Investigating the Level of Poverty and the Means of Survival among Female-headed Households in a South African Township

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ABSTRACT The paper uses cross sectional survey data to analyse poverty among the female-headed households in a South African Township. Due to the multidimensionality of the term poverty, this study had to specifically adopt an income definition where households falling below their income poverty line were deemed poor. Binary logistic regression model was used to estimate the determinants of poverty. The dependant variable was the households’ economic status (poor and non-poor) and a set of socio-economic and demographic variables used as explanatory variables. The results show that the household size, the age of the household head and total household income significantly explain variations in the likelihood of being poor. Different methods of survival were collected for each household. Results indicate several survival strategies, with some having long term health inferences, calling for immediate policy intervention.

INTRODUCTION

There has been an observed increase in the number of female-headed households worldwide (Milazzo and van de Walle 2015; Snyder et al. 2006) and the interest in these households is plenty (Bilenkisi et al. 2015; Khalid and Ukhtah 2011). The increase in female household headship has impelled various governments to elevate women, with the main purpose of addressing specific female related challenges and enhancing the physical and mental development of affected children (UN 2005). Also, it is well known and acknowledged that women are becoming key economic players with contributions that cannot be ignored both to society and to economic development (International Development Research Centre 2013).

Poverty studies in female-headed households have taken various dimensions. Rajaram (2009) studied poverty among female-headed households in India. Horrell and Krishnan (2006) focused on poverty and productivity among female-headed households. Snyder et al. (2006) concentrated on household composition and poverty among female-headed households with children, while Khalid and Ukhtah (2011) studied poverty dynamics in female-headed households. All these studies have made meaningful contributions to policy formulation and have created a fundamental basis for further studies. It is noteworthy to mention that a research gap exists on the survival means of the poor female-headed households.

Poverty, Women and Survival Means

Poverty is an elusive and contested term, capturing a wide range of dimensions which include social, economic, political, income, health and access to resources. Poverty therefore may have different meanings to different people depending on the type of definition used. According to Goulden and D’Arcy (2014), poverty is the inability to meet a range of needs. Due to diverse poverty definitions, researchers report different poverty figures since fickle indicators are used. In South Africa, diverse definitions and measures are used, ignoring the terms of the 1995 Copenhagen Declaration of adopting an official measure of poverty (Nooble et al. 2004).
Owing to the discord in poverty explanation, this paper adopts income poverty definition which is in line with Kabubo-Mariara et al. (2012) who purports that traditional studies of welfare measure poverty in terms of deprivation, based on incomes.

Defining a household is an on-going process. The World Bank (2001) defines a household as a group people living in the same unit, sharing housekeeping arrangements and possessing a culturally specified socio-economic boundary. The head of the household is therefore a household member with authority and income-earning responsibility (Barros et al. 1997). In the case of a female-headed household, the female member is the one responsible for main decisions and the income of the household (Buvinic and Gupter 1997). Female-headed households are regarded as the most vulnerable households due to their lack of access to resources, property, land and finance (Faxton 2015). They also bear a bigger share of poverty in South Africa (Rogan 2014).

The sources of poverty among women can be countless. Bilenkisi et al. (2015) suggest discrimination, low education levels and the wage gap between male and female earnings as the sources of women poverty. Recent data by Ledwith and Munakamwe (2014) indicates that the gender pay gap persists in South Africa where lack of human capital among women is the male-factor. According to Bhorat and Goga (2012), gender-based pre-labour market factors account for low employment among women. On the other hand, the World Bank (2005) blames the discriminatory policies and practices among governments regarding decision making on issues relating to women. Another contributory factor to poverty among women is high dependency ratio and higher share of children in households headed by women (Milazzo and van de Walle 2015).

There is also high incidence of poverty among female-headed households in rural areas (Medeiros and Costa 2006). Male counterparts immigrate to cities in search of employment and in most cases, never return. Though living in rural areas where land is vast, women remain landless since land rights for women are neither a reality nor a priority on the ground to most governments (Prosterman 2013). This makes women poverty a social and an economic problem (UN 2005), since it relates to the allocation and distribution of resources (Bilenkisi et al. 2015). Traditionally, the African society discriminates against women regarding inheritance, decision making, even on issues that pertain to their own lives and wellbeing (Gangopadhyay and Wadhway 2003). This increases female poverty. The gap therefore, between male and female poverty is a result of the gap between theory and reality in women’s rights, policies and access to property and resources (World Bank 2005).

