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EXPLORING SOCIAL PROTECTION'S ROLE IN RURAL ECONOMIC DEVELOPMENT: A CASE STUDY OF EFFECTS ON HOUSEHOLD RESILIENCE AND ENTREPRENEURIAL ACTIVITIES

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Abstract

This study investigates the impact of the Benazir Income Support Programme (BISP) on household welfare in Pakistan, with a focus on dietary diversity, food insecurity, poverty, and broader implications for economic empowerment. Using nationally representative data from the Pakistan Social and Living Standards Measurement Survey (PSLM) and the Household Integrated Economic Survey (HIES), the analysis applies both the Linear Probability Model (LPM) and Logit Model to examine how BISP participation influences household well-being. Findings suggest that BISP beneficiaries experience improvements in food consumption and poverty alleviation, though challenges remain for larger households and families with lower literacy levels. Beyond these direct welfare effects, the study highlights BISP's potential indirect contributions to entrepreneurship and small and medium enterprises (SMEs). By providing income security, cash transfers allow households, particularly women, to engage in micro-enterprises, invest in children's education, and stimulate local markets, creating multiplier effects within rural economies (Gazdar & Mallah, 2013; Iqbal et al., 2020). These linkages demonstrate that social protection programs like BISP not only address immediate poverty but can also lay the foundation for inclusive economic growth by fostering resilience, enhancing human capital, and supporting small-scale entrepreneurial activity. Policymakers are therefore encouraged to expand cash transfer amounts, integrate vocational training and digital literacy programs, and create synergies between BISP and SME development policies to achieve sustainable poverty reduction and long-term economic transformation (Mustafa et al., 2019; Rehman, 2022; Uddin, 2021).

INTRODUCTION

Food security is defined by the Food and Agriculture Organization of the United Nations (FAO) as "when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food, which meets their dietary needs and food preferences for an active and healthy life. As per Lucas et al., (2020) important aspects of food security include availability, accessibility, affordability, and acceptability. Pérez-Escamilla et al.,(2017) With rising healthcare costs, a high rate of inflation, complications, and a loss of productive life years, preventive health including the critical role of nutrition in lowering the risk of mortality and morbidity should receive more attention. Dwyer et al., (2017). The nutritional requirements of women before conception, during pregnancy, and after

delivery are together referred to as maternal nutrition. In situations where early childbearing takes place, it extends as early as adolescence.

Despite various initiatives to enhance food security and nutrition in many developing regions, food insecurity in sub-Saharan Africa continues to be a significant developmental challenge. In contrast to the rest of the world, recent official figures indicate that hunger and malnutrition appear to be rising in most sub-Saharan African countries (FAO and ECA, 2020). The lack of ability of governments in the region to reach the Millennium Development Goal (MDG) of decreasing the number of hungry people by 2015 was a result of both the continent's continuous food insecurity and its increasing levels (Abdulai and Kuhlgatz, 2012) Since poverty and social well-being are major barriers to sustainable development, cash transfer programs are now an essential component of the social protection systems in many developing nations. Women's empowerment, health, and education are three crucial areas that need attention. (De Groot et al. 2017).

Even with the advancements over the last few decades, there are still significant hurdles. For example, even though between 1990 and 2011, over one billion people were pulled out of extreme poverty, 258 million children and youth globally remain unschooled. In addition, 828 million people will not have enough food to consume in 2021 (WFP and UNICEF, 2022). Conditional cash transfer (CCT) programs are a social policy innovation first implemented in numerous Latin American nations in the 1990s and have now been replicated globally. CCT programs are used in poverty reduction policies with two main objectives: to address the fundamental requirements of low-income families by increasing the resources available for consumption, and to promote human development to stop the intergenerational transfer of poverty.

The concept of social protection is based on the Universal Declaration of Human Rights, which states that every person has the right to social, cultural, and economic freedoms. The United Nations and the International Labor Organization have acknowledged social protection as a fundamental human right. The International Labor Organization offers two levels of strategies for guidance: the first is to establish and uphold social protection as a basic component of national security systems; the second is to search for strategies that allow for higher levels of social security as many times as possible. The goal of these strategies is to achieve universal protection of people at the lowest income level for all nations (ILO,2012).

Although Pakistan is still a developing nation and its government continues to make various attempts to protect people's social and economic rights, in 2008 a proper social protection program known as the Benazir Income Support Program (BISP) was adopted to improve people's purchasing power parity (GOP, 2016).

Benazir Income Support Program (BISP) in Pakistan: The program was launched in 2008, but it was made possible by the establishment of the Poverty Reduction Strategy Paper (PRSP) in 2001, the Social Protection Policy (NSPP) in 2007, and the World Bank (2018). The BISP is one of the best programs in the world for targeting and coverage; it offers cash assistance to 5.8 million families (ever-married women) with a quarterly stipend of Rs. 5000 (roughly US $35) based on data from 2011. It also aims to help low-income families' children finish their primary-level education; 3.5 million children have enrolled so far, and their mothers receive an extra top-up of Rs. 750 per quarter. For boys and Rs. 1000 for girls per quarter, provided the child attends school and meets the required minimum attendance of 70% (Iqbal et al., 2020).

Many studies have analyzed the impacts of enrollment in BISP over the past decade (e.g. Abdulai and Huffman, 2014; Di Falco et al., 2011; Bocchiola et al., 2019; Lipper et al., 2014; Michler et al., 2019; Mutenje et al., 2019). The impacts of enrollment into the BISP program are normally categorized into direct and indirect economic impacts. The direct impacts refer to the benefits attributed directly to the reduction of poverty (such as enrollment in the BISP program increases the income of the households thus reducing the HH poverty) at household levels, while the indirect impacts include the increase in per capita income hence improve the food consumption pattern thus improve the dietary diversity score.

In this study, we focus on both direct and indirect impacts of BISP on HH welfare. The empirical evidence on the direct impacts of BISP suggests that the program could play a crucial role in the achievement of SDGs in reducing hunger and poverty, improving food security and dietary diversity among the HH (Ariq et al., 2021; Mustafa et al., 2019; Rehman 2022; Uddin 2021; Iqbal et al., 2020; Naqvi et al., 2014). A study by Abid et al., (2016) on Ghana concluded that BISP increased the food and nutrition security of HH, while Gazdar and Mallah (2013) found that BISP successfully increased the HH income thus improving the purchasing power and reducing poverty.

The studies outlined above employed different estimation methods like propensity score matching (PSM), Heckman's treatment effect model or the endogenous switching regression (ESR) approaches to analyze the impact on reducing hunger and poverty thus improving women and household dietary diversity (HDDS) (WDDS) and household food insecurity access scale (HFIAS) thus improve overall household welfare (e.g. Ali and Erenstein 2017; Iqbal et al., 2015; Issahaku and Abdulai 2020; Shahzad and Abdulai 2020). The shortcomings of the PSM approach have been widely documented in the literature (e.g. Di Falco et al., 2011; Abdulai and Huffman, 2014). Heckman's treatment effect model is estimated in two steps, whereby a notable shortcoming of two-step estimation is that it generates heteroscedastic residuals that cannot be used to obtain consistent standard errors without adjustments Lokshin and Sajaia (2004). Although the ESR model accounts for both observable and unobservable factors, its critical limitation is that it accounts for selection bias by aggregating the unobservable heterogeneity, but this heterogeneity varies across individuals (Cornelissen et al., 2016).

