SOCIO-ECONOMIC DETERMINANTS OF POVERTY AMONGST FEMALE-HEADED HOUSEHOLDS IN A SOUTH AFRICAN TOWNSHIP

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ㅡAbstractㅡ

The study reported here used household level data to analyse determinants of household poverty amongst female-headed households in a South African Township of Bophelong. Poverty is defined and then measured for the sampled population. A Logistic regression was estimated based on this data with the economic status (that is poor and non-poor) as the dependent variable and a set of demographic variables as explanatory variables. The results show that household size, the age and employment status of the head of household significantly explain variations in the likelihood of being poor. Household size was positively associated with the probability of being poor, whereas the age and employment status of the head of the household reduces the probability of being in the poor category. It is of interest to note that the educational attainment of the household head is not important in reducing the chances of being a poor household. Information provided through this study is at household level and extends on existing findings on poverty in South Africa by modelling and determining the various socio-economic and demographic household level indicators responsible for female poverty.

Key Words: *Poverty, Female-Headed Households, Township, South Africa*
JEL Classification: D12, I32, J11, J16.

1. INTRODUCTION

Enquiry into the socio-economic challenges of women is not new. In the 1970s, the UN declared the 1970s a women's decade as a result of various women pressure groups. The UN's General Assembly urged governments to formulate policies that incorporate women in the planning process (Venter & Marais, 2005). The growing attention to gender issues has been propelled by a growth in households headed by female. This growth has been observed in both developed and developing nations. In the United States of America (USA) the number of females raising up children on their own more than doubled from 13% to 30% in

22 years from 1970 to 1992 (Triegaard, 2005). In Philippines, the number of female-headed households increased by 42.7% during the period of 1988 to 1997 (Moranda et al., 2005). A study by Venter and Marais (2005) found that 41, 9% of all households in South Africa were headed by females in 2001.

Research indicates that women are over represented among the poor (Venter & Marais, 2005; World Bank, 2001). Delius and Schirmer (2001:16) found a high prevalence of poverty among females in rural areas in South Africa. Female poverty in rural areas was found to be a legacy of the migrant labour system in which men found urban jobs and left women behind, often dependent on infrequent or non-existent remittances. In many instances, migrants never returned to their rural homes. In South Africa, the existing literature on the determinants of female poverty is populous with the models majorly on national studies. The study reported here extends the existing literature on poverty in South Africa by modelling and determining the various socio-economic and demographic household level indicators and factors responsible for poverty in South Africa. A sample of households was interviewed in the township of Bophelong. A regression model is used with two dependent variables (0=non poor, 1=poor) and a set of demographic and socio-economic variables as explanatory variables. The aim is to highlight the determinants of poverty among female headed households in a South African Township.

The next section will provide a literature review of female headship and poverty. Following that will be an explanation of the research methodology. The empirical findings will be discussed in section 4, followed by a discussion and conclusion of the study.

2. POVERTY AND FEMALE-HEADED HOUSEHOLDS

The term household is defined by as a group of related or unrelated people living in a dwelling unit or its equivalence, eating from the same pot, and sharing common housekeeping arrangements (World Bank, 2001:1). According to this definition, the term is not only restricted to related people but to any group of people dwelling in the same house. A household usually has the head who is a household member with authority and income earning responsibility. The head of the house is usually nominated but can also take the headship even without any form of nomination. The male is usually the one who heads the household. In the absence of the male figure, a female family member takes over the role of headship giving rise to a female-headed household scenario (Ngwenya, 2008).

The research interest in household headship arises because of the perceived economic and social differences between male-headed and female-headed households. Female-headed households have become a concern because of the high incidence of poverty and food insecurity in those households. They have therefore become a focus of economic and social policy both in developing and developed nations (Ngwenya, 2008). Female-headed households can be understood from two perspectives and these are the 'de jure' and 'de facto' households (Martins, 2008). A de jure female-headed household exists where the head of the household is an unmarried woman, divorced or may have been married before but are widowed with no husband in existence in the household. On the other hand, a de facto female-headed household is when the head of the household in practice is a female due to the fact that the male head is absent throughout the year or for a longer period. The wife becomes the main decision maker during the husband's absence and thus heads by default. In South African literature, most households are referred to as de facto situation, where a woman heads the household in the absence of a husband (Liddel et al., 1991: 3). A female-headed household can also be explained as a situation where the main decision maker and the economic provider for the household is a woman regardless of her marital status. These households are usually embedded in a network of relationships for survival. The networking relationships are usually heavily dominated by women. Sometimes men may be present in these households but they are often few and less stable (Lingam, 1994).

