Oxford Policy Management

Benazir Income Support Programme

Final Impact Evaluation Report

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Executive summary

This report presents the findings from the **quantitative and qualitative research conducted for the 3rd round of the impact evaluation of the Benazir Income Support Programme (BISP)**. Its purpose is to provide an analysis of the impact of the BISP five years after the programme was initiated.

The impact evaluation has both a quantitative and qualitative component and this research is based on a set of fieldwork that was conducted in the period February to May 2016.

The evaluation is based on a **mixed methods approach**. The core of the evaluation is based on a household survey targeted at beneficiary households and a sub-set of non-beneficiary households with BISP poverty scores just above the programme's eligibility threshold, which will provide statistically robust estimates of impact of the BISP on its beneficiaries. This is combined with a qualitative research component that will provide a broader understanding of the context in which the programme is operating and inform an understanding of potential impacts that are difficult to cover comprehensively and sensitively using only a quantitative survey, as well as providing more nuanced data to help explain the quantitative findings.

Structure of the report

The report is structured in five parts. Part A provides a background to the BISP as well as a description of the methods used for evaluation. Part B provides an analysis of the experience of BISP beneficiaries in terms of how they receive the cash transfer. Part C provides a trend analysis of key characteristics of all BISP beneficiaries in the evaluation sample. Part D presents the impact evaluation results for the third round, focussing on the evaluation treatment and control groups relevant for the Regression Discontinuity analysis. Part E offers concluding thoughts.

Benazir Income Support Programme

The BISP is the main social assistance programme in Pakistan and one of the largest in South Asia, serving 5.29 million beneficiaries. The Government of Pakistan launched the BISP in 2008 as its flagship national social safety net initiative, in recognition that the existing instruments (Pakistan Bait-ul-Mal and Zakat) had limited coverage and were poorly targeted.

The BISP was launched with two main objectives: **to cushion the adverse impact of the food, fuel and financial crisis on the poor**; and a longer term objective of **providing a minimum income support package to the poorest and to those most vulnerable to future shocks**.

The programme provides eligible families with unconditional cash transfers (UCT), originally set at a monthly value of PKR 1,000, raised to PKR 1,200 in July 2013, PKR 1,500 in July 2014 and PKR 1,566 in July 2015. The transfer is delivered quarterly, with the vast majority of beneficiaries receiving cash through the BISP Debit Card.

By providing access to Computerised National Identity Cards (CNIC) and making BISP payments to the female head of beneficiary households the **BISP made explicit the goal of the empowerment of women**, which is complemented by the creation of BISP Beneficiary Committees (BBC) that provide a forum for beneficiaries.

The **programme established a National Socio-Economic Registry (NSER) through the use of an objective targeting system**, with households targeted based on a Proxy Means Test (PMT) that attempts to provide an objective estimation of the level of income and welfare in all households

in Pakistan and is summarised by the BISP poverty score. The NSER is now a database of more than 27 million households across Pakistan. The cash transfer is targeted at the poorest 25% of the population with a specific eligibility threshold set on the BISP poverty score to assign households as eligible for the BISP cash transfer.

The evaluation

The BISP includes an evaluation component and the Government of Pakistan has contracted Oxford Policy Management (OPM) to undertake a rigorous evaluation of programme impact. The evaluation component will help to determine the effectiveness of the programme in delivering its broad aims. The evaluation component will also help to inform stakeholders of the programme's performance and enable lessons to be drawn to improve future practice and policy.

The evaluation gathers and presents data on the targeting and operational effectiveness of the BISP as well as on the following potential impacts:

Key intended impacts

- Increased consumption expenditure and poverty reduction;
- Women's empowerment;
- Increased household and child nutrition security; and
- Increased asset retention and accumulation.

Secondary impacts

- Increased household investment in health and education;
- Changes to household livelihood strategies

Evaluation methods

The evaluation adopts a mixed methods approach to provide an assessment of the impact of the BISP on its beneficiaries across a range of impact areas and indicators that were identified collaboratively with the BISP and its key stakeholders.

The core of the evaluation is based on a large scale household survey across the four evaluation provinces; Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan. The **quantitative study is complemented by qualitative research to provide contextual information as well as to provide some insight into potential impacts that are less easily quantifiable**.

The impact evaluation results presented in this report are based on a comparison between a set of treatment households against a set of control households. Treatment households are defined as households who have been identified as beneficiaries of the programme. Control households are defined as non-beneficiaries of the programme, but who have BISP poverty scores that are just above the programme's eligibility threshold.

The quantitative estimates of impact are determined by the quasi-experimental Regression Discontinuity (RD) design. Essentially this requires the comparison of treatment and control households who have BISP poverty scores in the very close neighbourhood of the BISP eligibility threshold. It can be assumed that households who have very similar poverty scores but lie on either side of the BISP eligibility threshold will make good comparator households on which to base the evaluation.

A brief description of the method can be found in Section 2.2, whilst full details of the method, its assumptions and their implications can be found in Annex A

Experience of beneficiaries with the transfer

Beneficiaries are expected to receive a total of PKR 18,800 annually in quarterly instalments. In our evaluation sample beneficiaries self-reported that 87% of beneficiaries received at least three of the four expected payments, receiving on average PKR 13,906 in the 12 months preceding the survey.

Beneficiaries reported that the **direct costs of collecting the transfer remain relatively low**, amounting to just 2% of the value of the quarterly transfer, with beneficiaries taking on average just over half an hour to reach a collection point. However, almost **20% of beneficiaries reported that they could not withdraw cash on their first attempt** leading to them making multiple trips. The main reasons cited for this phenomenon were long queues or a lack of funds at the collection point.

Some beneficiaries reported indirect costs of collecting the transfer, **with 18% of beneficiaries reporting that they had to unwillingly pay a "fee" to collect the transfer**. Results from the quantitative survey suggested that this was usually to guards or staff at the collection point.

Despite only a third of beneficiary women reporting that they collected their transfer themselves, over three quarters reported that they **retained control over how the BISP cash transfer was spent**. Qualitative research indicates that men and women in BISP households are accepting the "woman focussed" nature of the BISP.

Profile of a beneficiary household

Given that the estimates of impact are based on a regression discontinuity that focusses only on households in close proximity of the BISP poverty score eligibility threshold, we present in Section 4 a short profile of a beneficiary household. The purpose of this section is to provide the reader with a snapshot of the current situation of a beneficiary household and should not be used to determine the impact of the BISP on key impact indicators.

We find that high proportions of beneficiary households are poor or remain vulnerable to poverty whether assessed from a monetary poverty perspective or a multi-dimensional poverty perspective. We assess the deprivations that the average beneficiary household faces, and find high deprivations against a range of dimensions, including:

- **Education:** just 69% of boys and 59% of girls aged 5-12 years old were currently attending school at the time of the survey;
- **Nutrition:** we find severe rates of malnutrition amongst infants and young children aged 0-59 months, with levels of wasting and stunting that are at emergency levels;
- **Access to safe drinking water and sanitation:** we find high levels of deprivations in terms of water and sanitation, with 38% of beneficiaries lacking access to improved toilets and 17% lacking access to safe drinking water; and
- **Housing conditions:** we find large deprivations on indicators relating to the condition of the house with 63% of households having earth floors and 71% using cooking fuels that are associated with harmful health effects.

Poverty and consumption expenditure

The BISP has continued to have an effect on **increasing per adult equivalent monthly level of consumption expenditure** of BISP beneficiary households, with this round of research reporting an increase of PKR 187.

The Government of Pakistan has adopted in May 2016 a new approach to calculating the poverty line in Pakistan, changing from a Food Energy Intake (FEI) approach to a Cost of Basic Needs (CBN) approach. This change combined with a recalibration of the basic basket of consumption needs has increased the poverty line by 33%.

The impact on poverty depends on which poverty line is used as a reference. Using the FEI poverty line the BISP reduces the poverty rate by 7 percentage points but has only a weak impact on the poverty gap. Using the CBN poverty line as a reference we find that the BISP is associated with a reduction in the poverty gap by 3 percentage points, but does not have a statistically significant impact on the poverty rate.

This finding results from the large increase in the poverty line resulting from the adoption of the CBN methodology. With the CBN poverty line the average poverty gap is PKR 496, with the average per adult equivalent monthly value of the transfer of PKR 270 insufficient to push significant numbers of beneficiaries above the poverty line when poverty is referenced in this way.

Food consumption and nutrition

We find some **evidence that the BISP is leading to an increase in per adult equivalent monthly food consumption (PKR 69)**, driven by high quality protein which can be expected to lead to significant improvements in the quality of diet.

In terms of child nutrition we find that the BISP has led to a reduction in the proportion of girls, but not boys, that are wasted. However, we continue to observe **levels of wasting and stunting that the World Health Organisation would classify as signifying an on-going crisis in terms of child malnutrition**.

Living standards

The beneficiary profile notes significant deprivations against indicators of living standards amongst the average BISP beneficiary household. However, we find that **BISP has led to a decrease in these deprivations** particularly in terms of the quality of flooring in their households and the quality of cooking fuel used.

Women's empowerment

We observe that the BISP has continued to influence a **change in the way women are viewed in the household and in the community** with most beneficiary women noting that they are now given an elevated status within the household as a direct result of the BISP.

For the first time we see a statistically significant effect on the **mobility of beneficiary women**, with more women being allowed to freely travel to various locales in their community alone. The qualitative research notes a direct relationship between increased acceptance of mobility and the collection of the transfer from BISP collection points, and further suggests the increased independence of beneficiary women may be extending to other women in their communities.

We find that the **BISP is related to increasing proportions of beneficiary women voting**, with this result related to a variety of factors including the need for a Computerised National Identity Card (CNIC) to access the transfer.

Livelihoods

We continue to observe a change in the livelihood strategies adopted by beneficiaries. We find that the **BISP has contributed to an overall reduction in the dependence of beneficiary households on casual labour** as the main source of income.

This finding is driven by the finding that the **BISP has resulted in a reduction in the proportion of men engaged in casual labour**, with an associated increase in the proportion of men engaged in agricultural activities including caring for livestock. Simultaneously we observe that the **BISP has resulted in a reduction in the proportion of women engaged in unpaid family labour**, and whilst there is no clear evidence of what women are replacing this activity with, we find no evidence that they are stopping economically productive activities.

In line with the finding that increased proportion of men engaging with agricultural activities including caring for livestock, we find that the **BISP has resulted in an increase in the proportion of beneficiary households that own small livestock** including sheep and goats.

Potentially supporting this purchase of small livestock we find improving financial access among beneficiary households, with the **BISP leading to an increase in the proportion of beneficiaries with savings** with the increase in savings being driven by an increase in formal savings.

Furthermore the qualitative research finds that women are reporting that they are beginning to more carefully plan how they use the BISP cash transfer, indicating that at the beginning of the programme they used to “binge” on the transfer, but that this habit was changing as they got used to receiving the cash.

Education

We **do not find that the BISP cash transfer increases the proportion of beneficiary children attending school**. Whilst beneficiaries recognise the importance of education in terms of securing better life outcomes for their children we find that the cost of education remains a significant barrier to access.

Table of contents

List of tables and figures

List of abbreviations

BISP	Benazir Income Support Programme
CBN	Cost of Basic Needs
CCT	Conditional Cash Transfer
CNIC	Computerised National Identity Card
FCS	Food Consumption Score
FEI	Food Energy Intake
LATE	Local Average Treatment Effect
MDE	Minimum Detectable Effect
MDGs	Millennium Development Goals
MGRS	Multicentre Growth Reference Study
MNA	Member of the National Assembly
OPM	Oxford Policy Management
PMT	Proxy Means Test
PPS	Probability Proportional to Size
PSLM	Pakistan Social and Living Standards Measurement Survey
PRSP	Poverty Reduction Strategy Paper
PSM	Propensity Score Matching
PSU	Primary Sampling Unit
RD	Regression Discontinuity
SRS	Simple Random Sampling
UCT	Unconditional Cash Transfer
WHO	World Health Organisation

Part A: Background and Methods

1 Introduction

This report represents the findings from the quantitative and qualitative evaluation conducted for the third and final follow-up round of the independent impact evaluation of the Benazir Income Support Programme (BISP). Its purpose is to provide an analysis of the impact of the BISP on its beneficiaries in the 5 year period since the inception of the programme in its current form.

The impact evaluation has both quantitative and qualitative components and the research in this report reflects the findings from the final round of field work undertaken in February – May 2016.

The evaluation is based on a household survey. The survey is targeted at beneficiary households and a sub-set of non-beneficiary households. Sampled non-beneficiary households have BISP poverty scores just above the eligibility threshold. The quantitative household survey is combined with qualitative research that provides a broader understanding of the context in which the programme is operating and enables an assessment of impacts that are difficult to sufficiently analyse using only a quantitative survey.

1.1 Overview of the BISP

The BISP was launched in 2008 as the Government of Pakistan's (GoP) main national social safety net programme and is the largest and most systematic social protection initiative to be launched in Pakistan. The **immediate objective of the programme in 2008 was to cushion the negative effects of the food, fuel and financial crises on the poor, but its longer term objectives are to provide a minimum income package to the poor and to protect the vulnerable population against chronic and transient poverty**.

The BISP cash transfer is **targeted using a Proxy Means Test (PMT)**. A PMT provides an objective method of approximating a household's level of welfare and poverty using a sub-set of indicators correlated with measures of monetary welfare. This is combined into a unique index to identify poor and non-poor households.

Armed with this PMT the GoP conducted a national poverty census which attempted to visit every household in Pakistan to implement the BISP poverty scorecard and assign each household with a poverty score. An eligibility threshold was set to target the poorest 20% of households in Pakistan. Households with a **PMT score below this threshold containing at least one ever-married woman in possession of a valid Computerised National Identify Card (CNIC) were deemed eligible for the BISP**.

The programme provides eligible families with an unconditional cash transfer (UCT). Recognising the goal of promoting women's empowerment the transfer is **paid directly to the female head of the family**, where the female head is defined as every ever-married woman in the household in possession of a valid CNIC.

The value of the cash transfer has increased steadily throughout the lifetime of the BISP cash transfer. Originally the BISP had a monthly value of PKR 1,000. This increased to PKR 1,200 with effect from July 2013, and then increased further to its **current monthly value of PKR 1,500** with effect from July 2014.

Beneficiaries are **paid in quarterly transfers** of PKR 4,500, with the vast majority of BISP beneficiaries receiving their payments through the **BISP Debit Card**, a magstripe card that can be used in any ATM in Pakistan or at any of the network of Point of Sale (POS) machines maintained by banking agents. A small portion of BISP beneficiaries, particularly those in remote communities

with limited financial system access, continue to receive the transfer via money orders delivered directly to the doorstep by Pakistan Post.

1.1.1 Waseela-e-Taleem

In addition to the main unconditional cash transfer component, the BISP also implements a range of complementary programmes. This includes the **Waseela-e-Taleem (WET) programme a conditional cash transfer (CCT) programme for education**. The 2016 round of research included an evaluation of the WET programme, focussed on the impact of the WET on access of 5 – 12 year old children. These findings are presented in an accompanying report.

The WET programme provides a top up cash transfer of PKR 750 in each quarter per eligible child in the household, with no upper limit on the number of children per household who are eligible for the programme. Receipt of the WET transfer is conditional on maintaining a minimum 70% attendance rate that is monitored on a quarterly basis, and children will be removed from the programme if they fail to fulfil the attendance conditions in three consecutive quarters.

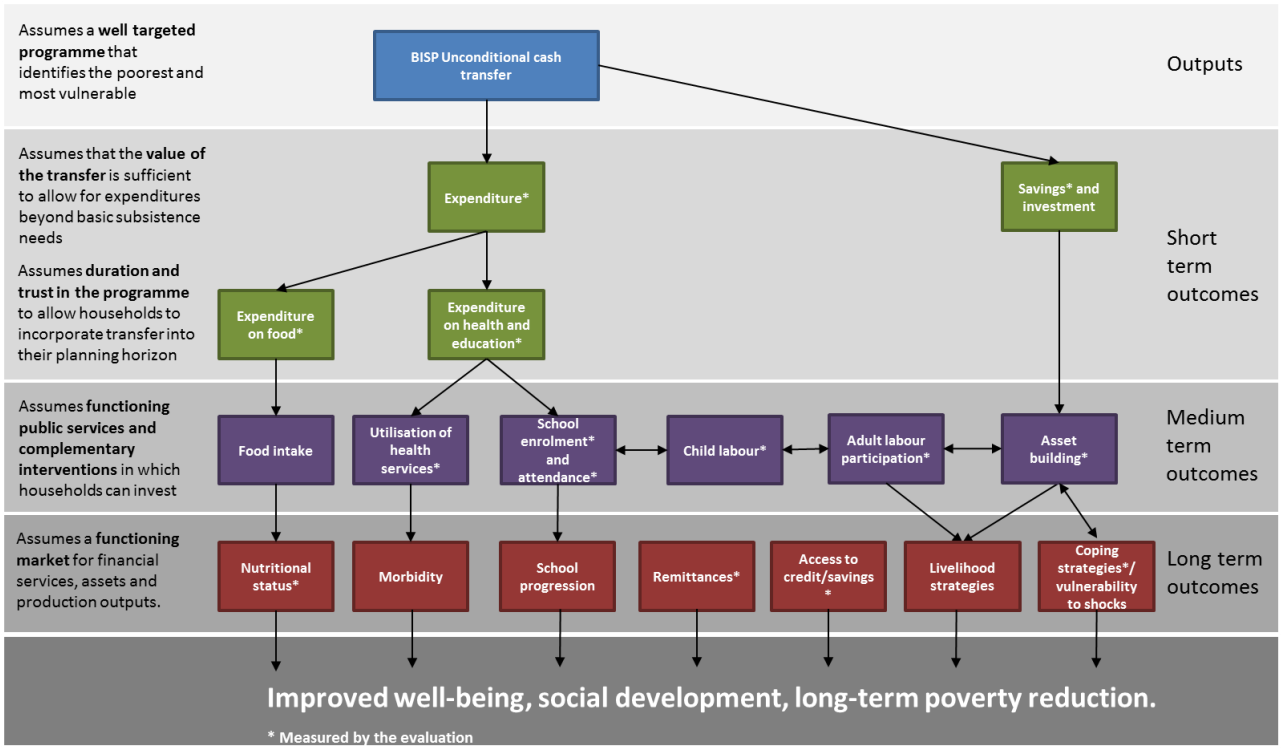
1.2 Cash transfers: a conceptual framework

The theory of change supporting the two main objectives of the BISP is presented in Figure 1 below. In the short term, through the provision of a regular and supplementary cash income, BISP would support basic consumption needs, and protect households from fluctuations in prices of necessities.

In the longer term BISP payments would allow beneficiary households at their own discretion to make 'desirable' investments in nutrition, education, health, productive assets, among others. These investments in human and physical capital in turn would be expected to support poor households to permanently graduate out of poverty. There is an ever growing body of evidence on the effectiveness of UCTs in addressing not only poverty mitigation but also long-term poverty reduction and human development goals (such as increased school enrolment, child nutrition and women's empowerment)[1].

[1] *Hanlon, Barrientos and Hulme (2010)* provide a useful summary of the evidence of impact of unconditional cash transfers

Figure 1 BISP theory of change[2]



However, the ability of an unconditional cash transfer such as the BISP to move beyond poverty mitigation to achieve long-term poverty reduction and human development goals depends crucially on a range of contextual, design and implementation features (adapted from *DFID, 2011*):

- **Value of the transfer** relative to the initial incidence and depth of poverty. To enable households to use the transfer for anything more than poverty mitigation it must be of sufficient value that allows them to not only meet their basic subsistence needs but also to leave some left over for savings and for investment in human and productive capital.

- **Targeting effectiveness** in terms of how successful the transfer is in actually identifying the poorest and most vulnerable. Impact on poverty and human development will be diluted if there is significant leakage to non-poor households.

- **Duration and trust in the programme**. The cash transfer should be delivered for sufficient time for households to make the step-wise changes needed for a permanent graduation from poverty. In addition, the programme should be sufficiently well implemented such that households can trust in a regular and reliable transfer and allow them to incorporate it into the planning of their household budget and their planning of future investments.

- **Functioning public services and complementary interventions** in which households can invest. Even if households are knowledgeable of the returns to investment in human capital such as education, a cash transfer can have only limited impact if beneficiaries do not have access to functioning public services or other interventions complementary to poverty reduction. This emphasises that a cash transfer such as the BISP is not a 'magic bullet' for poverty reduction and human development, but must be considered as one pillar of a broader set of services provided to a population.

[2] Adapted by authors from *DSD, SASSA and UNICEF(2012)* and *DFID (2012)*

- **Functioning markets** including for financial services, labour, assets and production outputs. Beneficiary households may be expected to leverage a cash transfer to make stepwise changes that allow their level poverty to be diminished and eventually eliminated. However, this is crucially dependent on such households having access to functioning markets that enable the opportunity to save, borrow, work and sell home-production, amongst others. Key market failures will prevent households from diversifying into potentially higher return activities and graduating out of poverty.

This evaluation will provide some understanding of the impact of the BISP as well as the potential influence of contextual, design and implementation factors that drive or hinder this impact.

1.3 Overview of the evaluation

The BISP includes an evaluation component and the GoP has contracted Oxford Policy Management (OPM) to undertake a rigorous evaluation of the programme's impact. The evaluation component will help to determine the relevance and effectiveness of the programme in delivering its broad aims of cushioning the negative effects of recent economic crises as well as protecting Pakistan's vulnerable population from chronic and transient poverty. The evaluation component will also help to inform stakeholders of the programme's performance and enable lessons to be drawn to improve future practice and policy.

To provide context to the estimates of programme impact, the evaluation gathers data on the beneficiary experience with the programme operations including community perception of targeting, the beneficiary experience with payments mechanism and user costs of accessing the payments.

The core of the report is focused on determining BISP programme impact on the following:

Key intended impacts

- Increased consumption expenditure and poverty reduction;
- Women's empowerment;
- Increased household food consumption and child nutrition; and
- Increased asset retention and accumulation.

Secondary impacts

- Increased household investment in health and education;
- Decreased vulnerability to shocks;
- Changes to informal inter-household transfers; and
- Changes to household livelihood strategies

In order to assess these impacts, the evaluation collects quantitative and qualitative information on a range of key indicators and supporting data. The impact analysis is conducted using a mixed methods approach, combining qualitative research with a quasi-experimental quantitative survey design.

The quantitative survey is implemented in 458 clusters (villages & neighbourhoods) across 90 districts of the four evaluation provinces: Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan. For the final evaluation survey, a new sample of households was drawn directly from the BISP MIS in order to better target the sample of beneficiary and non-beneficiary households that could be used for the quasi-experimental Regression Discontinuity approach described in Section 2.

In total a randomly selected sample of 9,317 households were interviewed, of which 5,300 are BISP beneficiary households. The fieldwork for the final quantitative round of fieldwork was conducted in the period February – April 2016.

Qualitative research has taken place in twelve districts in each round of study, purposively selected from the four evaluation provinces to provide a range of different contexts. Data collection for the final follow-up round of qualitative research was conducted in March and April of 2016.

The measure of programme impact presented in this report derives from a comparison of beneficiary households with BISP poverty scores in close proximity to the eligibility threshold score, with a set of non-beneficiary households with BISP poverty scores with the same proximity to the eligibility threshold score. The situation of these households is compared using the quasi-experimental approach known as a Regression Discontinuity (RD) Design.

1.4 Structure of this report

This report is structured as follows:

Part A includes Section 2 which describes the evaluation methodology.

Part B includes Section 3 which presents an analysis of the BISP beneficiary experience with receiving the BISP cash transfer.

Part C includes Section 4 which presents a profile of beneficiary households based on all beneficiary households in the same and not just those who are used for the Regression Discontinuity Impact Estimates presented later I n this report.

Part D presents in the impact evaluation results Section 5 analyses the impact of the BISP on poverty, household food and non-food consumption, child nutrition, household assets and deprivations on living standards. Section 6 provides a discussion of the impact of the BISP on women's empowerment. Section 7 provides an analysis of the impact of the BISP on the livelihoods adopted by beneficiary households. Section 8 considers the impact on education.

A technical annexure is provided detailing the evaluation methodology.

2 Evaluation methods

This evaluation adopts a mixed method approach to provide an assessment of the impact of the BISP on its beneficiaries across a range of impact areas and their indicators. These indicators and areas of impact as well as the particular methods employed in the evaluation were identified in coordination with BISP and its stakeholders during the inception phase of the evaluation. Below we briefly summarise the key research questions and areas of impact, the quantitative evaluation methods as well as the qualitative assessment of impact.

The quantitative impact assessment will compare a set of treatment households against a set of control households to measure the impact of the BISP cash transfer on beneficiary households over a range of indicators described in Table 1.

Treatment households are defined as households who have been identified as beneficiaries of the programme. Control households are defined as non-beneficiary households but who have poverty scores as determined by the BISP poverty scorecard that are just above the programme's eligibility threshold.

2.1 Key measures of impact

The evaluation measures a range of quantitative indicators across a number of different impact areas, which are detailed in Table 1 along with a description of the hypothesis behind which the BISP cash transfer can feasibly induce an impact.

Table 1 Key impact areas and indicators

Area of impact	Hypothesis	Quantitative indicators
Key intended impact		
Consumption expenditure and poverty (Section 5)	BISP programme will reduce the rate of poverty amongst beneficiary households, by directly supplementing monthly household income	• Proportion of beneficiary households below the poverty line • Per adult equivalent consumption expenditure
Women's empowerment (Section 6)	A transfer targeted directly at women will increase their agency in various domains including: control over household resources, engagement in public life, role in household decision making	• Percentage of female beneficiaries who retain control over the transfer • Percentage of women working outside the home • Women's participation in choices relating to household, both relating to short- and long-term decisions.
Household consumption and child nutrition (Section 5)	Regular and reliable payments will improve access to food by supplementing household incomes, tackling one of the pillars of food insecurity[3].	• Per adult equivalent food consumption expenditure • Child anthropometry
Asset retention and accumulation (Section 5.5)	Beyond being used for current consumption households will be able to save some portion of the transfer and use it for asset accumulation	• Ownership of livestock • Ownership of productive household assets
Secondary impacts		
Investment in education (Section 8)	A direct cash transfer will alleviate the economic constraints to the access of health and education services	• Primary school enrolment rate

[3] This recognises that the BISP cannot address all root causes of food insecurity including the stability of food supply, the availability of food and the way in which food is utilised.

Area of impact	Hypothesis	Quantitative indicators
Livelihood strategies (Section 7)	BISP will provide households the opportunity to explore alternative livelihood strategies and reduce their dependence on risky options	• Proportion of working age population economically active • Proportion of economically active population by employment status

2.2 Quantitative evaluation methods

A key challenge for any impact evaluation is the **identification of a suitable counterfactual** or control group against which to compare impact of a programme on beneficiary households or the treatment group. A valid control group should satisfy three conditions, *Gertler et. al. (2011)*:

- The treatment and control group should share on average the same characteristics;
- Treatment and control groups should react to the programme in the same way if it was indeed offered to both groups; and
- Treatment and control groups should not be differentially exposed to other interventions during the period of the evaluation.

The quantitative evaluation employs the **Regression Discontinuity (RD)** design to meet this challenge. It exploits one of the key design features of the BISP, its beneficiary targeting through the BISP poverty scorecard, to achieve this. BISP beneficiaries have their programme eligibility determined by the BISP poverty score such that treatment will be offered only to households with a score of 16.17 or less. Households with a BISP poverty score above 16.17 are ineligible.

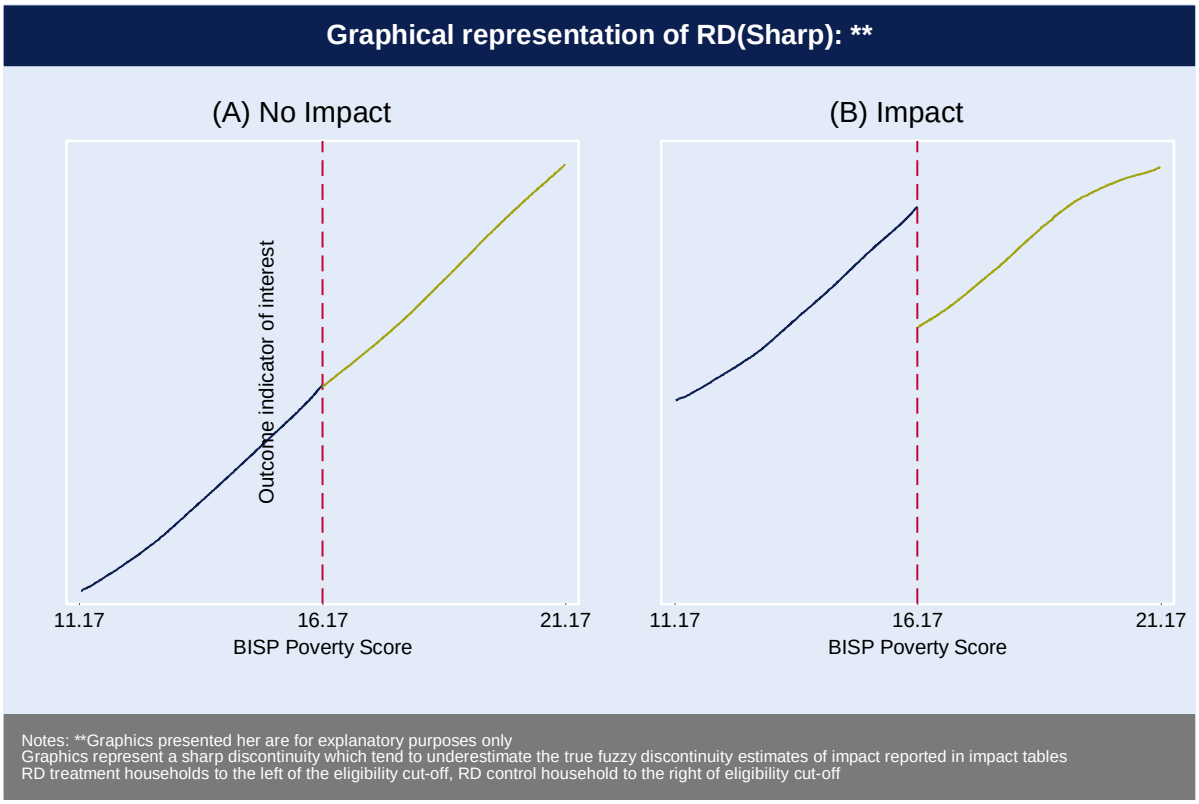
Under the assumption of a continuous relationship between the eligibility score (BISP poverty score) and the outcome variable we exploit the eligibility cut-off to define valid treatment and control groups. Figure 2 graphically presents the logic behind this approach. We compare **households just below the eligibility threshold (treatment households) with households just above the eligibility threshold (control)**.