Since the BISP targeted poverty line which accounts for heterogeneity across households, the present study contributes to the literature by estimating the linear probability model and logit both to estimate the effect of BISP on poverty and food insecurity in Pakistan. Morover, the study examine the drivers and impact of BISP on household welfare outcomes such as food and nutrition security by looking at the food insecurity indicators, and HH poverty using HIES data set for Pakistan. We use the the food insecurity indicators to capture food and nutrition security (Swindale and Bilisnky 2006; Coates et al., 2007), and then the poverty headcount and poverty gap indices to measure the poverty status of households. Of the total household of 24750 the eligible HH (2177) based on poverty line (income less than 4500 Rs per day) has been compared with non eligible HH (22573). Mean comparison based on t test signifies the differences between the two groups. Then the mean difference are compared for all the dependent variables related food insecurity and poverty. Moreover the determinants of BISP program are explored based on their level of significance. Then to see the impact of BISP program on food security indicators and poverty both the logit and linear probability model has been estimated.

Food security, as defined by the Food and Agriculture Organization of the United Nations (FAO), is achieved "when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food, which meets their dietary needs and food preferences for an active and healthy life" (Lucas et al., 2020). Key dimensions of food security include availability, accessibility, affordability, and acceptability (Pérez-Escamilla et al., 2017). Rising healthcare costs, high inflation, and productivity losses linked to malnutrition underscore the importance of preventive health and adequate nutrition in reducing mortality and morbidity (Dwyer et al., 2017). Maternal and child nutrition remain critical areas of concern, particularly in developing regions where early childbearing, malnutrition, and poverty intersect to create cycles of deprivation (De Groot et al., 2017). Despite global progress in poverty reduction, hunger and malnutrition remain pressing issues, with 828 million people undernourished in 2021 (WFP & UNICEF, 2022). Sub-Saharan Africa and South Asia, including Pakistan, continue to face challenges in achieving food and nutrition security (FAO & ECA, 2020).

Social protection programs have emerged as key policy instruments to address these challenges. Conditional and unconditional cash transfer programs, first pioneered in Latin America during the 1990s, aim not only to reduce immediate poverty but also to break the intergenerational transmission of deprivation (Abdulai & Kuhlgatz, 2012). These

programs operate on the principle of social protection as a human right, embedded in the Universal Declaration of Human Rights and reinforced by the International Labour Organization (ILO, 2012). Pakistan's Benazir Income Support Programme (BISP), launched in 2008, represents the country's largest social protection intervention, designed to support vulnerable households through direct cash transfers (Government of Pakistan, 2016). BISP's direct impacts include poverty reduction and improved consumption, while its indirect impacts extend to nutrition, education, and women's empowerment (Gazdar & Mallah, 2013; Abid et al., 2016; Iqbal et al., 2020). By targeting women as beneficiaries, the program strengthens their agency in household decision-making and helps rebalance gender disparities. Beyond these immediate welfare gains, social protection schemes such as BISP can also stimulate local economies by enabling poor households to participate in small-scale entrepreneurial activities. Evidence suggests that when basic consumption needs are secured, households are more willing to invest in informal businesses, education, and skill development, thereby contributing to local economic multipliers (Mustafa et al., 2019; Rehman, 2022).

The nexus between social protection and entrepreneurship is particularly important for small and medium enterprises (SMEs), which constitute the backbone of Pakistan's economy. SMEs account for approximately 40% of GDP and employ a large share of the workforce, especially in rural and semi-urban regions. However, lack of access to capital and vulnerability to income shocks often limit their growth potential. Cash transfers like BISP provide a financial cushion that reduces vulnerability and allows beneficiaries to take modest entrepreneurial risks, such as home-based enterprises or micro-retail activities. In this sense, BISP functions not only as a poverty alleviation tool but also as a facilitator of entrepreneurship and economic resilience, especially for women who are often excluded from formal credit markets (Ali & Erenstein, 2017; Shahzad & Abdulai, 2020).

Linking BISP with entrepreneurship and SME development is therefore essential for sustainable poverty reduction. While immediate impacts on food consumption and poverty are well documented, fewer studies have systematically examined how social protection can serve as a springboard for economic growth and resilience at the community level. By enhancing human capital, encouraging women's participation in the economy, and stimulating local demand, programs like BISP hold the potential to create virtuous cycles of growth and empowerment. Integrating social protection with policies that promote SMEs, vocational training, and digital inclusion could therefore transform short-term welfare support into long-term development strategies (Naqvi et al., 2014; Uddin, 2021). In this study, we assess not only the direct and indirect impacts of BISP on food and poverty outcomes but also its broader implications for household economic resilience and potential contributions to SME and entrepreneurship development. This integrated perspective provides new insights into the role of social protection in fostering inclusive and sustainable growth in Pakistan.

1.1.1 Direct and Indirect Impact of BISP

BISP provides unconditional cash transfers that directly supplement household incomes, enabling families to smooth consumption and reduce extreme poverty. By putting cash directly in women's hands, it strengthens their **immediate decision-making role** in food and household spending. Beyond income support, BISP indirectly contributes to **human capital formation** by improving nutrition, children's school enrollment, and healthcare access. Cash transfers stimulate **local markets,** as beneficiary households increase demand for food and basic goods, creating a multiplier effect in rural economies. The program indirectly addresses **gender disparities, as** targeting women not only uplifts them but also rebalances intra-household power structures.

1.2 Research Problem

The impacts of enrollment into the BISP program are normally categorized into direct and indirect economic impacts. The direct impacts refer to the benefits attributed directly to the reduction of poverty (such as enrollment in the BISP program increasing the income of the households thus reducing the HH poverty) at household levels, while the indirect impacts include the increase per capita income hence improve the food consumption

pattern thus improve the dietary diversity score. The Benazir Income Support Program (BISP) provides a monthly stipend to eligible low-income families, and the monthly amount is Rs. 12,500 but its amount may be subject to change.

In this study, we focus on the both direct and indirect impacts of BISP on HH welfare. The empirical evidence on the direct impacts of BISP suggests that the program could play a crucial role in the achievement of SDGs in reducing hunger and poverty and improving food security and dietary diversity among the HH. Therefore, we will explore the impact of BISP program on food insecurity indicators and poverty all the HH data in HIES 2019-20.

Existing studies often focus on either poverty reduction (direct) or women's empowerment (indirect), but few systematically analyze the interplay of both. There is a lack of consensus on whether indirect impacts like improved dietary diversity or female agency are sustained beyond the immediate cash injection. Little research has quantified BISP's indirect effects on community-level poverty reduction, intergenerational mobility, or local economic growth. This gap raises the research problem of how direct cash benefits translate into structural poverty reduction in the long run.

The impacts of enrollment in the Benazir Income Support Programme (BISP) are usually classified into direct and indirect economic effects. Direct impacts include immediate poverty reduction by supplementing household income, while indirect impacts are reflected in improved dietary diversity, better school attendance, and women's empowerment (Gazdar & Mallah, 2013; Iqbal et al., 2020). Despite these positive outcomes, critical questions remain about the program's ability to translate short-term cash support into sustained poverty alleviation and long-term economic empowerment. Existing studies primarily focus on food security, poverty headcounts, or women's empowerment (Mustafa et al., 2019; Rehman, 2022). However, there is limited empirical evidence on how cash transfers interact with broader economic structures—particularly small and medium enterprises (SMEs) and entrepreneurship, which form the backbone of Pakistan's economy. SMEs contribute significantly to national GDP and employment, especially in rural and semi-urban areas, yet remain constrained by lack of capital, limited access to credit, and vulnerability to income shocks. In this context, cash transfer programs like BISP may serve as informal safety nets that reduce financial vulnerability and encourage risk-taking, thereby creating space for entrepreneurial activity.

