

Effectiveness of Benazir Income Support Program for Poverty Reduction

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Abstract

Social safety net programs, such as Benazir Income Support Program ((BISP), is one of the largest safety net programs in Pakistan. The cash transfers made under this program unlikely to significantly change the living standards of its beneficiaries. Still, the program provides some relief and has potential to expand to other areas where the beneficiaries can get more benefits. This study used primary data collected from Thatta district of Sindh province to examine the effect of BISP on poverty reduction. Three different regression models were computed and tested for structural change in social status before and after the BISP. Results showed that social status of beneficiaries became stable after BISP started and their consumption pattern also showed an increasing trend. It could be inferred that BISP helped improve welfare and decrease poverty level of BISP beneficiaries.

Keywords: BISP, Poverty, Welfare, Safety Nets, Inequality

1. Introduction

Poverty is a centuries old phenomenon that existed since the existence of humanity. Absolute poverty refers to a condition where a person is not able to fulfil his basic human needs. These basic human needs commonly include clean water, nutrition, health, education, cloths, and shelter. According to an estimate there are currently 1.29 billion people (approx. 22% of population) in developing world were suffering from absolute poverty (DoSomething.org, 2018). Pakistan is among those countries where a large number of people are suffering from absolute poverty. There are many causes for this situation. The country is suffering from bad administration and the population is growing at a fast pace. The costs of living are on the rise and. The rate of unemployment is increasing and there are not many schools to provide education to all. Environmental pollution is another major issue (Ministry of Finance, 2014).

As a remedy of the poverty problem, poverty alleviation programs have been implemented by various governments of Pakistan. Some off these programs include Social Action Program, People Works Program, and Rural Works Program (Irfan, 2003). Governments in Pakistan have also tried many social safety nets in this regard. Social safety nets serve safeguard their recipients from two important but injurious effects of welfare. The first effect is chronic poverty. Continuous welfare can develop chronic incapacity in a person to work and earn. The second effect is the decline in the capacity of a person to work and earn. That can result in a situation where a person becomes unable to even fulfill his/her basic human needs (Devereux, 2002). In Pakistan, there are two types of social safety nets being used. The first one is budgetary social safety net and the second is non-budgetary social safety nets. Safety nets, such as Pakistan Bait-ul-Mall is a non-budgetary safety net while Benazir Income Support Program (BISP) is a budgetary safety net (Miankhalil, 2009).

The primary focus of this study is Benazir Income Support Program and its effectiveness for poverty reduction. Further, the study is focused on Thatta district of Sindh province. The main reason for selection of Thatta district is that it is the poorest district in Pakistan as per the NSER statistics of BISP. In the total population of Thatta, 73% people are poor (BISP.gov.pk, 2018). District Thatta is vulnerable to a number of natural hazards like riverine and rain floods, cyclones and droughts. Poor people can't afford investment in disaster risk reduction. Thatta District has been declared as one of the poorest districts of Pakistan especially its coastal areas are extremely poverty stricken (Business Recorder, 2017). The reason this program was chosen because it is the largest countrywide safety net program ever launched in Pakistan. This program is a social safety net that not only lends a hand in poverty management but also endeavors to harness entrepreneurial potential of its beneficiaries by marketing their products so that they may graduate out of poverty. In August 2018, its annual budget was US\$ 1.15 billion, and the program was serving 5.4 million people. Benazir Income Support Program was started in July 2008. The main objective of this program was to provide income support and other benefits to the people suffering from absolute poverty. In 2010, Benazir Income Support Program Act 2010 was passed that made BISP a self-governing body. The purpose was to ensure the continuity of this very significant social safety net program. In the beginning, BISP provided unconditional cash transfers of PKR 1000 per month to the registered beneficiaries. With an aim to significantly increase its spending on social support, government of Pakistan has gradually increased the budget of BISP from PKR 34 Billion in 2008 to US\$ 1.15 Billion in 2018. The amount of monthly support was also increased by 20%. Since 2008, PKR 412 Billion has been disbursed to beneficiaries (Maluccio & Flores, 2004). Since its inception, BISP has extended to cover special areas such as women empowerment (Waseela-e-Haq program),

