Looking for Job	191	37.7

Items	Frequency	Percent
<i>Job type</i>		
village work	84	16.6
factory worker	54	10.7
own small business	79	15.6
doing irregular work	69	13.6
not working	221	43.6
<i>Health status</i>		
very good	142	28
good	156	30.8
not so good	96	18.9
ill or chronic ill	63	12.4
<i>Number of dependency</i>		
.00	137	27.0
1.00	39	7.7
2.00	60	11.8
3.00	79	15.6
4.00	68	13.4
5.00	62	12.2
6.00	38	7.5
7.00	11	2.2
8.00	9	1.8
9.00	3	.6
10.00	1	.2
<i>Physical Status</i>		
Normal	477	94.1
Handicapped	30	5.9
<i>Type of House</i>		
Village	295	58.2
Housing Estate	146	28.8
Flat	66	13.0
<i>Status of House</i>		
Owner	231	45.6
Rent	171	33.7
Squat	94	18.5
Sharing	11	2.2

Table 1 showed that 14.6% of zakat applicants aged between 41-45 years old. Those who are between 51-55 years old comprise 13.41% of respondents while those aged 66 years and above

represent 12.23%. Only a small percentage (1.18%) are those less than 20 years who are applying for zakat. The majority of the zakat applicants are female (53%) and the remaining 47% are male. In terms of marital status, their status is either bachelor, married, divorced or widow. More than half of the zakat recipients are married (52.66%) while 19.7% are widows, 15% are divorced and 12.6% are bachelors. Hence, the main marital group that applies for zakat is married individuals.

Melaka has three main districts, namely Melaka Tengah, Alor Gajah and Jasin. From the list of respondents, 57.4% live in Melaka Tengah, 30.6% households live in Alor Gajah and 12% live in Jasin. The highest percentage of zakat applicants are from Melaka Tengah. From the 507 respondents, 90% of them had formal education either primary, secondary and tertiary education. Meanwhile, the remaining 10% did not have formal education. The highest percentage showed that 46.5% had secondary education until form 3 or had their Sijil Rendah Pelajaran (SRP) or Penilaian Menengah Rendah (PMR) certificate. Nearly 30% of respondents finished their secondary education with Sijil Pelajaran Malaysia (SPM) certificate. Some of them had Sijil Tinggi Pelajaran Malaysia (STPM) and Diploma certificate (2.8%), Degree qualification (1.4%) and vocational and technical certificate (0.8%).

The job status of the zakat applicants is either working, unemployed, retired or inactive looking for a job. There are 51.3% of the respondents who are working, 9.3% are unemployed, 1.8% are retired and 37.7% are not actively looking for jobs. The main reason for zakat applicants not actively looking for a job is their own personal reason, disabled, chronic illness or old age.

The job type of zakat applicant was classified as either doing village work, factory worker, own small business, doing irregular work, not working or others. The majority of the respondents (56.4%) have work and earn income. Out of these working respondents, 16.6% are doing village work, 10.7% work at a factory, 15.6% own small business, 13.6% doing irregular work, and 10.5% being employed in other types of job. Nearly half of the respondents (43.6%) are not working.

The respondents are also evaluated whether their health is very good, good, not so good, ill or chronically ill. Nearly 60% of the respondents stated that their health status is very good (28%) and good (30.8%). However, the remaining of the respondents have not been in good health and 12.4% are reported to be ill and suffer from chronic illness. In terms of the number of dependencies, the profile showed that a majority of individuals who apply for zakat live alone or without children (27%). For those who have children living together, the biggest

number of dependencies is three members per household i.e.,15.6%. On the other hand, only 2% have ten members per household.

Table 1 further showed evidence on the physical status of the respondents as are either normal or handicapped. From the survey, most of the applicants are normal (94.1%) and the remaining 5.9% are handicapped. The respondents were categorised as either living in a village, housing estate, flat or charity house provided by the government. There are 58.2% living in village houses, 28.8% living in housing estates, 8.7% living in flats and 4.3% living in charity houses. Table 1 also showed that 45.6% of the applicants own houses while 33.7% were renting. Another 18.5% were squatters and 2.2% were living in shared houses.