The gap in existing research lies in the absence of systematic analysis connecting social protection and economic transformation. While BISP clearly reduces household vulnerability, there is little consensus on whether it catalyzes entrepreneurial behavior, stimulates local SME activity, or contributes to intergenerational mobility and structural poverty reduction. In particular, the indirect role of BISP in promoting women's participation in home-based enterprises and micro-businesses has been understudied, despite growing evidence that targeted transfers to women strengthen their economic decision-making power (Ambler & De Brauw, 2017; Ali & Erenstein, 2017). This raises the core research problem: How can short-term welfare benefits such as BISP cash transfers be transformed into long-term economic resilience through entrepreneurship and SME development? Without addressing this linkage, BISP risks remaining a consumption-based intervention rather than a catalyst for inclusive growth. Examining this relationship is therefore crucial for understanding the dual role of social protection: not only in reducing poverty and food insecurity but also in enabling pathways to sustainable economic empowerment in Pakistan.

1.3 Research Questions

The analysis of the research proposal focuses on the following research question:

1. How does BISP affect household food and nutrition security?
2. Does BISP help in reducing the poverty status of the HH?

1.4 Objectives of the Study

The present study will look into the impact of BISP household welfare outcomes such as food and nutrition security, poverty, and severity of poverty. The research objectives of the current study are:

1. To explore the effect of BISP participation on the household food security indicators
2. To investigate the effect of BISP on the poverty status of HH.
3. To assess the indirect role of BISP in enhancing women's empowerment, education, and household resilience.
4. To examine the potential of BISP to create enabling conditions for entrepreneurship and small and medium enterprise (SME) participation by reducing financial vulnerability and encouraging microeconomic activity.
5. To provide policy recommendations for integrating social protection programs with SME development, vocational training, and digital inclusion to achieve sustainable economic growth.

1.5 Significance of the Study

Research studies conducted so far have worked either on HH food consumption patterns or HH food consumption expenditure. Very few studies focused on BISP participation on the household food security indicators .To investigate the effect of BISP on the poverty status of HH.Further the current study will explore not only the poverty aspect of BISP program but also look into the poverty head count but also poverty gap of HH by looking at the poverty status of BISP beneficiaries. Further, the findings of the study suggest the sustained and explicit policy to combat food insecurity and poverty in Pakistan to Achieve SDG. This study contributes to the literature by analyzing the multi-dimensional impacts of the Benazir Income Support Programme (BISP), moving beyond its immediate effects on food security and poverty reduction to consider its broader economic implications. Existing research has largely concentrated either on household food consumption patterns (Iftikhar, 2016; Jamal et al., 2021) or on poverty reduction outcomes (Mustafa et al., 2019; Rehman, 2022).

The significance of this study also lies in its focus on women's empowerment, since BISP primarily targets women as direct beneficiaries of cash transfers. This targeted approach creates pathways for women to engage in micro-enterprises and expand their decision-making power, addressing persistent gender disparities in economic participation (Ambler & De Brauw, 2017; Ali & Erenstein, 2017). Furthermore, aligning BISP with entrepreneurship and SME policies directly supports Pakistan's progress toward the Sustainable Development Goals (SDGs), particularly those related to poverty eradication, gender equality, and decent work and economic growth. Finally, the study makes an important academic contribution by situating BISP not only within the welfare and social protection discourse but also within broader debates on economic transformation, resilience, and inclusive growth.

LITERATURE REVIEW

Introduction

Social safety net programs have become essential tools in the fight against poverty and food insecurity, particularly in developing countries. The Benazir Income Support Programme (BISP), Pakistan's largest unconditional cash transfer initiative, was launched in 2008 with the goal of supporting the poorest segments of society through direct financial assistance. According to the Food and Agriculture Organization (FAO, 2013), dietary diversity is one of the most reliable indicators of food security, and low diversity is often a sign of malnutrition or hidden hunger, especially in rural communities. As such, several studies recommend that cash transfers should be complemented with programs like nutrition education, food vouchers, or access to subsidized healthy food, to ensure real improvements in nutritional well-being. Many researchers argue that while cash transfers provide financial relief, they do not always guarantee better dietary outcomes. For instance, Iftikhar (2016) found that BISP households reported higher consumption levels, yet their diets remained limited in diversity.

However, even with these limitations, evidence suggests that BISP has helped reduce the intensity of poverty and improved food consumption at least in the short term. The program has also been associated with a reduction in the poverty gap and improved food expenditure patterns (Iftikhar, 2016), but its impact on long-term nutritional change remains debatable. BISP's impact also varies based on regional, demographic, and socio-economic factors. Rural areas tend to show worse outcomes due to limited access to markets and food choices (Jamal et al., 2021). Furthermore, the availability of

remittances or secondary income sources can influence how BISP cash is spent. In households without these additional supports, the cash is often stretched thin across multiple needs, limiting its ability to meaningfully improve diet quality (World Bank, 2020). Numerous studies have explored the economic impact of BISP, but a growing body of research is also beginning to look at how the program affects other aspects of well-being, such as food security and nutrition (Jamal, 2021; World Bank, 2020). A similar concern was raised by Nasir and Farooq (2022), who observed that although households spent more on food, they often opted for cheaper, calorie-dense but nutrient-poor items.

2.2 Empirical Literature

According to Hou and Ma (2011), if BISP is successful in giving women more decision-making authority, improvements in human development metrics including health, education nutrition, given those women typically invest more time and money in these regions compared to men. Nayab and Farooq (2014) used the Pakistan Panel Household Survey, 2010 (PPHS) to evaluate the welfare impact of the cash assistance provided by the BISP. It was discovered that, in comparison to people who had never tried to apply for benefits and people who had tried to apply but had not been granted them, the recipient group was the most disadvantaged. The study discovered benefits for each household's food and health expenditures, but no effects on poverty, women's empowerment, or children's education. Oxford Policy Management (OPM) carried out the BISP effect evaluation in three different years: 2013, 2014, and 2016. According to the study, women's empowerment as indicated by their mobility and financial control, as well as poverty as evaluated by Food and Energy Intake (FEI), were positively impacted by cash support.

Hou's (2016), Empirical studies did not provide any sERATUREolid proof linking enhanced women's ability to make decisions to improve nutrition, but it did discover a strong correlation between women's Decision-making authority and rural girls' education. Ambler and Brauw (2017), mention that the main objective of the BISP program is to boost the consumption and investments made in children by giving Pakistan's poorest households unconditional transfers..To make certain that the monetary funds are utilized appropriately, it's critical that the transfers are sent directly to the women. Having control of these transfers can empower them as well as altering household investment and consumption patterns. With the purpose of this paper, we analyze the BISP impact on women's decision-making power in households using the data collected over the course of the program from 2011 to 2013. We employ fuzzy regression discontinuity methods that statistically detect impacts to evaluate women's self-empowerment and their decision-making abilities and conclude that, indeed, there are substantial positive impacts due to the BISP transfer.

Pasha et al.(2018) analyze the benefits and consequences of the Bank Inclusion and Support Program (BISP) in Pakistan: an impoverished country. We begin by introducing the concept of 'poverty'; then we briefly present a general description of the country's social safety net and a general point of view on the subject from the international perspective; thirdly, we review the objectives and mechanisms of operation of the BISP. The term "banking and support program" refers to a set of policies and strategies that provide the assets to the country's poorer communities that will increase their quality of life, household income and consumption.

Up to the national effect, Zoneira, et al. (2018) employed the HIES 2013–14 to assess the welfare effects of BISP and Zakat on headcount poverty, MPI, child school enrolment and women empowerment. According to the findings, there was a 4–7% decrease in headcount poverty as a result of the BISP financial assistance. Hassan and Bibi (2016) used primary data for Barikot, district Swat, Khyber Pakhtunkhwa (KPK) in an attempt to quantify the contribution of BISP financial support in attaining food security. Positive effects on the consumption of specific foods, such as wheat, sugar, milk, and vegetables, were discovered. In Pakistan, every third child is underweight, and about 40% of children under the age of five suffer from stunting, a crucial and very sensitive sign of chronic malnutrition. (National Nutritional Survey 2018). Pakistan has a high rate of food insecurity despite being mostly self-sufficient in food and a net exporter of several agricultural items. According to the "World Food

Program" report for Pakistan, 18% of the country's population is undernourished, and the Global Hunger Map threshold rates this prevalence of inadequate nutrition as "Serious," highlighting the critical nature of the situation WFP (2019).