For indicators on which the BISP does not have an impact we would expect no difference in the outcome indicator of interest between treatment and control households. In terms of the RD approach, for such outcome indicators we would find no discontinuity in the outcome variable at the eligibility threshold.

Alternatively, for indicators on which the BISP has an impact and assuming that only households below the eligibility threshold receive the transfer, we would expect to find a **discontinuity in the outcome variable at the eligibility threshold**. Such a discontinuity, should it be statistically significant, will represent the impact of the BISP cash transfer on that outcome variable.

A full description of the RD approach and various tests of the validity of the approach for this evaluation can be found in the annexure.

Figure 2 Graphical representation of Regression Discontinuity



2.2.1 'Fuzzy' RD design

The discussion above assumes that a 'sharp' RD is possible, which means that actual treatment status should perfectly match the eligibility of a household, i.e. a household that is determined as eligible for the BISP should actually become a beneficiary and a household that is determined as ineligible for the BISP should not.

However, we find in our sample that this is not the case. For example, in some cases programme rules stipulate it is possible to become a beneficiary with a higher eligibility cut-off score, such as in the case of a disability. We therefore implement the **Fuzzy RD (FRD)** approach, where the treatment effect can be recovered by dividing the jump in the relationship between the outcome variable of interest and the BISP poverty score, by the jump in the relationship between the treatment status and the BISP poverty score. FRD will provide an unbiased estimate of the local average treatment effect (LATE). Full technical details of this approach can be found in the annexure.

2.2.2 RD provides a Local Average Treatment Effect

Given that the RD approach analyses only households in very close proximity to the eligibility threshold its estimate of impact is a **Local Average Treatment Effect (LATE)**. This means that whilst the RD approach has **strong internal validity**[4], in that it provides robust estimates of impact for the set of households on which it is implemented it has **weaker external validity**, in terms of its applicability to households further away from the eligibility threshold.

[4] The annexure presents and tests the assumptions of the RD approach to demonstrate this.

In essence we might expect that beneficiary households that are very close to the eligibility threshold are somehow different from beneficiary households at lower ranges of the BISP poverty score. This expectation and its implications are explored in Annex F.

2.3 Evaluation sample size and sampling strategy

In order to implement the RD approach a complex multi-stage sampling strategy was required to identify our treatment and control groups. A number of contextual factors at the time of the baseline survey influenced the sampling strategy. Primary amongst these was the requirement to conduct the baseline survey before any payments had been made to BISP beneficiaries.

At the time of the baseline survey the BISP poverty census was still on-going. Under ideal circumstances the evaluation would have waited for the poverty census to complete and sample treatment and control households directly from this census. However, implementation of the poverty census was not synchronised across evaluation provinces with the implication that payments would begin in some districts before the census had been completed in others[5].

This meant that evaluation households were identified separately as *potential* treatment and control households based on a household listing exercise conducted in evaluation communities by OPM prior to the BISP baseline evaluation survey. In this household listing exercise an exact replica of the BISP poverty scorecard was delivered to all households in evaluation communities to approximate as closely as possible their actual BISP poverty score (as determined by the BISP poverty census) and assign them to treatment and control groups.

The consequence of this approach meant that when evaluation households were matched to the BISP Management Information System (MIS) via the number on the Computerised National Identity Card (CNIC) to identify their actual poverty score, not all households in the original evaluation sample were in the appropriate BISP poverty score range for the RD analysis.

To bolster the sample size of households in the appropriate RD analysis range, a re-sampling exercise was conducted in 2016 for the final round of the evaluation survey to draw new treatment and control households for interview in existing research communities. The total sample size for the final round of evaluation of this independent evaluation is presented in Table 2

Table 2 presents the **final sample size of 9,139 households** that have been interviewed for the final round of evaluation. The sample is split between a total of 5,212 beneficiary households and 3,927 non-beneficiary households. Of all beneficiary households 3,935 households are within the appropriate poverty score range for the RD analysis.

A full description of the sampling strategy adopted to draw this updated sample can be found in Annex D and a list of all districts that were visited for the quantitative survey can be found in Annex G.

[5] The idea of a *rolling baseline* that would follow the delivery was tabled during the inception phase. However, this would have required a detailed and confirmed workplan of the poverty census rollout, which was not possible given that the census was implemented by multiple third party implementers.

Table 2 Total evaluation sample size

	Total beneficiaries	Beneficiaries in RD range	Non-beneficiaries	Total households
Punjab	1,714	1,526	1,572	***3,286***
Sindh	1,860	1,191	1,147	***3,007***
Khyber Pakhtunkhwa	1,286	948	889	***2,175***
Balochistan	352	270[6]	352	***671***
Total	***5,212***	***3,935***	***3,927***	***9,139***
Source: BISP impact evaluation survey 2016. Notes: BISP poverty score full range: 0 - 100				

2.4 Note on the interpretation of impact estimates tables

We present our estimates of BISP impact in Sections 5 to Section 8. The estimates of impact are presented using the same format as illustrated by Table 3 below. The following estimates are presented:

(1) Mean values of the outcome indicator for treatment and control groups within the relevant RD bandwidth. These estimates have been weighted using a kernel weight which gives higher weight to observations closest to the BISP eligibility cut-off.

(2) Sample sizes for treatment and control groups within the relevant RD bandwidth

(3) The RD difference-in-discontinuity estimate which provides the measure of BISP impact on key impact indicators.

Table 3 Interpretation of impact estimate tables

	Control Group		Treatment Group		RDD impact estimate(3)
	Mean(1)	N(2)	Mean(1)	N(2)	
Outcome indicator	RD weighted value for control group	RD control group sample size (size within relevant RD bandwidth)	RD weighted value for treatment group	RD treatment group sample size (size within relevant RD bandwidth)	Regression Discontinuity impact estimate conducted on households within RD bandwidth
Source: BISP impact evaluation survey 2016. Notes: (1) Asterisks (*) indicate that an estimate is significantly different to the relevant treatment comparator: *** = 99%, ** = 95%, *=90%. (2) Point estimates are weighted using triangular weights (3) Sample sizes are based on the sample size of treatment or control households within +/- 5 points of the eligibility threshold					

[6] Due to the small size of beneficiary households in Balochistan who are in the RD treatment bandwidth, caution should be taken in interpreting the results of impact for households in Balochistan. A small treatment group sample size might mean that we mistakenly report that there is no evidence of impact, when in actuality there is.

We also use stars (*) to present the statistical significance of a particular result. These can be applied to third, sixth, eighth and ninth columns. Three stars (***) will indicate a 99% level of significance in a particular estimate. This would mean that we are 99% sure that an observed difference in our sample (whether it is a change in an indicator over time or an estimate of impact) would actually be observed in reality (i.e. we are 99% sure that the estimate is not a *false positive*).

Therefore, if an estimate of programme impact (column 8) on a particular outcome indicator is not highlighted by a star (*) then the BISP does not have a statistically significant impact on that outcome indicator.

2.4.1.1 Reporting means in impact tables

In all tables that include estimates of impact we report the sample means for both the control group and the treatment group. These are presented to provide a situational analysis of the current status against key indicators for both groups. However, caution should be taken in the analysis of means and their comparison to the final reported RD estimate of impact.

Consider Panel B in Figure 2 above. It is clear that in this case the BISP has had a positive impact on the outcome indicator of interest, demonstrated by the positive discontinuity at the eligibility threshold. Despite this it is also clear that the overall mean of the outcome indicator is lower for the treatment group (those with a BISP poverty score less than 16.17) than for the control group (those with a BISP poverty score of more than 16.17).

2.5 Qualitative research methods

2.5.1 Location sampling

The research focuses on 8 districts across four provinces, with two communities selected in each district. These were purposively selected. Three districts were WeT 2012 pilot districts: Noshki (Balochistan), Karachi (Sindh) and Malakand Protected Area (KPK). The remaining five districts are amongst those where WeT was scaled up in 2015.

Table 4 Research districts

Province	District
Punjab	Khushab
	Bahawalnagar
Balochistan	Noshki*
	Ziarat
KP	Malakand Protected Area*
	Charsadda
Sindh	Karachi South*
	Sukkhur

*WET pilot districts (2012)

All sixteen communities were those where the programme had started during its inception years from 2008 to 2010 (14 communities), with two (one in Sukkhur and one in Khushab) where the roll-out was during 2011-12. With the exception of the latter two areas, two or more rounds of selection had been conducted with the latest disbursement in 2015-16 in the selected villages.

Waseela e Taleem is operational in twelve of the selected communities; while not in two villages of Ziarat (one in Bahawalnagar and other in Sukkhur).

2.5.2 Respondent sampling

The respondents for individual interviews were randomly sampled from BISP beneficiary lists for the selected districts, focusing on beneficiaries who received BISP from 2009-12. FGD participants were selected with the help of community key informant and snowballing, with the main criteria of covering various geographical localities of the community including any multi-ethnic/religious characteristics in the area. In regard to non-beneficiary respondents, we focused on people with similar socio-economic profiles as BISP beneficiaries (using community knowledge for initial identification, followed by screening by the field teams).

Table 5 Tools used per district

	Type of tools	Respondent	Number of tools
District (2 communities)	Household In-depth	Beneficiary household	- 3 men - 3 women
	FGD	Non-beneficiary men and women	- 1 male FGDs - 1 female FGDs
	FGD	Beneficiary men and women	- 1 men - 1 women
	Community key informant interviews	Community influe2tial	- 1 man - 1 woman

A total of 48 beneficiary IDIs, 32 community FGDs and 16 KIIs will be conducted in the eight selected research districts.

2.5.3 Research tools

The research used a (semi) contextual inquiry approach using BISP as the context and its role in changes over time. Data was gathered at three levels that is community key informant interviews for an overview of the community, focus group discussions with beneficiary and non-beneficiary men and women for a community perspective on well-being and changes over-time and directed one-on-one interviews to gather information and understand the household members' attitudes and

behaviour around consumption patterns, education of children and assets accumulation while economic mobility and women's empowerment will be cross-cutting themes.

Tools used for data gathering were as follows.

Data was collected using Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and In-depth interviews (IDIs) as well as selected participatory tools focusing on specific areas of the research.

1. Key informant interviews

KIIs were carried out with one male and one female community member who had good general knowledge about the community. This included the community pesh imam, school teacher, social or political activist, Landlord/owner, LHW, LHV, TBA or any other person who understood the area and could provide information. Key respondents were mainly asked about changes in, and the impact of BISP (if any) on the social and economic conditions of the community; poverty status of beneficiary households; and gender-specific roles and responsibilities.

2. Focus group discussions

FGDs were conducted with both men and women to gather community level data from BISP beneficiary and non-beneficiary households regarding the

- Impact of BISP on household nutrition, education and health status;
- Risk-coping mechanisms and economic security;
- Gender roles and responsibilities;
- Decision making in context of household expenditure, education, health livelihood; and
- Collection of BISP transfer

3. Empowerment Ranking Exercise

A participatory tool was designed to analyse women's experiences and perceptions of the factors that enable them to express their human agency. This exercise was undertaken with women from both beneficiary and non-beneficiary households. The ranking exercise encouraged female respondents to identify, discuss and list various activities/functions at the household level that frame power relations and their capacity to make strategic choices, and to rank them according to their importance. Respondents were also asked to relate the contribution (if any) of BISP to the changes they identified.

4. Livelihood Matrix

The livelihood matrix was conducted with beneficiary and non-beneficiary men to assess the various sources of livelihoods in the area; community preferences for certain type of work and reasons for it; remunerations rates; changes in livelihood trends; and factors that have influenced these changes including any direct or indirect impact of BISP cash transfer on community livelihoods.

5. In-depth interviews

In-depth interviews were carried out with BISP beneficiary women and men according to education levels[7] of the respondents to assess whether education was a key determinant in women's

[7] Given the low educational attainment of BISP beneficiary women (on average), 'high education' represents women completing primary education and 'low education' represents women with no formal education.

empowerment (to test 'agency') and their attitudes and perceptions relating to gender empowerment. These interviews also gathered data on operational effectiveness of BISP. IDIs were also carried out with female respondents belonging to vulnerable households to uncover potential differences in findings for women headed or minority households.

2.5.4 Qualitative research focus

In order to analyse progress towards socioeconomic improvement, the research qualitatively explores BISP outcomes in the following indicator areas:

Household consumption

- Women and children's diet (food quality and quantity) and beneficiaries' ability to purchase and store food for future use;
- Beneficiary access to basic utilities (water, electricity, fuel) and transport; and
- Purchase of household goods (e.g. clothes and shoes)

Education

- School enrolment and retention (focusing particularly on the girl child), and associated change in parental beliefs and practices

Asset accumulation/ economic mobility

- Livelihoods - change or expansion of income-generating activities;
- Investment in productive assets (e.g. livestock, poultry, sewing machine);
- Purchases that increase socio-economic status (e.g. bicycle, motorbike, etc.); and
- Savings, loans and participation in insurance schemes

Women's empowerment:

- Women's decision making and control over BISP cash; and
- Change in female beneficiary mobility, confidence, self-esteem, decision making, interpersonal relations, etc.

Part B: Experience of receiving the transfer

3 BISP beneficiary experience

In this section we report on the experience of beneficiaries with the transfer looking at the frequency and value of payments, the costs associated with collecting the transfer and who makes decision over how the transfer is used. The key findings are:

- Beneficiaries are expected to receive quarterly payments, for a total of PKR 18,800 per year
- In the 12 months preceding the survey, 87% of beneficiaries received at least 3 of the 4 expected payments
- Beneficiaries reported receiving on average a total of PKR 13,906 in the 12 months preceding the survey
- Direct costs of travel to the collection point are relatively low, amounting to 2% of the total value of the transfer
- Some beneficiaries reported having to unwillingly pay a "fee" to collect the transfer (18%), though this phenomenon is most prevalent in Sindh (33%)
- The majority of beneficiaries retain control over how the BISP cash transfer is normally spent, even when it is collected by another household member

3.1 Frequency and value of payments

The value of the BISP transfer has steadily increased over the lifecycle of the BISP programme. At the inception of the BISP, the planned value of the transfer per beneficiary was PKR 1,000 per month. This increased to PKR 1,200 per month with effect from the 1st of July 2013 and then further increased to PKR 1,500 per month with effect from the 1st of July 2014.

Thus the relevant planned value of the transfer to be considered for reference in this evaluation report in PKR 1,500 per month, for a total annual value of PKR 18,000.

3.1.1 Number of transfers received in the last 12 months per beneficiary

The BISP cash transfer has been designed to provide income support to poor and vulnerable households in a frequent and predictable manner. The **frequency and predictability of the BISP cash transfer is important** as this facilitates consumption smoothing, planning of expenditures and moderate risk-taking in anticipation of future rewards. (*Daidone et. al., 2015*).

BISP payments are made quarterly and each beneficiary is expected to receive a total of 4 payments in an annual cycle. In the evaluation survey each beneficiary within a household was asked how many payments she personally received in the last 12 months. Given that the timing of the evaluation survey (February 2016 – April 2016) may not precisely coincide with actual payment days we consider **payments to be regular and in full if beneficiaries reported receiving at least three payments in a 12 month cycle**.

Figure 3 Number of transfers received per beneficiary in last 12 months

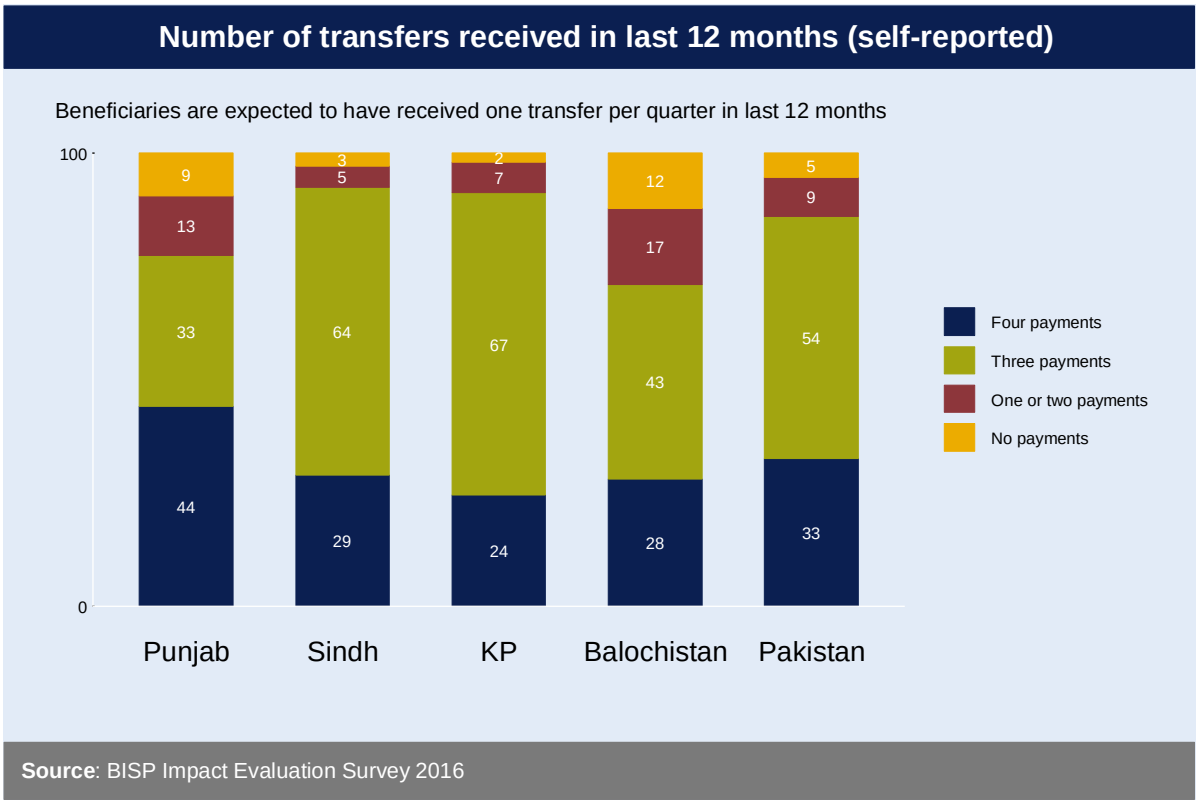


Figure 3 reports that on **87% of beneficiaries in the evaluation sample received at least three payments** in the last 12 months, using data that is self-reported by the beneficiaries. This finding is consistent with those presented in the BISP Second Impact Evaluation Report (*OPM, 2015*) and demonstrates that the BISP is continuing to make consistent payments to the vast majority of its beneficiaries.

There is, however, regional variation in this finding. In particular just 71% of beneficiaries in Balochistan had received at least three payments in the last 12 months. Beneficiaries in Balochistan were also the most likely to have reported not receiving a single payment in the last 12 months. 12% of Balochi beneficiaries reported this to be the case, compared to a sample average of 5%. This finding may be related to the lower reach of banking facilities in the province and the greater distance of beneficiaries to those facilities (see Table 6 below).

3.1.2 Value of the transfer received in the last 12 months

Over the reference period of the 2016 survey each BISP beneficiary was **expected to have received PKR 18,000 in an annual cycle** spread evenly over four payments. However, as discussed above, the timing of the 2016 evaluation survey and its 12 month recall period may not precisely coincide with the BISP payment schedule. Thus one would expect each beneficiary to have received at least three quarterly payments for a total of PKR 13,500.

Figure 4 Value of the transfer received per beneficiary in last 12 months (self-reported)

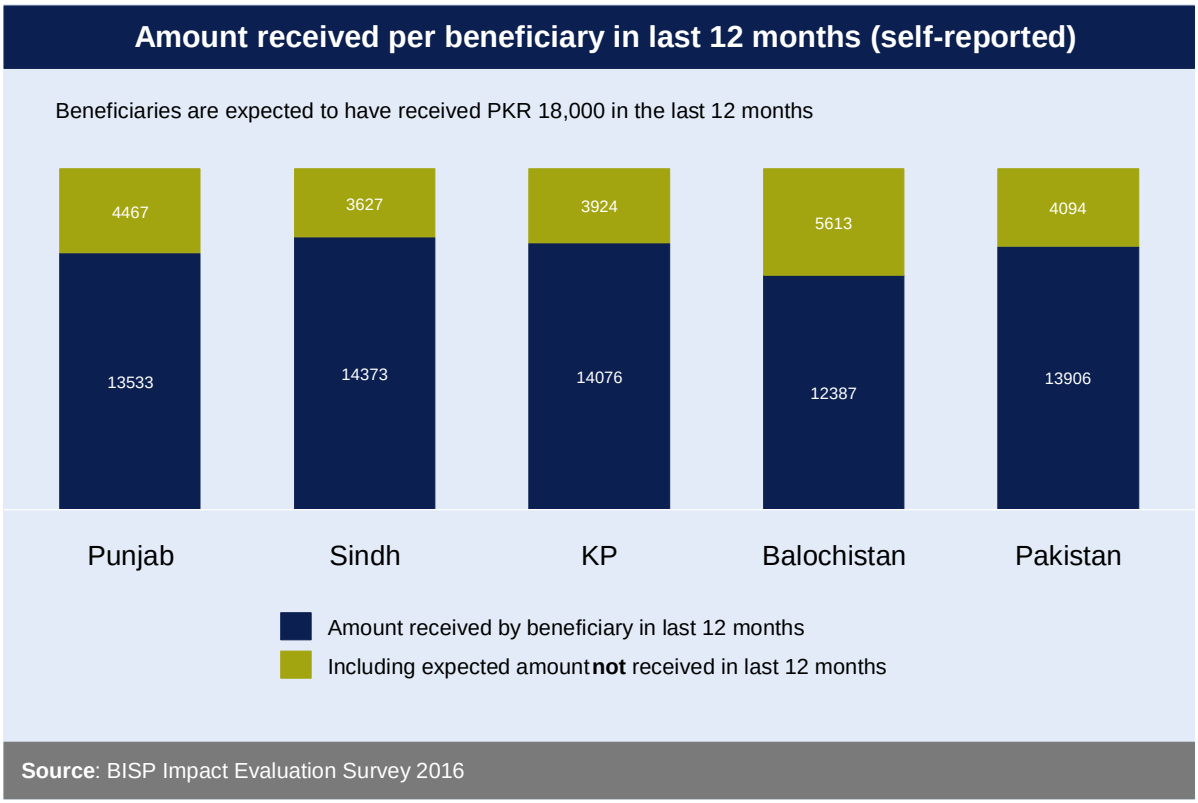
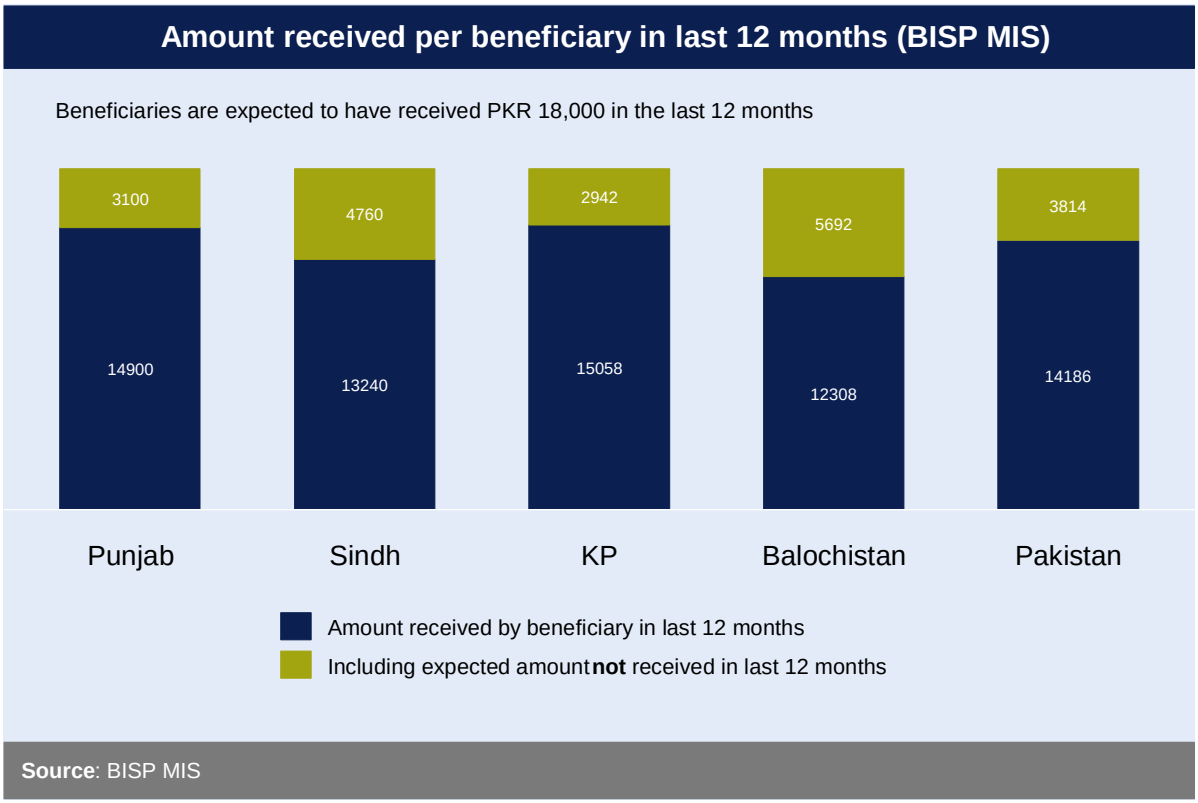


Figure 4 demonstrates that in the 12 months preceding the 2016 evaluation survey on **average beneficiaries had received PKR 13,906 or 77% of the PKR 18,000 that a beneficiary would expect to receive** in a 12 month period based on self-reported receipt of the transfer. This finding is in line with beneficiaries receiving at least 3 of the quarterly payments.

Balochistan continues to perform more poorly than other provinces, with **beneficiaries in Balochistan receiving just PKR 12,387 or 69% of the expected transfer** in the 12 months preceding the 2016 survey. This finding is consistent with Balochi beneficiaries receiving fewer transfers in a given 12 month cycle (Figure 3) than beneficiaries in other provinces.

To validate our findings from the self-reported data we confirmed our findings by using the records of payments made to beneficiaries accounts that is housed in the BISP MIS. These findings are presented in Figure 5. We find that the BISP MIS reports very similar results to the self-reported data, indicating that on average beneficiaries received PKR 14,186 or 78% of the total value of the transfer in the last 12 months. We also find that BISP MIS indicates that Balochistan performs the worst with beneficiaries receiving just PKR 12,308 or 68% of the transfer.

Figure 5 Amount received per beneficiary in last 12 months (BISP MIS)



3.1.3 Per adult equivalent value of the transfer per household

In the context of addressing the impact of the BISP cash transfer on key impact indicators (as presented in Part C of this report) it is useful to consider the **per adult equivalent monthly value of the transfer**[8], which will give the reader a better idea of the additional resource provided by the BISP per member of the household.

Furthermore it is useful to consider that the direct beneficiary of the BISP cash transfer are **female family heads**[9] **rather than at the household as a whole**. Given that it is common for there to be multiple families living in one household it is **possible for more than one BISP beneficiary to live under the same roof**. 10% of BISP beneficiary households had more than one BISP beneficiary, with an average of 1.11 beneficiaries living per household.