The prevalence of poverty among female-headed households poses several challenges on their survival means. With low human capital prevalent among women, the majority of them are concentrated in low pay, long hours, minimal-benefit jobs and are often in the lower echelons of the formal sectors (Chant 2007). However, with the increase in female labour force participation and the emphasis on the affirmative action, more women are now seen taking well-paying and challenging jobs in South Africa. Many, however still rely heavily on remittance and state welfare. Heavy reliance on state welfare causes the recipients to suffer poverty and lack in times of irregular and remittance delays. According to Schmidt (2005) some resort to committing crime (shoplifting and prostitution) as a means of survival.

Objectives of the study

Research indicates gender bias in poverty incidence where women carry bigger share in deprivation and lack. With the rise in the households headed by women, this paper primarily aims at highlighting poverty incidence among female-headed households. The paper focuses on a South African township of Bophelong where poverty has been perceived high by previous studies (Sekhampu 2013; Dunga and Sekatane 2014). Furthermore, an investigation will be made on the survival mechanisms at a household level of the female-headed households. The other motivation is to add to knowledge-base on the subject of poverty and survival mechanism for female-headed households within the South African context.

RESEARCH METHODS

Cross-sectional data was collected from Bophelong Township falling under Emfuleni
Municipality in the Gauteng Province of South Africa. Like any other Townships in South Africa, Bophelong houses mainly Black residents with 99.12 percent of the population being Black (Census 2011). Door to door personal interviews were done by means of structured questionnaires, administered by the principal author with the assistance of four trained interviewers. The survey questionnaire was pilot-tested before its distribution and necessary adjustments were made. Ethical considerations such as the respondents' right to confidentiality and privacy, protection from harm, anonymity and informed consent were strictly adhered to in line with Nunnally (1978). A total of 301 questionnaires were randomly administered and 171 households were found to be female-headed in March 2012. A further 60 questionnaires targeted at female-headed households were interviewed, making a total sample size of 231 female-headed households. Census (2011) found a total number of 14 257 households in Bophelong. This sample was considered representative and was in line with a survey by Slabbert (2009) who had a sample size of 286 households. The questionnaire was adapted from Slabbert 2009 and edited to fit the research focus.

**Measures of Poverty**

Due to the lack of a definitive national delineation of poverty in South Africa, there is therefore no nationally adopted poverty-measurement method. For this study, the cost of a minimum basket of goods that would satisfy the necessary daily energy requirement per capita per month was used. This was recommended at 2 261 kilocalories per capita per month by the African Medical Research Council (SAMRC) (Bhorat and Westhuizen 2010). Using the year 2000 Income and Expenditure Survey data, Stats SA (2000) estimated that it costs R211 per capita per month. A further consideration of other goods and services which include accommodation, energy, clothing, transport and medical services, were estimated by SAMRC to be at R111 per capita per month. This gives a poverty line of R322 per capita per month in 2000 prices. This paper adopted this poverty line and adjusted it for inflation, using the published inflation figures by Stats SA up to March 2012. The poverty line in this paper, based on the above method was R584 per capita per month. The household poverty line was calculated by multiplying R584 by the number of people in the household.

Poverty rate, calculated as the number of households falling below poverty line among the female-headed households was 75 percent. The poverty gap ratio, defined as the average difference between poor households’ income and the poverty line was measured by the formula according to Ravallion (1992):

\[
\frac{1}{N} \sum_{i=1}^{N} \frac{1}{Z_i} \left( Z_i - Y_i \right)
\]

Where:
- \( Y \) = income of poor household,
- \( Z \) = poverty line,
- \( N \) = total number of population,
- \( q \) = number of the poor

This poverty gap ratio was 0.58, meaning that on average; the poor needed 58 percent of their current income to reach their respective poverty lines.

**Regression Model**

The study used binary logistic regression model to determine the effects of some demographic and socio-economic characteristics of the households. Households were classified as either poor or non-poor based on their per capita income (as per methodology explained above). Independent variables were a set of demographic and socio-economic variables. Income poverty was used to categorise households as poor or non-poor based on the poverty line explained above. The objective was to predict factors that make a household poor or non-poor by creating a binary dependant variable (Household Poverty Status, 1 for poor and 0 for non-poor) The selection of these variables was in line with the studies by Myftaraj et al. (2014), Giang et al. (2014) and Yousaf (2014). Quantitative variables selected were household income, age of the household head and the household size. Categorical variables were the employment status of the household head (coded as 1, employed and 0 otherwise) and the marital status of the head (coded as 1, married and 0 otherwise). The logistic regression model was explained through the equation:

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \ldots
\]

In the model, \( Y \) is the poverty status, \( \beta \) is the intercept, and is the error term. The following socio-demographic characteristics were there-
fore hypothesized to influence household pov-
erty; \(X_1\) household size, \(X_2\) age of household head, \(X_3\) marital status of household head, \(X_4\) employment status of household head and \(X_5\) total household income.