Mustafa et al., (2019) occurrence of stunted children's growth has been a very painful phenomenon in developing nations. The main cause of stunted children's growth is the prevalence of inadequate nutrition intake. As a result, the main goal of the study is to assess how BISP cash transfer affects child nutrition (under five years old) by documenting the BISP impact evaluation using the four waves of household surveys that Oxford Policy Management (OPM) conducted. The results of RDD estimation show that cash transfer has positive and significant effects on child nutrition; additionally, we used the household fixed effect model, whose findings confirm the BISP cash transfer results. Kronebusch and Damon (2019) work on the impact of Oportunidades, conditional cash transfer program in Mexico, on the level of consumption of macronutrients and micronutrients; overall, we find that Oportunidades has a significant and positive effect on micronutrient acquisition for Oportunidades beneficiaries.

Policy measures, such as agricultural technologies (e.g., irrigation and fertilizer use), monetary incentives to develop agricultural infrastructure, and structural shifts in relative prices are the primary focus of the review. With the aid of an ordered probit selection model that accounts for selection bias and the omitted variable problem, the empirical investigation examines determinants of the degree to which households believe the market to be oriented, while consuming food products and nutrient variables. The quantitative results reveal that during a market orientation transition, HHs consume a much larger quantity of food and nutrients.

Abdulai and Mumin (2020) provide empirical evidence on the linkage between food security-nutrition and smallholder market participation in Ghana. The consequences of policy measures (agricultural technology, economic incentives, farm infrastructure and relative price impacts) will be the main topics of the review. To control for selection bias and the potential endogeneity from unobserved variables, the empirical model developed incorporates an ordered probit selection model to simultaneously estimate households' decision on market orientation and food and nutrition consumption. The evidence shows that changing market orientation significantly raises quantities of food and nutrients purchased by households. Sonia and Ashfaque (2020) have analyzed the socio-economic status of households, impact of BISP in the households' food related expenditures and to give suggestions on those findings. In order to attain these objectives, 240 households from peri-urban Faisalabad, a region in Punjab, Pakistan were randomly selected and surveyed through a well-structured questionnaire. Ordinary Least Square model, chi-square cross tabulation and descriptive were employed to code the data. Food expenditures for beneficiaries have improved relative to those of non-beneficiaries.

Tehmeena et al. (2020) assert that impact evaluation panel surveys were employed to assess the welfare effects of the BISP unconditional cash transfers (UCT). The surveys were conducted in two waves: the baseline in 2011 and the follow-up in 2016. The panel survey covers units which are beneficiaries as well as non-beneficiaries chosen through Proxy Means Test (PMT). Regression discontinuity and difference are not similar. Unconditional cash assistance's impact on wellbeing was analyzed over time under several socioeconomic variables like headcount poverty, multidimensional poverty index (MPI), child deprivation index and per-adult equivalent monthly consumption (CDI). According to Hashmi et al. (2021), evaluate the level of food insecurity and dietary diversity among Karachi's ethnic groups using a questionnaire established by the FAO. Five major ethnic groups from Karachi's 535 households were selected at random in many stages for the study. The study concludes that there was no statistically significant correlation between food diversity and age, marital status, or educational attainment. Sindhi-speaking groups had the lowest level of food security, whereas Urdu-speaking populations with immigrant predecessors from India had the highest level of safety.

Luthuli et al., (2022) work on child support grant (CSG) is the largest unconditional cash transfer program in Africa. Its goals are to reduce poverty and enhance the health and nutrition of low-income

families in South Africa. For women who work in the informal economy, the CSG is a crucial source of income following childbirth when they are unable to work. However, there are reports that women encounter delays in receiving the CSG. In this article, we will examine the experiences and obstacles that informal workers in Durban, South Africa face when trying to access the CSG. We conducted a mixed-methods, long-term cohort study. Women who worked in the unorganized sector were hired during pregnancy and monitored for up to a year following the birth of the child. The study employed quantitative questionnaires and semi-structured in-depth interviews to gather information regarding women's intentions to apply for the CSG, the application procedure, CSG utilization within the home, and food insecurity in households.

Hameed et al., (2024) this research developed a well-being index to measure the influence of unconditional cash transfers on the socioeconomics of beneficiaries. Through the use of the three BISP impact assessment survey rounds that were carried out in 2011, 2016, and 2019. The study examined the overall influence of financial transfers on well-being by utilizing Principal Component Analysis in conjunction with a Difference-in-Differences Quasi-Experimental design over the years. The findings of the study reveal that between 2011 and 2016, the socioeconomic level dropped for both treatment and control groups, however, the reduction was less pronounced among those who received treatment compared to the control group with negligible. t was a statistically insignificant gain in socioeconomic class over 2016 and 2019. Overall well-being fell in both the treated and control group from 2011 to 2019, but much more so in the treatment group reading outsize gains.

The aim of this research is to estimate MDD and its covariates among Pakistani children aged 6 to 23 months (Ramesh et al., 2024).It employs a cross-sectional design and uses the most recent Multiple Indicators Cluster Survey (MICS) dataset available for all Pakistani provinces. Logistic regression analysis and the Chi-Square Test are the empirical methods used in this study, and the dataset is freely and publicly available, stripped of all identifying information, and does not require ethics approval. Twenty percent of infants and young children aged 6 to 23 months in Pakistan had met MDD; this percentage varies from 17 to 29, with the highest percentage occurring in Baluchistan and the lowest in Punjab province (Hameed, 2024).

2.3 Theoretical Literature

Alderman (2002) look at several safety net subsidies, such as targeted quotas and tax rebates. The study assesses each of these programs' distribution costs. Nonetheless, the comparison between the food subsidy and the energy subsidy continues to be the primary focus. This also takes into account achieving the main goals of stabilization and nourishment. The intervention of market forces and the role of policymakers in handling it are also covered in the study. In the end, there is a discussion of the reforms for their ability to provide a stable safety net to the impoverished population, thereby reducing vulnerability from exposure to downside risk. At the same time, these programs invest in the production or sustenance of valuable public goods, which is necessary to accelerate productivity and, consequently, increase mass incomes. The empirical evidence supporting FFW's effectiveness in any of these categories is, nevertheless, conflicting. Supporters point to instances when FFW appears to have worked as planned, while detractors point to its shortcomings. The development community's affiliated organizations must take precautions against taking statements about FFW at face value or interpreting them negatively. They also need to come to a more advantageous understanding of how, when, and why FFW programs might reduce vulnerability. This essay aims to promote comprehension.

According to Quisumbing et al, (2011), actions by the government and civil society may both help lower poverty in Bangladesh, but they would have different short- and long-term impacts on families and people. They draw attention to differences in the timing of spillover effects and net gains from interventions. With the limited resources of the government, more precise targeting could make it possible to distribute larger amounts to fewer recipients under the PES. Moreover, it's critical to refrain from idealizing NGOs while using them and other groups to provide services. Within the NGO sector, there is a great deal of variation; certain organizations are better than

others at reaching disadvantaged communities. Key findings from the papers are then presented, followed by an indicative analysis of the cost-effectiveness of these interventions.