[8] Per adult equivalent values gives the total number of *adult equivalent* members of the household. It does this by applying a weight of 0.8 to household members under the age of 18 and a weight of 1 to all household members 18 years and older and taking the sum

[9] i.e. ever married women in the household

Figure 6 Per adult equivalent monthly value of transfer per household

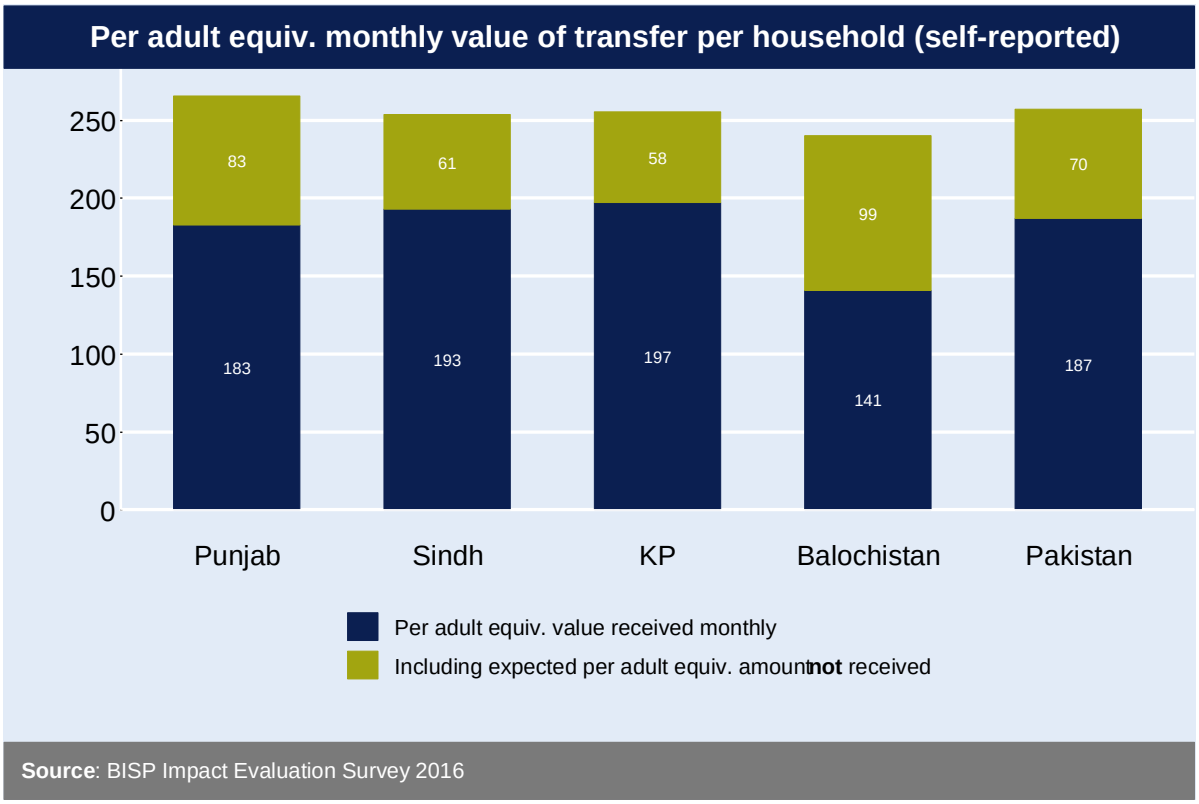
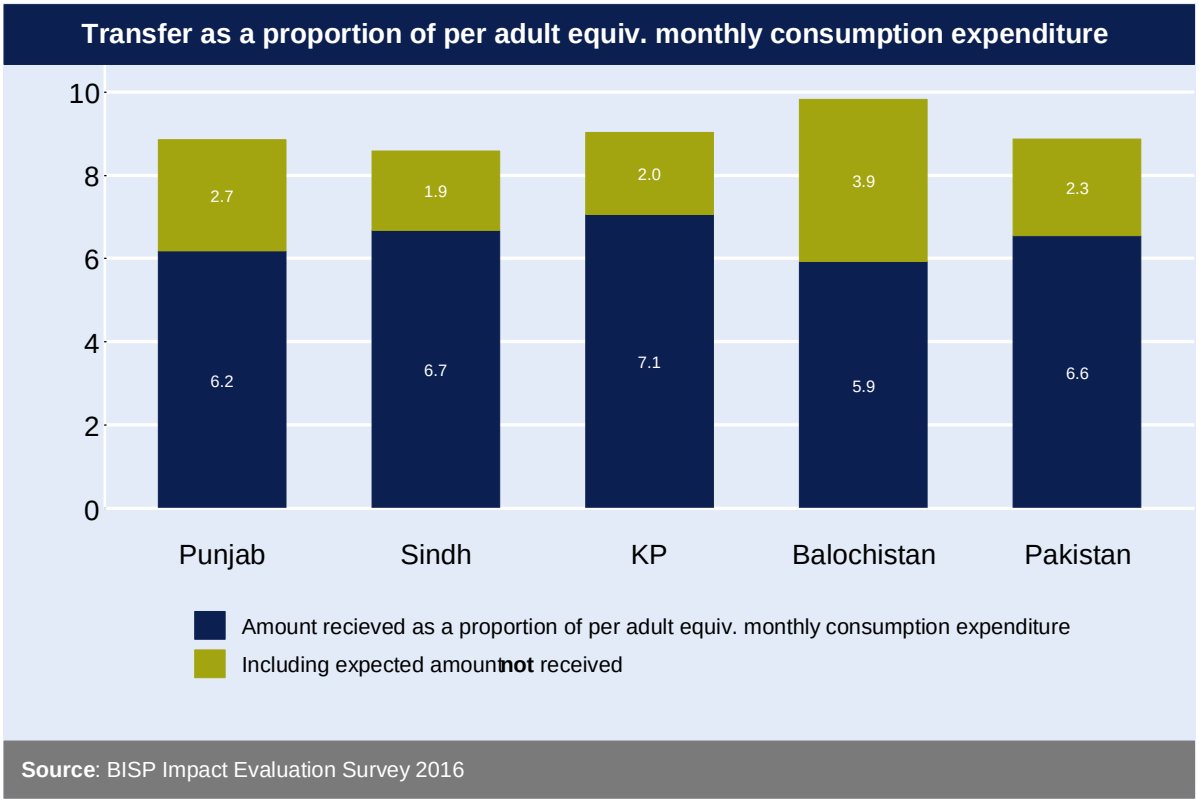


Figure 6 reports that the **average per adult equivalent monthly value of the transfer received was PKR 187**, though this would have been a total of PKR 257 if beneficiaries had received the full value of the BISP cash transfer in the last 12 months.

Unsurprisingly beneficiaries in Balochistan received the lowest per adult equivalent monthly value at just PKR 141, a direct consequence of having received the fewest number of transfers. However, even if beneficiaries in Balochistan had received the full complement of the BISP cash transfer in the last 12 months, they would have still had the lowest per adult equivalent monthly value at PKR 240, compared to the national average of PKR 257, as households in Balochistan tend to be larger on average.

Figure 7 provides some context in terms of the importance that the BISP cash transfer might play in a household's monthly budget. For the average BISP beneficiary in the evaluation sample, the **BISP transfer actually received in the last 12 months is equivalent to just 6.6% of the average per adult equivalent monthly value of consumption expenditure.** If the full value of the transfer had been received this value would have been 8.9% of per adult equivalent monthly consumption expenditure.

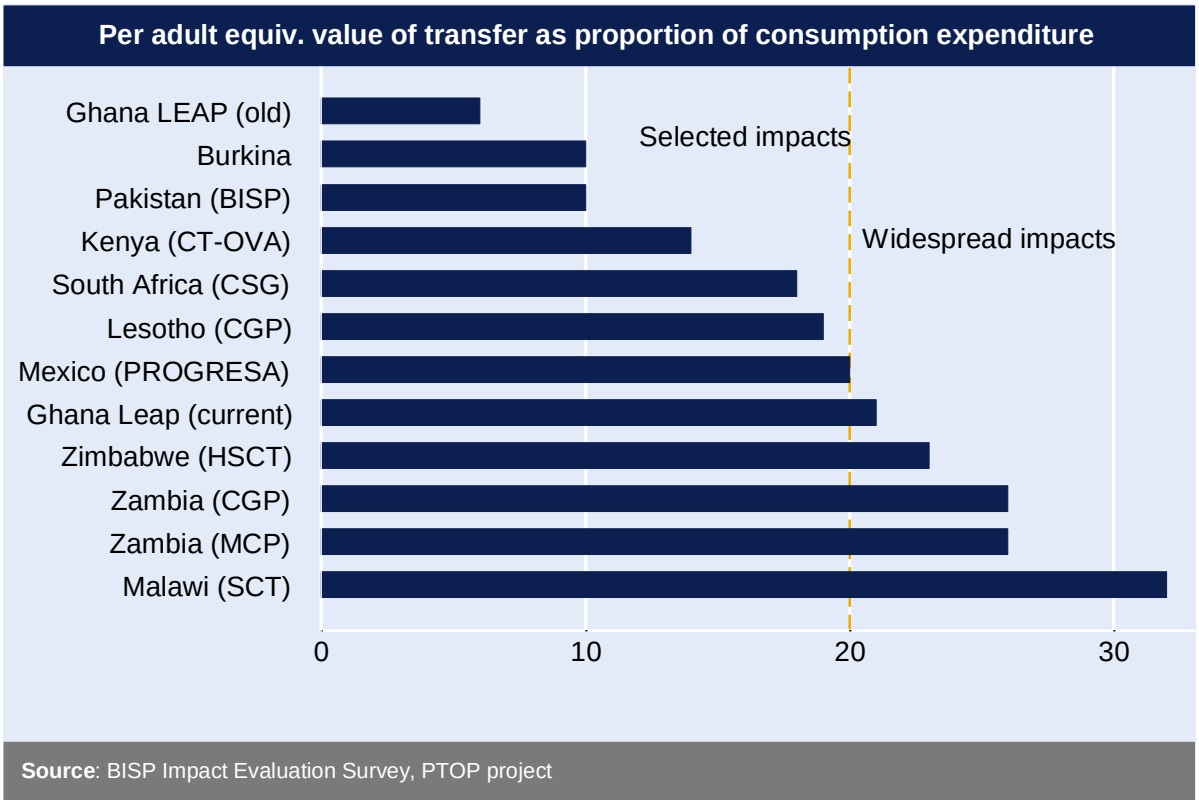
Figure 7 Transfer as a proportion of per adult equivalent monthly consumption expenditure[10]



Davis (2014) makes a comparison of 11 cash transfers globally, which are represented in Figure 8 below, and notes that transfers that make up at least 20% of per adult equivalent consumption expenditure tend to be more likely to have more widespread impacts, including on productive activities and human capital investments (such as education). Further, cash transfers with values below this threshold tend to have more selected impacts focussed on poverty.

[10] This is based on current per adult equivalent consumption. *OPM (2015)* reported that the value of the transfer (if received in full) made up 11% of per adult equivalent consumption expenditure. This analysis is not repeated here given the changes to the sample (see Section 2.3) which means that there is no baseline information for the majority of the evaluation sample

Figure 8 Per adult equivalent value of transfer as proportion of consumption expenditure



3.2 User costs related to the payment mechanism

Under the original design of the programme, BISP beneficiaries were paid money orders through the Pakistan Post, who delivered the cash transfer to the beneficiaries' doorsteps. Since 2013, however, this mode of payment has been phased out and replaced with the BISP Debit Card. The vast majority of cash transfers are now received in this manner (93% of beneficiaries in the evaluation sample).

Beneficiaries who use the BISP Debit Card can withdraw their cash transfer at any ATM in Pakistan. To further facilitate access to the transfer, the banks also provide branchless banking services, allowing BISP beneficiaries to withdraw their transfers from Point of Sale (POS) machines with a registered network of banking agents. The BISP Debit Card is managed by six partner banks[11].

Table 6 Costs associated with collecting transfer

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
Time taken to travel to collection point per trip (minutes)	32	34	31	45	33
Cost of travel to collection point per trip, including multiple trips (PKR)	79	120	74	147	96

[11] United Bank Limited, Habib Bank Limited, Bank Alfalah, Tameer Microfinance Bank, Summit Bank and Sindh Bank

Proportion of beneficiaries who could not withdrew cash on their first attempt	24	17	15	9	18
Proportion of beneficiaries reporting paying a "fee" to receive the transfer	7	33	13	15	18
Average "fee" paid by those who reported paying a fee (PKR)	153	219	122	204	192
Source: BISP Impact Evaluation Survey (2016)					

3.2.1 Cost of transport

Table 6 provides details of the types of user costs associated with collecting the BISP cash transfer. This includes time and cost to collect the transfer, the proportion of beneficiaries who managed to collect the transfer on the first attempt, as well as the amount of "fees" that beneficiaries unwillingly had to pay in order to collect the transfer – an indication of local level leakage of the transfer.

Across all provinces Table 6 suggests that there are **sufficient collection points to serve needs, with the average time taken to travel at just 33 minutes**. There is not much variation across the provinces, although beneficiaries in Balochistan had slightly further to travel, taking on average 45 minutes to reach a collection point.

The direct transport costs of collecting the transfer also seemed relatively low, with **beneficiaries spending on average PKR 96 or 2% of the quarterly value of the transfer on transport** to collect the transfer. This cost was highest in Balochistan, reflecting the longer travel distances required to reach a collection point.

However, despite the success on aggregate some communities in more remote regions were not well served by ATM infrastructure. For example beneficiaries in Ziarat, Balochistan, noted that there were no functioning ATMs close to their communities. As such they were forced to travel to the capital of Balochistan, Quetta. This travel was extremely costly in relation to the size of the quarterly transfer.

"There are no functional ATMs in ZIarat, so we have to collect BISP money from Quetta, which is very difficult for women because of travelling and also because they cannot travel alone so it does not make sense to go to Quetta accompanied by some other male from the family just to collect money. The standard travelling cost is also PKR 1,500 to and from Quetta to the village which takes away a substantive amount of the cash". (Woman IDI, District Ziarat, Balochistan)

3.2.2 Some beneficiaries making multiple trips to collect the cash transfer

Despite this not every beneficiary was successful in collecting payments on their first attempt. On average **18% of beneficiaries could not withdraw cash on their first attempt**. This issue is most severe in Punjab, where 24% of beneficiaries needed to make multiple trips, whilst just 9% of beneficiaries in Balochistan reported making multiple trips.

Figure 9 Reasons for not collecting last transfer on first attempt

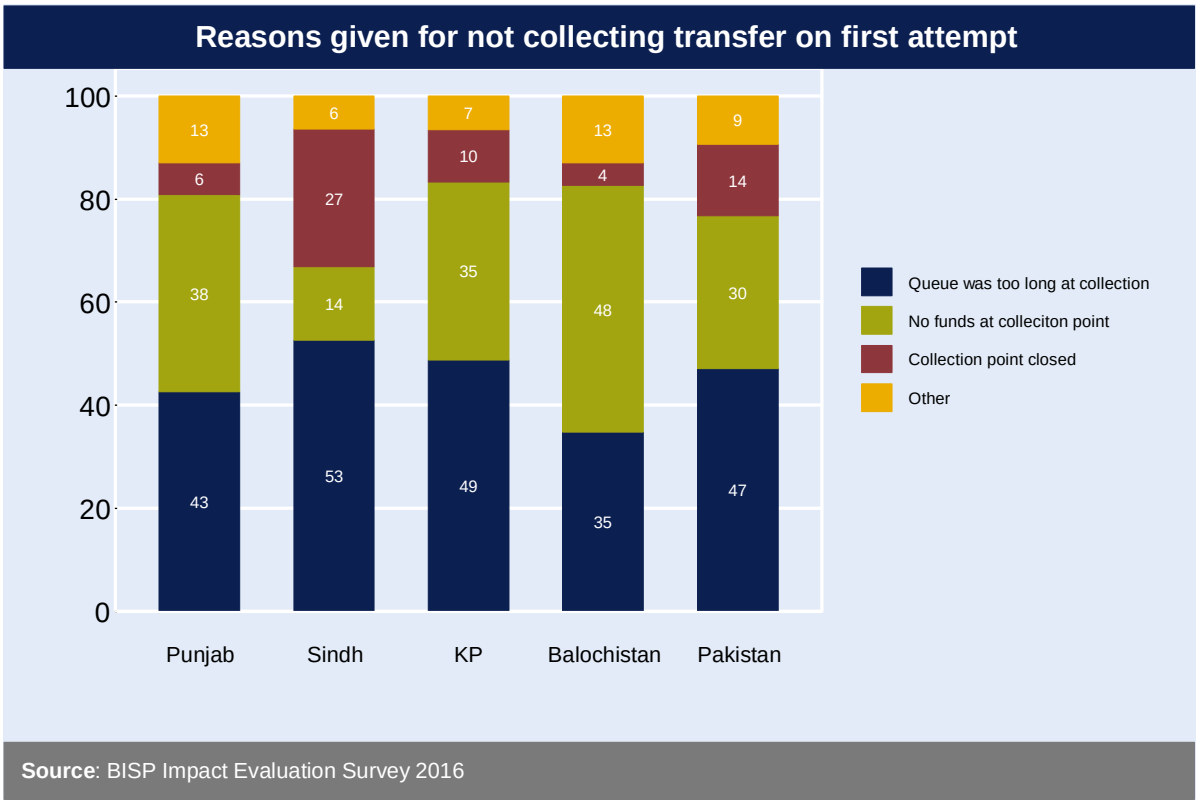


Figure 9 points at two main, related, reasons as to why beneficiaries needed to make multiple trips. **47% reported long queues and 30% reported lack of funds at the collection point** as the main reason why they could not collect the transfer on their first trip. This likely reflects a large number of beneficiaries converging on the collection points when the quarterly payments are made available in beneficiaries' accounts. BISP might therefore consider staggering the release of payments to ensure that collection points are not overwhelmed, though this would need to be accompanied by adequate communication so that individual beneficiaries were aware of when payments were being made into their accounts.

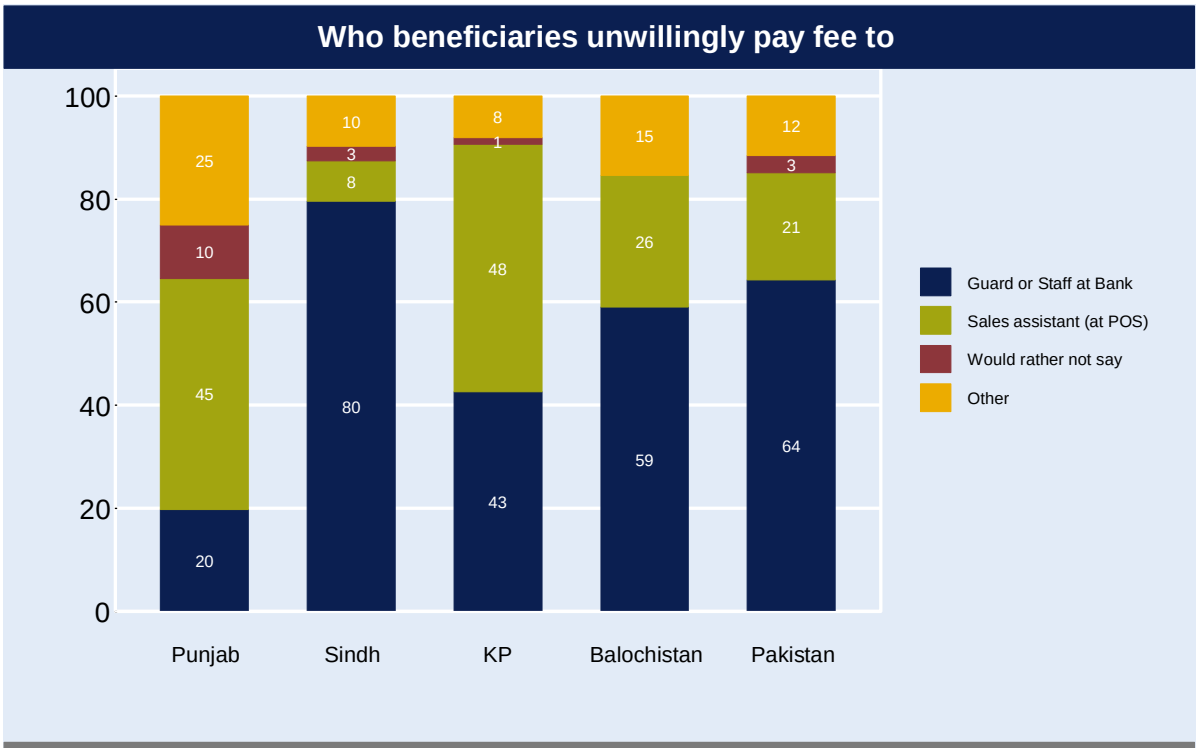
3.2.3 Local level leakage

Table 6 reports that **18% of beneficiaries had unwillingly paid a fee to receive their transfer across Pakistan**. There is, however, significant regional variation in this phenomenon with a third of beneficiaries in Sindh reporting having to pay a fee to collect the last transfer.

For those who had to pay fees, the **average fee paid for the last transfer that was collected was PKR 192**. This amounts to 4% of the value of the quarterly transfer demonstrating that, whilst clearly an inconvenience for some beneficiaries, it is rather low level local leakage.

Figure 10 demonstrates that the majority of fees are being paid to either guards or other staff members at banks, with 64% of beneficiaries who had paid a fee reporting this to be the case. However, the qualitative research noted that this type of local level leakage was falling as women (or their proxies) became more comfortable with using the ATMs, and still maintained that the ATM system was more transparent than, and thus preferred to, the previous mechanism whereby the cash was delivered by the Pakistan Post.

Figure 10 Who are fees paid to?

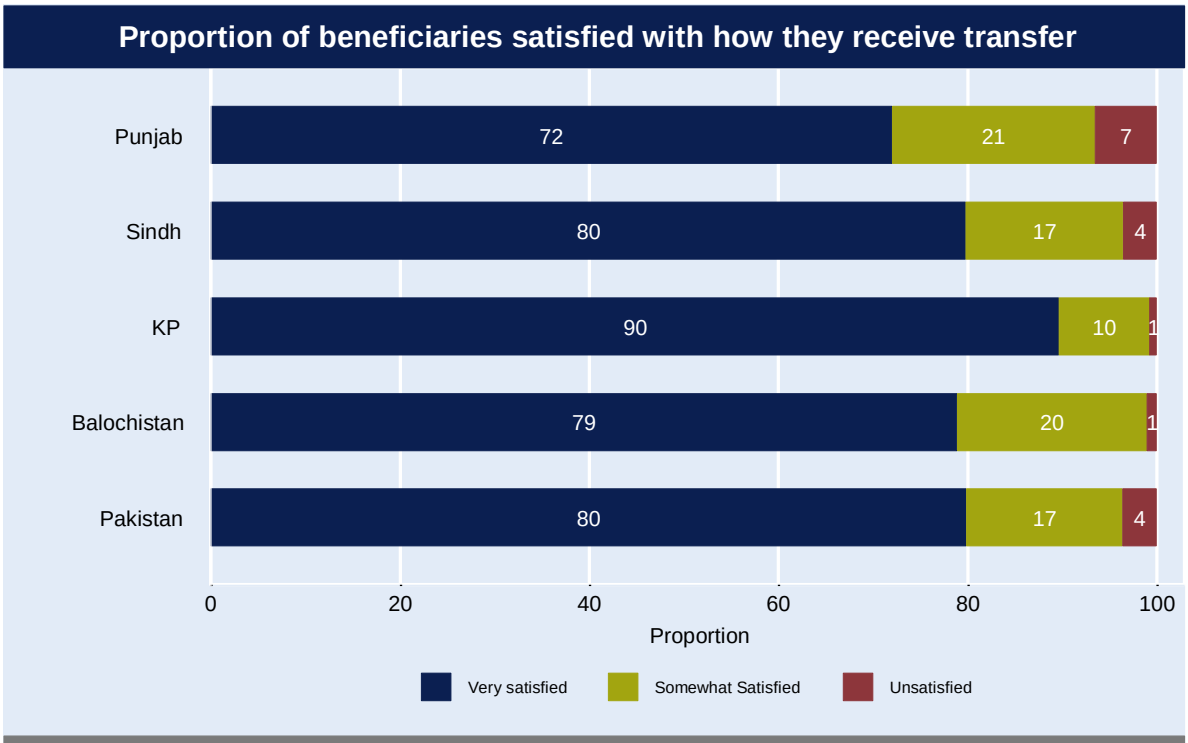


Source: BISP Impact Evaluation Survey 2016

3.3 Satisfaction with the payment mechanism

Figure 11 reports a high level overall of satisfaction with the way in which beneficiaries collect their transfer. Overall 96% of beneficiaries reported that they were very satisfied or somewhat satisfied with their experience in how they collected the cash transfer. The findings are consistent across the provinces with beneficiaries reporting high levels of satisfaction across each of the four provinces.

Figure 11 Satisfaction with the way in which cash is collected



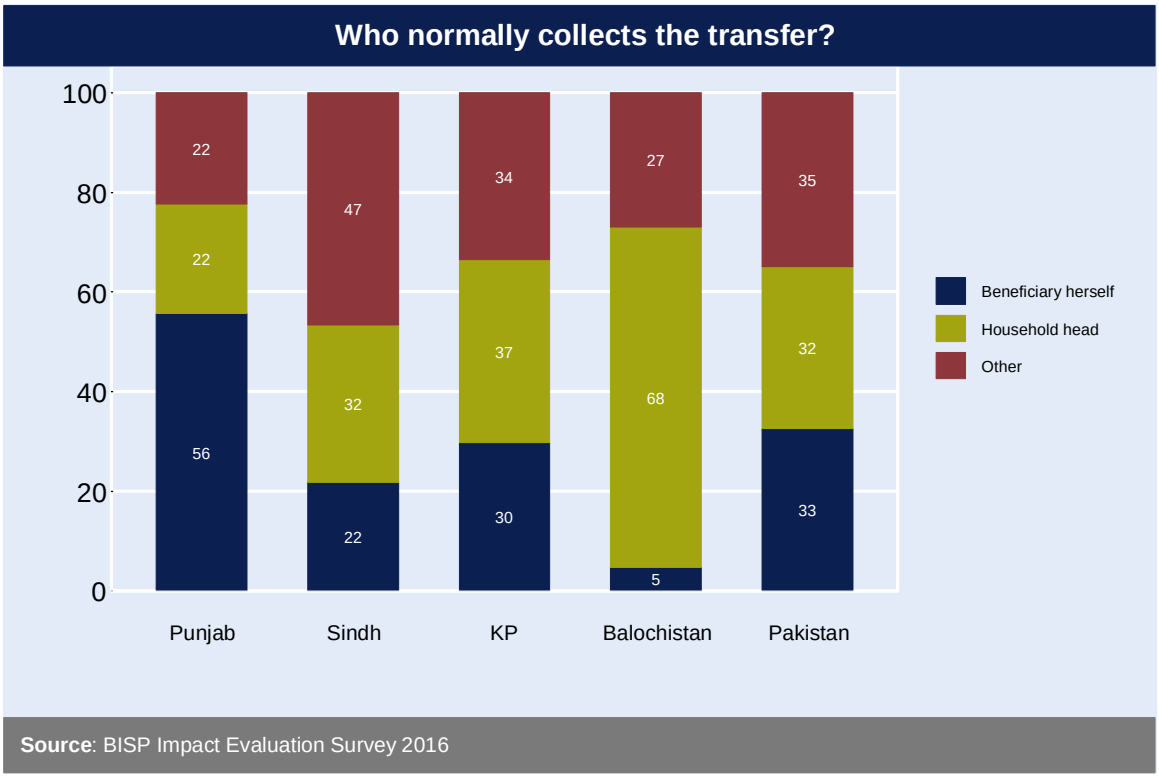
Source: BISP Impact Evaluation Survey (2016)

3.4 Control over BISP cash transfer

The BISP beneficiary is any ever-married female in a household determined as eligible for the BISP cash transfer. Embedded in the programme's theory of change is the goal to promote women's empowerment through providing the cash transfer to female beneficiaries.

In terms of who it is within the household who actually collects the transfer, we find compelling evidence that this is viewed as a shared responsibility within the household, with just a third of beneficiary women reporting that they normally collect the transfer personally. The qualitative research indicates that this was **perceived as a major benefit of the BISP Debit Card mechanism, with the majority of women in both IDIs and FGDs saying that they preferred ATMs more because anyone could collect the money** as was convenient at the time.

Figure 12 Who in the household collects the transfer?

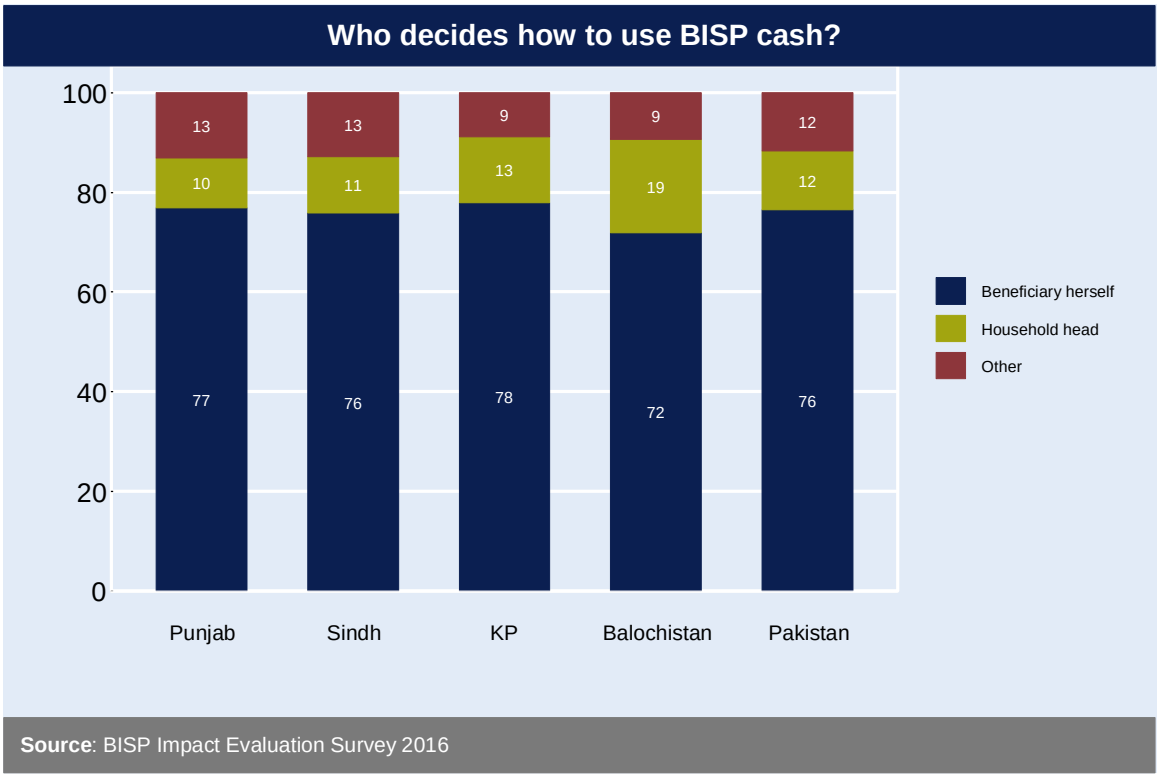


Source: BISP Impact Evaluation Survey 2016

However, there was some regional variation in this finding. In Balochistan in particular just 5% of women reported that they had collected the last transfer themselves. This finding is likely related to the less comprehensive coverage of ATMs and PoS devices in the province.

In order for the cash transfer to impact upon women's empowerment, however, women must not only be the intended beneficiaries but also retain control over how the cash is spent in practice. Despite the finding that just a third of BISP beneficiaries collect the transfer themselves, Figure 13 reports that the vast majority of women beneficiaries across Pakistan retain this control, with **76% of female beneficiaries saying that they are the ones who decide how the transfer is spent**. We do not find that there is significant variation across the provinces, although marginally fewer beneficiaries in Balochistan report that they retain control over the transfer (72%).

Figure 13 Who decides how to use BISP cash?



The qualitative research noted that the BISP has over time brought a change in the status of women and their decision making powers in the household. **Gradually BISP is perceived by husbands and sons as support which is received through women, and should therefore by controlled by the beneficiary**. In 38 out of 48 in-depth interviews both male and female respondents said that it should be the beneficiary herself that should control cash received from BISP and decide how it would be used.

"We take joint decisions about where household money including BISP would be spent. Of course both of us know what the needs of the family are and we spend accordingly. However, my wife plays a decisive role [deciding on the] BISP amount and keeps it herself. I don't interfere because this is her money and I know that she will use it for family benefit". (Male IDI, District Khushab, Punjab

3.5 Use of the BISP cash transfer

Table 7 reports the proportion of beneficiaries who reported at least some expenditure on a range of items out of the BISP cash transfer, no matter how small the amount. As might be expected, and in line with the immediate goal of the BISP to cushion the negative effects of food price inflation on the poor, the majority of BISP beneficiaries report expenditure on Food, with 80% of beneficiaries reporting at least some expenditure on this item.