3.2 Multifaceted Poverty Measurement

Previous study on multifaceted poverty has highlighted an array of methods to measure poverty. For instance, Dartanto and Otsubo (2013) classifies poverty experienced by Indonesia using five poverty indicators: absolute measures (calorie intake and expenditure poverty), relative measures and subjective measures (subjective well-being (SWB) and subjective poverty). Meanwhile Jansen et al. (2015) in a study in South Africa, calculated poverty using measures such as absolute income poverty method, relative income poverty method, subjective income poverty method, subjective poverty method and subjective well-being method.

In the current study, two concepts of poverty measurement were analysed. The first one is objective poverty measures, consisting of Poverty Line Income (PLI) and *Haddul kifayah*. The second one is subjective poverty measures, that is the Subjective Poverty Index (SPI) as suggested by Othman (2018). Among others, this study compares the objective and subjective poverty measurement in determining the poor or non-poor status as illustrated in Figure 1.

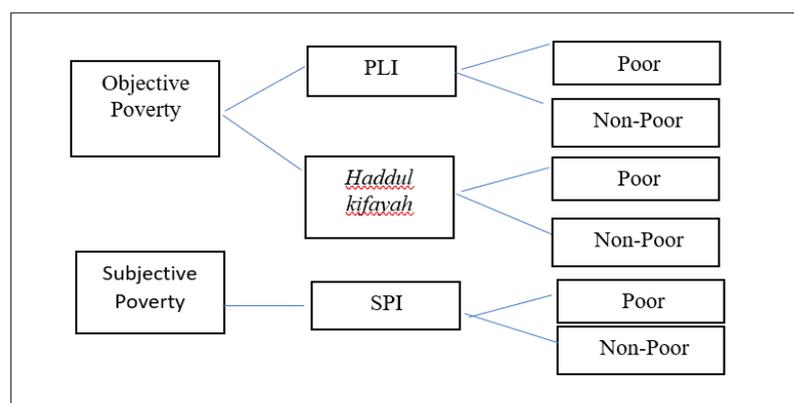


Figure 1: Multifaceted poverty measurements

The measures utilised involve:

1) Poverty Line Income (PLI)

The PLI is defined as a threshold that assists in distinguishing between the poor and the non-poor. If the respondents' income is above PLI, he/she is considered as non-poor and if the respondents' income is below PLI, he/she is considered poor. The official poverty line is developed by the Economic Planning Unit (EPU) of the Prime Minister's Department. Since 1970's, Malaysia has been using Poverty Line Income (PLI) and headcount approach to measure and monitor the incidence of absolute poverty. This methodology was introduced in 1977 using the 1973 Household Expenditure Survey and was based on the minimum requirements of a "model" five-person household for food and non-food items. The PLI used in this study is based on PLI 2016, that is RM980 per month. Recently, on the 10th of July 2020, the government had announced the new PLI as RM2,208 per month.

2) Haddul kifayah

The State Islamic Religious Council (SIRC) of Melaka has their own way of calculation to determine whether the zakat application is accepted or rejected. In practice, zakat institutions use the monetary approach in measuring poverty through the *haddul kifayah* (necessities of a household) or the Poverty Line Income (PLI) method. In addition, interview findings with the SIRC of Melaka officials indicated that there are eight factors used to determine the acceptance or rejection of the zakat applications. These factors consist of (1) the households' income exceed poverty line income (PLI), (2) the applicants are still young and healthy and capable to work, (3) the children are staying together and supporting the parents, (4) the children are helping them in terms of money although not staying together, (5) they receive pension, welfare, employment compensation money and divorce alimony, (6) they have a secure job and no dependency, (7) they have no problems in getting basic food and (8) they have the convenience of housing.

Haddul kifayah is determined by the respective zakat institution by assessing the level of necessity needed by a household to sustain daily needs. The assessment includes six aspects of shelter, food, clothing, medicine, education and transport. The Department of Awqaf, Zakat and Hajj (JAWHAR, 2007) had outlined the main components in determining *haddul kifayah*, however it depends on zakat institutions to decide the details of each component. *Haddul kifayah* is calculated based on various variables such as number of members of a household, age group of members, etc. To determine the category of the household whether they are poor

or not is based on the following calculation: Total Income – Total Expenditure on necessities of a household = Excess income.

If the applicant does not have any *halal* income or income receipts is not up to 50% of the daily basic needs of the person and their dependence on a moderate measure of living, then he or she is considered as *al fuqara* (the needy). If the applicant has property or income that exceeds 50% but does not reach the limit of *kifayah* for his or her basic needs and dependents, he or she is considered as *al masakin* (the poor).