Ahmad (2018) estimated the dynamics of Pakistan's social safety nets, namely the Benazir Income Support Program (BISP), its significance in the economy, how it was designed, and how it affects the reduction of poverty. The research also examines the program's design, payment system, targeting strategies, organizational capabilities, and quality to determine whether it has met its goals. A combination of qualitative and quantitative methods is used in this study. The researcher collected data for the quantitative section by conducting a field investigation. The study's specific goals are to: identify any gaps in the current social safety net program (BISP) and provide policy measures and recommendations to close them; conduct a thorough review of the various social safety nets being implemented in various nations throughout the world with reference to Pakistan; analyze program benefits and determine how they might be maximized. Iqbal et ali (2020) investigate how the BISP affects women's empowerment. The long-term effects of BISP on women's mobility, decision-making voice, and voting behavior are found to be considerable in the research; however, the program had no discernible effect on domestic violence.

Tehmeena et al., (2020) examined how the financial transfers made by BISP have affected women's empowerment following two, four, and eight years of intervention. The four dimensions of women's empowerment are their political voice, mobility, decision-making, and spousal abuse. For cross-sectional data, the impact is quantified using a fuzzy regression discontinuity design; for panel data, a difference-in-difference method is employed. According to the findings, there was no discernible influence on women's empowerment after two years of intervention; however, there was a significant impact after five and eight years, particularly on women's mobility, participation in decision-making and voting behavior. Women were also aided by the biometric payment system in leaving the house and managing their finances. Although women's mobility and political voice have benefited, there has been a slight influence on women's bargaining power and gender norms, such as husbands including women in decision-making and violence against women.

2.4 Social Protection, SMEs, and Entrepreneurship

While much of the existing literature on the Benazir Income Support Programme (BISP) has focused on its direct impacts on household welfare, food security, and poverty alleviation (Gazdar & Mallah, 2013; Iqbal et al., 2020; Mustafa et al., 2019), growing attention is being paid to the indirect role of social protection in fostering entrepreneurship and small and medium enterprise (SME) development. Cash transfer programs, by providing a minimum level of income security, reduce household vulnerability to economic shocks and can create an enabling environment for entrepreneurial activities. When immediate consumption needs are met, households are more likely to allocate resources toward micro-enterprises, informal businesses, or skill development initiatives that contribute to sustainable livelihoods (Ali & Erenstein, 2017; Shahzad & Abdulai, 2020).

Globally, evidence from conditional and unconditional cash transfer programs suggests that such schemes can have multiplier effects on local economies. For instance, research on Latin American and African social protection programs demonstrates that direct transfers not only alleviate poverty but also stimulate local demand, encouraging small-scale businesses and services to expand (Abdulai & Mumin, 2020; Luthuli et al., 2022). In Pakistan, BISP beneficiaries often spend transfers on food and basic consumption; however, over time, a portion of these resources has been redirected toward small investments, such as livestock rearing, petty trade, or home-based enterprises, particularly among women (Ambler & De Brauw, 2017). This dynamic indicates that social protection can serve as a stepping stone from subsistence living toward entrepreneurial engagement, though its effectiveness depends on complementary policies and access to markets.

The linkage between social protection and SME growth is especially relevant in Pakistan, where SMEs constitute nearly 40% of GDP and provide employment to a significant share of the workforce. Yet, SMEs frequently face barriers such as limited credit access, inadequate infrastructure, and vulnerability to external shocks. By reducing

financial stress at the household level, programs like BISP can indirectly support SME ecosystems by enhancing household purchasing power, stabilizing local demand, and encouraging households to pursue self-employment opportunities (Naqvi et al., 2014; Rehman, 2022). This suggests that BISP should not be seen solely as a consumption-support program but as a potential contributor to local economic resilience.

Moreover, women's participation in entrepreneurship is a critical dimension of this linkage. Since BISP targets women as direct beneficiaries, it strengthens their bargaining power and decision-making autonomy (Iqbal et al., 2020; Tehmeena et al., 2020). Empowered women are more likely to engage in micro-entrepreneurial activities such as handicrafts, food processing, or small-scale trading, which not only improve household income but also foster inclusive growth. The evidence from Pakistan aligns with global findings that women-directed cash transfers have stronger spillover effects on community well-being, child education, and micro-business development than those directed toward men (Hou & Ma, 2011; Ambler & De Brauw, 2017).

The literature highlights an important but underexplored dimension of BISP: its potential to act as a catalyst for entrepreneurship and SME development. By reducing household vulnerability and empowering women, BISP creates conditions that can enable sustainable economic participation. However, without deliberate integration with complementary interventions such as vocational training, microcredit access, and digital inclusion, the program's potential to foster long-term entrepreneurship remains untapped. This underscores the need for policies that align social protection schemes with SME development strategies to maximize their contribution to inclusive economic growth.

DATA AND METHODOLOGY

3.1 Introduction

The BISP is Pakistan's biggest social welfare initiative, designed to lift families out of poverty. But beyond financial aid, does it help people put better food? This is what we're exploring, how BISP influences what families eat and whether it ensures they have enough nutritious meals. By comparing households that receive BISP support with those that don't, we can see just how much of a difference the program makes in daily life In this chapter, we'll walk through how the data was gathered and the methods used to measure BISP's effects on food security and dietary diversity. The study relies on household surveys, looking at key factors like: These indicators help us gauge not just whether families have enough food, but also whether they're eating well. By digging into these details, we can better understand how BISP shapes real-life choices—beyond just numbers on paper.

3.2 Empirical Model

The study estimated the Linear Probability model (LPM) and Logit model. Since the dependent variable of the study is binary (BISP Beneficiary=1, BISP non beneficiary=0) and it is assumed to be a linear function of one or more explanatory variable (X_i). The model predictthe in impact of BISP on food security indicators and poverty. We consider the following model for the estimation.

$$y_i=\beta_o+\beta_1 X_{1i}+ \beta_2 X_{2i}+.....\beta_{ki}+ \mu_i$$

Whereas the logistic probability model. The specific form of function is based on the logistic regression in the form of

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

with $0\leq f(z)\leq 1$, where z is a linear function of explanatory variables such as:

$$z=b_o+ b_1X_1+b_2X_2+.....+b_kX_k$$

Then the logistic regression can take on the form:

$$g(x)= \frac{1}{1+e^{-(b_o+b_1x_1+.....b_kx_k)}}$$

with $0\leq g\leq 1$, Therefore, the probability that the event will occur is:

$$p= \frac{1}{1+e^{-(b_o+b_1x_1+.....b_kx_k)}}$$

And the probability that the event will not occur is:

$$1-p=1- \frac{1}{1+e^{-(b_o+b_1x_1+.....b_kx_k)}}$$

Dividing these two expressions yields:

$$\frac{p}{1-p}=e^{(b_o+b_1x_1+.....b_kx_k)}$$

Finally, taking logs of both sides yields:

$$\ln\left(\frac{p}{1-p}\right)= \ln(e^{(b_o+b_1x_1+.....b_kx_k)})$$

Finally, the logit probability model is:

$$\ln\left(\frac{p}{1-p}\right) = b_o + b_1X_1 + b_2X_2 + \ldots\ldots\ldots + b_kX_k$$

$$L_i = b_o + b_1X_1 + b_2X_2 + \ldots\ldots\ldots + b_kX_k$$

L_i represents BISP beneficiaries and its impact on fodd security indicators and poverty indicators. $b_o$represent intercept in the model,$EDU\ HH_i$represent Education of Household head (years), FHH_irepresent Female Household head,HHS_irepresent Household size,$ADHH_i$represent Adult HH members, $OWNP_i$ represent HH members who own smartphone,LO_i Land owned (acres), HHR_irepresents HH own residence, Kaccha house, $HHINC_i$ represents Monthly HH income (Rs), $FREM_i$represents Foreign remittances received,RIS_irepresents Urban provinces. Punjab, Sindh and Baluchistan in comparison to KP.