Other common expenditure items reported by beneficiaries included on health care, for which 55% of beneficiaries reported at least some expenditure and clothing, for which 48% of beneficiaries reported some expenditure.

Table 7 Reported use of the BISP cash transfer

	Pakistan	Punjab	Sindh	KP	Balochistan
% of households who reported at least some expenditure on…					
Food	80	76	83	83	73
Education	16	22	8	18	23
Health	55	46	62	60	67
Clothing	48	47	61	36	29
Loan	13	10	11	20	9
Saving	0	0	0	0	4
Investment	0	0	0	0	0

Source: **BISP Impact Evaluation Survey 2016**

Part C: Profile of a beneficiary household

4 Beneficiary profile

In this section we provide a short profile of a BISP beneficiary. This will be drawn from all beneficiary households in our sample and not just those in the RD evaluation sample explored in the sections that follow. The key findings are:

- We find high rates of poverty, whether this is measured using monetary of multi-dimensional methods
- BISP beneficiaries face a wide range of deprivations beyond monetary poverty that are related to education, health and living standards
- High rates of primary aged children remain out of school, particularly for girls for whom only 41% are currently attending school
- Child malnutrition rates continue at levels that are indicative of what the World Health Organisation would term a nutrition crisis

The purpose of this section is to provide a concise **situational analysis of all beneficiary households in the sample**, including BISP beneficiary households not in the RD treatment sample.

This will provide the reader with a snapshot of the experiences of the average beneficiary, given that the following sections focus on the impact of the BISP on beneficiaries within the evaluation RD bandwidth (i.e. those closest to the BISP poverty eligibility score).

4.1 High rates of poverty

The Government of Pakistan has recently updated the official poverty line (expressed in monthly per adult equivalent consumption expenditure). Under the previous methodology, **Food Energy Intake (FEI)**, the poverty line indexed to this survey was PKR 2,400. The updated methodology, **Cost of Basic Needs (CBN)**, has delivered a poverty line that has increased by 33% to PKR 3,244. Full details of the approach of each methodology are provided in Section 5.1.1.

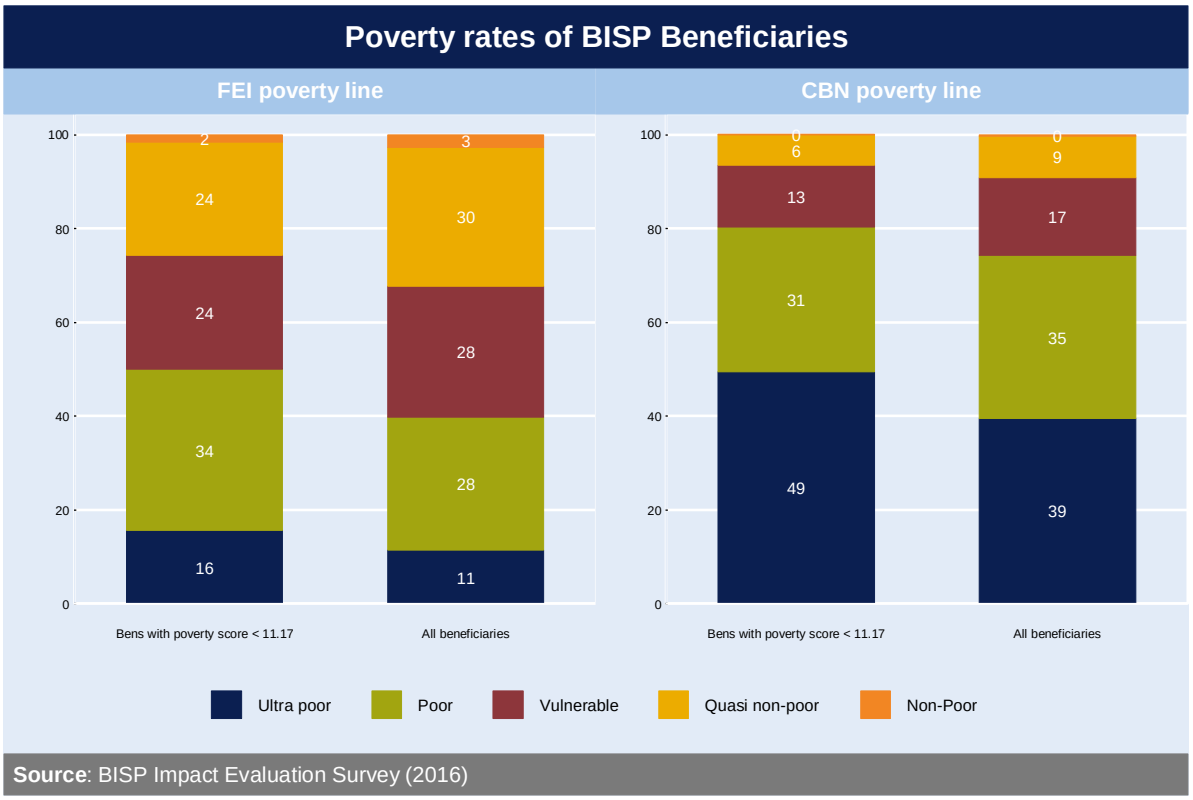
For an unconditional cash transfer to have an impact on poverty **it must be sufficiently well targeted that it actually provides for households that are amongst the poorest and most vulnerable**. By either measure of poverty line, the rates of poverty amongst BISP beneficiary households are high.

Focussing on the CBN poverty line we find that **91% of BISP beneficiaries were either ultra-poor, poor or vulnerable to being poor** in 2016, with the remainder defined as quasi non-poor as defined by the Pakistan Bureau of Statistics[12].

The high rates of poverty or vulnerability to poverty exhibited by BISP beneficiary population reflects a programme that **is well targeted and well placed to address the needs of the poor** by providing households with a minimum income package.

[12] *Ultra poor: those less than 75% of the poverty line. Poor: those between 75% and 100% of the poverty line. Vulnerable: those between 100% and 125% of the poverty line. Quasi non-poor: those between 125% and 200% of the poverty line. Non-poor: those at more than 200% of the poverty line.*

Figure 14 Poverty rates of BISP beneficiaries



Source: BISP Impact Evaluation Survey (2016)

We consider those who are vulnerable to poverty in this analysis to recognise the cyclical nature of poverty. There is a strong body of evidence that suggests that those who are just above the poverty line, may only be there temporarily, and may well slip back below the poverty line as they are exposed to income shocks, productivity shocks or other household shocks.

Overall there the group of BISP beneficiary households with a poverty score of less than 11.17 have similar rates of poverty to all BISP beneficiaries in our evaluation sample, with 93% deemed to be poor or vulnerable to poverty referenced against the CBN poverty line. However, more of such households were classified as *ultra-poor* at 49% as compared to just 39% in the full sample of BISP beneficiaries.

4.2 Poverty as a multi-dimensional concept

Whilst the monetary based measures of poverty provide a useful overview into the situation of a BISP beneficiary household, multi-dimensional measures of poverty such as the **Multi-dimensional Poverty Index (MPI)** can provide rich insights for poverty policy.

The MPI recognises that **monetary based poverty is just one type of deprivation that households face**, with the MPI revealing the combination of various deprivations that afflict a household at the same time across **three dimensions: education; health; and living standards** each measured by different indicators reported in Box 1 below[13]. The MPI is particularly useful as it enables the reader to quickly understand both whether or not a household faces poverty but also to **determine which particular deprivations are driving this poverty**.

[13] Calculation of the MPI is based on the Oxford Poverty and Human Development Initiative Methodology and details are provided in Annex E

Box 1 Multi-dimensional poverty index

The MPI presented in this report has **3 dimensions, (education, health and living standards) and 11 indicators**. Each dimension is equally weighted in the construction of the MPI. The dimensions, indicators and the criteria to be considered deprived are presented below, and a **household is considered multi-dimensionally poor if it is deprived in at least one third of the weighted indicators**:

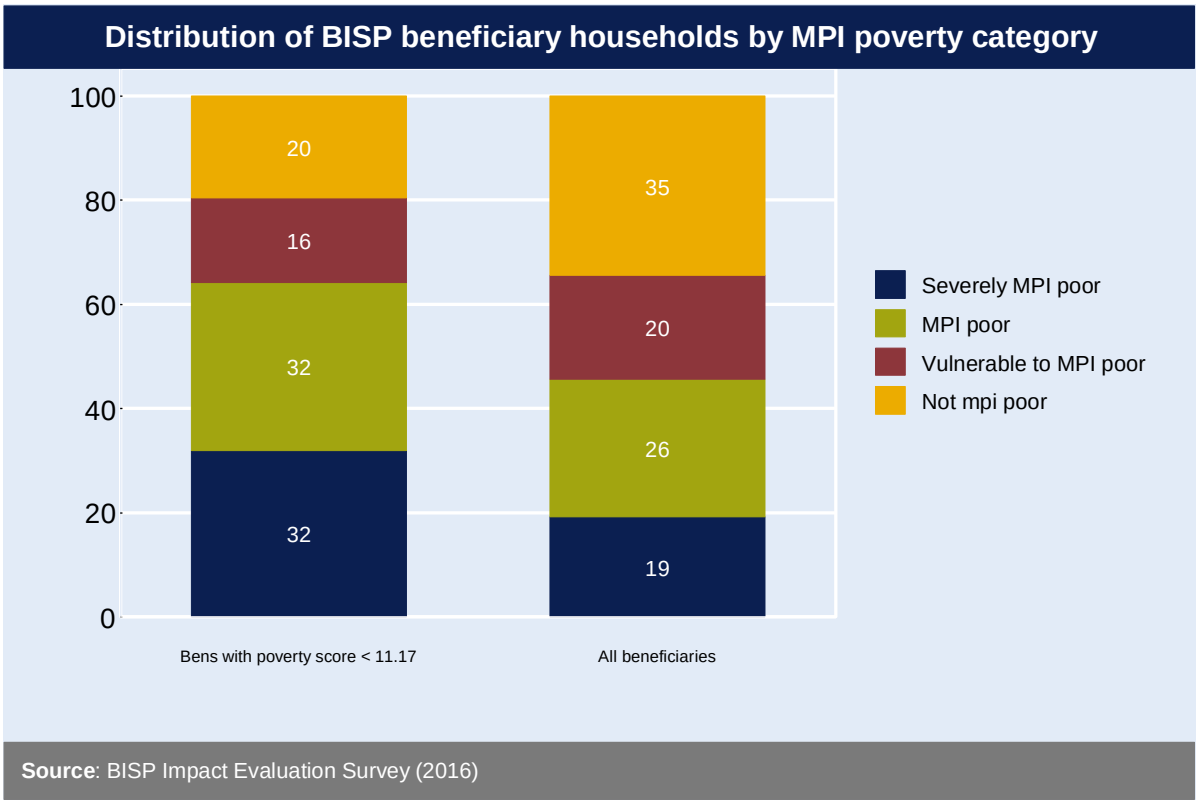
1. **Education** (each indicator weighted equally at (1/6)
    a. **Years of schooling:** deprived if no household member has completed 5 years of schooling
    b. **Child school attendance:** deprived if any school aged child is out of school in Grades 1 to 8
2. **Heath** (each indicator weighted equally at 1/9)
    a. **Child vaccinations:** deprived if any child aged 20-59 months is not vaccinated for DPT or measles
    b. **Child nutrition:** deprived if any child aged 0-59 months is malnourished
    c. **Household nutrition:** deprived if the household does not have acceptable food consumption[14]
3. **Living standards** (each indicator weighted equally at (1/18)
    a. **Electricity:** deprived if a household does not have electricity
    b. **Sanitation:** deprived if access to toilet does not meet MDG standard
    c. **Drinking water:** deprived if drinking water does not meet MDG standard
    d. **Flooring:** deprived if the floor is dirt, sand or dung
    e. **Cooking fuel:** deprived if household cooks with wood or charcoal
    f. **Assets:** deprived if household does not own more than one of : TV, bike, motorbike, refrigerator or radio and does not own a car

Figure 15 reports that 65% of BISP beneficiary households were MPI poor or vulnerable to MPI poverty in 2016. The rate of MPI poverty amongst the sub-group of beneficiary households with a poverty score of 11.17 or less is higher at 80%.

This demonstrates that BISP beneficiary households are poor not only in a monetary sense, but that they continue to face deprivations on a wide variety of dimensions, each of which is discussed in further detail below. Dissecting the MPI by each of its dimensions will allow the reader to gain an insight as to whether the high rates of monetary poverty (see Figure 14) have translated into deprivations against the three dimensions of multi-dimensional poverty: education, health and living standards.

[14] As measured by the World Food Programme *Food Consumption Score* (*WFP, 2008*)

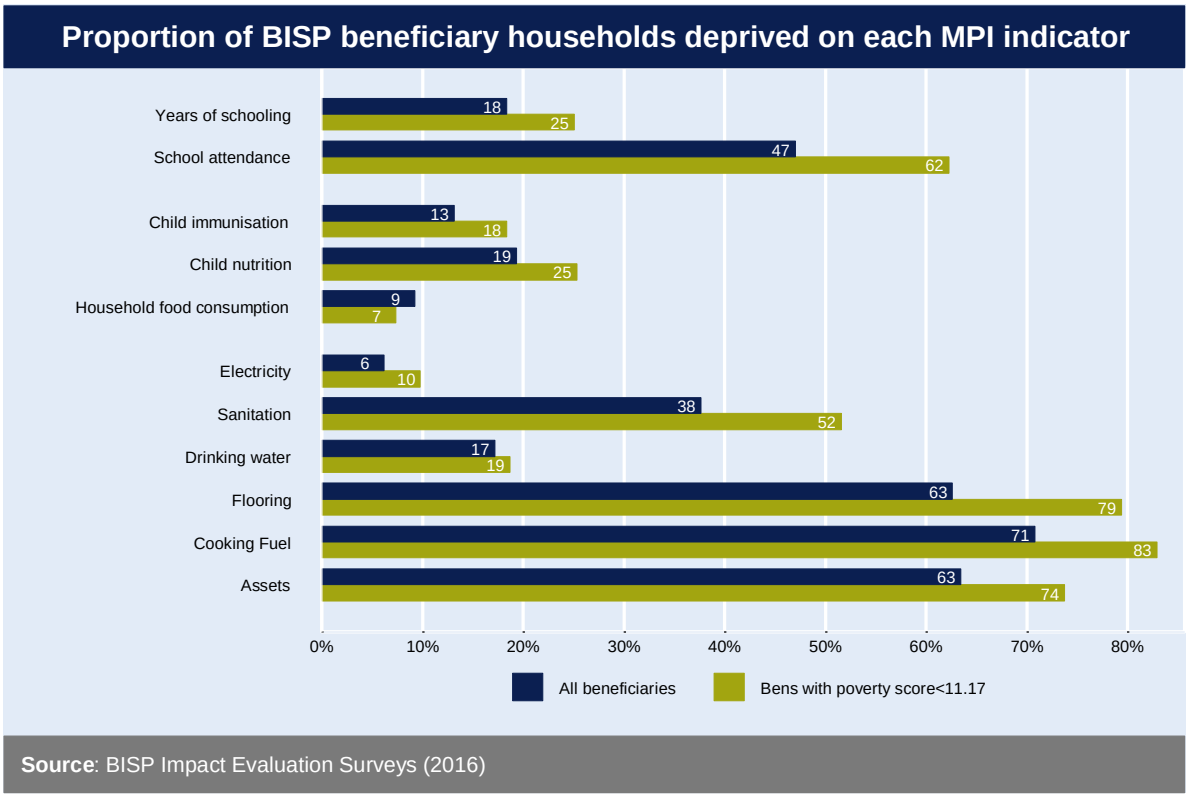
Figure 15 Proportion of BISP beneficiary households who are multi-dimensionally poor



4.3 Beneficiaries face multi-dimensional deprivations

In this section we discuss the various deprivations that are faced by BISP beneficiary households. These are presented in Figure 16 below, which reports the proportion of BISP beneficiary households that are deprived in each indicator. For reference the definition of what it is to be deprived against each indicator is provided in Box 1 above.

Figure 16 BISP beneficiary deprivation per indicator



Source: BISP Impact Evaluation Surveys (2016)

4.3.1 Deprivations in education

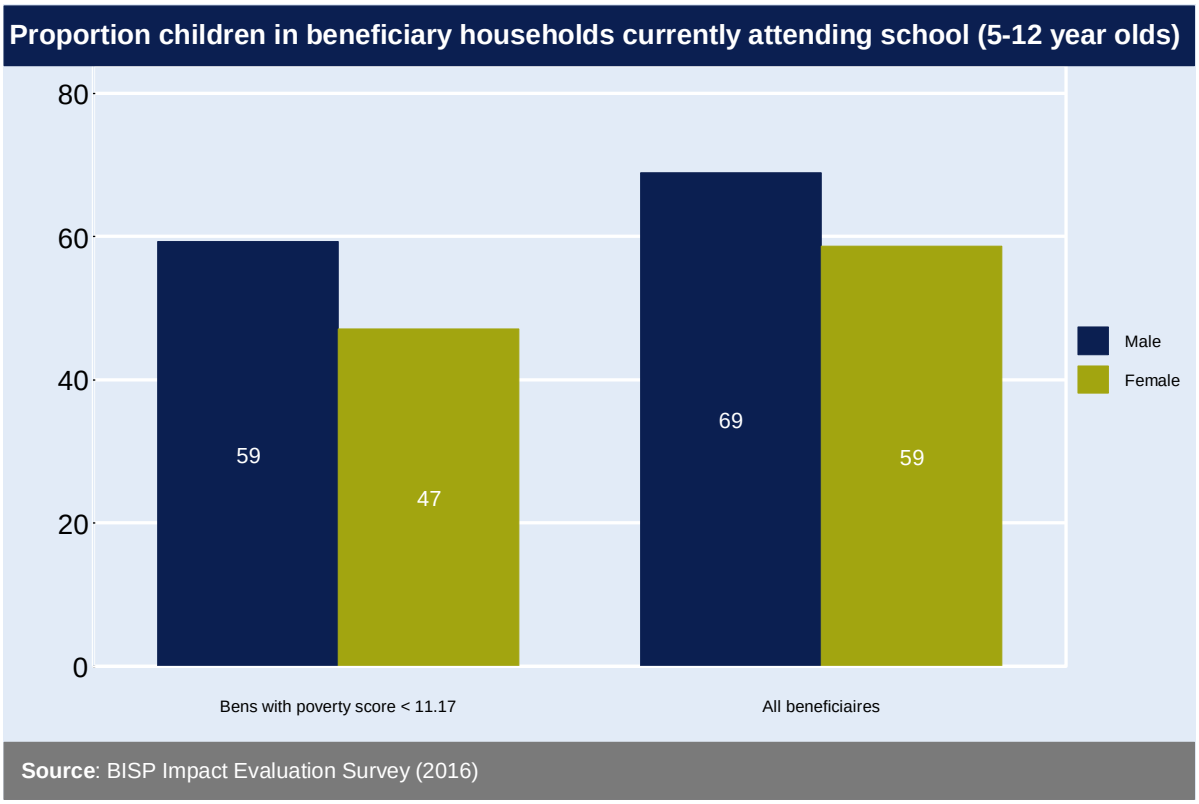
The accumulation of human capital is one of the most significant factors that can help break the transmission of inter-generational poverty and there are well-discussed links between higher learning outcomes and lifetime outcomes. However, children from poorer households can find themselves stuck in a vicious cycle: the poor are the most likely to be excluded from schooling; more likely to face higher opportunity costs of education; this in turn affects the opportunities available to such children when they enter the labour market.

Figure 16 demonstrates that BISP households are significantly deprived against the two indicators measuring the education dimension of multi-dimensional poverty. We find that **18% of BISP households do not contain a single member who has completed primary school**, an indication of the type of labour market opportunities that may be inaccessible to this group of households.

Furthermore **school attendance** is a significant driver of multi-dimensional poverty with almost of half of BISP beneficiary households containing at least one child who is not attending school in 2016.

That access to school is of concern is reinforced by the findings presented in Figure 17, which demonstrates that **only 69% of primary aged boys and just 59% of primary aged girls were currently attending school** at the time of the 2016 evaluation survey. As would be expected in the sub-group of beneficiary households with poverty scores less than 11.17 fewer children are attending school: 59% of primary aged boys and just 47% of primary aged girls.

Figure 17 School enrolment for children aged 5-12 year olds



The impact of the BISP on education attendance as well as the observed gender gap in education is discussed in Section 8. This section also discusses that access to education is not merely driven by demand by also by the available supply of education to those demanding it.

4.3.2 Deprivations in health

Measures of infant and child nutrition

Wasting: identifies current under-nutrition. Causes include adequate current food intake, incorrect feeding practices, disease and infection.

Stunting: identifies past or present chronic nutrition. Causes include long-term factors including chronic insufficient protein, energy and micro-nutrients, frequent infection or disease, sustained inappropriate feeding practices.

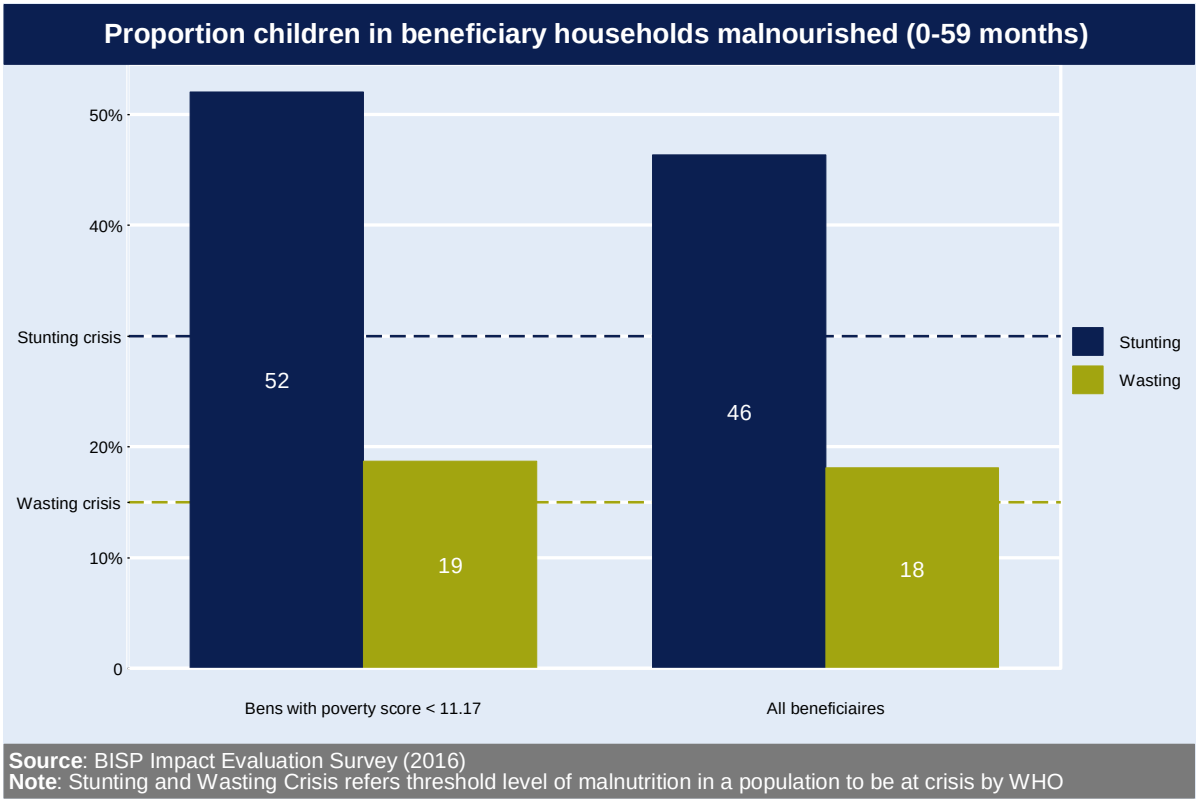
In terms of health, **child nutrition** is a particularly important driver of observed rates of MPI poverty, with almost a **fifth of households containing a malnourished child aged 0-59**.

Infant and child nutrition security relates critically to the longer term goals of the BISP in terms of protecting a vulnerable population from chronic poverty. There is a strong body of literature that indicates that **poor infant and child nutrition is an important driver of the inter-generational transmission of poverty**. Under-nourished children perform worse in school and drop out earlier (*Glewwe et. al. (2002), Grantham-McGregor et. al. (2007), Walker et. al. (2005)*), whilst lower school achievement is linked with lower lifetime earnings (*Duflo (2001)).*

The extent of the challenge faced by BISP beneficiary households in this indicator is demonstrated by Figure 18. The rate of **stunting for children aged 0-59 months is at 46%**, with stunting indicating long-term malnutrition, meaning that over the course of a child's life they have not had exposure to sufficient quantities of protein, energy and micro-nutrients or have been exposed to frequent episodes of infection or disease.

This rate of stunting is **16 percentage points above the threshold that the WHO would describe as a crisis**[15] for the prevalence of stunting in a population.

Figure 18 Malnutrition rates for children aged 0-59 months



Source: BISP Impact Evaluation Survey (2016)
Note: Stunting and Wasting Crisis refers threshold level of malnutrition in a population to be at crisis by WHO

Given the role that child nutrition plays in the inter-generational transmission of poverty, the high rates of child malnutrition might be taken into account in the design of future programmes complementary to the BISP. Increasingly, social protection programmes and policies around the world are including components relevant to food security, health, education, gender and WASH to improve the overall well-being and nutrition of beneficiaries (*FAO, 2015*).

Such interventions could include those that are costly to implement such as conditional cash transfers that are focussed on child health. For example *Oportunidades* included a conditional component targeted at child health that provided support to access of services such as pre-natal care, health check-ups and nutritional supplements (*Fernald et. al., 2008*).

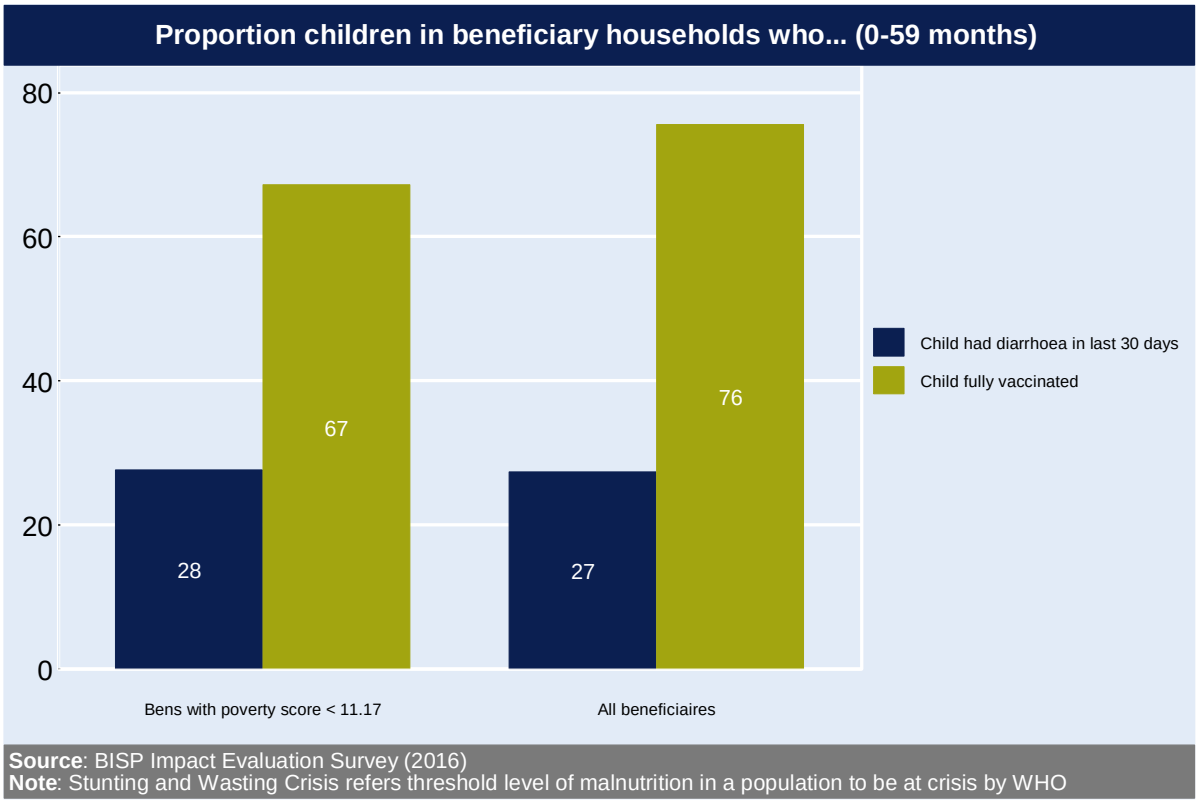
On the other hand less costly but effective interventions could be implemented in conjunction with an unconditional cash transfer programme such as the BISP. Behavioural change messaging that can be delivered to beneficiary women via the medium of SMS has been shown to have positive impacts on child and maternal health. The Maternal Health (Nutrition) programme in Tanzania used mobile technology to disseminate information (via SMS) on the importance of maternal nutrition and specific recommendations such as eating protein and iron rich foods (*Viljoen and Sowah, 2015*).

Child nutrition is related to a number of factors that are captured by the MPI. We report these in Figure 19, including **child immunisation** with 14% of children under the age of 5 years not being fully immunised against DPT or measles. Furthermore, Figure 16 reports high rates of deprivation

[15] The WHO classification for the degree of malnutrition within a population of children aged 0-59 months. Rates of wasting higher than 15% and rates of stunting higher than 30% are considered to be *very high*, indicating a child nutrition crisis, *World Bank (2008).*

against the **sanitation** and **drinking water** deprivations which are discussed further below. These directly relate to child health, with Figure 19 reporting relatively high proportions of children (27%) in beneficiary households that had experienced an episode of diarrhoea in the last 30 days.

Figure 19 Rates of diarrhoea and immunisation amongst children younger than 5 years



Source: BISP Impact Evaluation Survey (2016)
Note: Stunting and Wasting Crisis refers threshold level of malnutrition in a population to be at crisis by WHO

The impact of the BISP on child nutrition is discussed in Section 5.4.

