

THE INCOME POVERTY REDUCTION IMPACT OF EXTENDED PUBLIC WORKS PROGRAMMES IN A SOUTH AFRICAN TOWNSHIP

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Abstract

The study reported here measured the income poverty reduction impact of extended public works programmes in a South African township. The public works programme aims to provide access to a minimum level of regular work on an on-going and predictable basis at the local community level in low income areas. The study is based on household data collected in a township of Kwakwatsi, South Africa. Poverty is measured using an upper bound income poverty measure and the poverty reduction impact of a stipend received from participation in the programme assessed. The results of the analysis showed that 44% of the sampled households survive on income below the poverty line. When analysing the impact of the programme in the area, 62% of sampled households had a participant in the programme. The poverty share of female headed households was found to be higher. When excluding income from the public works initiative, the number of households that are poor increasing to 54%. Furthermore, participation in the public works programme reduced the poverty gap by 46%. The results of the study indicate that most of the participants are young adults, with secondary schooling education, and are female. The study suggests that extended public works programmes offer some relief from poverty and can benefit vulnerable groups. The study is at household level and seeks to highlight trends and progress in addressing socioeconomic challenges faced by low income households in South Africa.

Keywords: poverty, public works programmes, household, income, South Africa.

1 INTRODUCTION

The dawn of democracy in 1994 brought about hope for increased opportunities for employment and the correction of the injustices of the past. Despite the introduction of many exemplary policies, the impact on wide scale poverty has been lacklustre. The government has, since 1994, implemented various programmes that aim to alleviate income poverty through stimulating employment, developing skills and improving service delivery, etc. The anti-poverty programmes undertaken by government since 1994 include the following:

- Social assistance and grants: this are non-contributory and means tested cash grants, including the Old Age, Disability, Child Support, Foster Care Grants and Grant-in-Aid,
- Employment generating programmes like community based poverty Alleviation Projects, Community Based Public Works Program, Expanded Public Works Programme;
- Basic household security (e.g. access to basic necessities— such as food packages for indigents, free basic water and electricity);
- Free education and basic health facilities in most communities.

McCord (2003) notes that public works programmes can be seen to be contributing to social development by creating employment through the creation of infrastructure, providing services or improving access to them, thus stimulating informal and formal sector economic activity. Townsend (1989) notes the importance of ongoing enquiries in the form of social surveys in order to monitor a nation's progress in poverty eradication. In line with common practice, the impact of any form of intervention can be assessed by the status of recipients without the intervention. When it comes to poverty studies, a common practice would be to assess the impact of government transfers according to how poor people would have been without them. Studies on the incidence of public spending often subtract the entire amount of government transfer receipts from household income or consumption to approximate pre-intervention welfare. This common practice has been followed in this study. Caution is drawn in using this approach as it does not cater for behavioural responses of involved households in cases where there is no intervention. The objective of the study reported here is to provide an analysis of the income poverty-reducing potential of a community based public works programme. This study is mainly concentrating on the income poverty impact rather than any other non-monetary impact of public works programmes. The study is at household level and seeks to present trends in terms of poverty in South Africa. Further to this, the study would model the impact of socioeconomic and demographic variables on the poverty status of a household.

2 AN OVERVIEW OF PUBLIC WORKS PROGRAMMES

Public works are a state intervention to promote employment and reduce poverty through public works. Public works are seen as a key component of the current social protection framework in South Africa, constituting the only form of social support for the able-bodied working-age population (McCord, 2004). Expanded Public Works Programme' or EPWP were initiated in 2004 covering wide ranging locations aimed at poverty reduction, employment, infrastructure provision and growth (Department of Public Works, 2003). It was envisioned that the programme would draw significant numbers of the unemployed into productive employment, with the aim of increasing their chance for employment after leaving the programme.

Public works aims at offering unemployed adults part-time employment for extended periods depending of funding. Participants in the programme work select days on set community programs, thus guaranteeing a regular, predictable income. The scheme is run at the local municipality level where particular projects are identified at each local community and are coordinated by the area's municipality. Participants in the programme which formed the focus of this analysis worked select days per week and earned a wage of R500 per month. Comprehensive public works programmes seek to contribute to community development and are seen as a short-term solution to the unemployment problem (African National Congress, 2002).

Kwakwatsi is a former black residential township for the town of Koppies, located approximately 150km south of Johannesburg and 280 km north of Bloemfontein. The township is part of Ngwathe Municipality with its head office in Parys, and within the northern region of the Free State province of South Africa. The characteristics of Free State shows a population of 2 700 000 residents (which makes up about 5% population of South Africa). Stats SA (2014) records a poverty rate of (30.5%) for the province, with an unemployment rate of 34.0%, compared to 26.4% for South Africa (Statistics South Africa, 2015). A previous study in the area of Kwakwatsi revealed a population of less than 20 000 inhabitants, with an average household size of 4 members. The area has recently (2013-2104) expanded on the outskirts of the township, with informal structures erected by residents in the hope of being allocated formal residential sites. Previous studies indicated increased incidents of poverty in the area (Sekhampu, 2010; Sekhampu, 2012). This study aims to add to the empirical literature on poverty by analysing the income poverty reduction potential of extended public works programmes in the area. It is hypothesized that participation in the public works programme and the poverty status of a household is influenced by socioeconomic and household characteristics such as sex of respondent, the number of economically active members of the household, the age of the participant, gender, age, education, household head gender, household size, household head employment and household income (Teklu & Asefa, 1997; Gaiha, 1996).