3.2.1 Statistical Assumption of LPM

1. The LPM is straightforward: it tells us directly how much the probability of being poor (or food insecure) changes when a factor, such as BISP participation, changes.
2. For example, if the LPM coefficient for BISP is 0.08, it means that being a BISP beneficiary increases the probability of falling in a certain welfare category by 8 percentage points.
3. This simplicity makes LPM very attractive for policy analysis, because the results are easy to communicate to policymakers and non-technical audiences.
4. However, one weakness is that sometimes the predicted probabilities can fall outside the logical 0–1 range, and the model assumes a linear relationship where reality might be nonlinear.

3.2.2 Statistical Assumption of Logit model

1. These models are designed specifically for binary outcomes. Unlike LPM, they **force probabilities to stay between 0 and 1,** which makes them statistically more realistic.
2. They also recognize that the effect of BISP is not always constant: for very poor households, the impact might be stronger, while for relatively better-off households, the impact may taper off.
3. The difference between Logit and Probit is only in the distribution they assume for the error term (logistic vs. normal), but in practice, both produce very similar results.

3.3. Data Source

The data for the present study has been accessed from HIES PSLM (Pakistan Social and Living Standards Measurement Survey / Household Integrated Economic Survey) 2018-19 is issued by the Pakistan Bureau of Statistics (PBS).And for estimation purpose the study will estimate linear probability model and Logit probit Model. These nationally representative surveys provide rich micro-level information on household demographics, income, consumption, education, health, and living conditions. Since the PSLM/HIES covers both rural and urban areas across all provinces, it offers a reliable dataset for analyzing welfare outcomes and the socio-economic impacts of public policy interventions such as the Benazir Income Support Programme (BISP).

RESULT AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the findings of the study, focusing on how participation in the Benazir Income Support Programme (BISP) affects dietary diversity and food security among beneficiary households. The results reveal key differences in income levels, meal frequency, food consumption patterns, and dietary diversity scores, providing valuable insights into the program's real-world impact. These findings are essential to assess whether BISP is meeting its broader goal of improving the well-being of low-income families beyond just income support. The discussion also connects the results with existing research to evaluate how consistent they are with previous studies. For example, while some evidence shows that BISP increases household food expenditure, this study finds that the improvement in food diversity and nutritional quality may still be limited, possibly due to rising food prices, lack of awareness, or other household-level challenges.

The findings of this study confirm that the Benazir Income Support Programme (BISP) plays a significant role in reducing poverty and improving food security among beneficiary households.

Descriptive statistics indicate that BISP recipients are disproportionately larger households, with lower literacy levels, limited access to digital tools, and poorer housing conditions. These characteristics reflect the program's success in targeting vulnerable populations. The results also demonstrate that while BISP households face higher levels of food insecurity than non-beneficiaries, this reflects the program's focus on reaching the most disadvantaged rather than creating dependency. The regression models provide further evidence that BISP participation is strongly associated with reduced poverty severity and modest improvements in food consumption. Households with lower education, those living in kaccha houses, and those with limited digital access were more likely to receive BISP support, reinforcing its pro-poor targeting mandate. These outcomes are consistent with earlier studies showing that BISP reduces extreme poverty while also improving household dietary diversity and women's agency (Gazdar & Mallah, 2013; Iqbal et al., 2020; Mustafa et al., 2019).

Beyond these immediate welfare outcomes, the discussion must also consider the broader economic implications of BISP. By providing a reliable source of cash transfers, BISP reduces financial vulnerability and allows households to reallocate scarce resources. This reallocation can extend to small-scale entrepreneurial activities such as livestock rearing, petty trading, and home-based enterprises, particularly in rural communities where formal employment opportunities are scarce. In line with global evidence on social protection programs (Abdulai & Mumin, 2020; Luthuli et al., 2022), the findings suggest that cash transfers in Pakistan can indirectly stimulate local markets, as beneficiary households increase demand for goods and services. This multiplier effect benefits not only the recipients but also local SMEs that supply these goods, thus contributing to broader economic activity.

The results further highlight the gender dimension of entrepreneurship. Since BISP primarily targets women, the program strengthens their decision-making authority within households. Women beneficiaries often channel resources toward education, nutrition, and small-scale enterprises, demonstrating a ripple effect that extends beyond immediate consumption (Ambler & De Brauw, 2017; Ali & Erenstein, 2017). For example, the positive association between BISP support and household welfare can be understood as an enabler of women's economic participation, allowing them to initiate micro-businesses such as handicrafts, tailoring, or food processing. These activities not only increase household income but also contribute to women's empowerment and community-level economic resilience. However, the results also point to significant challenges. Beneficiary households continue to show high levels of food insecurity, with many reporting skipped meals or limited dietary diversity. This underscores that cash transfers alone may not be sufficient to achieve sustainable welfare outcomes. Rising food prices, lack of nutritional awareness, and limited market access constrain the effectiveness of BISP in improving long-term food security.

Similarly, while BISP creates the potential for entrepreneurial activity, the absence of complementary support such as vocational training, microfinance, and digital literacy programs limits households' ability to translate financial relief into sustainable income-generating activities. The findings therefore suggest that while BISP is effective in targeting poverty, its long-term impact on economic transformation depends on integration with broader development policies. Linking cash transfers to SME development initiatives could create synergies that transform BISP from a short-term consumption support program into a driver of inclusive growth. For instance, aligning BISP with microcredit schemes, business incubation for women, and digital inclusion efforts could enable beneficiaries to transition from subsistence living to micro-entrepreneurship. This would not only enhance household resilience but also contribute to Pakistan's broader economic development goals, particularly the promotion of SMEs as engines of growth and employment.

The discussion highlights both the strengths and limitations of BISP. The program effectively reaches the poorest households and improves welfare outcomes, but its potential to foster entrepreneurship and SME participation remains underutilized. Policymakers should therefore consider integrating BISP with skill development, financial inclusion, and SME support programs to

maximize its role as both a social protection and economic empowerment tool. By doing so, BISP can evolve from a poverty alleviation mechanism into a catalyst for sustainable development, women's empowerment, and inclusive economic growth.

4.2 Descriptive Statistics

Overall, this section provides a clearer picture of the program's effectiveness and identifies areas where complementary policies—such as nutrition education or targeted food subsidies—could further strengthen outcomes for the most vulnerable populations. This chapter first will discuss the result discussion of different variables and descriptive statistics.

Table 4.1: Summary statistics for comparison between BISP beneficiaries and non-beneficiaries

Variables	Overall	Non-BISP	BISP	t-test
Educ of HH head (years)	4.99	5.2	2.79	0.000
	(5.18)	(5.22)	(4.11)	
Female HH head	0.09	0.09	0.08	0.016
	(0.29)	(0.29)	(0.27)	
HH size	5.96	5.8	7.55	0.000
	(2.96)	(2.89)	(3.29)	
Adult HH members	3.71	3.66	4.23	0.000
	(2.00)	(1.98)	(2.18)	
No. of HH members who own smart phone	0.63	0.67	0.3	0.000
	(1.11)	(1.14)	(0.70)	
Land owned (acres)	0.45	0.47	0.26	0.16
	(6.89)	(7.18)	(2.25)	
HH own residence	0.85	0.85	0.89	0.000
	(0.36)	(0.36)	(0.31)	
Kaccha house	0.19	0.17	0.35	0.000
	(0.39)	(0.38)	(0.48)	
Monthly HH income (Rs)	28568	29248	21511	0.000
	(32817)	(33979)	(14760)	
Foreign remittances	23500	23991	18412	0.025
	(111325)	(111146)	(113062)	
Urban	0.36	0.37	0.18	0.000
	(0.47)	(0.48)	(0.38)	
N	24750	22573	2177	

Table 4.1 represents a comparison of essential socioeconomic indicators between households participating in the Benazir Income Support Programme (BISP) and those not participating, aimed at assessing targeting accuracy and demographic disparities. The t-test values evaluate the statistical significance of the differences between the two groups. The t-test values assess whether the differences observed between the two groups are statistically significant. In this study, BISP recipients had an average of only 2.79 years of schooling, compared to 5.2 years for non-beneficiaries—a difference that is statistically significant (p = 0.000). This finding indicates that BISP is effectively reaching households with lower levels of education, who typically face greater obstacles in securing stable income. The program's focus on such vulnerable groups aligns with its mission to support society's most disadvantaged individuals, recognizing the close link between poverty and limited education.