4.3.3 Deprivations in living standards

We find that significant proportions of BISP beneficiaries did not have access to improved toilets with Figure 16 reporting that **38% of BISP beneficiaries were deprived in terms of sanitation**. There are substantial linkages between this indicator and other deprivations faced by BISP beneficiaries, particularly to child health. This situation is exacerbated by the **17% of BISP beneficiaries that do not have access to safe drinking water**.

UNICEF (2013) notes that repeated episodes of diarrhoea and intestinal infestation can impede nutrient absorption and diminish appetite, resulting in stunting and other forms of undernutrition. *Guerrant et. al. (2008)* proposes that improving the water, sanitation and hygiene can promote health environments and reduce the prevalence of infectious diseases. Key interventions (if implemented at scale) that could help to reduce undernutrition in combination with nutrition focussed interventions discussed above include: immunisation, improving sanitation by creating environments free of open defecation, hand washing with soap, access to clean drinking water and use of oral rehydration and therapeutic zinc to treat diarrhoea.

Flooring reflects the quality of housing in which beneficiary households live, with a household being deprived in this indicator if the floor of the household is made of earth. 63% of beneficiaries are deprived in this indicator, providing a rudimentary indication of the poor quality of housing affordable to them. The large deprivations with respect to **cooking fuel** are also indicative of the

poor quality of housing. Furthermore, chronic conditions in children, like asthma, can result from exposure to unsafe cooking fuels (*WHO, 2006*).

The impact of the BISP on living standards and material welfare is discussed in Section 5.6.

4.4 Main source of household income

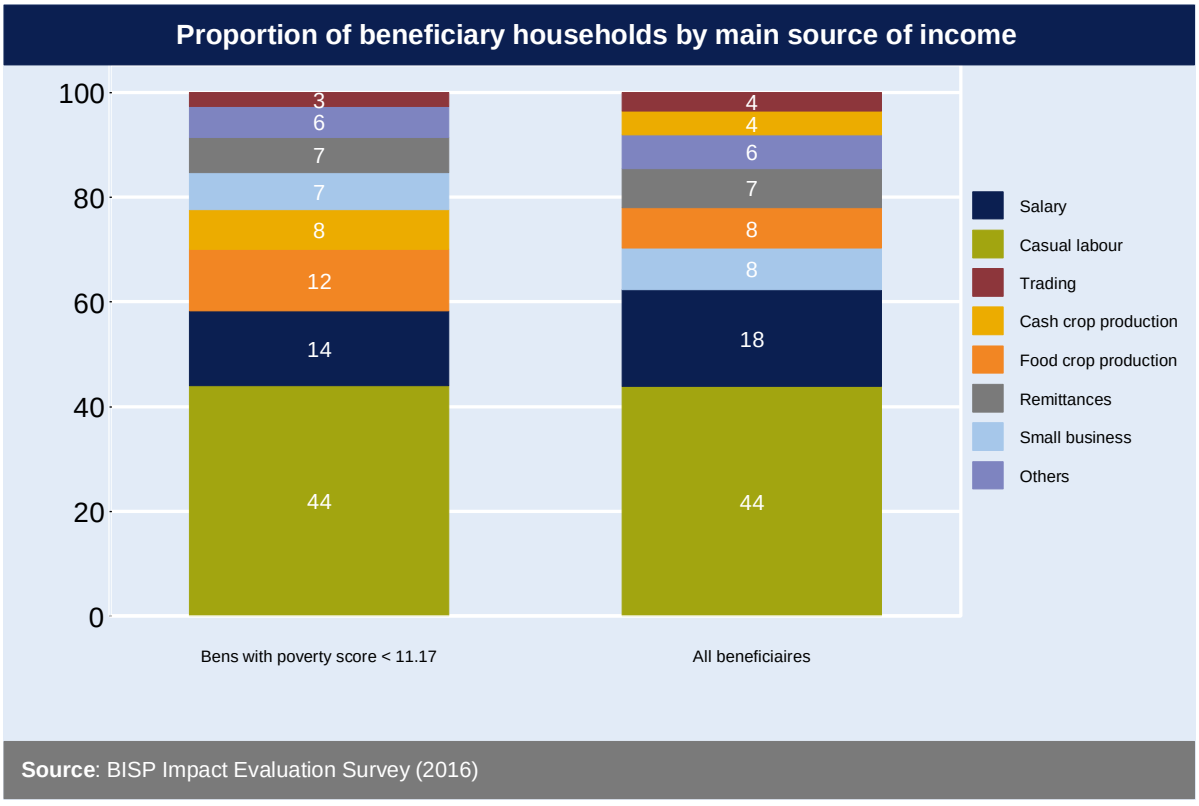
BISP beneficiary households are characterised has having **dependence on casual labour**, with 44% of BISP beneficiaries reporting that this was their main source of income. Furthermore for 24% of BISP households this was the only source of income available to the household.

Dependence on casual labour is commonly associated with those towards the bottom of the income distribution (*ILO, 2013*). Casual labour is often indicative of **poor job quality, low wages as well as being vulnerable to cyclical and seasonal shifts**. We also find that this dependence is common across both the average beneficiary household as well as the sub-group of beneficiary households with a poverty score less than 11.17.

The qualitative research also indicated that communities in Pakistan themselves viewed casual labour as being associated with poor households.

"Poor are those households who have difficulty in fulfilling 3 meals a day. In our community households are dependent on daily wages with most men working as unskilled manual labourers in either the fields or nearby localities. During harvesting season, women and children also work in crop picking and cleaning activities. In most households if there is no work then there is no food that day". (Policeman, Community Key Informant, District Sukkur, Sindh)

Figure 20 Main source of income



Source: BISP Impact Evaluation Survey (2016)

Part D: Final impact evaluation results

5 Poverty, nutrition and material welfare

In this section we present findings related to consumption expenditure, poverty, nutrition and material welfare. The key findings are:

- The BISP cash transfer has a positive and statistically significant impact on per adult equivalent monthly consumption expenditure of PKR 188
- The increase in consumption expenditure is mostly driven by increases in non-food consumption expenditure
- The adoption of an update poverty line by GoP means that the poverty line has increased by 33% (PKR 804)
- BISP has a negative and statistically significant impact on the rate of poverty when using a **Food Energy Intake (FEI)** poverty line but no impact on the poverty rate based on a **Cost of Basic Needs (CBN)** poverty line
- Nonetheless for the CBN poverty line we find a statistically significant reduction in the poverty gap
- The BISP has a positive and statistically significant impact on the ownership of some household assets

Poverty and nutrition relate to the core objectives of the BISP, which was initially designed with the immediate objective to **cushion the negative effects of food inflation on the poor**. Additionally, the programme has longer term objectives to provide a minimum income package to the poor to **protect vulnerable households in Pakistan against chronic and transient poverty**.

5.1 Household consumption expenditure and poverty

5.1.1 Recent re-definition of the poverty line in Pakistan

Income is difficult to measure accurately and is subject to short-term volatility relating to the availability of work and to seasonality. As a result it is standard for surveys in Pakistan such as the Pakistan Living Standards Measurement Survey) to estimate consumption expenditure instead which gives the **monthly consumption expenditure per adult equivalent as the standard proxy for household welfare**[16].

Until very recently the poverty line in Pakistan was estimated using a **Food Energy Intake (FEI)** methodology, which calculates the total per adult equivalent consumption expenditure required to for those households which are on the threshold of adequate caloric intake, which in Pakistan was defined as at least 2,350 calories daily per adult equivalent.

However, in May of 2016 a different approach to calculating the poverty line in Pakistan was announced, using a **Cost of Basic Needs (CBN)** methodology. This methodology differs from the FEI methodology in that it first estimates the cost of acquiring enough food for nutrition as per the

[16] We follow the Pakistan Bureau of Statistics method for the calculation of per adult equivalent monthly consumption expenditure. Details of this are provided in Annex C.

FEI (2,350 calories daily per adult equivalent) and then adds on the cost of other essentials such as clothing, education and shelter (see Annex III of the *Economic Survey of Pakistan 2015/16*[17]).

The implication for this evaluation is that the two methodologies deliver starkly different Rupee value poverty lines and hence estimates of poverty rates. The FEI methodology delivers a poverty line of PKR 2,440, whilst the CBN methodology delivers a poverty line of PKR 3,244[18] an **increase in the poverty line of PKR 804** (33%). To put this increase in perspective it represents over half of the monthly value of the transfer.

In this section we consider estimates of the poverty headcount ratio and the poverty gap derived from both methodologies, and discuss the differences and similarities of both.

The result of this increase in the poverty line means that national levels of poverty for 2013/14 in the entire population increase from 9% using the FEI methodology to 30% using the CBN methodology (*Government of Pakistan, 2016*).

5.1.2 Household consumption expenditure

The BISP cash transfer can be spent in a variety of ways, including on consumption in the household of food, expenditure on durable assets but also on debt repayment and savings. In terms of household consumption expenditure we find that the BISP has a **statistically significant and positive impact on the value per adult equivalent monthly consumption expenditure of PKR 187** (see Figure 6) amongst BISP beneficiary households in the RD treatment sample. Across the provinces we find weak evidence of the BISP resulting in increased per adult equivalent consumption expenditure in Punjab (PKR 199) and Khyber Pakhtunkhwa (PKR 275), but no impact on consumption expenditure in either Sindh or Balochistan.

In the case of Sindh, as we report in Section 7.4, we find that Sindh is the only province in which the BISP has a positive and statistically significant impact on the propensity to save, or the propensity to save in formal institutions. Thus the lack of observed impact on consumption expenditure in Sindh may well derive from a diversion of a significant enough portion of the BISP transfer to savings and away from immediate consumption.

Table 8 Household consumption expenditure and poverty: impact estimates[19]

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Mean household consumption expenditure per adult equivalent (PKR)					
Pakistan	3,177	3,927	3,064	3,935	188**
Punjab	3,290	1,572	3,153	1,526	199 (NR)
Sindh	3,184	1,147	3,158	1,191	64
KP	3,117	889	2,932	948	275 (NR)
Balochistan	2,757	319	2,607	270	505
Proportion of population below poverty line (FEI Methodology)					

[17] *Government of Pakistan (2016)*
[18] Adjusted for inflation and indexed to the evaluation survey period
[19] One can Section 2.4 for the proper interpretation of impact tables.

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Pakistan	25.0	3,927	28.7	3,935	-6.7*
Punjab	19.8	1,572	24.2	1,526	-0.4
Sindh	25.3	1,147	26.5	1,191	-10.8
KP	27.6	889	32.8	948	-10.0 (NR)
Balochistan	43.3	319	49.3	270	-3.6
Poverty gap (%) (FEI Methodology)					
Pakistan	4.3	3,927	4.8	3,935	-1.3 (NR)
Punjab	3.2	1,572	3.5	1,526	-0.9
Sindh	4.1	1,147	4.6	1,191	-2.1
KP	4.7	889	5.5	948	-3.3**
Balochistan	9.0	319	10.3	270	5.4
Proportion of population below poverty line (CBN Methodology)					
Pakistan	59.2	3,927	64.2	3,935	-4.1
Punjab	54.3	1,572	60.9	1,526	1.0
Sindh	59.3	1,147	60.0	1,191	-2.4
KP	62.5	889	70.6	948	-4.4
Balochistan	73.4	319	78.5	270	-6.3
Poverty gap (%) CBN Methodology					
Pakistan	13.7	3,927	15.3	3,935	-3.1**
Punjab	11.6	1,572	13.4	1,526	-2.4 (NR)
Sindh	13.7	1,147	14.4	1,191	-3.1
KP	14.6	889	17.2	948	-5.1*
Balochistan	21.5	319	24.2	270	-3.9

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

5.1.3 Poverty

The impact of the BISP on the rate of poverty and the poverty gap depends on which poverty line (discussed above in Section 5.1.1 above) is used.

Poverty rate or the headcount ratio gives the proportion of a population below the poverty line

Poverty gap ratio is a measure of the intensity of poverty and is defined as the average gap in the population between consumption expenditure and the poverty line. It is expressed as a proportion of the poverty line

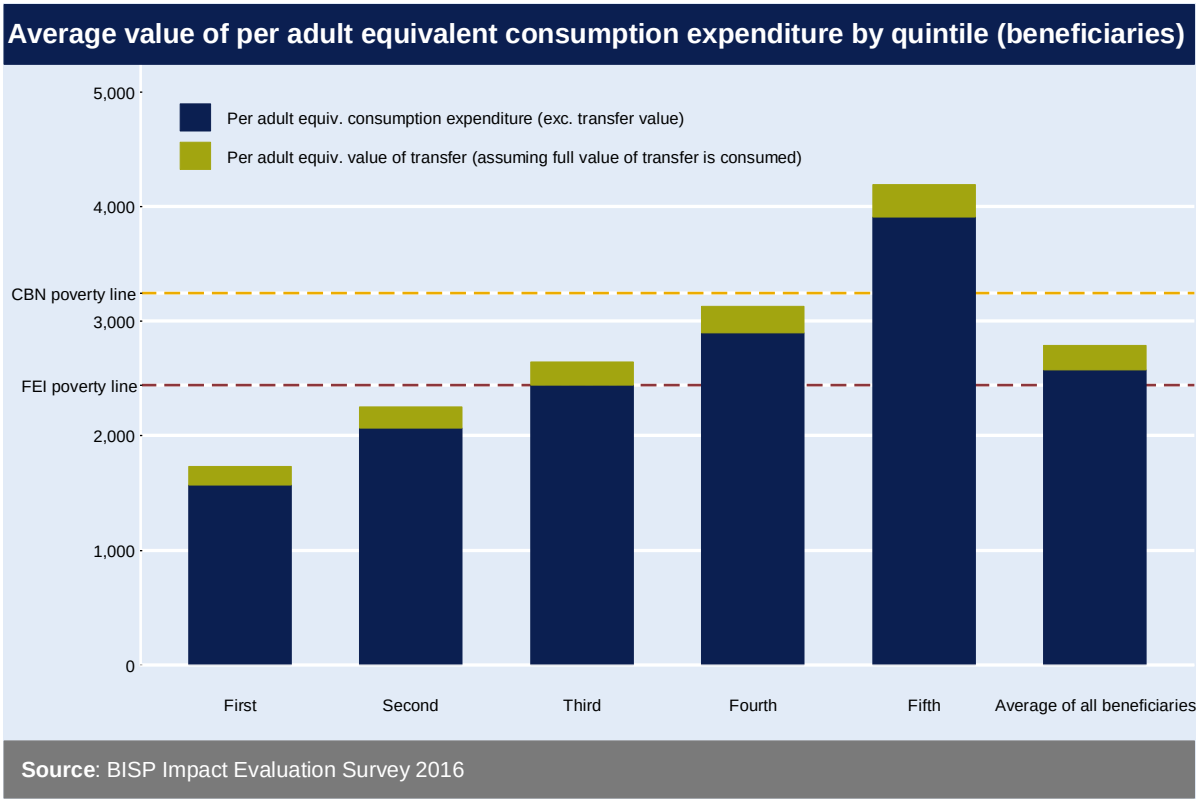
With the **FEI poverty line used as a reference** we find that the current rate of poverty amongst BISP beneficiaries in the RD treatment group to be 29%. Furthermore, we find that the BISP has a **negative and statistically significant impact on the rate of poverty of -7 percentage points** for beneficiaries in the RD treatment group with weak evidence of a similar effect impact for beneficiaries in Khyber Pakhtunkhwa. However, with this poverty line as a reference we find only weak evidence of a reduction in the poverty gap, with the poverty gap currently at 5% (PKR 122).

Alternatively, when the **CBN poverty line is used as a reference** we find that the current rate of poverty amongst BISP beneficiaries in the RD treatment group is significantly higher at 64%, though **with the CBN poverty line as a reference we do not find any impact of the BISP on the poverty rate** for beneficiaries in the RD treatment group.

However, with the CBN poverty line we find a **negative and statistically significant impact on the poverty gap of -3 percentage points** for beneficiaries in the RD treatment group, with similar effects in Khyber Pakhtunkhwa and Punjab. Despite this the average poverty gap still remains significant for beneficiaries in the RD treatment group at 15% (PKR 496 per adult equivalent)

Figure 21 provides some useful insight as to why we see these differing results depending on which poverty line is used as a reference. It shows that whilst the top three quintiles have an average per adult equivalent consumption expenditure per month above the FEI poverty line, only the top quintile has an average per adult equivalent consumption expenditure above the CBN poverty line.

Figure 21 Per adult equivalent value of consumption expenditure[20]



Given that the CBN methodology increases the poverty line by PKR 804 as compared to the FEI methodology, that the current average poverty gap for beneficiaries in the RD treatment sample is PKR 496 and that the per adult equivalent average household value of the transfer is just PKR 257 (assuming the full value of the transfer is received, see Section 3.1.3) one can surmise that the value of the BISP cash transfer is not enough to push significant enough numbers of beneficiaries above the CBN poverty line to have an impact on poverty when referenced in this way.

As a result, whilst we see that the BISP has clearly increased the welfare of households, in terms of increasing consumption expenditure, we do not find evidence of a reduction in the rate of poverty when the CBN poverty line is used a reference.

[20] Measured for all beneficiaries in the sample and not just the RD treatment group

.

5.2 Non-food consumption expenditure

Table 9 suggests that the majority of the impact on per adult equivalent total consumption expenditure is driven by consumption of non-food items. We find that the BISP has a **positive and statistically significant impact on non-food consumption of PKR 112** for beneficiaries in the RD treatment sample.

As has been consistently observed throughout the course of this evaluation in the previous two evaluation reports (*OPM, 2014* and *OPM, 2015*) the main driver of this increase in non-food consumption expenditure is that the BISP has a **positive and statistically significant impact on the value of housing related expenditure** for beneficiaries in the RD treatment sample.

This finding may well be explained by the way in which the cash transfer is delivered in quarterly payments. Such a payment delivery in which beneficiaries receive quarterly payments of PKR 4,500 may well facilitate expenditure on "lumpy" items.

Table 9 Non-food consumption: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Mean household non-food consumption expenditure per adult equivalent (PKR)	1,520	3,927	1,460	3,935	112**
Mean household non-food consumption expenditure per adult equivalent on… (PKR)					
Education	86	3,927	84	3,935	5
Health	160	3,927	155	3,935	5
Housing expenses	360	3,927	340	3,935	124***
Transport	144	3,927	135	3,935	-22**
Cleaning	129	3,927	126	3,935	8
Apparel	196	3,927	191	3,935	12

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

Table 9 also reports a **negative and statistically significant impact on transport expenditure** of PKR 22 for beneficiaries in the RD treatment sample. This result does not imply that the BISP has induced a reduction in the amount of transport that a household consumes. Rather it is possible that the type of transport consumed has changed. As we report in Section 5.5 we find that the BISP has induced an increase in the ownership of bicycles, which might be sufficient to provide the result that is shown in Table 9.

5.3 Food consumption expenditure

We find weak evidence that the BISP cash transfer is having a **positive impact on the level of per adult equivalent food consumption expenditure** of PKR 67. As shown in Section 5.2 above this implies that the bulk of the impact on total per adult equivalent household consumption expenditure derives from an increase to non-food consumption expenditure.

Table 10 Food consumption: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Mean household food consumption expenditure per adult equivalent (PKR)	1,657	3,927	1,604	3,935	68.7 (NR)
Mean household food consumption expenditure per adult equivalent on… (PKR)					
Wheat	335	3,927	342	3,935	-6.3
Maize	3	3,927	2	3,935	-0.5
Rice	87	3,927	86	3,935	-14.3
Vegetables	179	3,927	176	3,935	0.7
Meat	87	3,927	83	3,935	23.2**
Fish	14	3,927	13	3,935	8.1**
Eggs	19	3,927	18	3,935	3.7
Milk	358	3,927	345	3,935	4

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

When the components of food consumption are considered we find that the BISP cash transfer has a **positive and statistically significant impact on the consumption of meat and fish by PKR 23 and PKR 8 respectively** for beneficiaries in the RD treatment group. This finding is encouraging as meat and fish are sources of the highest quality protein that when consumed, even in the smallest of quantities, can lead to significant improvements in the quality of diet (*WFP, 2008*).

Furthermore it is possible that this increase in the consumption of high protein meat and fish is associated with the findings on reduced wasting presented in Section 5.4 below. For example *Krebs et. al. (2011)* find that the consumption of meat is associated improved child nutrition in four study countries, including Pakistan.

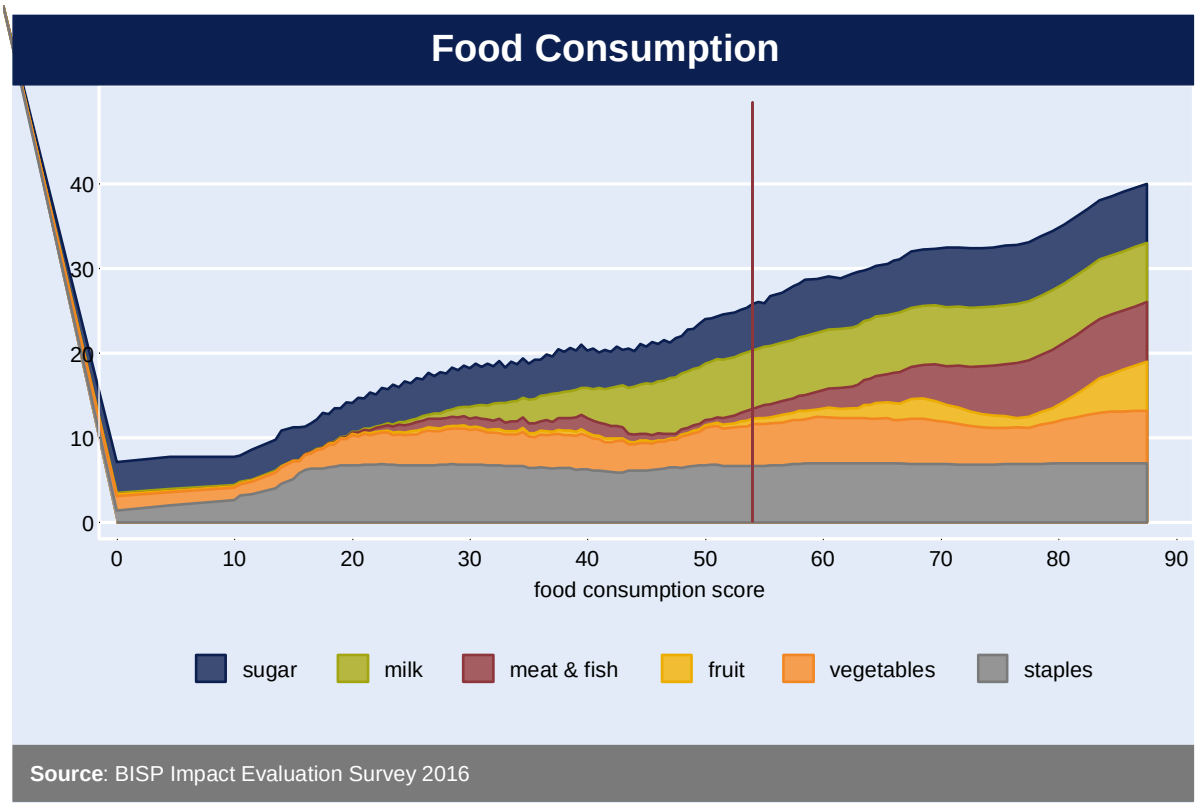
To understand why the BISP might induce households to consume greater quantities of meat and fish, rather than staple foods such as wheat, maize or rice it is useful to consider Figure 22, which presents the profile of food consumption depending on the value of their **Food Consumption Score (FCS)[21].** The food consumption score presents the quality and diversity of a household's diet by presenting a weighted total of the number of days particular food groups are consumed in

[21] *World Food Programme, (2008)* *http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197216.pdf)*

the household out of the last seven days. Each food group is weighted according to its nutritional value. One can see from Figure 22 that as a household's FCS increases the diversity of foods that are eaten increases as well as the quality of that food consumed.

In the evaluation sample the average BISP beneficiary has a FCS of 54. At this score Figure 22 illustrates that their consumption of basic foods, whether staples or vegetables is satisfied, though only smaller quantities of higher quality foods (such as meat or fish) are consumed. Thus the observation of impact of the BISP on consumption of meat and fish, and not on other foods is not surprising, given that the average BISP household can already satisfy their consumption needs of basic goods such as staples or vegetables.

Figure 22 Food consumption score



The qualitative research supports these findings, with some beneficiaries reporting that they were using some portion of the BISP cash transfer to increase overall food consumption as well as purchase higher quality food.

"When BISP amount comes we store food rations like wheat and pulses, so even if there is not work for a few days, we have some food to go by with. Also now the quantity of food is more because we have growing children in the house and they demand more food so we have started to eat thrice a day". (Male IDI, District Noshki, Balochistan)

"I buy chicken and fruits when I go to collect the BISP cash. It is a special day for all of us because children know that now their needs will be fulfilled". (Female IDI, District Bhawalnagar, Punjab)

However, as seems to be suggested by the quantitative finding of only a weak finding on food consumption expenditure, the qualitative research suggests that the money is not enough for all beneficiaries to fully meet the food needs of their families.

"When I collect the money then my children ask me for good food like chicken or rice otherwise we eat the same food as before that is roti and vegetables" (Female IDI, District Karachi, Sindh)

"BISP beneficiaries are better than us only for a week. Their happiness is only 4 to 5 days after they collect the BISP grant". (Male Non-Beneficiary FGD, District Sukkur, Sindh)

5.4 Child nutrition

Infant and child nutrition is secured when the child not only has a received adequate breastfeeding and weaning, has been born to a healthy mother, has a sanitary environment, adequate health services and when heath carers have the knowledge and skills necessary to provide adequate care for a healthy life for infants and toddlers in the household.

We have shown earlier in this report (see Section 4.3) that beneficiary households face significant deprivations in some of these indicators. This provides the context for the findings presented in Table 11 that levels of **wasting and stunting are at levels that would be classified by the World Health Organisation as signifying an on-going crisis in terms of child nutrition**[22]. Rates of stunting above 30% and rates of wasting above 15% are classified as a child nutrition crisis. Rates of stunting and wasting in the beneficiary RD treatment sample are at 44% and 18%, significantly above this crisis threshold.

However, we find that the BISP has had a **negative and statistically significant impact on the proportion of girls in the RD treatment sample that are wasted**. Wasting is a measurement of acute (short-term) nutrition status.

Table 11 Child nutrition: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of children wasted					
All	17	2,216	18	2,098	-3
Boys	20	1,136	20	1,137	4
Girls	15	1,080	15	961	-11***
Proportion of children stunted					
All	44	2,216	44	2,098	3
Boys	45	1,136	46	1,137	2
Girls	43	1,080	42	961	3
Proportion of children underweight					
All	31	2,216	32	2,098	-4
Boys	33	1,136	34	1,137	-3
Girls	28	1,080	31	961	-4

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

[22] The WHO classification for the degree of malnutrition within a population of children aged 0-59 months. Rates of wasting higher than 15% and rates of stunting higher than 30% are considered to be *very high*, indicating a child nutrition crisis, *World Bank (2008).*

The observation of **impact on girls' nutrition and no impact on boys' nutrition is not unique to the BISP**. Most famously *Duflo (2003)* found in South Africa significant improvements in girls' wasted status in households where women were receiving a social cash transfer in the form of a pension, whilst no impact was observed for boys. *Manley et.al. (2012)* explore this issue further in a meta-analysis of six studies which analyse the impact of cash transfers separately by gender (including *Dulfo, 2003*). The authors conclude that on average the nutrition impact of these programmes to be higher for girls than boys under the age of 5.

Certainly, as *Duflo (2003)* notes there is more work to be done to understand the differences between boys and girls, and in particular the apparent preference for girls' nutrition among female BISP beneficiaries.

Given the close relationship between child nutrition and child health discussed in Section 4 above, we analyse whether or not the BISP has had an impact on child health indicators presented in Table 12. We find that the BISP does not have any impact on either the proportion of children who are fully vaccinated, or the proportion of children who have had an episode of diarrhoea in the last 30 days.

Table 12 Child immunisation and diarrhoea: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of children fully immunised					
All	73	2,216	73	2,098	-4
Boys	74	1,136	73	1,137	-2
Girls	72	1,080	74	961	-7
Proportion of children who have experienced an episode of diarrhoea in last 30 days					
All	23	2,216	25	2,098	-6
Boys	23	1,136	26	1,137	6
Girls	23	1,080	24	961	-4

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

5.5 Household assets

In addition to spending income on consumption and child nutrition, BISP beneficiary households also can spend money on the purchase of household assets. During the quantitative survey we asked households whether they own a range of different household assets, including those presented in Table 13.

Table 13 Asset ownership: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of households that own…					
Fan	92	3,926	92	3,934	2
Heater	6	3,926	5	3,934	4*
Bicycle	23	3,926	23	3,934	7*
Car	1	3,926	0	3,934	0
Motorcycle	24	3,926	23	3,934	7
TV	52	3,926	52	3,934	14***
Radio	1	3,926	1	3,934	-1
Sewing machine	40	3,926	40	3,934	3
Cooking stove	33	3,926	31	3,934	12***
Washing machine	41	3,926	41	3,934	13***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

We find that the BISP has had a **positive and statistically significant effect on the proportion of households that own: a TV (14 percentage points); a bicycle (7 percentage points); a cooking stove (12 percentage points); a washing machine (13 percentage points); and a heater (4 percentage points)**. The ownership of a bicycle in particular could be significant: bicycles are an important type of household asset as they are not only a means of transportation, but can also in some cases facilitate productive activities, in the sense that it both provides a higher degree of mobility and as such easier access to both labour and product markets.

5.6 Living standards

Earlier in this report (see Section 4.2) we provided a profile of a BISP beneficiary household, describing the various deprivations that are faced in such households. We found that in terms of living standards BISP beneficiary households were particularly deprived on indicators related to the condition of the household, including flooring, cooking fuel and household assets.

Table 14 reports the finding of the evaluation in terms of whether the BISP has had a positive effect on the living conditions experienced in BISP beneficiary households. Overall we report that the **BISP has had a positive and statistically significant impact on the certain indicators relevant to the quality of living standards** as per the multi-dimensional poverty index described in Section 4.2. In particularly the **BISP has supported a reduction in deprivations such as for flooring in the household, for cooking fuel used in the household and for assets owned by the household** for BISP beneficiaries in the RD treatment sample.