3 RESEARCH METHODOLOGY

3.1 Survey Process

The study is based on a household survey administered in Kwakwatsi, with the aim in poverty reduction in South African townships. The data collection was done during a period in which the community has been participating in a public works programme cleaning streets, graveyards and common open areas in the

township. It was therefore deemed important to analyse the impact of participation in the initiative on household poverty in the area. A total of 230 households were surveyed between June and September 2014 through face to face interviews. A questionnaire serving the purpose of this study was designed and comprised two parts; the first part related to demographic information of the household and the second part included information on household income and the sources thereof. Information was obtained from the breadwinner or the spouse. Participants were not required to provide their names and data from 225 households was deemed legible for analysis.

3.2 Measuring Poverty

Following the guidelines of the World Bank (2005), 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. The headcount index which is defined as the fraction of the population below the poverty line was calculated for the sample. In this analysis the headcount index is adapted to indicate the fraction of households that fall below their individual poverty lines.

In 2012, South Africa published a set of three national poverty lines – the food poverty line (FPL: R321; \$26), lower-bound poverty line (LBPL: R443; \$35) and upper-bound poverty line (UBPL: R620; \$50) – to be used for poverty measurement in the country. The FPL is the level of consumption below which individuals are unable to purchase sufficient food to provide them with an adequate diet. Those below this line are either consuming insufficient calories for their nourishment, or must change their consumption patterns from those preferred by low income households. The LBPL includes non-food items, but requires that individuals sacrifice food in order to obtain these, while individuals at the UBPL can purchase both food and non-food items (Statistics South Africa, 2014). This study used the upper bound per capita poverty line of R685 (\$55) per month (adjusted for inflation).

4 EMPIRICAL FINDINGS

4.1 Demographics

The demographic information allows for understanding of the household structures of the sample population. There were more male headed households (75%) in the area. The average household size was recorded at 4 members; male headed household had more members (5) compared to female-headed households (4). In contrast to the headship figures, 62% of household members in the sample were female. The average age of the household head was 49 years old and attended schooling for a period of seven years. The average household income amounted to R4 078 (\$326) per month, with female-headed households having a lesser income (R2 942; \$235), compared to their male (R4 464; \$357) counterparts.

Regarding public works programme participation, 62% of the sample had on average one member taking part in the project. The majority of the participating household members were female (60%), indicating that the programme has the potential to impact vulnerable groups. On average, participants were 32 years old and high school drop outs (8 years of schooling). Female participants were younger (27 years old), compared to male (32 years) participants.

4.2 Participation in Public Works Programmes

The table below present the maximum likelihood estimates of factors that influence participation in public works employment. The results show that participation is significantly influenced by education, gender of the household head, household size and the employment status of the household head. The education level of plays an important role in the participation, with the probability of participation decreasing with the education level of participants; an increase in one year of educational attainment was associated with a 4% reduction in the probability of participation in the programme. About 50% of the participants had attended schooling for a period of 10 years and greater, with 34.1% having primary schooling education (less than 7 years of schooling). With regards to gender, the sex of the participants was not a significant predictor of participation, while the gender of the household head significantly predicted participation in the programme. The gender of the household head (female) was negatively associated with participation in the programme; coming from a female headed household lowered the chance of participation by 10%. Of the surveyed participants in the public works programme, 64% were female. The coefficient for household size was significant and negative, meaning that larger households were associated with lower participation in the programme. Coming from a household with an employed household head was associated with an increased (8%) chance of being involved in the public works programme. Other variables like age and household income were not significant

predictors of participation in the public works programme.

Table 1: Determinants of participation in the public works programme

	Coef.	Std. Err.	z	P>z	95% Conf. Interval		dy/dx
Gender	-0.36	0.65	-0.55	0.58	-1.63	0.92	
Age	-0.03	0.03	-0.91	0.36	-0.08	0.03	
Education	-1.02	0.14	-7.47	-0.00	-1.28	-0.75	0.04
Household head gender	-2.29	0.70	-3.30	0.00	-3.66	-0.93	0.10
Household size	-0.99	0.22	-4.45	-0.00	-1.42	-0.55	0.04
Household head employment	1.92	0.68	2.81	0.01	0.58	3.25	0.08
Household income	-0.00	0.00	-0.64	0.52	-0.00	0.00	
_cons	11.04	2.16	5.10	-0.00	6.79	15.28	
LR chi2(7) =		276.04		Pseudo R ² =		0.7274	
Log likelihood =		-51.72		Prob > chi ² =		0	

4.3 Employment potential

The employment contribution of the public works programme can be seen through the contribution to household income and reduction in the unemployment rate. For this analysis, involvement in the programme was regarded as an informal activity. Table 2 is representation of the sample according to their economic status. The majority of the sampled population (45.3%) were not economically active (children and the aged). Of those who are able to engage in employment opportunities, 39.4% recorded their employment type as informal; 250 (64%) were involved in the public works programme. Involvement in the public works programme reduced the unemployment rate from 29% to 16%, albeit in creating informal employment opportunities. The majority of those engaged in the programme, were female (64%).