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skill training (Waseela-e-Rozgar program), and healthcare (Waseela-e-Sehat program) (BISP, 2011). BISP has also introduced many innovations. These include National Socio-Economic Registry (NSER), and E-commerce. NSER is a database containing information on the socioeconomic status of over 27 million households across Pakistan. BISP data/NSER is used for provision of BISP benefits. BISP started e-commerce for the financial empowerment of its beneficiaries across the country. BISP uses e-commerce to promote handicraft skills of its beneficiaries and create a softer image of the Country (Miankhail, 2009).

Following are the research questions of this study.

- What is the effect of BISP in poverty alleviation in the selected district?
- What is the difference in social status and consumption of beneficiaries of BISP before and after the program?

Following are the objectives of this study:

- To assess the impact of Benazir Income Support Program on poverty alleviation in district Thatta of Sindh
- To assess the differential in social status and consumption of BISP beneficiaries

This article is divided into five sections. After providing introduction in first section, the section two will provide review of relevant literature on poverty and safety nets. The literature review will be followed by discussion of research methodology in section three. Section four will discuss research findings and relevant hypotheses. Concluding remarks will be provided in section five.

2. Literature Review

Various studies have been conducted to assess the impact of cash transfers to the poor. In one such study on 9000 elderly poor households of South Africa, Case and Deaton (Case & Deaton, 1992) found that poor households spent pension income in much the same way as other income. It seemed that the households considered every dollar a dollar irrespective of its source. The results were significant because the participants of this study were randomly selected from all races and areas and the sample included the so-called independent households as well. Testing social safety nets, Ravallion et, al. (1994) found that cash transfers played an important part in decreasing poverty level and increasing consumption. Hicks and Wodon (2000) found that during financial crisis, fiscal constraints make social spending pro-cyclical rather than counter-cyclical. As such, it appears that fiscal constraints make social protection spending unprotected. Schultz (2001), in his study of school education subsidies, found that school enrolment figures of beneficiaries were higher than those who did not receive the subsidy.

Studies have also been conducted for the impact of the other aspect of safety nets programs i.e. in-kind transfer. In one such study, Nino and Dorosh (2002) studied the impact of in-kind transfers on household food consumption in Bangladesh. Results showed that in-kind transfer (in form of food) increased enrolment in school education. The study of Duflo (2003) showed that large cash transfer program impacted children's nutritional status and the gender of the recipient affected that impact. Cash transfer (in the form of pensions) received by women had a large impact on the nutritional status of girls but little effect on that of boys. No similar effect was observed for pensions received by men.

Researchers have also found that safety nets programs do not produce their desired results. In his study of social safety net programs in Vietnam, Walle ((2003) showed that social safety net programs were unable to produce significant impact on the consumption pattern of beneficiaries. The social safety net program was not able to provide a safety net for protecting the living standards of poor. Jalan and Ravallion (2003) studied the impact of benefits on anti-poverty program in Argentina. The results showed that the program was highly attractive to the poor and the program's benefit incidence was decidedly pro-poor. The study of Imai (2003) investigated the dynamic aspects of anti-poverty interventions with a special focus on the effects of preventing the non-poor from slipping into poverty. Imai studied Employment Guarantee Scheme (EGS) in rural India as a social safety net. Imai found that the EGS was effective in reducing poverty in the long-run. In a study of social grants as social safety net, Booysen (2004) found that social grants played an important role in poverty alleviation.

2.1 Hypotheses

Following are the hypotheses of this study.

H1: There is a break point i.e. the data set cannot be represented with a single regression line

H2: There is no proof of structural instability.