From an empirical point of view, there has been number of studies shedding light on the factors that can contribute to one's poverty status. These studies either look at the characteristics of the household as a whole or that of the household head as possible determinants of poverty. Household level determinants of poverty generally rely on the household level data. Age, gender of the household head and educational level are generally found to be some of the most important determinants of poverty. A study by Malik (1996) concluded that households whose heads are in higher age groups have a lower possibility of remaining poor households. Moreover, years of schooling of the head of the household also significantly reduce the probability of remaining in the poor group (Minot & Baulch, 1997). Households headed by males are found to have a lower probability of being poor compared to those headed by female (Geda et al., 2005). Family size and dependency ratio are positively related with the level of poverty (Malik 1996, Minot and Boulch 2005). The other factors like the gender of the household head and the occupation or industry also influence the poverty level.

3. RESEARCH METHODOLOGY

3.1. Survey design

The research reported in this article is based on a survey using questionnaires. Questions applicable to this study were selected and arranged in a manner that could yield meaningful results in a cost effective manner. The format and contents of the questionnaire were finalised only after the questionnaire was pre-tested. A total of 585 households were randomly interviewed between Jan and April 2012. Of the total sample, 289 were found to be headed by females. This data was extrapolated and analyzed to serve the purpose of this study. Bophelong is an urban township established in 1955 on the outskirts of the industrial town of Vanderbijlpark as a dormitory township for cheap black labour for surrounding industries. The area belongs to the Emfuleni Municipality, on the southern part of the Gauteng Province in South Africa. The heart of Bophelong remains in the old township where a few amenities exist – a clinic, a library, council offices, a satellite police station and a few local shops. The population in Bophelong is estimated at 37779, and the number of households is estimated at 12352.

Previous studies have found seemingly high poverty levels in the area; where 67% of the households were found to be living below their poverty lines in 2003 (Slabbert, 2003). A study by Sekhampu (2004) reported that 62% of the households were poor. Furthermore, of those who were found to be poor, 45.8% had an income of less than 50% of the poverty line. A similar study by Slabbert (2009) revealed increasing levels of poverty where 69% of the sampled population in Bophelong was found to be poor. For this study, an analysis of the demographic information of the respondents showed that the youngest household head was 18 years, with the oldest at 90 years old. The average household size was calculated at 4 members per household. The marital status of the respondents showed that 33.9% of household heads were married. On average, female-headed households had primary schooling education (6.27 years of schooling).

3.2   The measurement of poverty

Following the guidelines of the World Bank, a poor household is defined as a household of which the combined income of all its members is less than the Household subsistence Level (HSL) as determined for the specific household. If the combined income of a household is described by y_i and the poverty line (HSL) of the same household is described by z_i, the extent of poverty, P_i, of this household is described by P_i (y_i; z_i) (Slabbert, 2004). The headcount index is defined as the fraction of the population below the poverty line. Another measure

for poverty is the poverty gap. The poverty gap measures the average shortfall of the incomes of the poor from the poverty line while the poverty gap index measures the extent of the shortfall of incomes below the poverty line.

Using the 2000 Income and Expenditure Survey data, Statistics South Africa estimated that when consuming the kinds of foodstuff commonly available to low-income South Africans, it costs R 211($26.37) per person every month to satisfy a daily energy requirement of 2261 kilocalories. This means that R211 ($26.37) is the amount necessary to purchase enough food to meet the basic daily food-energy requirements for the average person over one month. Another consideration is the need by households for other goods and services beyond food in order to meet basic needs. This includes accommodation, electricity, clothing, and schooling for children, transport and medical services, amongst other things. The cost of such essential non-food items were estimated at R111 ($13.88) per capita per month. Adding these figures together (R 211 and R111) gives an estimate of the minimum cost of essential food and non-food consumption per capita per month. It gives a poverty line of R322 per capita per month in 2000 prices (Statistics South Africa, 2007). When increased with inflation, the threshold amount to R570 in 2010 prices (Statistics South Africa, 2011). For this study the poverty line was adjusted for inflation and calculated at R593 ($74) per capita per month. Statistics South Africa suggests that expenses attributable to children and adults in poor households are of similar magnitude. By estimating the cost of an additional male/female of various ages when added to a baseline household of two adults, it can be shown that the cost of a child in South Africa is roughly the same as the additional cost of an adult. This suggests that the additional complexity of adult equivalence calculations may be unnecessary (Stats SA, 2001).

3.3   Regression model

The study used a logistic regression with two different dependent variables of dichotomous nature. The households are classified as either poor or non-poor based on their per capita income (as per methodology explained above). Predictor variables are a set of demographic and socioeconomic variables. In a logistic regression model, the probability, p, that a household is non-poor is given by

$$p = \frac{e^z}{1 + e^z} \qquad (1)$$

Logistic regression analysis is premised on the logit transformation of p given by Z

$$Z = \ln\left(\frac{p}{1-p}\right) \tag{2}$$

where

$$Z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 .... \ell_t \tag{3}$$

Where β_0 is the vector of unknown parameters (Intercept); and ℓt is the error term. The following socio-demographic characteristics are therefore hypothesized to influence total household expenditure: β_1 household size, β_2 age of the head of household, β_3 education attainment of the household head, β_4 employment status of the household head, and β_5 marital status of the household head.