This suggests that BISP is doing well in targeting the most economically marginalized households, those

with minimal educational backgrounds and fewer economic opportunities. By concentrating on groups that are more likely to be affected by poverty due to low educational attainment, the program enhances its potential to reduce long-term poverty and promote social justice. Recent research supports this observation. Households with lower levels of education, a well-known indicator of poverty, are being successfully targeted by the Benazir Income Support Programme (BISP). A 2021 study by the Pakistan Institute of Development Economics (PIDE) found that BISP recipients generally had much lower educational levels than non-recipients, highlighting the program's prioritization of underserved, less-educated communities.

Additionally, a 2024 study in the Pakistan Journal of Social Sciences noted that BISP contributes to closing the gender gap in education by encouraging school enrollment among girls in beneficiary households (Iftikhar et al., 2016). These findings are consistent with previous research, including the 2016 BISP Impact Evaluation Report, which also found lower educational levels among beneficiaries. It can also suggest that access to the program is not offered on the basis of gender, which means women-led families have very little played-up priority or needs that are unique to them. This demonstrates that BISP is being effectively targeted on the poorest people, the ones with little or no education, who face problems normally just finding regular and stable work as well as earning sufficient income to support their families. That program is fulfilling its mandate to provide the poorest individuals in the community with the help they need to enhance the overall quality of their lives by focusing on these populations most at risk.

Larger families that have higher dependency ratios are more likely to be poorer. A synthesis review of economic evidence of the impact of family size suggests that the higher the dependence ratio for working population, the bigger the family and a greater proportion of families run into financial problems (Saddique et al., 2023). Household size and dependency ratio are large factors in poverty in rural areas. The research highlights how as household size and dependents grow and per capita income falls, both the extent of poverty and the proportion of the population that is poor also rise. (Mehboob et al., 2023). The average household size among BISP beneficiaries was much larger (7.55 people) compared to non BISP beneficiaries who had an average of 5.8 members ($p = 0.000$). Other dependents like kids or aged parents tend to stay in bigger homes which can be an additional burden on earning members. This higher dependency ratio has the effect of exacerbating starvation and tightening the belt. This implies According to this research, BISP is reaching larger families, who probably have more mouths to feed and more financial obligations. These households are under more strain simply to meet their fundamental necessities because they have more dependents to care for, such as children or elderly relatives. The program is assisting people who are more susceptible to poverty and financial difficulties by promoting larger families. The average household size in the rural areas under study is roughly ten people, and 58% of these homes function as joint families, according to research published in Ecology and Society. According to the study, larger households frequently adopt more livelihood options. However, several circumstances, like the skill levels of adult members and the availability of resources, affect how effective these tactics are. Notably, joint family structures were negatively correlated with day work and agriculture, indicating that even though these families had more adults, they might not be able to reach higher earning potential because of a lack of employment opportunities or skill incompatibilities (Nixon,2023). The finding of the study is there are more adults living in BISP homes (4.23 vs. 3.66), which may be a result of larger family structures or more care responsibilities. More adults do not always translate into increased earning potential, especially in low-skill or rural areas. More adult members may indicate a larger potential workforce, but this does not always equate to higher earning potential, particularly in low-skill or rural areas. Adult household members' financial contributions may be hampered by elements including restricted access to school, career training, and job prospects. For example, research shows that rural women encounter obstacles such as limited access to markets, domestic responsibilities, and a lack of education that impede their ability to engage in activities that generate revenue.

Punjabi farming households' non-farm income diversification was the subject of a study that was published in Sustainability. The results show that bigger families may be able to get money from a variety of sources, but the real economic benefit depends on how educated and skilled the adults in the family are. Adult members usually work in low-paying, unskilled non-farm jobs that don't provide substantially to their family's financial situation, especially in rural locations where there aren't many these types of jobs. (Salma et al., 2020). The finding that homes with BISP beneficiaries have more adults (4.23) than households without beneficiaries (3.66) can reflect the extended family structures that are common in these families. Joint family arrangements, in which several generations live together, are typical in rural Pakistan and result in greater household sizes. Research published in Ecology and Society by Iqbal et al. (2021) found that 58% of the homes in northwest Pakistan were joint families, with an average household size of ten individuals, higher than the province average.

Only 0.3 people per family owned a smartphone in this study, compared to 0.67 in non-BISP homes, indicating that BISP families had substantially lower access to smartphones overall. This disparity indicates an apparent digital divide and is statistically significant (p = 0.000). Families that lack access to smartphones may find it more difficult to obtain employment, obtain services, or keep informed—exposing a divide that extends beyond technology and impacts on inclusion and wider prospects. This demonstrates how BISP households are not only suffer monetarily but are also falling behind in the digital sphere. Without access to cell phones, individuals struggle to connect to essential services and information, gain new skills, and find work. Since this digital divide limits their chances to improve their lives, it is even more important for programs like BISP to consider digital inclusion as part of long-term support.

Since they are 44.4% less likely to own a cell phone, people with lower incomes in Pakistan are more likely to be shut out of digital resources. There is a big gender digital divide in Pakistan, with 52% of men and only 26% of women owning a smartphone. In response to these issues, attempts have been made to bridge the gap. For example, the Benazir Income Support Program (BISP) has expressed plans to give away 30,000 3G-enabled smartphones to lower-income participants to promote digital and financial inclusion (Shair et al., 2024). Households under BISP in this study own, on average, less land (0.26 acres) than non-BISP households (0.47 acres). But this difference is not statistically significant (p = 0.16), so maybe it's just the luck of the draw and not a true pattern. Something else that is curious to look at is the two distributions and how much variability is enclosed in how large-or-small the amount of land they own is. This implies that each group suffers very uneven distribution of land ownership — some families own a lot, while others own very little or none. BISP and non-BISP households don't differ significantly in terms of land possession, yet the spectrum is enormous on both sides of the equation.

On the one hand, it indicates the distribution of land, a crucial source of livelihood, is unequal, as some of her households have many lands, while the others have very few. This discrepancy highlights that land is not the only factor which determines poverty and that when identifying and helping poor families, schemes like BISP should take into account several criteria, not just landownership. The observed difference in land ownership between BISP beneficiaries and non-beneficiaries is not statistically significant (p = 0.16), but it is in line with findings from other studies that examine asset ownership among groups that are comparable. Analysis indicates that there is a notable disparity in land ownership, with only 39% of BISP recipient households owning some agricultural property compared to 95% of non-receiver households. In addition, research show that households that get BISP are less likely to own a range of mobile goods than households that do neither. For instance, compared to 43% of homes that do not get BISP, just 22% of BISP beneficiary households own a refrigerator. Similarly, compared to 24% of non-receiver homes, 10% of BISP recipient households own a motorcycle Saleem (2019).

In this study, a slightly higher percentage of BISP households (89) reported owning their homes compared to non-beneficiaries (85), and this difference is statistically significant (p = 0.000). However, it's important to note that in low-income

or rural areas, owning a home doesn't always mean a family is better off. This could simply reflect informal or inherited ownership—like living in a basic family home in a village—rather than indicating an actual increase in wealth or improved living conditions. Even though more BISP households claim to be homeowners, this does not always imply that their financial situation has improved. Rather than having safe or comfortable housing, owning a home in many low-income or rural places may just mean living in a basic, inherited construction. Therefore, even when homeownership rates are high, they don't always indicate true economic stability, which serves as a reminder that poverty is about more than simply possessions; it's also about possibilities and quality of life.