If \(P_i\)denotes the probability that the \(i\)th household is below the poverty line and its distribution depends on the vector of predictors (poverty determinants) \(X\), then this can be explained by:

\[
\log \frac{P_i}{1-P_i} = \sum \beta_j X_{ij}
\]

(3)

As a result, the model can be written in terms of the probability of being poor as follows:

\[
P_i=\frac{\exp(\beta_0+\beta_1X_i)}{1+\exp(\beta_0+\beta_1X_i)}
\]

(4)

To illustrate it in terms of the probability of being non-poor, it follows that:

\[
1-P_i = \frac{1}{1+\exp(\beta_0+\beta_1X_i)}
\]

(5)

RESULTS

Descriptive Statistics

This section presents the findings of the study. The results obtained were at household level and were meant to represent the trends among township dwellers in a South African set up. Demographic characteristics of the head of the households are shown in Table 1.

The employment status indicates that only 21 percent \((n=49)\) of the household heads were formally employed, 32 percent \((n=74)\) were unemploye and 39 percent \((n=90)\) were economically inactive. In terms of age only 5 percent \((n=11)\) of the heads were below the age of 20 years and a staggering 34 percent \((n=79)\) were aged 60 years and above. With a mere 4 percent \((n=9)\) indicating that they were married household heads, the majority of the respondents 40 percent \((n=93)\) reported that they were never married. On the education front, Table 1 presents high levels of illiteracy among the household heads where 44 percent \((n=102)\) could not read or write, 24 percent \((n=55)\) had not reached Matric level and none had a degree.

Determinants of Poverty

To test the goodness of fit of the model, omnibus tests and the \(R^2\) coefficient of determination were done, as shown in Table 2. The omnibus tests of model coefficients (OTMC) uses chi-square tests to see if there is a significant difference between the standard model and the model used. In the model, the chi-square was highly significant (\(Chi-square=153.308, df=5, p<.000\)) making this model significantly better.

<table>
<thead>
<tr>
<th>Table 2: Omnibus tests of model coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Step</td>
</tr>
<tr>
<td>Block</td>
</tr>
<tr>
<td>Model</td>
</tr>
</tbody>
</table>

The \(R^2\)are pseudo \(R^2\), meaning that they are similar to \(R^2\) in multiple regression but do not carry the same interpretation. The Nagelkerke \((R^2)\) estimate is calculated in such a way as to be constrained between 0 and 1; with a better mod-
INVESTIGATING THE LEVEL OF POVERTY AND THE MEANS OF SURVIVAL

el displaying a value closer to 1 (Nagelkerke 1991). The larger the Cox and Snell estimate the better the model; but it cannot be greater than 1. Table 3 shows that the Cox and Snell estimate \( R^2 \) was 0.599 while the Nagelkerke indicator \( R^2 \) was 0.876. Gujarati (2004) asserts that for cross-sectional data, there are high possibilities of obtaining low \( R^2 \) values, possibly because of the diversity of the units in the sample and the existence of various explanatory variables.

Table 3: Coefficients of determination

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox and Snell (( R^2 ))</th>
<th>Nagelkerke (( R^2 ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39.905*</td>
<td>0.599</td>
<td>0.876</td>
</tr>
</tbody>
</table>

The results of binary logistic model are reported in Table 4. Household size and the total household income significantly caused poverty among these households, both significant at 1 percent. The age of the household head was significant at 5 percent. The marital status and the employment status were not significant. Total household income was negatively related to poverty while all the other selected variables had a positive relationship with poverty status. The higher the age of the household head the higher the probability of that household to be poor. Also the household size related positively with poverty. Table 4 also shows that the employment status and marital status were positively related to poverty.

Female-headed Households Survival Means

The female-headed households were characterised by high unemployment and in cases where employment existed, it was on the low paying job sectors with high job insecurity. This poses a question on their survival mechanisms. Table 5 below shows information on income sources for the household head and members. Also the adopted survival means of the female-headed households is shown.