4. EMPIRICAL FINDINGS

4.1. Poverty and the demographic characteristics of the respondents

The headcount index for the sample population is calculated at 0.687. This means that 68.7% of the sampled households' income was found to be below their respective poverty line when using R593 ($74) per capita poverty line. The average household size for the poor was calculated at 4. This is in comparison to a household size of 3 for the total sample population. The poverty gap is the mean shortfall of the total population from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line; it adds up the extent to which individuals on average fall below the poverty line. This measure reflects the depth of poverty as well as its incidence. The poverty gap can also be interpreted as an indicator of the potential for eliminating poverty by targeting transfers to the poor. The minimum cost of eliminating poverty using targeted transfers then becomes the sum of all the poverty gaps in a population; every poverty gap is filled up to the poverty line (Ravallion, 1992). The poverty gap index for Bophelong is calculated at 0.58 using the survey data. This means that on average, poor households have an income shortage of 58% of their poverty line. This represents the average amount needed by a poor household to make up the difference between average household income and the poverty line.

4.2 Socio-economic determinants of poverty

The results of the logistic regression on the determinants of poverty amongst female-headed households are shown in table 1. The table shows the regression coefficients and marginal effects of each of the explanatory variables. The result of the survey show that households size (HH_Size), employment status (ES_Head) and the age of the head of household (Age_Head) significantly explains the poverty status of a household. The sign of the coefficient for household size show that larger family sizes contributes positively to the

probability of becoming a poor household. The coefficient for the variable is positive and significant at 1%. Results suggest that household size contributes 9.1% to the probability of being a poor household. The households were the head of the household is employed have a lower probability of being poor. The marginal effect of the employment status of the head is 25%. The age of the head of the household is important for reducing the probability of remaining a poor household. The coefficient for age is negative and significant at 1%. Moreover, the marginal effect for the age of the head of the household shows a contribution of 0.8% in reducing the probability of being a poor household. The educational level of the household measured by the number of years of schooling is not found to be significant in explaining the poverty status of the household. This is contrary to a well held view that education can help in improving the socio-economic status of a household. The marital status of the household was not significant in predicting the poverty status of the household.

Table 1: Socio-economic determinants of female poverty

	Coef.	Std. Err.	z	P>|z|	Marginal
HH_size	0.5241815	0.09247	5.67	0	0.0908788
MS_head	-0.1054526	0.318957	-0.33	0.741	-0.0182826
Educ_head	-0.0409555	0.046705	-0.88	0.381	-0.0071006
ES_head	-1.446647	0.32524	-4.45	0	-0.2508093
Age_head	-0.0439167	0.01112	-3.95	0	-0.007614
Constant	1.718248	0.752591	2.28	0.022	

Pseudo R2 = 0.1815   LR ch2 (5) = 66.43
Prob > chi2 = 0.0000   Log likelihood = -149.7973
N = 289

5. CONCLUSION

The aim of the study reported here was to analyse the determinants of poverty amongst female-headed households in a South African Township. A sample of female-headed households in Bophelong was analysed, with the poverty status (o=non-poor and 1=poor) as the dependent variable and a number of socio-economic characteristics as explanatory variables. The results of the study show that the age of the head of the household is negatively associated with the probability of being poor. The result is consistent with that of the Khalid et al., (2005) but does not coincide with the findings of Baulch and McCulloch (1998) who report that no significant effect on the poverty status is made by the age of the head of the household. It is worth noting that for the model, the coefficient of age of the head of the household is highly significant. Other important

explanatory variables are the employment status of the household head and the household size. Household size is an important factor and can play a role in bringing down the incidence of poverty by reducing the probability of remaining in the poor household category. For this study, larger household sizes were associated with a higher probability of being poor. The increasing family size implies a larger number of dependents on fewer earners and this might lead to fewer earning and lesser per capita consumption. This finding is consistent with that of Okurut et al., (2002) who reported that large households are likely to be poor. The age of the household was asscoaited with a negative chance of being in the poor category. Older persons in South Africa are eligible for the state's old-age grant ; the grant is means tested and given to people older than 60 years old. It is worth noting that the educational level of the household head (measured by the number of years of schooling) was found not to be significant in explaining the poverty status of female-headed households in Bophelong. This is inconsistent with a well held tenet that education can ameliorate the impact of poverty. The marital status of the head of the household was not significant in explaining the variations in the poverty status of households. This was expected a households interviewed were headed by females. About 33.9% of household heads reported that they were married.

The analysis presented above enables policy makers to clearly see the effect of various household characteristics on poverty amongst female-headed households in a South African context. Moreover, the study provides the factors which are strongly related to the poverty status of a household, specifically female-headed households. Information provided through this study is at household level and extends on existing findings on poverty in South Africa by modelling and determining the various socio-economic and demographic household level indicators responsible for female poverty. Strategies aimed at reducing female poverty can be directed at these factors.

6. BIBLIOGRAPHY

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