Table 14 Deprivations on living standards: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of households that are deprived on the MPI indicator…					
Electricity	5	3,936	5	3,945	2
Sanitation	32	3,936	33	3,945	8
Flooring	54	3,936	57	3,945	-11**
Water	17	3,936	17	3,945	2
Cooking fuel	63	3,936	67	3,947	-19***
Assets	60	3,936	63	3,947	-15***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

The qualitative research was strongly supportive of this finding and a notable 20 out of 48 respondents reported that they had used the BISP cash transfer for infrastructure improvements in their home, such as construction of latrines, kitchens, roof repairs and boundary walls. This is the first round of qualitative research for this evaluation where this has been noted by BISP beneficiaries.

"I know two women in our village who have constructed latrines in their homes from BISP money. Before they used the fields but saved money from BISP and had a latrine constructed". (Female Beneficiary FGD, District Sukkhur, Sindh)

"I save a small amount whenever I receive BISP cash for annual home repairs and maintenance. We just buy the material and do the labour ourselves". (Female IDI, District Karachi, Sindh)

"My mother in law and I are both BISP beneficiaries. So we planned and saved our BISP cash and then upgraded our kitchen by tiling it and getting shelves and counters installed". (Female Beneficiary FGD, District Charsadda, Khyber Pakhtunkhwa)

6 Women's empowerment

In this section we present the findings of the evaluation as related to women's empowerment. The key findings are:

- Women appear to retain control over the BISP cash transfer
- We find evidence of beneficiaries being able to access small amounts of money more easily
- We report very low rates of literacy and education amongst beneficiaries on average
- We find evidence that beneficiaries are more involved in household decision making and that this is associated with increased status
- We find evidence that the BISP has increased the proportion of women who vote in local or national elections
- We find evidence that BISP has led to an improvement in women's mobility within their communities

A key design choice for the BISP is the **assignment of the female head of the family as the direct beneficiary** of the programme. In addition to this the BISP has recently created 48,000 BISP Beneficiary Committees in 32 districts to provide a forum for discussing issues such as nutrition, child health, education, family planning and adult literacy, as well as providing a platform for mobilising beneficiary women.

This focus reflects a clear commitment to promoting the empowerment of women in Pakistan. However, it does not mean that it is a foregone conclusion that becoming a BISP beneficiary will lead to empowerment. For this to happen, the BISP must make an appreciable difference across three dimensions (*Kabeer, 1999*):

- **Access to resources**: which include material resources in the more conventional economic sense (including the cash itself), but also human (such as education) and social (such as networks) resources, which serve to enhance a woman's ability to exercise her own choice;
- **Agency**: which refers the ability to define one's goals and act upon them which is supported by a woman's access to resources but can be constrained by opposition of others in the household or wider community. This is often operationalised as the ability of a woman to engage in decision making whether at the household level or more broadly; and
- **Achievements**: which relates to actually achieving the desired goals, often linked to welfare outcomes such as the education and nutrition of children.

6.1 Access to resources

6.1.1 Access to cash

A necessary precondition for the BISP to improve the access of women to resources is that she actually retains control over the cash that is transferred in her name. We have demonstrated earlier (see Section 3.3) that this assumption holds for over three quarters of BISP beneficiaries, and that further this holds even when the beneficiary does not actually collect the transfer herself.

> *"Mostly my husband collects BISP money from the ATM. But he gives it to me except a small amount which he keeps himself. I decide where to spend the money and no one in the family questions me on it". (Female IDI, District Malakand, KP)*

During the quantitative survey we asked women whether they could easily access various sums of money in an emergency as a simple measure of whether or not the BISP would induce a change in access of women to financial resources. Table 15 reports these results, and we find that **significant portions of women still cannot access relatively small amounts of money**, for example just under half of beneficiary women in the RD treatment sample are unable to access PKR 400 in an emergency.

Table 15 Women's access to money: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of women who report that they can easily access in an emergency…					
100	73	3,450	71	3,564	4
200	62	3,450	61	3,564	8
400	49	3,450	51	3,564	9
600	40	3,450	43	3,564	17***
800	36	3,450	37	3,564	16***
1,000	34	3,450	35	3,564	15***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

Despite this, we find that the **BISP has had a positive and statistically significant impact on the proportion of women who can access cash in an emergency** for larger sums of money that they were asked about. We do not find that the BISP has had an impact on access to relatively smaller amounts of money, likely a reflection of the relatively easier access to these amounts by both treatment and control units.

This finding is consistent with BISP beneficiaries retaining control over the BISP cash transfer that is presented earlier in this report (see Section 3.3), and suggests that beneficiary women have greater access to cash.

6.1.2 Access to other economic resources

In the section that follows (see Section 7) on livelihood opportunities, we find that whilst the rate of participation in economic activities of women has not changed as a result of the BISP, the proportion of women that are engaged in unpaid family labour has fallen.

Whist the quantitative results does not offer an answer as to what type of work beneficiary women are substituting into, the **qualitative research suggests that some women may be engaging in some forms of self-employment**. A common example of this was the purchase of a sewing machine.

6.1.3 Access to human resources

Literacy and education can be tools for access to greater information, knowledge, skills and understanding (*Aldred, 2013*) and is an important resource in its own right. Furthermore, literacy and education can both support access to other resources or support the achievement of desired outcomes such as the proper nutrition of infant children.

Figure 23 Education levels of beneficiary women

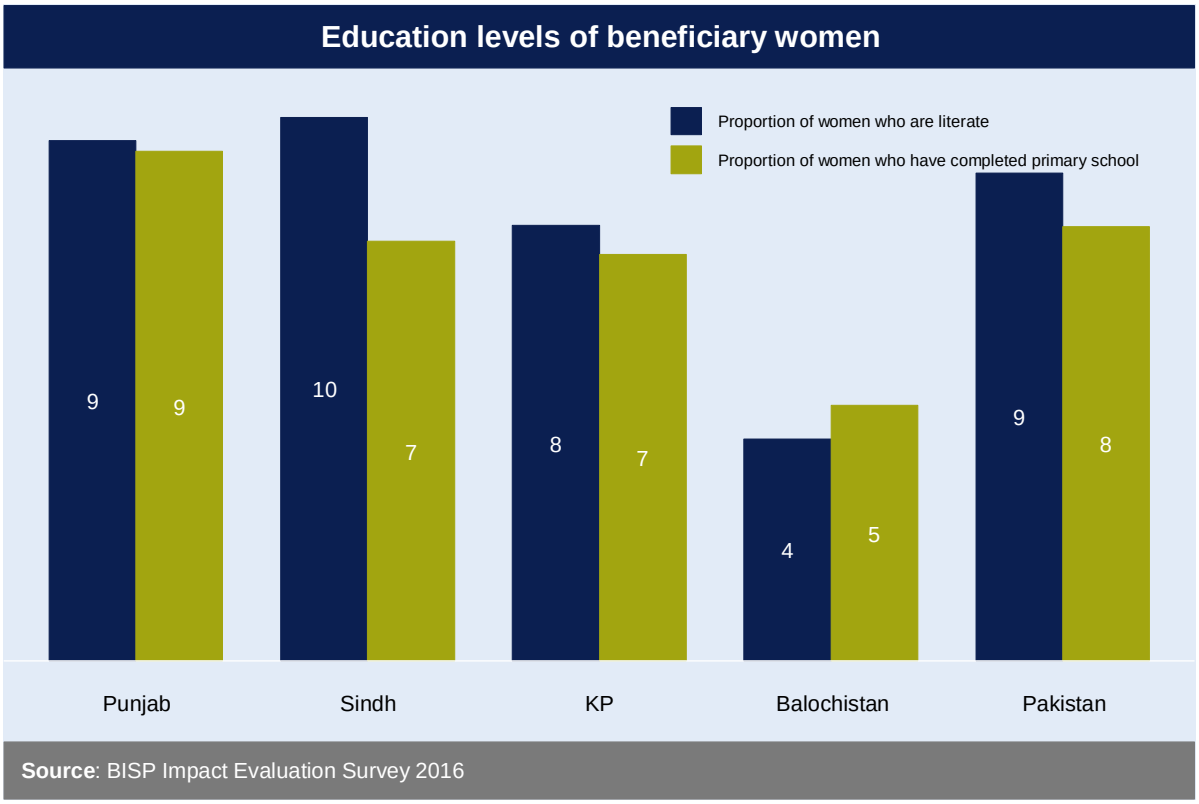


Figure 23 clearly demonstrates the **very low levels of literacy and education of beneficiary women.** At the national level just 9% of beneficiary women are literate, whilst just 8% have completed primary school. There is variation across the provinces, with literacy and education rates in Balochistan particularly poor.

6.2 Agency

6.2.1 Household decision making

The majority of respondents to in-depth interviews indicated that female **beneficiaries now play a more active role in decision making within the household including managing money**, and that the BISP had supported this change. This finding was most pronounced in Khyber Pakhtunkhwa, followed by Punjab.

"In general, there is a more proactive role of women in in household decision making" (School Teacher, Community Key Informant, District Khushab, Punjab)

"Women in our village don't go out alone and usually men control the cash, but now after BISP my wife play a more decisive role and gradually she controls most of the household cash now. I am happy because now I can focus more on my work". (Male In-depth Interview, District Ziarat, Balochistan)

"My wife is much happier now after BISP, so we all are happy. She is more independent, takes her own decisions and manages children's education expenses also. Our life is more organised now". (Male IDI, District Charsadda, Khyber Pakhtunkhwa)

The qualitative research suggests that the involvement in decision making has been accompanied by an increase in the status of women both in the household, but also in the community.

"We are definitely respected more in the community after BISP and women's status in general has gone up because more people realise that women can also play a role in supporting the family" (Female Beneficiary FGD, District Khushab, Punjab)

6.2.2 Participation in voting

Pakistan has historically had low political participation of women, with many women casting their votes based on the choice of their husbands and other male family members. However, one of the preconditions to becoming a BISP beneficiary is that a woman must be in possession of a currently valid Computerised National Identity Card (CNIC).

Table 16 Women voting: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of women reporting that they would vote in every national or local election…					
Pakistan	53	3,450	70	3,561	14***
Punjab	59	1,419	77	1,410	11*
Sindh	63	962	88	1,038	3*
KPK	29	791	37	886	11*
Balochistan	54	278	76	227	4*

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

A CNIC is also required to vote in Pakistan. Whether it is through the channel of the BISP cash, the increased women's mobility that we demonstrate below (see Section 6.3.1) or the requirement to have a CNIC to access the BISP Table 16 suggests that the **BISP has had a positive and statistically significant impact on the proportion of women reporting that they would always vote**, whether in a local or national election.

6.3 Achievements

6.3.1 Mobility of women

Social norms in Pakistan place a certain degree of restriction on the mobility of women. This can be seen to some degree in Table 17, which reports whether or not a beneficiary is free to travel alone to various places in the community. Table 17 suggests that there **is still a large degree of restriction on the mobility of beneficiary women**, with only 26% able to go to a religious centre alone and 51% able to go to a friend's home alone.

However, the qualitative research suggests that there is a link between the need to collect the BISP cash transfer at a BISP collection point, and the mobility of women.

"In the beginning, men in our village used to go to collect BISP money because they thought women would not be able to manage it on their own. Now in the last two to three years, women go in groups to the city to collect their money. It is something which we could not have imagined five years ago. BISP has brought this change amongst both men and women". (Male Beneficiary FGD, District Sukkhur, Sindh)

Table 17 Female mobility: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of women reporting that they can freely visit alone…					
Market	31	3,450	37	3,564	11**
Health Centre	31	3,450	37	3,564	9**
Friend's house	44	3,450	51	3,564	3(NR)
Religious centre	22	3,450	26	3,564	6*

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

For BISP beneficiaries Table 17 suggest that this mobility extends beyond just the matter of collecting the transfer itself. We find that the **BISP has had a positive and statistically significant effect on the ability of women to travel alone** to various locales in the community.

Furthermore, the qualitative research suggests that this phenomenon might have wider effects in communities with significant numbers of beneficiaries.

"Now non-beneficiary women also go out more because they see BISP beneficiary women going out more often to collect their money. There is more acceptability regarding female mobility". (School Teacher, Community Key Informant, District Khushab, Punjab)

6.3.2 Other achievements noted in this report

Here we summarise other outcomes that are noted in this report as they relate to gender, focussing on nutrition and education outcomes of girls.

- **Nutrition outcomes:** we find evidence that the BISP transfer has had an impact on the nutrition outcomes of girls but not boys aged 0-59 months (see Section 5.4). Furthermore we note that this finding is consistent with the available literature which also finds a preference for girls nutrition when a transfer is targeted at a female beneficiary in the household

- **Education outcomes:** the qualitative research indicates that many beneficiaries report that they place value on education, including the education of girls as well as boys (see Section 8). Despite this we do not find that the BISP transfer has increased the proportion of girls or boys that are enrolled in school. Furthermore, we find that in some communities when resources are scarce there is still a preference for the education of boys rather than girls.

7 Livelihoods

In this section we present the findings related to livelihoods, including the activities and assets required to generate an income. The key findings are:

- Casual labour remains an important source of income, but BISP beneficiaries are reducing their reliance on this form of livelihood
- BISP transfer has led to a reduction in the proportion of men engaged in casual labour
- BISP transfer is related to an increase in the proportion of men engaged in agricultural activities or looking after livestock
- BISP transfer has led to a reduction in the proportion of women engaged in unpaid family help
- There is evidence that the BISP is supporting the purchase of small livestock particularly sheep and goats
- There is evidence that the BISP is supporting an increase in savings, in particular formal savings

A household's livelihood depends on people's strengths (assets or capital endowments) and how they endeavour to convert these into positive livelihood outcomes. People have different endowments of a range of assets to achieve positive livelihood outcomes, and no single category of assets is sufficient to yield all the many and varied livelihood outcomes that people seek[23]. This is particularly true for people whose access to any given category of assets can be limited.

Households have different endowments of a range of assets including: human capital; natural capital; financial capital; physical capital; and social capital. In this section we focus on the following assets:

- **Human capital**: which represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. We focus here on labour supply.
- **Physical capital**: comprises the basic infrastructure and resources to which households have access. We focus here on livestock.
- **Financial capital**: denotes the financial resources that people use to achieve their livelihood objectives. We focus here on the ability to save.

7.1 Main livelihood strategies

BISP beneficiary households were asked about what was their main source of income. We have shown earlier (see Section 4.4) that many BISP households are still dependent on casual labour, a source of income that does not offer much in the way of job security and is particularly vulnerable to seasonal and economic variation.

[23] *DFID (1999)*

Table 18 Household main livelihood source: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of households that derive main source of income from					
Salary	22	3,934	20	3,942	2
Casual labour	43	3,934	44	3,942	-8*
Petty Trading	3	3,934	2	3,942	0
Skilled trading	1	3,934	2	3,942	-1
Cash crop production	4	3,934	3	3,942	3
Food crop production	5	3,934	6	3,942	1
Remittances	7	3,934	8	3,942	-2
Small business	9	3,934	8	3,942	-2

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

Table 18 reports the impact of the BISP on the main source of income for BISP beneficiary households and we find that the **BISP has a negative and statistically significant impact on the proportion of households who rely on casual labour** as the main source of income for beneficiaries in the RD treatment sample.

However, Table 18 does not indicate that the BISP has led to an appreciable increase in the reliance on any other single type of livelihood strategy. This may suggest that BISP beneficiaries are using the cash in different ways as they diversify their livelihoods away from casual labour. In the sub-section that follows we report the impact of the BISP for the livelihood strategies that are adopted by individuals who live in beneficiary households.

7.2 Labour participation

In addition to asking households about their main source of income, the BISP evaluation survey examined labour participation rates[24]. Table 19 reports these findings with the analysis focussed on adults of *prime* working age, defined as adults aged 18-49. Table 19 reports **large gender discrepancies in participation in economic activities**, with 78% of men in the RD treatment sample economically active in 2016 as compared to a quarter of women.

A concern that is sometimes raised by policy makers about the implementation of an unconditional cash transfer is that such programmes could have the tendency to discourage work. We find that the **BISP has no impact on the proportion of adults engaged in economic activities, either male or female**. This finding is consistent with *Banerjee et. al. (2015)* who examined results from

[24] We define an adult to be economically active if she had worked at least one hour in the last preceding the interview, or even if she didn't work in the last week she had a job or ran an enterprise such as a shop, business, farm or service establishment that she would return to

seven randomised control trials of government run cash transfers in six developing countries[25], who found no systematic evidence that cash transfer programmes discourage work.

This finding is not surprising in the context of the BISP, given that the value of the BISP payments received in the 12 months prior to the evaluation survey make up only 7% of the per adult equivalent consumption expenditure.

Table 19 Labour participation: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of working age adults (18-49) engaged in economically productive activities					
Total	50	11,526	50	11,182	-2
Male	79	5,542	78	5,215	1
Female	23	5,984	25	5,967	-4
Proportion of economically active working age men (18-49) who are engaged in…					
Self-employed	17	4,395	15	4,083	-5
Employee	22	4,395	22	4,083	6
Unpaid family helper	4	4,395	4	4,083	3
Casual labourer	45	4,395	47	4,083	-9**
Own agriculture/ livestock	5	4,395	5	4,083	3***
Share-cropper	4	4,395	5	4,083	2*
Proportion of economically active working age women (18-49) who are engaged in…					
Self-employed	20	1,347	19	1,468	7
Employee	19	1,347	17	1,468	2
Unpaid family helper	9	1,347	10	1,468	-6***
Casual labourer	40	1,347	39	1,468	-9
Own-agriculture/ livestock	2	1347	4	1468	2
Share-cropper	1	1,347	2	1,468	-1

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

However, we do find an impact on the type of labour that is being provided by members of BISP beneficiary households. Consistent with the finding that overall dependence on casual labour has fallen at the household (see above in Section 7.1) we find that BISP has had a **negative and statistically significant impact on the proportion of male members who are engaged in**

[25] Honduras, Indonesia, Morocco, Mexico, Nicaragua and the Philippines

casual labour in beneficiary households in the RD treatment sample. We do not find that there has been a similar impact for women members of beneficiary households.

Simultaneously, Table 19 reports that male members are substituting their labour towards two types of agriculture: sharecropping[26] and own agriculture which includes own cultivation and livestock breeding. This is consistent with the findings presented in the sub-section that follows (see Section 7.3) which reports that the BISP has enabled some households to purchase small livestock.

For female members Table 19 reports that the biggest change has been that the **BISP has had a negative and statistically significant impact on the proportion of women who are engaged in unpaid family help**. This finding may be related to the increased sense of confidence expressed by women interviewed during the qualitative research as a result of BISP that is discussed in the previous section (see Section 6).

Whilst the quantitative data presented Table 19 does not provide an insight into the types of labour that women might be substituting into, the qualitative research found indications of a growing trend for self-employment. For example, we have already mentioned the purchase of sewing machines, but there have been other types of self-employment reported including the setting up of small-scale trading such as for flowers and fruit and vegetables.

"Some women have bought sewing machines from BISP money and earn some money by stitching clothes at home. This amount helps in fulfilling household needs. These days the price of everything is so high that any additional amount is a blessing".

"Jinnah hospital is right next to our colony, so there is a high demand for flowers. Taking advantage, two women in our community have started flower businesses and both are doing quite well. Their entire lives have changed". (Female beneficiary FGD, District Karachi, Sindh)

Other women reported that they had given their husbands part of their BISP money so that they could start their own economic activities (though this finding was not substantiated in the quantitative data).

"Salim, a man in our neighbourhood, saved [money through] BISP through a [savings] committee and bought a rickshaw from it. Now he earns between PKR 500 and 1,000 every day" (Social Organiser, Community Key Informant, District Malakand, KP)

"My husband bought a vending cart from our BISP savings. He goes from street to street selling pakoras and fries. From that he made enough money to set up a small tea khoka (kiosk). We pray for Benazir each and every day that her help has enabled us to lead a more comfortable life". (Female IDI, District Karachi, Sindh)

7.3 Livestock ownership

The qualitative research provided strong indications that BISP beneficiaries had been able to use some part of the BISP cash transfer for the purchase of small livestock as an income generating investment. Some examples included:

"I bought two goats from BISP savings and then sold them for double the price at Eid. The money from those was used for improving our house roof and I also bought a pedestal fan". (Female IDI, District Bahawalangar, Punjab)

[26] A sharecropper is a tenant farmer who gives a part of each crop as rent

"My wife bought four small chicks from the bazaar and now we have seven grown up chicken. We not only eat eggs at home but also sell eggs in the village sometimes". (Male Beneficiary FGD, District Sukkhur, Sindh)

Table 20 Livestock: impact estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of households that own…					
Any livestock	40	3,935	40	3,943	3*
Bull	3	3,935	3	3,943	2
Cow	16	3,935	17	3,943	-2
Buffalo	14	3,935	14	3,943	0
Sheep	2	3,935	3	3,943	2*
Goat	21	3,935	20	3,943	9**
Poultry	10	3,935	11	3,943	0

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

The quantitative data supports this finding, with Table 20 reporting that the **BISP has had a positive and statistically significant impact on the proportion of households that own certain types of small livestock including sheep and goats** for beneficiary households in the RD treatment sample. This finding is significant given that livestock is both a productive investment, but also a store of value in the context of households with low financial access (see Section 7.4).

7.4 Access to finance

There is potential for BISP to have a significant impact on financial access, providing that beneficiaries have access to facilities that are appropriate in which to save. The majority of BISP beneficiaries receive their transfers through the BISP Debit Card. *CGAP (2013),* in a report detailing qualitative research with various banks on their willingness to engage with BISP beneficiaries, indicates that there is a willingness amongst the partner banks to transition beneficiaries to *Level 0 branchless accounts* which would enable beneficiaries to not only withdraw but make deposits.

Savings enable households to cope with future household needs and unexpected shocks, as well as enabling productive investments. Poor households often lack the access to a secure means of saving, contributing to them struggling to build up stores of welfare improving productive physical and human capital. Table 21 reports that the level of financial access of BISP households remains low, with just 18% of BISP beneficiary households.

However, Table 21 reports that the **BISP has had a positive and statistically significant impact on the proportion who have some form of savings** for beneficiary households in the RD treatment sample. Furthermore Table 21 suggests that this impact on savings is concentrated in formal savings: i.e. savings with a bank or a micro-finance group rather than savings in cash or with families and friends.

Table 21 Financial access: Impact Estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of households that have					
Any savings	16	3,935	18	3,943	5***
Formal savings	8	3,935	9	3,943	3**
Informal savings	8	3,935	9	3,943	2
Outstanding loans	29	3,935	32	3,943	7

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold

The qualitative research confirms that BISP beneficiaries are beginning to use the BISP cash for savings and reports that savings are used in different ways.

"My mother in law and I are both BISP beneficiaries. So we planned and saved from our BISP cash and then upgraded our kitchen by tiling it and getting shelves and counters installed" (Female Beneficiary FGD, District Charsadda, Khyber Pakhtunkhwa)

"I save a small amount whenever I receive BISP cash for annual home repairs and maintenance. We just buy the materials and do the labour ourselves" (Female IDI, District Karachi, Sindh)

"I started saving BISP amount for my daughter's dowry five years back. At the time of her marriage, I had prepared her entire dowry. I could not have managed it without BISP". (Female IDI, District Charsadda, Khyber Pakhtunkhwa)

Furthermore, the qualitative research suggested that there has been a change in the way BISP cash is being used in the household. Specifically, **respondents were reporting that they were using the money more carefully than before** and that they had started to more carefully manage and plan its expenditure, as compared to during the early years of the programme.

"Yes in the beginning when we started to receive BISP, we would spend it without really thinking. We would spend it on all things which we wanted to do or buy but could do so because we did not have any money. But now we now when the money comes so plan out where we will spend it. Beneficiaries plan according to the timing of the BISP cash". (Female Beneficiary FGD, District Charsadda, Khyber Pakhtunkhwa)

"No, there is a change over time in the BISP impact and I think it is related to the way people are using the money. Before there was a binge effect, which has gone down now and people use money for education, health and other useful purposes". (BBC member, Community Key Informant, District Karachi, Sindh)

That beneficiaries are expressing that they are changing the way they plan the use of the money is likely related to two factors: that the reliability and regularity of payments made by BISP has improved over the course of implementation; and that beneficiaries are beginning to trust the programme and therefore internalise the BISP cash as part of their household budget.

These two factors are likely to have contributed to findings that we see in other parts of this report. In other sections we see that the BISP has had a positive impact on the purchase of larger items

such as household assets (see Section 5.5), purchases of livestock (see Section 7.3) as well as supporting an increase in the proportion of beneficiaries with savings that is reported in this section.

Table 21 also reports that the BISP does not have a statistically significant impact on the proportion of beneficiaries with an outstanding loan. Despite this relatively large proportions of beneficiaries in the RD treatment sample have an outstanding loan (almost a third), reflecting the variation in incomes over the year for many beneficiaries who are reliant on casual labour.

8 Access to education

In this section we present the findings of the impact of the BISP on education. The key findings are:

- There is some evidence from the qualitative research that some parents are using the BISP cash transfers to support education for their children
- Overall we do not find that the BISP has a statistically significant impact on school enrolment, either for boys or girls
- The cost of education remains high relative to the unconditional cash transfer component of BISP
- We find some evidence of preferential investments for boys, particularly when finance of education is a constraint
- Supply side factors are also important determinants of access to education, and these cannot by addressed by an unconditional cash transfer

Education and the acquisition of skills are strongly influenced by both household factors and the wider environment including: the affordability of education; the access to and quality of education; and the market demand for labour.

There is a widely acknowledged link between low levels of education amongst children with poor parents and the persistence of poverty, with education in many countries correlating strongly with adult income and other markers of socio-economic status (*Aldaz-Carroll and Moran, 2001*). This observation also appears pertinent in Pakistan where *Afzal et. al. (2012)* find that education and poverty are inversely related, whilst *Awan et. al. (2011)* finds that education is negatively correlated with poverty status and that this correlation is stronger the higher the level of education.

Income poverty can lead to a cycle of lower education outcomes as poverty does not permit one to make adequate investment in education and a low level of investment in education tends to accentuate poverty of the individual (*Thapa, 2013*).

The **qualitative research suggests that BISP beneficiaries continue to highlight the importance education, including that for female education**. The majority of respondents, both beneficiaries and non-beneficiaries reported that they wanted for their children to receive an education.

"People know that educating children is very important and everyone tries their best to send their children to school including girls". (Female Non-beneficiary FGD, District Ziarat, Balochistan)

"We know that it is equally important to send daughters to school as well, otherwise they will just end up like us" (Female Non-beneficiary FGD, District Charsadda, Khyber Pakhtunkhwa)

In some cases the qualitative research suggests that some beneficiaries are using the BISP cash transfer to send their children to school.

"I am a widow and have seven children. Despite economic pressures, all my children go to school except my eldest son, who had to drop out of school after my husband died to start work as a

rickshaw driver. Two of my sons attend private schools, while one daughter and son go to government schools. I am only able to send my sons to private schools because of BISP". (Female IDI, District Karachi, South)

"BISP had definitely helped poor families in sending their children to school. Beneficiary women spend their BISP grant for their children's education needs. Sending children does not only mean paying the school fee; there are a lot of other costs associated with sending children to school which can be very difficult for poor households to afford". (Female Beneficiary FGD, District Khushab, Punjab)

"From BISP money I manage to send my children to school which I otherwise would not have been able to do without this cash. I basically keep aside BISP for this purpose" (Female IDI, District Ziarat, Balochistan)

Table 22 Education: Impact Estimates

	Control		Treatment		RDD impact estimate
	Mean	N	Mean	N	
Proportion of children aged 5-9 years old currently enrolled in school					
All children	64	3,945	65	4,695	6
Male	67	2,069	69	2,492	10
Female	61	1,876	61	2,203	1
Proportion of children aged 5-12 years old currently enrolled in school					
All children	69	6,485	68	7,971	-3
Male	72	3,455	73	4,194	2
Female	65	3,030	63	3,777	-8

Source: **BISP impact evaluation survey (2016).** Notes: **(1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10. (2) NR – Not Robust: suggests that there is weak evidence of impact, as whilst we do not find statistically significant impact at bandwidth of +/- 5 we do find statistically significant impacts at other bandwidths (3) Samples sizes are given for bandwidth of +/- 5 points around the cut-off. (4) Point estimates are weighted using triangular weights based on a bandwidth of +/- 5 points around threshold**

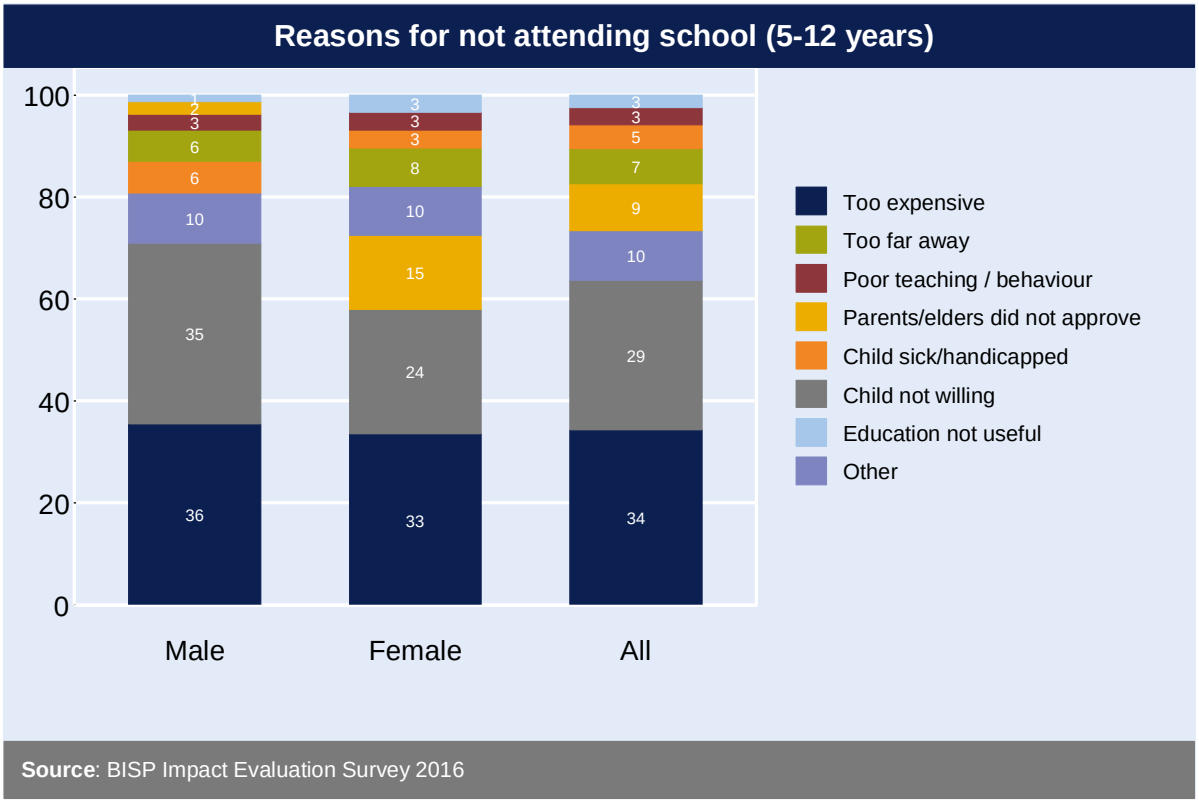
Despite some beneficiary households utilising the BISP cash transfer for education and a clear desire for both boys and girls to be educated Table 22 reports that the **BISP does not lead to a statistically significant increase in current school enrolment rates** for children living in BISP beneficiary households in the RD treatment sample on average. This result holds equally for boys and girls as well as across the 5-9 and 5-12 year-old age groups. In addition, Table 22 reports high proportions of children in the RD treatment sample, particularly girls, who are not currently attending school.