3. Methodology

3.1 Sampling

In this study, we used proportionate sampling where the data of 237 BISP beneficiaries was collected from 11 tehsils of Thatta district. The total number of BISP beneficiaries in Thatta district was 20159. To measure consumption, we tool monthly household expenditure as proxy variable. Following is the details of dependent and independent variables used in this study.

Dependent Variable: Monthly Household Expenditure = MHE

Independent Variables

Table 1: Variables Description

Variable Name	Variable Description	Possible Values
DISABLE	Whether the beneficiary household has disabled people in family	Yes/No
LITERACY	Level of literacy of beneficiary household head	Literate/Illiterate
GENDER	Gender of beneficiary head of household	Male/Female
LOWN	Land ownership of beneficiary household	Have Land Ownership/Don't Have Land Ownership
LOAN	Loan obtained by beneficiary household	Yes/No
LOANAP	Loan obtained by beneficiary household after program	Yes/No
LOANBP	Loan obtained by beneficiary household before program	Yes/No
FAMILY	No. of family members of beneficiary household	A Number
LANIMAL	Total no. of large animals owned by beneficiary household	A Number
LANIMALAP	Total no. of large animals (cows and buffalos) owned by beneficiary household after program	A Number
LANIMALBP	Total no. of large animals owned by beneficiary household before program	A Number
SANIMAL	Total no. of small animals (Sheep and Goats) owned by beneficiary household	A Number
SANIMALAP	Total no. of small animals owned by beneficiary household after program	A Number
SANIMALBP	Total no. of small animals owned by beneficiary household before program	A Number
SHOCK	Whether the beneficiary household has met unexpected economic shocks	Yes/No
WORK	Work status of beneficiary household	Employed/Not Employed
WORKAP	Work status of beneficiary household head after program	Employed/Not Employed
WORKBP	Work status of beneficiary household head before program	Employed/Not Employed

The variable of disability was used to check whether disability of beneficiary was a factor that impacted expenditure of household. Under the BISP poverty ranking mechanism, a poverty score is assigned to each beneficiary based on multiple factors. A family that has disabled person(s) gets an additional score of 5 added to their total poverty ranking score. The unexpected shock variable was added to gauge the impact of unexpected events (such as flood, death of an animal etc.) on the dependent variable i.e. monthly expenditure of household.

This study was concerned to find the impact of BISP on poverty reduction. As such, major focus of this study was that whether the social status of beneficiaries changed after BISP or not. To measure that effect, this study used Chow test to see whether there were any structural changes in the social status of beneficiaries after the BISP program. In Chow test, a given sample is divided into multiple structures. A regression equation is estimated for each structure (or model). Sum of Squared Residuals (SSR) is calculated for each structure (or model). The SSR is also calculated for the entire sample. Then, SSR from each structure (or model) is compared with SSR of entire sample. Here we developed three structures (or models) as follows. Structure 1 (or Model 1) was based on data before BISP. The second structure (or second model) was based on data after BISP. The third structure (or third model) was based on the entire sample. The SSRs of different structures were labeled as SSR_{n1} , and SSR_{n2} , SSR_n , respectively. The F-static was calculated using following equation.

$$\frac{(SSR_n - (SSR_{n1} + SSR_{n2})) k}{(SSR_{n1} + SSR_{n2}) / (n_1 + n_2 + 2k)}$$

Here, k represents the number of parameters estimated in the regression equation of each structure. For this case k = 2. The calculated F-static was compared with the $F_{(kn_1+n_2+2k)}$ for the required significance level. The structure parameters were considered stable if the calculated F-static was greater than F-static (critical)

4. Results and Discussion

4.1 Impact of BISP

92.1% of heads of household were unemployed before the start of BISP. Only 7.9% of household head were employed before the start of BISP. After the BISP started, 79.2% of head of household were unemployed while 20.8% were employed. That shows BISP was helpful in making people work and earn. Before BISP, 59.1% participants had no small animals. Out of remaining respondents, 28.3% had 2-4 small animals, 10.2% had 5-10 small animals, and only 2.4% had 5-10 small animals. After BISO started, the percentage of respondents having 2-4 small animals increased to 68.1% and percentage of respondents having 5-10 small animals increased to 23.5%. Before the start of BISP, 35.3% of respondents had no large animals. 47.1% respondents had 1 large animal while 17.6% had 2 large animals. After the BISP program, the statistics remained the same. One possible reason for this was that the cash transfers made to beneficiaries under BISP were not large enough. As such, beneficiaries were not able to purchase more large animals because they were costly.

