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THE WEIGHTED FAKIR MISKIN INDEX AS AN ALTERNATIVE MEASUREMENT OF POVERTY: A CONCEPTUAL FRAMEWORK

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ABSTRACT

Poverty in Malaysia is commonly conceptualized from the perspective of monetary or income. Economists have argued that the current monetary approach is not able to reflect the multidimensional nature of poverty which has developed due to the rapid economic development process via globalization and liberations of trade and businesses. This paper proposes a multidimensional poverty measurement using index. The proposed method via the Weighted Fakir Miskin Index comprising of nine components is expected to capture a more realistic poverty group. Furthermore, the multidimensional phenomenon of poverty in a more holistic way is envisaged to be captured and is expected to have an impact to the policy makers as it gives a new perspective of measuring poverty.

Keywords: index, poverty threshold, measurements, fakir-miskin

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INTRODUCTION

Poverty has many faces. One sees it in different forms and the image of poverty isn't always what we picture. The most commonly used definition of poverty is monetary (Laderchi, 2000; Asselin&Dauphin, 2001). It is the estimated minimum amount of income necessary to afford basic necessities and sustain human life (Ravallion 1998). Conceptually, the approach of measuring poverty according to income level is inspired by a basic needs understanding of poverty that human require a certain level of physical needs i.e the food and non-food requirement. It assume, naturally enough that lack of these requirements is closely tied to income level which can act as a proxy measurement. The amount of income needed to fulfill these basic needs is known as poverty line income (PLI). Poverty occurs if the income obtained is below the PLI. Poverty using the PLI known as absolute poverty is widely used across the globe to define poverty based on the work of Rowntree (Laderchi, 2000). The definition of poverty in the modern world today however is no longer confined to the monetary approach. It is explained in various ways. Sen (1976,1987,1999) the pioneer of the capability approach argues that poverty should be viewed as the deprivation of basic capabilities rather than merely as lowness of income. This approach includes non monetary items such as life expectancy, literacy and infant mortality in defining poverty. Poverty indexes are then formulated to identifiy the poor as well as to measure the level of poverty. Later, social exclusion was introduced as an extension of the capability approach. Today, poverty is accepted as a multidimensional phenomenon using various methods such as the Participatory Poverty Assessments (PPA) method which incorporates the perspective of poverty from the poor themselves.

Despite all these approaches, poverty in Malaysia is still commonly conceptualized and operationalized from the perspective of monetary approach and widely used in policy and decision making Economists have argued that the current monetary approach is not able to reflect the multidimensional nature of poverty which has developed due to the rapid economic development

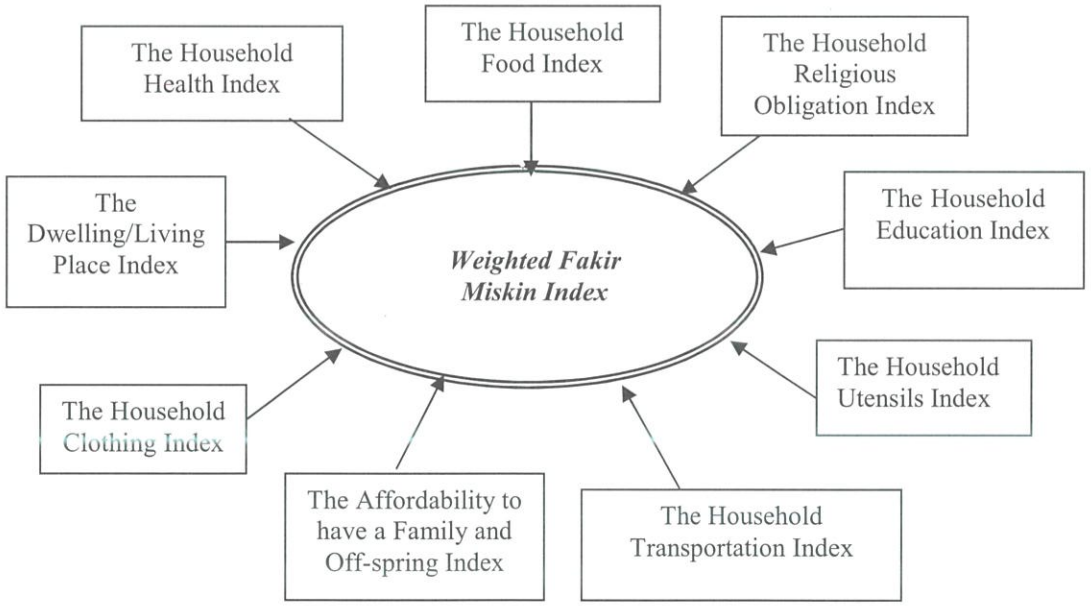
process via globalization and liberations of trade and businesses. Wagle (2005) emphasized that monetary based approaches, namely income and consumption are unidimensional and unable to capture multiple dimensions of poverty. Nolan and Whelan (2009) stressed that non monetary indicators together with financial or income data would be able to improve the measurement and understanding of poverty. On the other hand, Sen (1999,2000) pointed out the capability and social exclusion as a more appropriate method. The inclusion of more comprehensive indicators would enable a more holistic poverty measurement. Therefore, the objective of this paper is to propose a poverty measurement method using index known as the weighted fakir miskin index (FMI_w) which incorporates various components of wellbeing.