Table 2: Example of calculation for eligibility of *Al Fuqara* (the needy)

Household income	Actual Income (RM)	Expected Income (RM)	Remarks
Applicant	500.00	800.00	Domestic Worker
Spouse	None		
Income of children/family living together			
Contribution from children living together			
Other income		270.00	
JKM/SOCSO/DLL			
Total	500.00	1,070.00	
Expenditure/Dependency	RM	RM	
Utility Bill	50.00	50.00	
Schooling	200.00	200.00	4 children
			schooling
Residency	250.00	250.00	Rent a house
Medical/Fee	300.00	NA	Wife has
			chronic illness
Household Expenditure	400.00	400.00	
Total	1,200.00	900.00	
Balance	- 700.00	170.00	

Source: MAIM (2013)

From the above example, this individual lacks RM700 to fulfill his daily expenditure. Furthermore, his income is not up to 50% of the daily basic needs of the person and their dependence. Therefore, he is categorized as *al fuqara* (the needy).

Table 3: Example of calculation for eligibility of *Al Masakin* (the poor)

Household income	Actual Income (RM)	Remarks
Applicant	500.00	Domestic worker
Spouse	None	
Income from children/family living together		
Contribution from children living together		
Other income	100.00	Extra income
JKM/SOCSO/Etc	400.00	
Total	1,000.00	
Expenditure/Dependency	RM	
Utility Bill	50.00	
Schooling	200.00	4 children schooling
Residency	250.00	Rent a house
Medical/Fee	300.00	Wife has chronic illness
Household Expenditure	400.00	
Total	1,200.00	
Balance	- 200.00	

Source: MAIM (2013)

As indicated in the example in Table 3, this household is categorised as *al masakin* since they have property or income that exceeds 50% but does not reach the limit of *kifayah* for his or her basic needs and dependents. His income is RM1000, but his household expenditure is RM1200. This household has a shortage of RM200.

3) Subjective Poverty Index (SPI)

The subjective poverty is measured through the Subjective Poverty Index as proposed by Othman (2018). There are seven dimensions as shown in Table 3. Columns (a) and (b) are the dimensions and their respective indicators, while column (c) presents the weightage of each dimension. If a household is deprived of any indicator, a score of 1 would be assigned and score 0 shows that a household is able to fulfil the needs of a particular indicator or variable. Then, the score of each indicator is computed in the score column by multiplying the weightage of a particular indicator with the score assigned, whether 1 or 0. Finally, the scores of all indicators are finally totalled up to give the total score or TWI. This score, which is between 0

and 100, gives the score for each household. Then, the TWI would be compared with the cut-off points to determine whether the household is poor, needy or not poor.

The intensity of subjective poverty deprivation score is between 0 to 100. If the household score is less than 20, they are negligible to subjective poverty. If the household score is between 20 and 50, they are deprived of moderate subjective poverty. If the household score is >50 but less than 75, they are high subjective poverty deprived and if the household score is > 75, they are very high subjective poverty deprived. Hence, in this analysis, the score below 50 is considered as non-poor and the score above 50 considered as poor.

Table 4: Computation of SPI

Dimensions	Indicators	Weightage	Score (0-not deprived, 1-deprived)
(a)	(b)	(c)	(d)
Ability to work	Able to work but inactive	4.77	
	Able to work but not able to get suitable work	4.77	
	Working but odd income	4.77	
Level of education	Lower level of education	14.3	
Status of employment	Not working and no income	7.15	
	Working but insufficient income	7.15	
Health status	Unable to work due to poor health	14.3	
Other source of income	Spouse not working	3.58	
	Spouse working but insufficient income	3.58	
	Children (adult) not working	3.58	
	Children (adult) working but income insufficient	3.58	
Moral support	No family members support financial expenses	14.3	
Financial stress	Inability to pay house rent	7.15	
	Inability to pay loan	7.15	
			TWI

The subjective poverty index is shown by the following equation with weightage of each dimension derived from the ranking determined by expert review as in Table 3. All dimensions

are weighted equally and then all indicators within each dimension are weighted equally. The equation for calculation of the Subjective Poverty Index (SPI) as shown below:

$$\text{SPI}=(A1*4.77)+(A2*4.77)+(A3*4.77)+(B1*14.3)+(C1*7.15)+(C2*7.15)+(D1*14.3)+(E1*3.58)+(E2*3.58)+(E3*3.58)+(E4*3.58)+(F1*14.3)+(G1*7.15)+(G2*7.15)$$