Table 5: Sources of income and the means of survival for FHH

<table>
<thead>
<tr>
<th>Survival means</th>
<th>Absolute frequency</th>
<th>% of households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from employment</td>
<td>65</td>
<td>28</td>
</tr>
<tr>
<td>Informal Employment</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>Old age pension</td>
<td>79</td>
<td>34</td>
</tr>
<tr>
<td>Other government grants</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Child grant</td>
<td>182</td>
<td>79</td>
</tr>
<tr>
<td>Subsidies</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Sale of assets</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Income from family</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>Income from partner</td>
<td>46</td>
<td>20</td>
</tr>
<tr>
<td>Borrow from neighbours</td>
<td>97</td>
<td>42</td>
</tr>
<tr>
<td>Odd jobs</td>
<td>46</td>
<td>20</td>
</tr>
<tr>
<td>Meal skipping</td>
<td>115</td>
<td>50</td>
</tr>
<tr>
<td>Porridge</td>
<td>62</td>
<td>27</td>
</tr>
</tbody>
</table>

In Table 5, only 28 percent \( (n=65) \) of the respondents were reported as having income from employment. This figure was higher than the number of employed household heads due to the existence of employed household members who were not heads of the households. Overall, it is clear that the government grants were the most common source of survival among these households. The majority of the households 79 percent \( (n=182) \) received child grant, over one third \( (34\%) \) received old age pension and 10 percent \( (n=23) \) received other government grants. 50 percent \( (n=115) \) involuntarily skipped meals while 42 percent \( (n=97) \) borrowed food from their neighbours.

DISCUSSION

According to this paper, the household size, household income and the age of the house-
hold head were significant predictors of poverty in the female-headed households in Bophelong. These three determinants were in line with findings by (Twerefou et al. 2014) who asset the main determinants of poverty to be income, household size and the household head age. A different study by Khalid and Ukhthah (2011) found that the probability of female-headed households to be poor is seen to decline with the rise in the age of the household head. Contrary to the above, Baulch and McCulloch (1998) found that the age of the head of the household has no significant effect on the poverty status. In this model, household size was highly significant where a big family size implied a larger number of dependents on fewer earners. This leads to small earning per capita, hence poverty. In the same manner Khatun (2015) found a strong positive relationship between poverty and household size and a negative relationship between poverty and household income Khatun (2015).

The age of the head of the household was found to be significant where high poverty incidence was found in households led by aged women. This can be due to various peace jobs that young household heads can take compared to older ones. A study by Bogale et al. (2005) found a significant relationship between poverty and the age of the household head. Their study however diverts from the current study in that they concluded that the probability of a household being poor tends to diminish as age of the household head increases. Contrary to these results Simpa (2014) found age insignificant. The employment status of the head of household is another important explanatory variable and was positively associated to probability of being a poor household. This can be caused by low wages obtained due to low paying jobs taken by women. Also, the employment status of the head of household failed to predict the poverty status among the female-headed households in Bophelong. The household income was the only factor that was negatively related to poverty.

The most common survival strategy was income from state grants. Of particular concern is that this income has its main mandatory like taking care of the old (old age pension) and taking care of the child (child grant). It is then diverted to become the main household income. Other survival means included borrowing, sale of assets, meal skipping and doing odd jobs. The results of this study concur with (Simpa 2014) who found meal skipping, borrowing from friends and relatives and sale of assets common survival means among female-headed households in Nigeria.

CONCLUSION

This paper investigated poverty and the means of survival among female-headed households in a township in South Africa. The poverty was reported high (75 present poverty rate) and the poverty gap ratio was 58 percent. Low income, large household size and the age of the household head significantly caused poverty among female-headed households. Other socio-economic characteristics such as marital status, educational background and employment status of the household heads were found to be statistically insignificant. Total household income among the female headed households was found to be meagre due to low earnings. In cases where a female was employed, it would be in the lower ranks and mostly within poor paying sector jobs such as domestic work and child minding. Most households were forced to craft unfamiliar means of survival like selling of personal belongings, engaging in menial jobs, illegal activities and skipping of day-meals. Survival by meal skipping threatens the nutritional status and health development of children in the female-headed households.

RECOMMENDATIONS

Based on the findings, the following recommendations are proffered. Firstly, priority should be given to aged female household heads in the intervention programmes. The governments should introduce a welfare programme to provide food and education opportunities for their children. Secondly, promotion of education in the girl child is recommended. This can be done by creating gender based academic bursaries. Thirdly, governments should play and lead roles at the national and local levels to ensure the ratification and implementation of instruments that promotes women heads of households. Fourthly, women should be encouraged to be key economic players and take up challenging and well-paying jobs seeing that they are becoming household heads. Lastly the poor female heads propose the introduction of the poor female-headed household grant.
REFERENCES


Ledwith S, Munakamwe J 2014. Gender regimes and inequalities in labour markets, pay and trade union leaderships – the case of South Africa. 9th Global Labour University Conference. 15-17 May 2014.

Berlin School of Economics and Law, Germany.


Rogan M 2014. Poverty may have declined, but women and female headed households still suffer most. Econ3x3, May 2014.