Table 2: Employment potential of public works programme

	FREQ	%
Formally employed	66	6.7%
Informally employed	389	39.4%
Unemployed	85	8.6%
Not active	447	45.3%
Total	987	100%

4.4 Poverty reduction impact of the programme

The impact of the public works programme is assessed by its ability to reduce income poverty. The concentration of this study is on the income poverty impact of the public works programme. The headcount index for the sample population is calculated at 0.44. This means that 44% of the sampled households survived on incomes below their respective poverty lines. When excluding income from the public works initiative, the number of households that are poor increasing to 54%. Of the poor households, 35% were

male-headed households. A gender comparison of poverty showed a higher poverty rate among female-headed households (61%) than male-headed households (38%).

The severity of poverty depends on the distribution of the poor below the poverty line. Table 3 shows the distribution of poor households below the poverty line. About 35% of the poor households had incomes of between 80% and 100% of their poverty line. The hardship of living in poverty can be seen by the number of households who are in deep poverty, earning less than 40% of their poverty line; the public works programme reduce the number of households in this category from 39% to 11%. Involvement in the programme is seen to be improving the household's poverty status.

Table 3: Distribution of households below the poverty line

		Total Sample		EXC. EPWP	
Distribution		Freq	%	Freq	%
0	20	0	0%	25	25%
21	40	11	11%	14	14%
41	60	17	17%	23	23%
61	80	36	36%	41	41%
81	100	35	35%	20	20%
Total		99	100%	123	124%

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 fall below the poverty line, and expresses it as a percentage of the poverty line. The poverty gap for the total sample R944 (\$76). When excluding income from public works programmes, the mean poverty gap increases to R1 378 (\$110).

Further analysis was on the impact on socioeconomic and demographic variables on the poverty status of a household (table 4). The results show that household size, the age of the household head, and household income are important predictors of poverty. Salaried income, government grants and income from the public works programme were negatively associated with the probability of being poor. These variables are significant at the 1% level of significance. It was expected that income variables would be negatively associated with poverty as it determines the ability of a household to satisfy its needs (Anyanwu, 2010).

Table 4: Determinants of household poverty

	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]
Gender of household head	0.49	1.33	0.37	0.71	-2.12 3.10
Household size	9.63	2.52	3.82	0.00	4.68 14.57
Age of household head	-0.08	0.04	-2.13	0.03	-0.15 -0.01
Education of head	0.06	0.13	0.50	0.62	-0.19 0.32
Employment status of head	1.57	1.58	0.99	0.32	-1.53 4.68
Household income	-0.01	0.00	-4.01	0.00	-0.02 -0.01

Public works income	-0.01	0.00	-3.88	0.00	-0.02	-0.01
Government grants	-0.01	0.00	-3.76	0.00	-0.02	-0.01

Large households were associated with an increased likelihood of being poor. Larger households have increased competition for limited resources. The age of the household head was negatively associated with the probability of being poor. This variable was significant at the 5% level of significance. Other variables like the gender of the household head, educational attainment and the employment status of the household head were not significant predictors of poverty in the area.

5 CONCLUSION

The aim of the study reported here was to measure the income poverty reduction potential of public work programmes in a South African township. Further analysis included the factors influencing participation in the programme and the impact of a household's socioeconomic and demographic variables on their poverty status. Public works programmes are an intervention by the government to promote employment and are seen as a key component of the current social protection framework in South Africa.

A survey of households was undertaken in the township of Kwakwatsi. The majority of the participating household members were female and from poor households; indicating that the programme has the potential to impact vulnerable groups. Participation in the programme was influenced by educational attainment, the gender of the household head (residents from female headed households were less likely to participate in the programme), while coming from a household with an employed household head was associated with an increased chance of being involved in the programme.

Although short term in nature, involvement in the public works programme reduced the unemployment rate from 29% to 16% in the area. The income poverty reduction potential of public works programmes was seen through its ability to reduce poverty in the area. Through the involvement in the programme, poverty was seen to be reduced by 10% to 44%. Female headed households had a higher share of the poverty rate. Further analysis showed that the public works initiative reduced the extent of extreme poverty (those earning less than 40% of their poverty line) from 39% to 11%. The short-term nature of the programme would require other measures to improve the employability of the participants as their engagement is on menial jobs around the community. More rigorous analysis should include other factors like the impact of the environment and the potential for skills transfer.

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