Where

A1 = Able to work but inactive

A2 = Able to work but not able to get suitable work

A3= Working but odd income,

B1 = Lack of education

C1 = Not working

C2= Working but odd income

D1= unable to work due to poor health

E1=Spouse not working

E2=Spouse working but insufficient income

E3 =Adult children not working

E4 =Adult children working but income not sufficient

F1 = No family members help to provide financial expenses

G1 = Inability to pay monthly rent

G2 = Inability to pay back a bank loan.

Score 0 also implies that although the household is categorized as income poor due to their income being less than PLI (Poverty Line Income) but they denied feeling poor. For those who feel poor, they are divided into four categories. Firstly, those with scores more than 75 are defined as highly subjective poor. Secondly, those with scores less than 50 are defined as high subjective poverty. Thirdly, those with scores between 20 to 50 is moderate subjective poverty. Fourthly, a score less than 20 is called low subjective poverty.

4.0 RESULTS AND DISCUSSIONS

The multifaceted poverty is presented in two analyses: 1) crosstabulation and 2) logistic regression.

4.1 Cross Tabulation between Objective and Subjective Poverty

Table 5: Number of poor and non-poor based on the three poverty measurements

Measures	Status	Frequency	Percent
PLI	.00 (non-poor)	247	48.7
	1.00 (poor)	260	51.3
<i>Haddul Kifayah</i>	.00 (non-poor)	159	31.4
	1.00 (poor)	348	68.6
SPI	.00 (non-poor)	121	23.9
	1.00 (poor)	386	76.1

Table 5 displays a cross tabulation of 507 households being classified as poor or non-poor in each one of the three poverty measurements (Othman, 2018). It showed that, under the objective poverty measure based on PLI, 48.7% (247) of households are characterized as non-poor, while 51.3% (260) are categorized as poor. Based on *haddul kifayah* measurement, 31.4% (159) are categorized as non-poor and 68.5% (348) as poor. Meanwhile, under SPI, only 23.9% (121) of households are reported as non-poor, the outstanding 76.1% as poor.

The three approaches used in this study are (1) Poverty Line Income (PLI), (2) *Haddul kifayah* and (3) Subjective Poverty Index (SPI). The PLI for Melaka is RM960. Therefore, if the household's income is below RM960, the household is poor and if their income is above RM 960, they are considered as non-poor. The *haddul kifayah* practised by the zakat institution will determine whether the zakat application is accepted or rejected. When their applications are accepted, they are considered as poor. On the other hand, if they are rejected, they are considered as non-poor. For the proposed Subjective Poverty Index, the subjective poverty score of each household is premeditated with the help of a weighted sum of the number of deprivations, so that the subjective poverty score for each person lies between 0 and 100.

Table 6 presents a cross tabulation of 507 households being classified as poor or non-poor in each one of the three operationalized poverty definitions.

Table 6: Cross tabulation of poor and non-poor based on three poverty measurement

Poverty Measures		PLI		SPI		<i>Haddul Kifayah</i>	
		Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor
PLI	Non-Poor	247					
		48.7					
	Poor		260				
			51.3				
SPI	Non-Poor	84	37	121			
		69.4	30.6	23.9			
	Poor	123	263		386		
		31.9	68.1		76.1		
<i>Haddul Kifayah</i>	Non-Poor	70	89	44	115	159	
		13.8	17.5	36.4	29.8	31.4	
	Poor	137	211	77	271		348
		27	41.7	63.6	70.2		68.5

Under PLI, 48.7% of households are categorized as non-poor (i.e., 51.3% as poor). For SPI only 23.9% of households are reported non-poor (i.e., 76.1% as poor). For *haddul kifayah*, 31.4% reported as non-poor and another 68.5% as poor. While 31.9% of households that PLI non-poor reported themselves as subjective poor, 30.6% of the PLI poor reported as non-poor in subjective poverty measure. This evidence specifies that some households that are non-poor in an objective measurement may still feel poor subjectively. In the same token, other households that are poor in an objective metric could still perceive themselves non-poor in subjective measure.