Out of 237 beneficiaries, 47.3% obtained loans while 52.7% did not obtain any loan. 61.3% beneficiaries had obtained loans after BISP started while 38.7% did not obtain loans. It can be seen that BISP increased the number of people availing the loan facility. It can also be inferred that BISP program was helpful in increasing the creditworthiness of the beneficiaries. Table 1 shows comparative descriptive statistics of household expenditures before and after BISP started. It can be seen that BISP increased the monthly household expenditures by 32%. It can also be inferred that consumption of households also increased. Since consumption increased that also means welfare of people was increased that in turn reduced poverty level of people.

4.2 Testing for Structural Changes in Social Status

Monthly Expenditures of 237 households	Before BISP Started			After BISP Started		
	Min	Max	Mean	Min	Max	Mean
	2100.	25000.00	839.235	3100.00	33000.00	13156.7432

As mentioned earlier, this study used Chow test to check the change in social status of beneficiaries before and after BISP. In the first step, we estimated the OLS regression equation of model using data before BISP. Equation 1 is the regression equation of structure 1 (or model 1).

Equation 1

$$\text{MHE} = \beta_0 + \beta_1 (\text{FAMILY}) + \beta_2 (\text{GENDER}) + \beta_3 (\text{WORKBP}) + \beta_4 (\text{LITERACY}) + \beta_5 (\text{LOWN}) + \beta_6 (\text{DISABLE}) + \beta_7 (\text{SHOCK}) + \beta_8 (\text{LOANBP}) + \beta_9 (\text{SANIMALBP}) + \mu$$

Once the regress equation was estimated, the RSS of this model was estimated. The RSS of this model was 13.32. In the second step, we estimated the OLS regression equation of model using data after BISP. Equation 1 is the regression equation of structure 2 (or model 2).

Equation 2

$$\text{MHE} = \beta_0 + \beta_1 (\text{FAMILY}) + \beta_2 (\text{GENDER}) + \beta_3 (\text{WORKAP}) + \beta_4 (\text{LITERACY}) + \beta_5 (\text{LOWN}) + \beta_6 (\text{DISABLE}) + \beta_7 (\text{SHOCK}) + \beta_8 (\text{LOANAP}) + \beta_9 (\text{SANIMALAP}) + \beta_{10} (\text{LANIMALAP}) + \mu$$

Once the regress equation was estimated, the RSS of this model was estimated. The RSS of this model was 18.89. In the third step, we estimated the OLS regression equation of combines model using data before and after BISP. Equation 3 is the regression equation of structure 3 (or model 3).

Equation 3

$$\text{MHE} = \beta_0 + \beta_1 (\text{FAMILY}) + \beta_2 (\text{GENDER}) + \beta_3 (\text{WORK}) + \beta_4 (\text{LITERACY}) + \beta_5 (\text{LOWN}) + \beta_6 (\text{DISABLE}) + \beta_7 (\text{SHOCK}) + \beta_8 (\text{LOAN}) + \beta_9 (\text{SANIMAL}) + \beta_{10} (\text{LANIMAL}) + \mu$$

Once the regress equation was estimated, the RSS of this model was estimated. The RSS of this model was 36.29.

$$F = \frac{RSS_c - (RSS_b + RSS_a) / k}{RSS_b + RSS_a / (n - 2k)}$$

Where

RSS_c= Residual Sum of Square (combine)

RSS_b= Residual Sum of Square (before)

RSS_a= Residual Sum of Square (after)

k = Number of parameters

n = Number of observations (total sample including before and combine)

$$F = \frac{[36.29 - (13.32 + 18.89) / 11]}{(13.32 + 18.8) / (474 - 2 * 11)}$$

$$F = 0.371 / 0.071$$

$$F = 5.22$$

The critical value of F was 2.51 at 1% level of confidence. The calculated F-static was 5.22. Hence F-calculated was greater than F-critical. That shows a structural break in social status of beneficiaries before and after BISP started.