Value of the transfer and cost of education

For an unconditional cash transfer such as the BISP to have an impact on schooling requires that the **value of the transfer is sufficient to meet both basic household needs as well as the direct and indirect cost of schooling**. Figure 6 in Section 3.1.3 reveals that the per adult equivalent value of the transfer that was actually received in the last 12 months by BISP beneficiaries in the last 12 months was PKR 187, or just 6.6% of total per adult equivalent consumption expenditure.

Figure 24 demonstrates that the **most common reason for not attending school is the expense of education** suggesting that the UCT component of the BISP has yet to alleviate this constraint on the demand for education for many children in BISP beneficiary households. Furthermore, we report in Table 9 in Section 5.2 above that the BISP has not had a statistically significant impact on the level of education expenditure in the household.

Figure 24 Reasons for not attending school



Source: BISP Impact Evaluation Survey 2016

To understand why this is the case it is useful to consider cost of education relative to the value of the transfer provided. *Pakistan Bureau of Statistics (2013)* notes that the average monthly expenditure per pupil on education for children attending government schools in rural areas was PKR 106[27]. This would account for 57% of the per adult equivalent value of the transfer that was actually received in the last 12 months by BISP beneficiary households.

The complementary intervention, **Waseela-e-Taleem Programme**, a conditional cash transfer for education directly seeks to address this constraint by providing an additional top up of PKR 750 per quarter per child aged 5-12 years old who is enrolled in school. We present the additional impact of this programme in a separate complementary report, where we find that this additional provision (combined with the conditions) is sufficient to increase child enrolment in school.

Some preference for boys' education

In some communities there was still a preference for sending boys rather than girls to school. This was particularly true when financial pressures meant that not all children in the household could be educated.

[27] Expenditure includes on fees (admission, tuition, registration, examination, etc) as well as expenditure on uniforms, books and supplies, private tuition, transport, etc

"Education of boys and girls is equally important and people also realise this, but parents still have a preference for educating their sons especially in the case of limited finances". (Teacher, Community Key Informant, District Sukkur, Sindh)

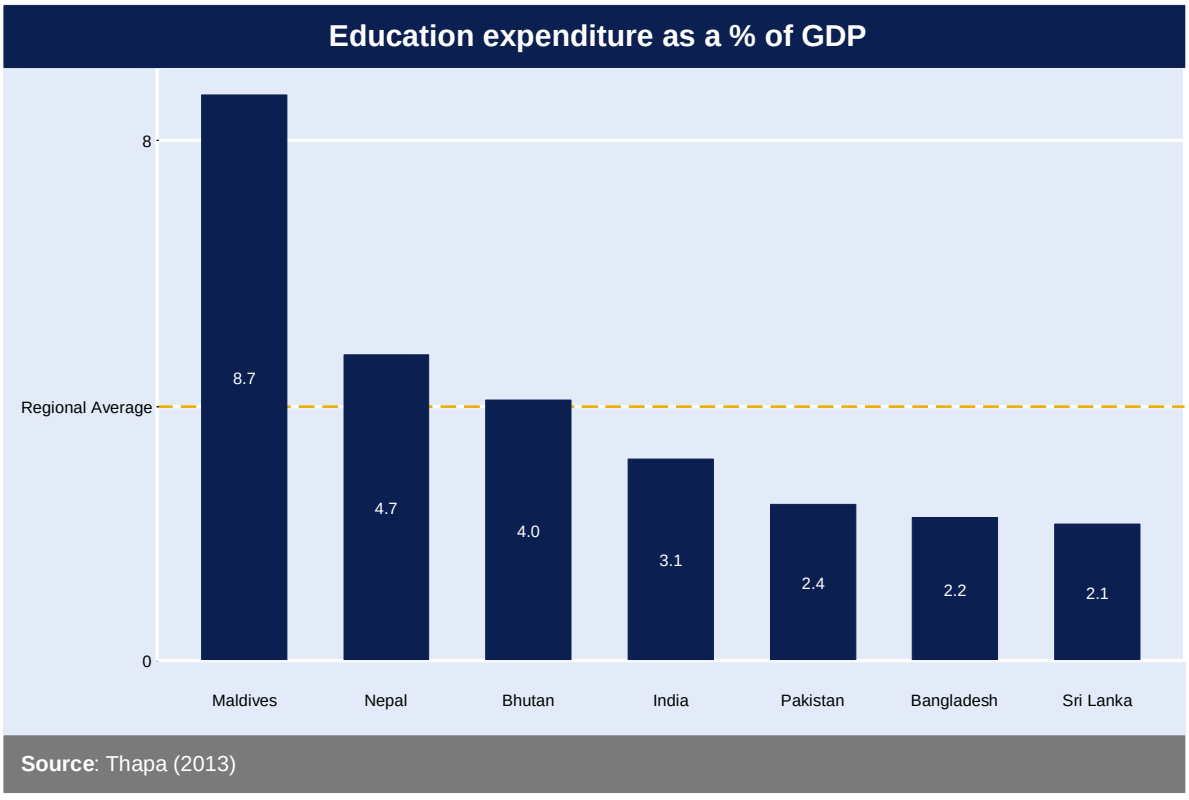
This analysis seems to be supported by the quantitative data, where the **non-approval of parents or elders** was a far more common reason for not attending school for girls (15%) as compared to boys (2%). However, one should be careful in the interpretation of this finding, in the sense of it being a simple value judgment on behalf of some parents on whether or not a girl should be educated.

Aslam and Kingdon (2008) finds substantial evidence of a strong pro-male bias in the binary decision of whether to spend anything on education amongst households in Pakistan. However, *Aslam and Kingdon (2008)* goes on to point out that whether this constitutes pure discrimination is open for debate. Further evidence is required on the returns of education by gender to understand whether gender bias in intra-household education is attributable to an investment motives, based on gender differentials in labour market returns to education.

Public sector provision of education

The success of an unconditional cash transfer such as the BISP in improving access to education depends crucially on the supply of education that can meet any increase in demand. It is well documented that Pakistan has historically **allocated low levels of expenditure to the education sector**, with Figure 25 reporting that Pakistan has amongst the lowest level of education expenditure as a proportion of GDP in South Asia. This low level of spending has contributed to Pakistan having amongst the lowest levels of adult literacy, highest rates of school drop-outs and lowest levels of primary school enrolment in South Asia (*Human Development Report, 2013*).

Figure 25 Education expenditure as a proportion of GDP



Source: Thapa (2013)

The Pakistan Education for All Report (*GoP, 2015*) notes that the low levels of spending has led to a **range of supply side weaknesses** in the Pakistan education system:

- Shortage of schools especially for girls and in remote and far flung areas;
- Shortage and high absenteeism of teachers;
- A lack of qualified and trained teachers;
- Missing facilities such as water, toilets and boundary walls; and
- Weak supervision.

The qualitative research indicated that some beneficiaries indeed experienced supply side constraints to their access to education, particularly in the provision of education for girls.

"Sometimes schools are not accessible and parents cannot afford transport and so their children end up out of school" (Female Beneficiary FGD, District Ziarat, Balochistan)

"There is a primary school in the village where both boys and girls go. But after primary then only a few girls continue their education because the middle school is 3 to 4 km away and people don't want their daughters to walk that far alone" (Teacher, Community Key Informant, District Sukkur, Sindh)

An unconditional cash transfer, such as the BISP, in isolation cannot overcome such supply side constraints that would allow children in BISP beneficiary households to access education. This highlights the need for the BISP to be accompanied by complementary investments in education both to improve the quantity and quality of education if children in beneficiary households are to see real improvements in their education outcomes.

Part E: Conclusion

9 Conclusion

This report represents the culmination of the independent impact evaluation of the BISP, and provides the final set of findings as they relate to the implementation and potential impact on beneficiaries. Quantitative and qualitative data have been collected and analysed that relate to the impact 5 years after the BISP has initiated in its current form, in order to provide a comprehensive and robust assessment of the impact of the programme. Impact is measured across a multitude of domains and we are now in a position to make a final set of conclusions as to where there is strong evidence of impact, where there is weak evidence of impact and where there is no evidence of impact.

Mitigating poverty

We find strong evidence that the **BISP cash transfer has increased the welfare of BISP beneficiary households** at least in terms of increasing their consumption expenditure possibilities. This is to be expected given that the BISP provides households with an injection of cash additional to their household income, but is not a foregone conclusion given that households may also share the transfer, save from the transfer or use it to pay down debt.

We also find strong **evidence that the BISP cash transfer has reduced poverty, at least when poverty is measured using the poverty line that was relevant until May 2016**. However, since May 2016 the Government of Pakistan has re-defined the approach to measuring poverty which has resulted in the poverty line increasing by PKR 804 (33%). To put this increase into perspective, it represents over half of the total monthly value of the transfer.

The new poverty line has sufficiently increased relative to per adult equivalent value of the transfer (PKR 270), that we find no reduction in poverty when it is referenced in this way. Indeed after **five years of receiving support the average BISP beneficiary has a value of per adult equivalent consumption expenditure that is PKR 456 below this newly calibrated poverty line**, whilst being PKR 348 above the former poverty line.

The Government of Pakistan has made an implicit choice in its decision to increase the poverty line in this way: that the new poverty line represents what is now considered to be the basic minimum level of consumption expenditure that is sufficient to secure the necessities of life. The results of this evaluation suggest that, whilst the BISP cash transfer has certainly been welfare improving in many dimensions, it is not of sufficient value to bring the average beneficiary to this newly defined minimum level of income that would allow them to secure the basic necessities of life.

Using the BISP transfer in new ways

A strong finding in the qualitative research indicated that women were beginning to think about the way in which they use the BISP cash transfer differently. Many women reported that at the beginning of the programme they would *binge* on the money spending it quickly. However, overtime, as women have got **used to receiving the transfer, its expenditure had become more planned**.

This common observation is likely related to a series of results that are observed in this final round of evaluation. This includes a series of larger investments being made, particularly in relation to the homes of beneficiaries and we report strong **evidence of a reduction in deprivations related to living standards** that include the quality of flooring in beneficiaries' households and in improvement in the quality of cooking fuel used.

Furthermore we report **evidence that the BISP is enabling households to save**, with this increase in the propensity to save being driven by formal savings. However, more could be done to support the financial access of BISP beneficiaries including the conversion of programme accounts that would allow deposits as well as withdrawals.

Child nutrition remains a worry

Whilst we do find that the **BISP has led to reductions in wasting in girls**, the levels of child nutrition remain a concern, **with levels of wasting and stunting that would represent an emergency** as defined by the World Health Organisation. We do find some evidence of increased food consumption at household level. However, child nutrition outcomes are driven by more than availability of food, and are influenced by significant deprivations faced by beneficiary households particularly in factors such as early childhood and maternal health care, immunisation, sanitation and access to clean drinking water.

The BISP is potentially a viable channel to address these child nutrition outcomes and could potentially emulate other social protection programmes that directly address the same issue, with examples including conditional cash transfers for health or behavioural change messaging.

Contribution to changing livelihoods

The findings in this report suggest that the BISP has continued to make an appreciable difference in the types of livelihoods pursued by BISP beneficiaries. At the household level we find that the **BISP has reduced the dependence of beneficiaries on casual labour**. This is a positive finding given that casual labour is often associated with seasonal fluctuations, offering little in the way of income security.

This finding is driven by a reduction in the supply of casual labour by men within beneficiary households, and an accompanying increase in the supply of labour by men in agricultural activities including managing livestock. This finding is supported by an increase in the proportion of households that own small livestock such as sheep or goats.

We also report changes in the supply of female labour, with the BISP inducing a reduction in the supply of unpaid family labour. This has not been accompanied by an overall reduction in the supply of female labour. Whilst the quantitative results do not shed light on how women are substituting their labour, the qualitative research indicates that some women have begun to engage in self-employment of various kinds.

Unconditional cash does not impact education

Whilst many beneficiaries have expressed that they place considerable value on education, of both boys and girls, we do not find that the BISP transfer has led to an increase in the proportion of primary aged children attending school.

The success of an unconditional cash transfer to have an impact on school enrolment depends on two factors: (1) the **value of the transfer** relative to the cost of schooling; and (2) the **level of education service delivery**.

In this report we have noted that the level of the cash transfer is relatively low, comprising of just under 10% of a households monthly budget. Additionally we report that the cost of education remains one of the most significant barriers to accessing education.

Furthermore we note that Pakistan has allocated relatively low levels of expenditure to the education sector, compared to its closest regional neighbours. Furthermore the Government of Pakistan's own *Pakistan Education for All Report* suggests that this has led to a range of supply side weaknesses including a lack of qualified teachers and a shortage of schools, particularly for girls.

These findings highlight the need for complementary interventions that address both demand and supply side issues. Programmes such as the BISP's own Waseela-e-Taleem programme will help beneficiaries to overcome financial barriers, whilst greater investment in education through sector programmes such as those implemented the Chief Minister's Road Map for Education in Punjab will help to alleviate supply side barriers.

Building on impact observed in previous evaluation rounds

This report represents the final findings of the independent impact evaluation of the BISP. It follows two previous impact evaluation reports – *OPM (2013)* and *OPM (2014)*. As a set the reports tell a consistent story of slowly building impact. In each round of evaluation it was observed that the BISP has contributed to the mitigation of poverty and the support of household incomes.

In each report we have observed that the BISP has supported a change in the livelihoods strategies adopted by beneficiary households and in particular a reduction in the reliance on casual labour of male household members. However, for the first time in the 2016 evaluation report we see that the BISP has reduced the proportion of households who rely on casual labour as their main source of income.

It is now 5 years since many BISP beneficiaries received their first transfer and for the first time we observe that the BISP is supporting other changes, particularly as beneficiaries begin to better plan their expenditure of the transfer. In particular the 2016 evaluation report notes for the first time that the BISP has supported an increase in savings and improvements in material welfare.

However, challenges remain that may be outside the scope of an unconditional transfer to tackle alone. In particular the BISP continues to not have an impact on either education or child nutrition, which, as we note above, will require additional investments to tackle.

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Annex A Impact evaluation methods: technical appendix

Regression Discontinuity (RD) can be used to estimate the causal effect of a treatment on one or more outcomes of interest when the treatment is a deterministic function of an assignment variable and the threshold that determines the treatment is known. Under certain assumptions we can use observations close to the eligibility threshold and work with them as if treatment around this threshold were random. In the close neighbourhood of the threshold we can then identify causal impact of having receiving payments through the BISP on an outcome of interest *(y_i)* by taking the difference in outcomes for the treatment and control observations at the eligibility threshold.

$$Y(1) - Y(0) = E(Y_i|x_i, BISP_i = 1, BISPSCORE_i) - E(Y_i|x_i, BISP_i = 0, BISPSCORE_i)$$

We will use a non-parametric approach to estimate the impact of the BISP on its beneficiaries. This involves estimating the differences in intercepts (i.e. the discontinuity) of two local polynomial estimators, one from each side of the eligibility threshold c_0. Formally for a positive bandwidth *h*:

$$\min_{\beta} \sum_{i=1}^{n} \left(y_i - \sum_{j=0}^{p} \beta_j (BISPSCORE_i - c_0)^j \right)^2 K\left(\frac{BISPSCORE_i - c_0}{h}\right)$$

The key features of this approach are include the implementation of a local linear regression in some bandwidth *h* around the eligibility threshold. The estimation of impact is sensitive to the choice of the bandwidth. Thus whilst in the main body of the report we present the results of just one bandwidth (+/- 5 points around the cut-off) we present the estimates of the discontinuity observed with a variety of bandwidths. This is presented in Annex B.

A kernel weighting approach is also used, as determined by the kernel function *K(.)* such that the data is weighted according to its distance from the cut-off point. We implement a triangular kernel weight which gives greater weight to data points closer to the cut-off than those further away, with the weights falling off in a linear fashion.

A.1 Sensitivity testing

To be satisfied with the robustness of our findings we conduct the following sensitivity tests, the results of which can be found in Annex B:

- We test sensitivity of results to the choice of bandwidth. Results reported in the main report are based on a bandwidth of +/- 5 points around the cut-off. In annex B we also report estimates of the discontinuity at a variety of other bandwidths.
- We test for discontinuities away from the eligibility threshold. If there is a discontinuity away from the eligibility threshold this would suggest that some other factor is driving the observed discontinuity at the eligibility threshold. In Annex B we report the estimate of the discontinuity at a point ±1 away from the eligibility threshold.

We find that our results presented in the main report are robust to the sensitivity tests applied.

A.2 Assumptions of RD

RD will identify the combined causal impact of being treated by the BISP UCT on the outcomes of interest if the only source of discontinuity in the outcomes at the eligibility threshold is the

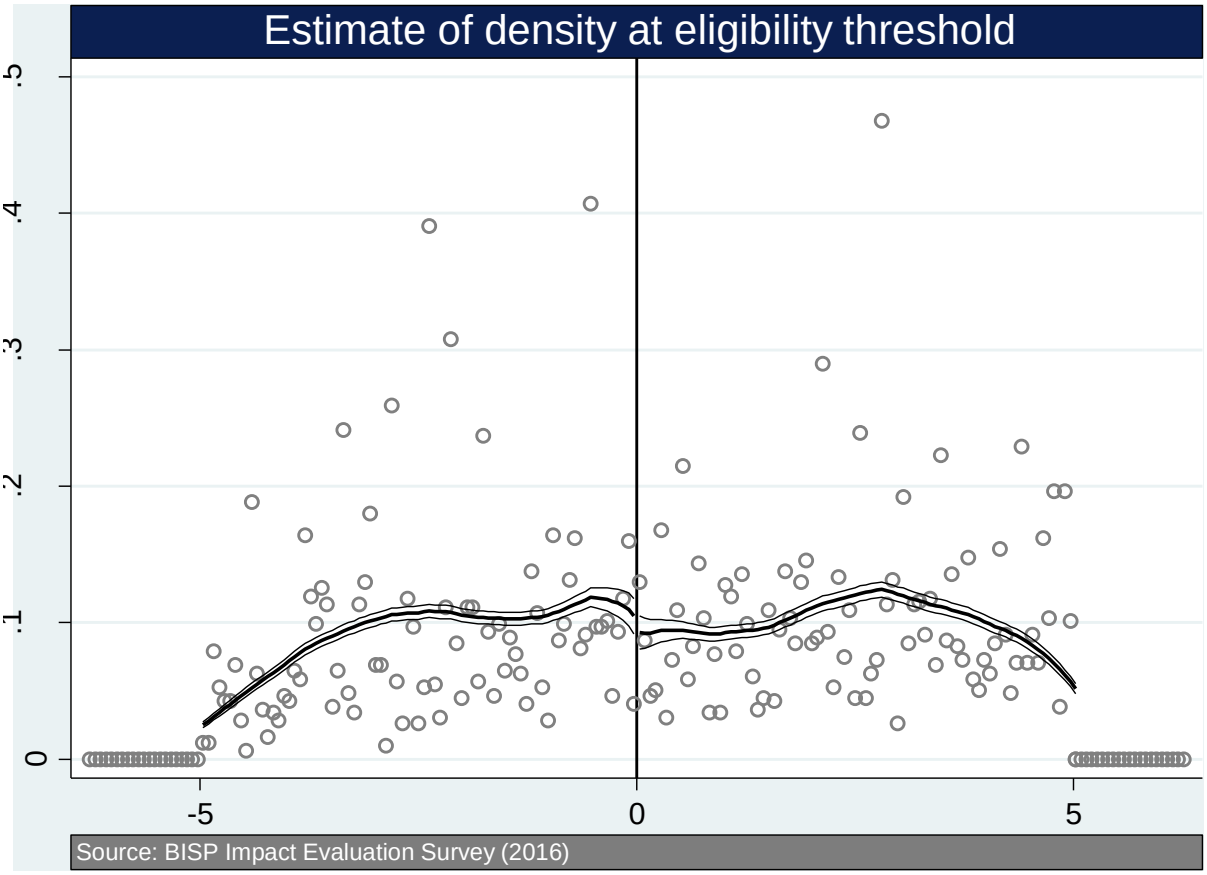
probability of receiving the BISP treatment. In order for this to hold we need to satisfy five assumptions, which are presented below:

Assumption 1: *the assignment variable has a monotonic effect on the probability of being treated for everyone*. Whilst this assumption cannot be tested directly we can be reasonably confident that the lower your poverty score the higher your probability of being targeted as eligible by the BISP and the higher your probability of receiving the BISP cash transfer.

Assumption 2: *the gains from treatment must be a function of the assignment variable at the eligibility threshold*. This assumption relates to worries about the ability of households to manipulate the assignment score and increase their probability of being BISP eligible.

This can be formally tested, and Figure 26 presents the results of a test of a discontinuity in the BISP poverty score at the eligibility threshold following *McCrary (2007)* which tests whether the marginal density of the BISP poverty score is continuous across the eligibility threshold.

Figure 26 Density of BISP poverty score at eligibility threshold (matched MIS scores)[28]



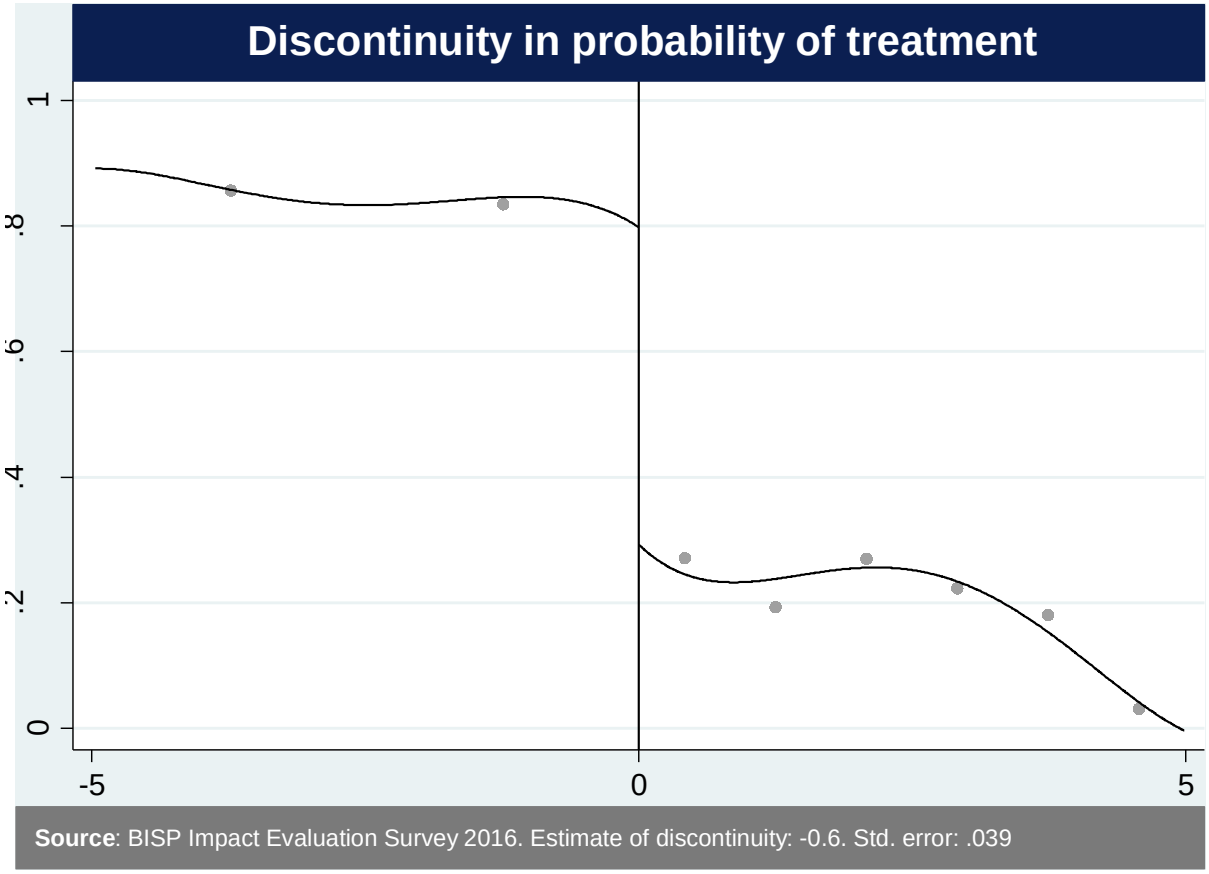
The results of this test reports that there is no statistically significant jump in the marginal density at the eligibility threshold Additional RD tables: Sensitivity Tests

Assumption 3: *there must be a discontinuity in the probability of being treated by BISP around the eligibility threshold.* This requires that the BISP is sufficiently well implemented such that those who are determined to be eligible actually receive the BISP and those who are ineligible do not. Figure 27 presents this analysis.

[28] BISP poverty score normalised so that eligibility threshold = 0

Whilst there is a statistically significant jump in the probability of treatment, there are some cross-overs – i.e. some ineligible households receive BISP payments and some eligible households are missed by the programme and some eligible households do not receive the payment. Additionally some households with scores greater than the 16.17 eligibility cut-off receive the transfer due to alternative rules for specific groups such as disabled family heads. Given that the treatment status is only partially determined by the BISP poverty score we implement a **fuzzy regression discontinuity (FRD)** as discussed in A.3 below.

Figure 27 Discontinuity in probability of treatment[29]



Assumption 4: *the observables must be a continuous function of the assignment score at the eligibility threshold.* In practice this assumption applies to both observable household characteristics that might affect our outcome variables of interest and requires that at least at baseline there is no discontinuity in observable characteristics and outcome variables at the eligibility threshold. If this assumption is violated we could not be sure whether any discontinuity observed at follow-up represents false impact due to a pre-existing discontinuity in that outcome variable, driven by a factor other than the BISP.

However, in the case of this round of the evaluation, this assumption cannot be directly tested as the majority of the sample was freshly sampled for this round of the evaluation, meaning that for the majority of the evaluation sample we do not have baseline values of household characteristics. However, we can be confident that this assumption is satisfied given that this assumption was strongly satisfied for the sub-set of households for which there is baseline information. This analysis was provided in our previous follow-up reports, including for the 2nd follow-up impact evaluation report (*OPM, 2015*).

[29] BISP poverty score normalised so that eligibility threshold = 0

Assumption 5: *unobservables must be a continuous function of the assignment score at the eligibility threshold.* This assumption relates to concerns over the possibility of a discontinuity in unobservable variables (such as ability) that could affect the outcome variable of interest. If such a discontinuity existed, then one could not be sure if a discontinuity in the outcome indicator of interest observed at follow-up is attributable to the BISP cash transfer or the unobservable variable.

By nature of unobservable indicators it is not possible to test this assumption. However, given that we are confident that we have satisfied *Assumption 4* at baseline it is likely that this assumption will also hold.

A.3 Fuzzy regression discontinuity

As discussed above against *Assumption 3* we find that BISP treatment is only partially determined by the BISP poverty score, and we find that some eligible households are not beneficiaries of the programme and some ineligible households have become beneficiaries of the programme.

We therefore implement a **Fuzzy Regression Discontinuity (FRD)** design. In principal the treatment effect is recovered by dividing the jump in the relationship between the outcome variable of interest and the BISP poverty score, by the jump in the relationship between treatment status to provide an unbiased estimate.

The implementation of the FRD is conducted using **two-stage least squares (2SLS)**. In the first stage we estimate the value of the treatment status, which is then used in place of actual treatment status in the second stage where we estimate the impact of the BISP programme on the outcome variable of interest.