4.2 Logistic Regression

Logistic Regression analyses are conducted to identify characteristics of the poor using the following approaches: (1) Poverty Line Income (PLI), (2) *Haddul kifayah* and (3) Subjective Poverty Index (SPI).

Logistic regressions are run to determine the effect of the explanatory variables on the likelihood of the person being poor, in each method. Furthermore, table 7,8 and 9 shows the analysis of the logistic regression for the three poverty measurements. For Poverty Line Income, there are three significant variables (age $p=0.081$, child $p=0.042$, own land $p=0.090$). The age, number of child schooling and ownership of land will have influenced on why they are poor based on income poverty. For the β value; age, gender, number of dependency, number of children working, physical, mental and type of house have positive signs and it will increase

the likelihood of a yes to why they are poor based on income poverty measurement. Marital status, number of children staying together, number of children schooling, ownership of the house and land have negative sign and will decrease the likelihood of a yes to the subject matter.

Table 7: Variables in equation for poverty line income

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Age	.015	.009	3.049	1	.081	1.015
	Gender	.242	.206	1.380	1	.240	1.274
	Marital	-.032	.127	.065	1	.798	.968
	Dependency	.037	.093	.160	1	.690	1.038
	Childstay	-.026	.109	.058	1	.810	.974
	Childschool	-.210	.104	4.121	1	.042	.810
	Childwork	.094	.075	1.580	1	.209	1.099
	Physical	.681	.470	2.101	1	.147	1.975
	Mental	.644	.436	2.177	1	.140	1.904
	Typehouse	.106	.126	.698	1	.403	1.111
	Ownhouse	-.042	.134	.096	1	.756	.959
	Ownland	-.150	.089	2.872	1	.090	.860
	Constant	-1.476	.893	2.730	1	.098	.229

a. Variable(s) entered on step 1: age, gender, marital, dependency, childstay, childschool, childwork, physical, mental, type of house, own house, own land.

Table 8 revealed that for *haddul kifayah*, there are three significant variables; the age ($p=0.000$), number of children working ($p=0.007$) and the mental status of the household ($p=0.000$) will influence the poor based on zakat poverty measurement. For the β value; age, gender, marital status, number of dependencies, number of children schooling, ownership of house has positive sign and it will increase the likelihood of a yes to why the poor is based on zakat poverty measurement. The number of children staying together, the number of children working, type of house has negative signs and it will decrease the likelihood of a yes to the subject matter.

Table 8: Variables in equation for *Haddul Kifayah*

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	age	.061	.010	35.226	1	.000	1.063
	gender	.205	.236	.751	1	.386	1.227
	marital	.149	.140	1.140	1	.286	1.161
	dependency	.182	.104	3.047	1	.081	1.199
	childstay	-.030	.121	.063	1	.801	.970
	childscool	.218	.123	3.140	1	.076	1.243
	childwork	-.205	.076	7.192	1	.007	.815
	physical	1.334	.573	5.416	1	.020	3.797
	mental	2.009	.571	12.397	1	.000	7.454
	typehouse	-.176	.144	1.486	1	.223	.839
	ownhouse	.236	.156	2.288	1	.130	1.266
	ownland	.163	.107	2.303	1	.129	1.176
	Constant	-7.141	1.163	37.694	1	.000	.001

a. Variable(s) entered on step 1: age, gender, marital, dependency, childstay, childscool, childwork, physical, mental, typehouse, ownhouse, ownland.

Table 9 shows the subjective poverty measurement that there is only one significant variable, the physical attributes of the recipients ($p=0.13$). Whether physical or the head of household is normal or has any abnormality will influence on why they are poor based on subjective poverty. For the β value; age, gender, marital status, number of dependencies, type of house, ownership of land and house have positive signs and it will increase the likelihood of a yes to why they are poor based on subjective poverty measurement. While the number of children staying together, the number of children schooling, and the number of children working have negative signs and it will decrease the likelihood of a yes to the subject matter.