Table 2 shows a summary of regression analysis. The Table 2 shows how this structural break occurred. Number of family members remained a significant factor in enhancing consumption before and after BISP. In fact, its impact increased after BISP. Gender was not a significant factor in consumption both before and after BISP. That shows the change in social status and increase in consumption is not affected by the gender of the beneficiary. This finding is important given that Pakistan is considered a male-dominated society and women are generally not the bread and butter earners of the household. As expected, work status of head of household remained a significant factor in change of social status and increased consumption. Surprisingly, literacy was not found to be a significant factor in change of social status and consumption. Land ownership was not significant but presence of disabled persons in the family did significant affected beneficiary social status and consumption pattern. Unexpected shocks did not appear to have significant impact on dependent variable. The loan obtained was not significant before BISP but became significant after BISP. That shows BISP enhanced creditworthiness of the beneficiaries. As such, beneficiaries were now able to avail loan facilities that were actually helpful in enhancing their social status and increased consumption. The ownership of small animals was not a significant factor but the ownership of large animals was a significant. The ownership of large animals was significant both before and after BISP. In fact, both its significant and impact on change in consumption increased after BISP.

Table 2: Summary of Regression Analysis: Model Comparison

Before BISP				After BISP		
Variable	Sign	p-value	Coefficient	Sign.	p-value	Coefficient
FAMILY	+	0.000	.052	+	0.000	.069
GENDER	+	0.031	.141	+	0.032	.279
WORK	+	0.000	.754	+	0.000	.732
LITERACY	+	0.072	.069	+	0.092	.072
LOWN	-	0.062	-.048	-	0.063	-.034
DISABLE	+	0.000	.243	+	0.000	.252
SHOCK	+	0.061	.038	+	0.076	.042
LOAN	+	0.072	.089	+	0.044	.141
SANIMAL	+	0.062	.008	+	0.075	.0139
LANIMAL	+	0.042	.126	+	0.033	.138

5. Conclusion

The findings of this article show that there is a structural break in social status of beneficiaries of BISP before and after the program. BISP have produced positive impact on the lives of its beneficiaries. Their consumption, measured through the proxy variable of monthly household expenditure, increased after the BISP program started. The welfare of beneficiaries improved and because of this improvement, their poverty level decreased. The findings also suggest that the size of cash transfer under BISP is sufficient for producing significant change the social status of beneficiaries. These cash transfers are a sigh of relief for beneficiaries and help them manage their daily household expenditures. It also helps them achieve relatively better food, health care, and education. Most of the beneficiaries of BISP in the district selected for this study were unemployed and extremely poor. A cash transfer of PKR 10,000 per month is very helpful for them to get a reasonable relief and help them meet their immediate needs. BISP is a good social safety net that should be continued. However, this continuation requires certain modifications in the program. These modifications would help achieve sustainable increase in welfare and gradual decrease in the poverty levels of beneficiaries. There is a need to lay down a clear policy for deciding who could be the beneficiary of BISP. BISP is extending its reach by launching various new program (such as Waseela-eTaleem). However, these programs should be carefully studied before their launch at large scale. For example, governments may seek co-op option in Waseela-eTaleem program where government and beneficiary could share the cost of education. Of course, governments would need to figure out a mechanism to determine the share of government and beneficiary in each case. Federal and provincial governments may create a fund for BISP. Governments can seek assistance from NGOs, businesses, and other donors to donate money into this fund. However, governments would first need to win their trust in order to generate a sustainable stream of donations.

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