Annex B RD sensitivity tables: technical appendix

Table 23 Household consumption expenditure and poverty: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Mean household consumption expenditure per adult equivalent (PKR)						
Pakistan	137.197	186.506*	215.058**	208.403**	199.802**	187.552**
Punjab	343.927*	381.306**	304.051*	264.174	238.574	198.971
Sindh	-331.871	-174.5	-44.86	-15.952	23.71	64.158
KP	218.695	288.516	382.634**	358.336**	320.448*	275.486
Balochistan	739.611	746.92	736.2	677.8	619.1	505.94
Proportion of population below poverty line (FEI Methodology)						
Pakistan	-8.85*	-8.702*	-7.737*	-6.86	-6.796*	-6.651*
Punjab	-2.617	-6.01	-2.728	-1.728	-1.137	-.38
Sindh	-2.277	-5.266	-6.807	-7.005	-9.41	-10.838
KP	-16.471	-16.514*	-17.112**	-14.438*	-12.257	-10.02
Balochistan	-4.0773	-3.8581	-4.1597	-3.7493	-3.676	-3.5654
Poverty gap (%) (FEI Methodology)						
Pakistan	-.021*	-.018*	-.013	-.013	-.013	-.013
Punjab	-.014	-.013	-.007	-.006	-.008	-.009
Sindh	-.006	-.013	-.014	-.014	-.017	-.021
KP	-.041*	-.043**	-.046**	-.044**	-.04**	-.033**
Balochistan	.053	.058	.065	.065	.062	.054
Proportion of population below poverty line (CBN Methodology)						
Pakistan	-7.412	-7.743	-7.697	-6.066	-4.726	-4.131
Punjab	-14.514	-13.844	-8.7171	-4.382	-1.217	.962
Sindh	8.229	4.534	-.019	.339	-1.135	-2.413
KP	-3.408	-5.758	-8.288	-6.956	-5.297	-4.401
Balochistan	-1.1324	-9.3637	-8.3932	-7.701	-7.14	-6.349
Poverty gap (%) CBN Methodology						
Pakistan	-.04**	-.039**	-.036**	-.033**	-.032**	-.031**
Punjab	-.058**	-.059**	-.042*	-.033	-.029	-.024
Sindh	.011	-.003	-.012	-.014	-.023	-.031
KP	-.05	-.059*	-.073**	-.069**	-.061**	-.051*
Balochistan	-.086	-.072	-.063	-.047	-.043	-.039

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 24 Non-food consumption expenditure: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Mean household non-food consumption expenditure per adult equivalent (PKR)	32.958	83.431	111.017*	114.85*	117.95**	118.848**
Mean household non-food consumption expenditure per adult equivalent on… (PKR)						
Education	10.234	15.685	14.155	6.509	3.22	4.942
Health	-34.931*	-22.136	-6.523	1.777	5.918	4.906
Housing expenses	114.523***	131.403***	130.417***	132.431***	130.908***	123.514***
Transport	-37.934***	-34.641***	-30.736***	-27.369**	-24.56**	-21.93**
Cleaning	9.645	10.043	9.2100	9.056	8.615	8.419

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Apparel	-1.673	3.121	10.563	12.24	11.761	11.969

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 25 Food consumption expenditure: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Mean household food consumption expenditure per adult equivalent (PKR)	104.239	103.075*	104.041*	93.553*	81.852	68.704
Mean household food consumption expenditure per adult equivalent on… (PKR)						
Wheat	12.236	-3.803	-8.42	-9.542	-9.052	-6.286
Maize	1.811	1.213	.857	.05	-.348	-.5
Rice	-26.165**	-20.055*	-12.527	-9.5471	-11.313	-14.284
Vegetables	-7.889	-5.08	-4.58	-3.567	-1.049	.737
Meat	26.923**	34.333***	34.232***	31.137***	27.655***	23.219**
Fish	9.06	10.098**	10.105**	10.357**	9.794**	8.058**
Eggs	4.605	5.351	4.505	3.892	3.947	3.719

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 26 Asset ownership: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of households that own…						
Fan	-.026	-.008	-.005	0	.005	.017
Heater	.057*	.071***	.077***	.067***	.057***	.042*
Bicycle	.119**	.097**	.08*	.067	.066	.067*
Car	-.001	.001	.001	.001	0	.001
Motorcycle	.131	.116	.083	.074	.069	.065
TV	.192***	.216***	.193***	.167***	.149***	.143***
Radio	-.023	-.013	-.008	-.007	-.008	-.01

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 27 Deprivations in living standards: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of households that are deprived against…						
Electricity	.07	.052	.041	.037	.032	.022
Sanitation	.087	.064	.076	.085	.091	.087
Flooring	-.132**	-.167***	-.141***	-.121**	-.117**	-.119**
Water	-.009	.042	.06	.043	.033	.023
Cooking fuel	-.28***	-.304***	-.267***	-.239***	-.216***	-.193***
Assets	-.26***	-.257***	-.215***	-.18***	-.163***	-.153***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 28 Women's access to money: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of women who report that they can easily access in an emergency…						
100	9.78	8.817	6.931	5.448	4.447	4.179
200	8.784	10.257	9.552	8.266	7.394	7.54
400	10.205	10.935	9.583	9.305	8.351	8.636
600	19.852**	20.45***	18.645***	18.991***	17.687***	17.409***
800	18.459**	18.957***	16.965***	16.607***	15.502***	15.556***
1,000	18.801**	18.014***	15.939**	15.653**	14.685**	14.984***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 29 Deprivations in living standards: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of women who report that they can easily access in an emergency…						
100	9.78	8.817	6.931	5.448	4.447	4.179
200	8.784	10.257	9.552	8.266	7.394	7.54
400	10.205	10.935	9.583	9.305	8.351	8.636
600	19.852**	20.45***	18.645***	18.991***	17.687***	17.409***
800	18.459**	18.957***	16.965***	16.607***	15.502***	15.556***
1,000	18.801**	18.014***	15.939**	15.653**	14.685**	14.984***

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 30 Women voting: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of women who report that they can easily access in an emergency…						
100	13.92**	11.233**	10.549**	11.378**	12.327***	13.544***
200	20.25**	17.905**	14.612*	12.395*	11.49*	10.969*
400	-7.524	-6.025	-2.033*	1.606	2.607*	3.381*
600	8.144	10.184*	10.73*	10.524*	10.573*	11.314*
800	-5.198	-8.848	-7.371	-6.8424	-5.907	-3.872

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 31 Female mobility: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of women reporting that they can freely visit alone…						
Market	16.615***	13.523**	10.562**	9.913**	10.536**	11.127**
Health Centre	19.325***	14.014***	10.678**	9.712**	9.195**	8.881**
Friend's house	14.088**	8.737*	5.163*	3.695*	3.161	3.118
Religious centre	15.944***	11.984**	9.244**	7.839*	6.849*	5.857*

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 32 Household main livelihood source: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of households that derive main source of income from						
Salary	.075	.066	.04	.024	.017	.018
Casual labour	-.087	-.117**	-.117**	-.103**	-.089**	-.079*
Petty Trading	.002	.003	.007	.007	.005	.002
Skilled trading	-.013	-.01	-.01	-.008	-.008	-.007
Cash crop production	.042*	.042	.043	.041	.037	.031
Food crop production	.001	-.002	.005	.01	.012	.012
Remittances	-.05	-.049*	-.041	-.035	-.03	-.021
Small business	-.029	-.005	-.002	-.009	-.018	-.022

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 33 Labour participation: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of working age adults (18-49) engaged in economically productive activities						
Total	-.044	-.038	-.034	-.024	-.015	-.015
Male	.042	.046	.034	.028	.022	.013
Female	-.115**	-.103*	-.087	-.065	-.046	-.037
Proportion of economically active working age men (18-49) who are engaged in…						
Self-employed	.038	.024	.008	-.018	-.036	-.046
Employee	.081	.081*	.056	.051	.053	.059
Unpaid family helper	.01	.021	.03	.033*	.031*	.031*
Casual labourer	-.136**	-.142***	-.129***	-.109**	-.098**	-.097**
Own agriculture/ livestock	.025*	.022*	.026**	.027**	.028***	.03***
Share-cropper	.006	.008	.019	.026	.031*	.029*
Proportion of economically active working age women (18-49) who are engaged in…						
Self-employed	-.01	.031	.053	.062	.072	.073
Employee	.151	.187	.176	.161	.143	.124
Unpaid family helper	-.2***	-.227***	-.227***	-.211***	-.189***	-.169***
Casual labourer	-.198**	-.189**	-.138	-.114	-.109	-.091
Own-agriculture/ livestock	.077***	.059*	.044	.031	.026	.021
Share-cropper	.005	-.01	-.016	-.012	-.01	-.012

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 34 Livestock ownership: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of households that own…						
Bull	.041**	.027	.025	.027	.026	.023
Cow	.059	.01	.001	-.001	-.009	-.017
Buffalo	-.01	-.037	-.034	-.017	-.012	-.004

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Sheep	.031	.028	.026	.028*	.028*	.025*
Goat	.091*	.082*	.103**	.1**	.097**	.087**
Poultry	-.025	-.021	-.008	.001	.003	.003

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 35 Savings: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of households that have						
Any savings	6.356	8.173**	9.707**	9.977***	9.421***	9.022***
Formal savings	1.531	3.006	4.728*	5.096*	4.851*	4.827*
Informal savings	.294	1.145	1.963	2.667	2.734	2.676

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Table 36 Education: RD sensitivity tables

	Estimate at bandwidth					
	2.5	3	3.5	4	4.5	5
Proportion of children aged 5-9 years old currently attending school						
All children	3.701	6.072	6.573	4.401	4.021	5.731
Male	10.635	13.402*	12.778*	10.062	9.25	9.744
Female	-5.184	-3.002	-1.122	-2.211	-1.92	1.456
Proportion of children aged 5-12 years old currently attending school						
All children	-10.189**	-6.721	-4.671	-6.091	-5.516	-3.125
Male	-4.127	-.844	.878	-.551	.159	1.737
Female	-16.72	-12.799	-10.482	-11.837	-11.354	-7.95

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an RD estimate is statistically significant: *** p < .01; ** p < .05; * p < .10.

Annex C Consumption expenditure and poverty: technical appendix

The consumption aggregate which is considered a better indicator of household welfare than income in developing countries has been calculated. The consumption expenditure includes both paid and unpaid such as:

- Purchased and consumed
- Own produced and consumed
- Wages and salaries in kind received and consumed
- Received as gift, assistance or inheritance and consumed

There are different components of household consumption expenditure. Mainly, consumption aggregate includes consumption expenditure incurred on food items, fuel and utilities, house rent and housing, frequent non-food expenses such as household laundry, cleaning, personal care products and services. Other leading non-food expenses relate to clothes, footwear, education and health-related expenses. However, some consumption expenditures not related to living standards have been excluded while computing consumption aggregate. These relate to expenses which are of lumpy nature and seriously compromise the household/individual welfare ranking, such as expenses on religious functions like marriage and funerals.

Different items have different recall periods. There are certain items for example milk, meat, fruits and vegetables which are very frequently consumed by the households and the recall period for such items is last fortnight before the date of interview. The recall period is last month before the interview for those items such as wheat, rice, pulses, vegetable ghee, tea and fuels which are less frequently consumed. The recall period is last year from interview for items which are occasionally purchased and consumed such as cloth, shoes and medical expenses. When the expenditure of these items is aggregated, they are homogenised in monthly terms.

Household surveys collect data about household consumption expenditure at the household level whereas welfare needs to be measured at the individual level. Therefore, household consumption expenditure is adjusted by household size and its composition. The common practice is to get per capita consumption expenditure by dividing the household consumption expenditure by the household size, ignoring the adjustment of household composition.

This argument does not carry much weight because it gives equal welfare ranking to two households with the same total consumption and same number of household members whereas one household is dominated by adults and the other by children. Nutrition-based adult equivalent scales, which differentiate between households on the basis of sex and age, are also used in some research to convert individuals in a household into adult equivalent. However, the use of such scales to non-food consumption expenditure is not convincing. In this report, the household has been adjusted by a simple scale in order to get per adult equivalent consumption expenditure. This scale applies a weight of 0.8 to individuals younger than 18 years old and a weight of 1 to those who are 18 years and older.

Thus, the number of equivalent adults per household is calculated as follows:

$$Adult\ equivalent\ household\ size = 0.8 \times (Number\ of\ members < 18\ years) + 1 \times (Number\ of\ members \geq 18\ years)$$

C.1 Regional and intra-survey temporal price deflator

The BISP Impact Evaluation Surveys both at baseline and first follow-up were conducted over an extended period of time and, as a result, households face different prices across provinces over the period. Therefore, it is very important to compute the welfare indicator in real values. In order to take into account the price differences faced by the households, the Paasche Price Index has been computed at a primary sampling unit where most of the household interviews occurred at the same time and this index has been used to convert the nominal per adult equivalent monthly consumption expenditure into real values, that allow us to compare consumption expenditure across regions.

This survey provides information on the implicit prices/unit values and budget shares of food and fuel items. The average budget share of each Primary Sampling Unit (PSU) has been utilised as a weight for the ratio of median prices faced by the households in each Primary Sampling Unit and the median national prices.

These are used to produce the Paasche Price Index at the PSU level, which is calculated as follows:

$$p_i^P = \sum_{k=1}^{n} w_{ik} \{ {}^{p_{ik}}/_{p_{0k}} \}$$

Where,
$w_{ik} = budget\ share\ of\ item\ k\ in\ PSU\ i$
$p_{ik} = median\ unit\ value\ of\ item\ k\ in\ PSU\ i; and$
$p_{0k} = national\ median\ unit\ value\ of\ item\ k$

The nominal per adult equivalent monthly expenditure of each household is then divided by the Paasche Price Index of the respective PSU to which the household belongs to arrive at the real monthly per adult equivalent expenditure.

C.2 Poverty line

To calculate the headcount rate or proportion of households that live in poverty one must calculate the proportion of households that live below the poverty line. The poverty line in Pakistan is set such that it allows households to consume a basic basket of goods. To calculate the poverty line we have used the poverty line set by the Government of Pakistan and adjusted this for inflation using price statistics housed in the Pakistan Bureau of Statistics.

The relevant poverty lines to be used for this report are discussed in Section 5.1.1

Annex D Sampling: technical appendix

In order to implement the RD approach a complex multi-stage sampling strategy was required to identify our treatment and control groups. A number of contextual factors at the time of the baseline survey influenced the sampling strategy. Primary amongst these was the requirement to conduct the baseline survey before any payments had been made to BISP beneficiaries.

At the time of the baseline survey the BISP poverty census was still on-going. Under ideal circumstances the evaluation would have waited for the poverty census to complete and sample treatment and control households directly from this census. However, implementation of the poverty census was not synchronised across evaluation provinces with the implication that payments would begin in some districts before the census had been completed in others[30].

This meant that evaluation households were identified separately as *potential* treatment and control households based on a household listing exercise conducted in evaluation communities by OPM prior to the BISP baseline evaluation survey. In this household listing exercise an exact replica of the BISP poverty scorecard was delivered to all households in evaluation communities to approximate as closely as possible their actual BISP poverty score (as determined by the BISP poverty census) and assign them to treatment and control groups.

The consequence of this approach meant that when evaluation households were matched to the BISP Management Information System (MIS) via the number on the Computerised National Identity Card (CNIC) to identify their actual poverty score, not all households in the original evaluation sample were in the appropriate BISP poverty score range for the RD analysis.

To bolster the sample size of households in the appropriate RD analysis range, a re-sampling exercise was conducted in 2016 for the final round of the evaluation survey to draw new treatment and control households for interview in existing research communities. The total sample size for the final round of evaluation of this independent evaluation is presented in Table 2

Table 2 presents the **final sample size of 9,139 households** that have been interviewed for the final round of evaluation. The sample is split between a total of 5,212 beneficiary households and 3,927 non-beneficiary households. Of all beneficiary households 3,935 households are within the appropriate poverty score range for the RD analysis.

Table 37 Total evaluation sample size

	Total beneficiaries	Beneficiaries in RD range	Non-beneficiaries	Total households
Punjab	1,714	1,526	1,572	***3,286***
Sindh	1,860	1,191	1,147	***3,007***
Khyber Pakhtunkhwa	1,286	948	889	***2,175***
Balochistan	352	270	352	***671***
Total	***5,212***	***3,935***	***3,927***	***9,139***
Source: BISP impact evaluation survey 2016. Notes: BISP poverty score full range: 0 - 100				

[30] The idea of a *rolling baseline* that would follow the delivery was tabled during the inception phase. However, this would have required a detailed and confirmed workplan of the poverty census rollout, which was not possible given that the census was implemented by multiple third party implementers.

The resampling exercise consisted of the following steps:

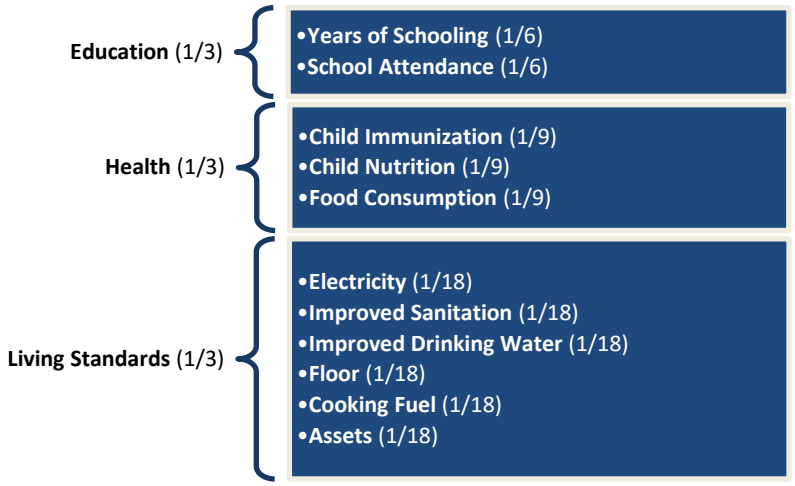
- All households that had previously been successfully matched to the BISP MIS were retained providing that they had a BISP poverty score of less than 21.17
- All PSUs in the evaluation sample were matched to the BISP MIS
- BISP provided a set of households (both treatment and control) that had a BISP poverty score of +/- 5 points from the eligibility threshold
- 9 treatment and 9 control households were randomly selected in each matched PSU.

Annex E Multi-dimensional poverty: technical appendix

The methodology for constructing the Multidimensional Poverty Index for BISP beneficiaries was adapted from the Oxford Poverty and Human Development Initiative (OPHI) Global Multidimensional Poverty Index. The Global MPI has been constructed and calculated by OPHI for 108 developing countries using data mostly from the Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). The Global MPI is contains ten indicators over three dimensions - Education, Health and Standard of Living – and is constructed to capture a set of direct deprivations that affect an individual or household at the same time. It was constructed through a rigorous technique for multidimensional measurement created by Sabina Alkire and James Foster (the Alkire Foster method)[31].

The MPI presented in this report differs slightly from that developed by OPHI. It contains eleven indicators over the dimensions of Education, Health and Living Standards. Indicated in the diagram below, each dimension is equally weighted and each indicator within a dimension is also equally weighted.

Figure 28 Construction of the BISP MPI



The variations between the MPI constructed for BISP beneficiaries and that used by OPHI are a result of minor discrepancies between the BISP and DHS survey questionnaires. The key differences include:

- A Child Immunization indicator has been substituted for the Child Mortality indicator because data on child mortality was not collected in the BISP survey.
- The Nutrition indicator contains data on child nutrition only, as data on adult nutrition is not available in the BISP survey.
- A Food Consumption indicator has been added to the health dimension to add analytical depth and supplement the indicators on child health with one that applies to adults as well.

Table 38 documents the definitions and weights of each indicator included in the index and indicates where there are differences between the BISP MPI and the OPHI MPI.

[31] More information can be found here: *www.ophi.org.uk/wp-content/uploads/ophi-wp38.pdf*

Table 38 Dimensions of MPI poverty

Dimension	Indicator	Deprived if…	Divergence from OPHI MPI Indicator	Weight
Education	**Years of Schooling**	There no household member who has completed five years or more of schooling.		1/6
	Child School Attendance	There is at least one school-aged child (up to class 8)[32] who is not attending school.		1/6
Health	**Child Immunization**	At least one child in the household between the ages of 20 and 59 months is not fully immunized[33].	Replaces indicator on child mortality.	1/9
	Child Nutrition	Any child for whom there is nutritional information is malnourished[34].	Does not include data on adults.	1/9
	Food Consumption	The household does not have an acceptable level of food consumption (either poor or borderline).	Not included in OPHI MPI.	1/9
Living Standards	**Electricity**	The household has no electricity.		1/18
	Improved Sanitation	The household's sanitation facility is not improved (as defined by the Pakistan Bureau of Statistics)[35].	Sanitation categorised by Pakistan Bureau of Statistics, not the WHO's JMP definitions.	1/18
	Improved Drinking Water	The household does not have access to improved drinking water[36], or safe drinking water is located more than a 30-minute roundtrip from home.		1/18
	Floor	The household's floor is made of dirt, sand, or dung.		1/18
	Cooking Fuel	The household uses dung, wood or charcoal to cook.	Indicator inferred from reported expenditures, rather than a direct question.	1/18
	Assets	The household does not own more than one (combined) of a radio, TV, bicycle, motorbike, or refrigerator, and nor does its members own either a car or a truck.	Telephone not included in list of assets.	1/18

[32] Considered to be between the years of age 5 and 12 in Pakistan.
[33] Children are considered to be fully immunized if they have received both DPT 3 and measles vaccinations.
[34] Children are considered malnourished if their z-score of weight-for-age is below minus two standard deviations from the median of the reference populations. This data exists in the BISP survey for children under 5-years-old.
[35] Based on JMP/ Pakistan Bureau of Statistics, sanitation facilities classified as 'improved' include flush connected either to public sewerage, a pit, or an open drain. A household is considered to have 'unimproved' sanitation facilities if they have a dry raised latrine or dry pit latrine, or there is no toilet in the household.
[36] Water sources classified as 'improved' include piped water, hand pumps, tube wells, and closed wells. 'Unimproved' water sources include open wells, ponds, rivers, springs, and other sources.

Adopted from OPHI's methodology, a person is considered to be multi-dimensionally poor (MPI poor) **if they are deprived in one third or more of the weighted indicators**. The proportion of the population that lies below this poverty threshold represents the incidence of poverty or the headcount ratio (H), and the average proportion of weighted indicators in which those who fall below this threshold are deprived is defined as the intensity of poverty (A).

The overall MPI is computed by multiplying these two indicators (MPA = H x A), and therefore reflects both the share of people in poverty and the degree to which they are deprived. Persons deprived in the range of 20-33.3% of the weighted indicators are considered 'vulnerable to poverty' and those deprived on half or more of the weighted indicators are considered to be in 'severe poverty'.

Although the BISP MPI statistics are reported at the level of the individual (ex. the proportion of individuals who are MPI poor), deprivations are calculated at the household level. As such, an individual is considered to be deprived on an indicator if they live in a household that is deprived on that indicator. For example, if a household has three school age children, two of whom are in school and one of whom is not in school, all members of the household, including the two children who are in school are considered deprived on School Attendance. Some indicators (e.g. School Attendance, Child Immunization and Child Nutrition) are not applicable across households because not all households contain members of the indicator's reference populations (school-aged children or children under 5 years of age, for example). In line with OPHI's methodology, a household is considered not deprived on an indicator in cases where the household does not contain any members of the indicator's reference population.

Annex F Local Average Treatment Effect

Given that the RD approach analyses only households in very close proximity to the eligibility threshold its estimate of impact is a **Local Average Treatment Effect (LATE)**. This means that whilst the RD approach has **strong internal validity,** in that it provides robust estimates of impact for the set of households on which it is implemented, it has **weaker external validity**, in terms of its applicability to households further away from the eligibility threshold.

To assess the strength of the **external validity** we must conduct an assessment of whether or not the sub-sample of beneficiary households on which the RD is conducted (our evaluation treatment group) has similar characteristics to all beneficiary households in our sample.

Table 39 makes this comparison comparing all beneficiary households in our evaluation sample to the sub-sample of households within +/-5 points of the BISP eligibility threshold. This analysis suggests that there are indeed some differences between the two groups of households that should be carefully considered when interpreting the results of this evaluation for all beneficiary households.

In particular we find that beneficiary households that have BISP poverty scores closer to the eligibility threshold tend to be slightly smaller (driven by having less children under the age of 14), are more likely to own a variety of household assets and are likely to be slightly more wealthy (evidenced by the lower poverty rates.

The implications for the evaluation are those associated with the drawbacks of the RD design[37] in that it delivers a **Local Average Treatment Effect**, which provides robust estimates of impact for treatment households close to the BISP poverty score threshold. Thus care must be taken in the interpretation of estimates of impact presented in Section 5 onwards, noting that the estimates of impact are relevant for a sub-sample of households that differ from the average beneficiary household in a variety of ways detailed in Table 39.

Table 39 Household characteristics by BISP poverty score

Variable	All beneficiaries	Beneficiaries in RD range (+/- 5 points)
Household composition		
Household size	7.91	7.65***
Children under the age of 5	0.76	0.72*
Male 5-14	1.39	1.33***
Male 15-24	0.93	0.89*
Male 25-34	0.33	0.33
Male 35-44	0.30	0.30
Male 45-54	0.33	0.32
Male 55-64	0.17	0.17
Male above 65	0.12	0.11
Female 5-14	1.28	1.21***
Female 15-24	0.93	0.90
Female 25-34	0.36	0.37

[37] The RD approach was adopted at baseline as the best available approach given the way the BISP is implemented, following extensive consultation with the main evaluation stakeholders, BISP and the World Bank.

Variable	All beneficiaries	Beneficiaries in RD range (+/- 5 points)
Female 35-44	0.44	0.43
Female 45-54	0.32	0.32
Female 55-64	0.14	0.15
Female above 65	0.12	0.12
Household head characteristics		
Household head has no education	62.45	60.50*
Household head is female	12.66	13.59
Household head is literate	4.32	4.48
Housing characteristics		
Number of rooms in household	1.85	1.88
Household has improved water source	88.96	89.07
Household has improved toilet	61.47	66.21***
Livestock ownership		
Cow	17.74	16.51
Buffalo	15.91	14.08**
Sheep	2.49	2.38
Goat	22.18	20.25**
Asset ownership		
Refrigerator	22.64	25.70***
Fan	90.02	92.09***
Washing machine	37.10	40.99***
Cooking stove	27.37	31.41***
Bicycle	22.07	22.84
Motorcycle	21.85	22.89
TV	48.51	52.18***
Sewing machine	37.14	40.17***
Poverty		
Proportion poor (FEI)	32.22	28.80***
Proportion poor (CBN)	66.70	64.26**

Source: BISP impact evaluation survey (2016). Notes: (1) Asterisks (*) indicate that an estimate is significantly different to the relevant treatment comparator: *** = 99%, ** = 95%, *=90%.

Annex G Districts visited for quantitative survey

Table 40 Districts visited for quantitative survey household sample size

Province	District	Urban	Rural	Total
Punjab	ATTOCK	18	102	120
Punjab	BAHAWALNAGAR	21	71	92
Punjab	BHAKKAR	56	56	112
Punjab	BHAWALPUR	91	92	183
Punjab	CHAKWAL	35	72	107
Punjab	D.G.KHAN	0	59	59
Punjab	FAISALABAD	84	128	212
Punjab	GUJRANWALA	112	123	235
Punjab	GUJRANWALA CANTT	18	0	18
Punjab	GUJRAT	0	42	42
Punjab	HAFIZABAD	18	36	54
Punjab	ISLAMABAD	17	67	84
Punjab	JHANG	0	96	96
Punjab	JHELUM	18	45	63
Punjab	KASUR	19	129	148
Punjab	KHANEWAL	18	38	56
Punjab	KHUSHAB	0	33	33
Punjab	LAHORE	34	73	107
Punjab	LODHRAN	38	36	74
Punjab	MANDI BAHAUDDIN	34	39	73
Punjab	MUZAFFARGARH	18	137	155
Punjab	NAROWAL	0	34	34
Punjab	OKARA	18	111	129
Punjab	R.Y. KHAN	17	106	123
Punjab	RAJANPUR	0	30	30
Punjab	RAWALPINDI	71	0	71
Punjab	SAHIWAL	38	60	98
Punjab	SARGODHA	108	72	180
Punjab	SHEIKHUPURA	18	169	187
Punjab	SIALKOT	34	44	78
Punjab	T.T.SINGH	27	75	102
Punjab	VEHARI	19	112	131
Sindh	BADIN	61	133	194
Sindh	DADU	54	292	346
Sindh	GHOTKI	18	106	124
Sindh	HYDERABAD	375	163	538
Sindh	JACOBABAD	75	194	269
Sindh	KARACHI CENTRAL	52	0	52
Sindh	KARACHI EAST	72	0	72
Sindh	KARACHI SOUTH	92	0	92
Sindh	KARACHI WEST	73	42	115
Sindh	KHAIRPUR	55	148	203

Province	District	Urban	Rural	Total
Sindh	LARKANA	54	125	179
Sindh	NAUSHAHRO FEROZE	15	201	216
Sindh	NAWABSHAH	16	108	124
Sindh	SHIKARPUR	85	112	197
Sindh	SUKKUR	93	75	168
Sindh	THATTA	23	95	118
Khyber Pakhtunkhwa	ABBOTTABAD	18	45	63
Khyber Pakhtunkhwa	BANNU	0	70	70
Khyber Pakhtunkhwa	BUNER	0	76	76
Khyber Pakhtunkhwa	CHARSADA	97	63	160
Khyber Pakhtunkhwa	CHITRAL	0	59	59
Khyber Pakhtunkhwa	D.I.KHAN	18	157	175
Khyber Pakhtunkhwa	HARIPUR	0	67	67
Khyber Pakhtunkhwa	KOHAT	36	72	108
Khyber Pakhtunkhwa	KOHISTAN	0	18	18
Khyber Pakhtunkhwa	LOWER DIR	36	55	91
Khyber Pakhtunkhwa	MALAKAND AGCY	39	18	57
Khyber Pakhtunkhwa	MALAKAND PROTECTED AR	0	59	59
Khyber Pakhtunkhwa	MANSEHRA	18	147	165
Khyber Pakhtunkhwa	MARDAN	55	111	166
Khyber Pakhtunkhwa	NOWSHERA	55	53	108
Khyber Pakhtunkhwa	PESHAWAR	139	125	264
Khyber Pakhtunkhwa	SHANGLA	0	57	57
Khyber Pakhtunkhwa	SWABI	82	101	183
Khyber Pakhtunkhwa	SWAT	59	134	193
Khyber Pakhtunkhwa	UPPER DIR	18	18	36
Balochistan	BARKHAN	17	17	34
Balochistan	BOLAN	18	35	53
Balochistan	CHAGHI	0	36	36
Balochistan	JAFFARABAD	22	27	49

Province	District	Urban	Rural	Total
Balochistan	JHAL MAGSI	0	2	2
Balochistan	KALAT	0	11	11
Balochistan	KHARAN	0	18	18
Balochistan	KILLA ABDULLAH	0	14	14
Balochistan	KOHLU	0	13	13
Balochistan	LASBELA	24	28	52
Balochistan	LORALAI	0	54	54
Balochistan	MASTUNG	12	6	18
Balochistan	NASIRABAD	15	0	15
Balochistan	PISHIN	18	40	58
Balochistan	QUETTA	56	31	87
Balochistan	SIBI	36	50	86
Balochistan	ZHOB	19	13	32
Balochistan	ZIARAT	0	39	39
TOTAL		***3119***	***6020***	***9139***