THE WEIGHTED FAKIR MISKIN INDEX

This paper proposes to use the concept of index which is a method used to measure magnitude of change over time or place or individuals. By using this method, comparisons can be made with greater ease. For instance, the Human Development Index (HDI) developed by United Nations (UN) is able to compare the level of human development from one country to another. Specifically, HDI looks at the level of development in seven categories such as trade structure, gender empowerment and unemployment. Thus, index is a useful tool to measure changes according to time. In Malaysia, Economic Development Index (EDI) and Malaysian Quality of Life Index (MQLI) are used to measure the effectiveness of the development policies of the country. For example, EDI is used to measure economic achievements from the perspective of economic development indicators. On the other hand, MQLI compares socio-economic achievements in areas such as health, education and entertainment.

The proposed index would be based on the Human Poverty Index which was developed by Sen (1976) and adopted by United Nation Development Program (UNDP). Mohd Fauzi (2006) further developed this method in his study on natives in Malaysia. The Weighted Fakir Miskin Index (FMI_w) is a composite index comprising of nine components or sub indexes (refer figure 1).

Figure 1: The Nine Components of Weighted Fakir Miskin Index (FMI_w)



Note : FMIw covers the whole household (the head and the members of family)

Next is to develop an equation for the proposed index. Mathematically it refers to the following procedures as follow:

Formally, the weighted mean of a non-empty set of data

$$[x_1, x_2, \ldots, x_n],$$

with non-negative weights

$$[w_1, w_2, \ldots, w_n],$$

is the quantity

$$\bar{x} = \frac{\sum_{i=1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i},$$

which means:

$$\bar{x} = \frac{w_1 x_1 + w_2 x_2 + \cdots + w_n x_n}{w_1 + w_2 + \cdots + w_n}.$$

Therefore variable with a high weight contributes more to the weighted mean than does with a low weight. The weights cannot be negative. Some may be zero, but not for all of them (since division by zero is not allowed).

The formulas are simplified when the weights are normalized such that they sum up to **1**, i.e.

$$\sum_{i=1}^{n} w_i = 1$$

.

For such normalized weights the weighted mean is simply

$$\bar{x} = \sum_{i=1}^{n} w_i x_i$$

Refering to the above procedures and to the nine identified components, the equation of weighted fakir miskin index is extended as follows:

$$FMI_w = \left[\frac{w_1 Z_1^{\,9} + w_2 Z_2^{\,9} + w_3 Z_3^{\,9} + w_4 Z_4^{\,9} + w_5 Z_5^{\,9} + w_6 Z_6^{\,9} + w_7 Z_7^{\,9} + w_8 Z_8^{\,9} + w_9 Z_9^{\,9}}{w_1 + w_2 + w_3 + w_4 + w_5 + w_6 + w_7 + w_8 + w_9} \right]^{1/9}$$

with FMI_w = Weighted Fakir Miskin index
w_1Z_1 = The Household Food index
w_2Z_2 = The Clothing Index
w_3Z_3 = The Dwelling/Living Place Index
w_4Z_4 = The House Education Index
w_5Z_5 = The Household Health Index
w_6Z_6 = The Affordable to have a Family and Off-spring Index
w_7Z_7 = The Household Utensils Index
w_8Z_8 = The Household Religious Obligation Index
w_9Z_9 = Indeks Household Transportation Index
$w1, w2 \ldots\ldots w9$ = weights

The weight of each of the variables would be calculated based on the rankings given by the scholars. Finally, FMI_w computation and interpretation together with threshold determination would be carried out (refer table 1).

Table 1: Values of FMIw and the Poverty Interpretation

Value of FMIw	Poverty Interpretation
0.00 – 0.20	Non-poor
0.21 – 0.40	Slightly poor
0.41 – 0.60	Moderately poor
0.61 – 0.80	Poor
0.81 – 1.00	Hard-core poor (Fakir)

CONCLUSIONS

The study is expected to enhance the understanding of poverty measurement in Malaysia. This is because the multidimensional poverty measurement method is envisaged to suite the current rapid changes of the Malaysian economy. The proposed measurement method would be able to capture a more realistic poverty group. The identification of this poverty group would enable the relevant authorities to draw more appropriate and effective distributive methods and programmes that would be able to reduce the incidence of poverty in the country. This could be achieved as the proposed poverty measurement method would be able to address the multidimensional factors that prevail in Malaysia. The introduction of the proposed index would provide an alternative method in identifying the poverty group to policy makers from a different perspective. The FMIw is envisaged to reflect the multi- dimensional phenomenon of poverty in a more holistic way. Thus, a study to develop this proposed index is deemed necessary and should be undertaken with immediate effect to address the issues highlighted in this paper with regards to poverty measurement.

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Sekian, terima kasih.

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