Table 9: Variables in equation for subjective poverty

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Age	.007	.010	.576	1	.448	1.007
	Gender	.110	.229	.233	1	.630	1.117
	Marital	.085	.139	.373	1	.542	1.089
	dependency	.080	.103	.604	1	.437	1.083
	childstay	-.049	.117	.178	1	.673	.952
	childscool	-.114	.112	1.035	1	.309	.892
	childwork	-.031	.076	.164	1	.685	.970
	physical	2.020	.812	6.194	1	.013	7.538
	mental	-.487	.433	1.264	1	.261	.615
	typehouse	.198	.149	1.767	1	.184	1.218
	ownhouse	.133	.158	.711	1	.399	1.143
	ownland	-.158	.101	2.446	1	.118	.854
	Constant	-1.151	1.110	1.074	1	.300	.316

a. Variable(s) entered on step 1: age, gender, marital, dependency, childstay, childscool, childwork, physical, mental, typehouse, ownhouse, ownland.

The logistic regression model was used to select the significant variables that are believed to contribute to determinants of poverty. As in this study, research problems call for the analysis and prediction of a dichotomous outcome: whether the respondents are poor or non-poor. In general, logistic regression is well suited for describing and testing hypotheses about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables

For the poverty line income, there are three significant variables (age $p=0.081$, child $p=0.042$, own land $p=0.090$). There are three significant variables; the age ($p=0.000$), number of children working ($p=0.007$) and the mental status of the household ($p=0.000$) will influence the poor based on *haddul kifayah* measurement. For subjective measure, only one significant variable, physical ($p=0.13$). If the p-value is less than or equal to the significance level, it can be concluded that there is a statistically significant association between the response variable and the term.

The study identified poverty implying both objective and subjective measures by restricting the analysis to PLI, *haddul kifayah* and SPI. Based on the cross-tabulation test, the study found that some households that are non-poor in an objective measurement may still feel poor subjectively, vice versa. The different measures of poverty would produce different analytical results that, in turn, call for a different set of policy interventions. These findings

point to the needs of tailor-made strategies for the society in order to cope with multifaceted poverty. In the findings, it is shown that 192 out of 481 respondents are identified as poor under all measurements, which are PLI, *haddul kifayah* and SPI (Figure 2). The subjective poverty measurement identified a greater number of poor and needy (386 of respondents) compared to the objective poverty measurement, that is PLI (260) and *haddul kifayah* (348).

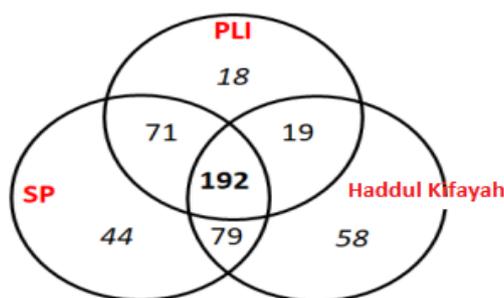


Figure 2: Cross tabulation summary

5.0 CONCLUSION

Poverty, despite being a multifaceted concept, is commonly measured in either absolute or relative monetary terms. However, it can also be measured subjectively, as people form perceptions on their relative income, welfare and life satisfaction. The findings suggest the need to go beyond traditional monetary poverty measures and complement it with multidimensional poverty measures to identify the poor more accurately. The results are critical for policy interventions, especially for monitoring the trends, understanding poverty dynamics, and targeting social assistance programmes. Optimal utilisation of zakat funds can be achieved when the selection of zakat recipients is conducted more efficiently. One of the ways to ensure efficient selection of zakat recipients is by using the proposed multi-faced poverty measures suggested in this study.

Commonly, the poverty measurement methods are from the perspective of parties involved in policy making or researchers but neglect the views of poor people themselves. Instead of viewing poverty from outside which is regarded as incomplete, it is recommended for research to be undertaken that views poverty from the perspective of the poor themselves. Using various tools and methods suited to each locality, this approach would be able to identify the welfare of households such as social wellbeing and freedom of choice, beyond the state of poverty. This would enable the interpretation and understanding of poverty from various dimensions. Social policy makers need both objective and subjective indicators. As such all

three methods can be used collectively as effective measures of poverty. For some purposes, objective indicators are best suited, for other uses subjective indicators are preferable. Assessments of overall life satisfaction are particularly needed to assess comprehensive policy success and to distinguish needs from wants.

To enhance external validity, future research efforts should contain a more representative sample covering all the states in Malaysia, ideally using a longitudinal research design to establish causal relationships among the variables. Thus, the relationship between poverty indicators and socioeconomic indicators could be examined. A longitudinal study would be able to capture the effect of socioeconomic indicators on the welfare of the poor. Hence, the direction of welfare could be analysed, whether moving out of poverty or vice versa.

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