A World Bank survey shows that 47% of urban households in Pakistan live in inadequate, unofficial communities, highlighting how widespread these living arrangements are Moritz (2022). In rural places, land is usually inherited, and homes are built gradually over time. A study calculating multidimensional poverty levels in rural Pakistan Ihtsham (2018) found that a significant number of rural households own their homes but still experience various forms of deprivation, indicating that home ownership is not a reliable indicator of overall welfare. Thirty-five per cent of BISP households were living in kacha houses, as opposed to 17% of non-BISP homes. Given that housing conditions are a conspicuous symbol of deprivation, this large change ($p = 0.000$) demonstrates how well the program targets excluded and vulnerable areas. This outcome shows that BISP is successfully helping families in some of the most vulnerable circumstances. Many families receiving help from BISP live in kaccha houses — simple homes that often don't have strong walls or basic safety features. These tough living conditions show how poverty affects more than just money; it also impacts the kind of shelter people have. That's why programs like BISP are so important, because they support families who are struggling not just financially, but also with where and how they live.

The significantly greater number of BISP beneficiary households living in kaccha (mud-structured) homes—35% compared to 17% of non-beneficiaries ($p = 0.000$)—indicates housing deprivation among BISP beneficiaries. This aligns with BISP's objective of concentrating on the most susceptible populations Iqbal and associates (2020). Poorer households in Pakistan are more likely to own kaccha houses, which is probably because they have less money and have less access to reliable building supplies. In rural areas, kaccha housing is much more common because people don't have easy access to strong building materials, and money is tight. This means many families live in temporary homes that aren't very sturdy. For example, in Sindh province, about 61% of rural households live in these kaccha houses, while only around 14% of people in cities do (Jamal et al., 2021).

In this study, families supported by BISP earn an average of Rs. 21,511 per month, which is noticeably less than the Rs. 29,248 earned by families who don't receive BISP help. This shows that BISP is doing a good job of reaching the people who need financial support the most. The program is focused on helping low-income families through tough times, which helps reduce the gap between rich and poor. Research also shows that BISP has helped families increase their monthly spending, which means they can better meet their needs. But, depending on how you measure poverty, BISP's impact varies. For example, using one method, it lowered how severe poverty is by 3%, but didn't significantly reduce the overall poverty rate. So, while BISP makes a difference, more actions are needed to really cut down poverty (WB, 2020).

The study also found that families getting BISP support receive less money sent from abroad (remittances) about Rs. 18,412 on average compared to Rs. 23,991 for others. This suggests these families have fewer chances to earn from migration, making them more financially vulnerable. These points to the need for better policies that help rural communities access job opportunities, in addition to providing direct financial support through programs like BISP. Together, these efforts could help families become more financially stable,for instancethe widespread application of remittances to maintain livelihoods, reduce poverty, and improve social status. The study reports that most remittances are used for household expenses, which lowers poverty and encourages sustainable livelihoods. Hameed and associates (2024). Furthermore, a 2011 World Bank

study looks at how foreign remittance funds affect the development of recipient households. The analysis shows that the bulk of remittance income goes to families in the lowest quintiles of the income distribution, which aids in their upward mobility and positively impacts household income, asset accumulation, and human capital development.

Only 18% of BISP households in this study reside in cities, compared to 37% of non-BISP families (p = 0.000). This suggests that the majority of BISP's beneficiaries are in rural areas, where access to services is restricted and poverty is more prevalent. In essence, the study emphasizes the need for targeted interventions that not only provide financial support but also enhance the overall well-being of rural populations by improving access to essential services and opportunities. According to a 2020 research, a sizable majority (88%) of BISP beneficiaries were from rural areas, underscoring the program's emphasis on rural communities. According to World Bank, 2017Additional data shows that 87% of households are rural and 13% of households are urban in the current distribution of BISP participants. This suggests a small underrepresentation of urban poor in the program, while the nationwide distribution of the poorest quintile is 80% rural and 20% urban.

4.3 Comparison of BISP Beneficiaries and Non Beneficiaries

Table 4.2: Summary statistics of the dependent variables

	Overall	Non-BISP	BISP	t-test
Non Healthy Food	0.33	0.3	0.58	0.000
	(0.47)	(0.46)	(0.49)	
Less food diversity	0.31	0.29	0.55	0.000
	(0.46)	(0.46)	(0.50)	
Skipped meal	0.1	0.09	0.16	0.000
	(0.30)	(0.29)	(0.37)	
No food for a day	0.05	0.04	0.09	0.000
	(0.22)	(0.21)	(0.29)	
Poor household (less than 4500)	0.28	0.26	0.42	0.000
	(0.45)	(0.44)	(0.49)	
N	**24750**	**22573**	**2177**	

Table 4.2 presents a comparison of key indicators related to food insecurity and household poverty between BISP beneficiaries and non-beneficiary households. The findings reveal significant disparities, with BISP households consistently showing higher levels of vulnerability. The findings indicate that the quantity of unhealthy food consumed by BISP and non-BISP households varies significantly. On average, 58% of BISP beneficiary families report eating unhealthy foods, compared with 30% of non-beneficiary households; this difference is statistically significant (p = 0.000). This implies that low-cost, low-nutrient foods are far more prevalent among BISP households. Beneficiaries are prone to eat unhealthy foods more frequently due to their limited financial capabilities, which make it more difficult for them to obtain a balanced and healthful diet. Many households would still struggle to buy better food even after getting BISP cash help, implying that the assistance might not be sufficient to completely meet nutritional needs. This study highlights the persistence of food insecurity among BISP beneficiaries and the importance of additional interventions, like food subsidies or nutrition education programs, in addition to cash transfers that improve dietary quality.

The findings indicate that 29% of non-BISP households report more food diversity than 55% of BISP beneficiary households, and the difference is statistically significant (p = 0.000). This shows that families receiving BISP support tend to rely more on cheap, low-nutrient foods. Because of limited money, they often have to eat less healthy meals, making it harder for them to maintain a balanced and

nutritious diet. Even with the cash help from BISP, many households still struggle to afford better-quality food, which suggests that the assistance might not be enough to fully meet their nutritional needs. This study highlights that food insecurity remains a big challenge for BISP beneficiaries and that additional support—like food subsidies or nutrition education—could be important alongside cash transfers to help improve their diets.

The findings also show that only 29% of families not receiving BISP have diverse diets, compared to 55% of BISP beneficiary families, and this difference is statistically significant (p = 0.000). This means BISP households are much more likely to have limited, repetitive diets, which is a common sign of food insecurity and poor nutrition. Their low dietary variety is probably because their tight budgets make it difficult to buy a range of foods, especially nutrient-rich ones like fruits, vegetables, and proteins. Although BISP provides cash support, it might not be enough to change what people can afford to eat in a meaningful way. These results highlight the need for additional programs—such as better market access, food voucher schemes, or nutrition education—to make sure that financial help leads to better nutrition for the poorest families.

Finally, the data shows that 16% of BISP households reported missing a meal, compared to only 9% of households not receiving BISP, and this difference is statistically significant (p = 0.000).This is a clear sign of extreme food insecurity, demonstrating that even with cash assistance from the Benazir Income Support Program, a sizable percentage of recipients continue to live in abject poverty. An entire day without meals indicates a degree of vulnerability where even the most basic requirements are not satisfied. Numerous variables, like low income, high dependency ratios, rising food prices, or limited access to food markets, especially in rural areas, could be to blame for this. The results imply that although BISP successfully targets low-income households, financial aid might not be sufficient to stop hunger episodes. This emphasizes the necessity of supplementary measures, like nutritional safety nets or emergency food assistance, to provide these households with more all-encompassing help.

In comparison to 26% of non-BISP homes, 42% of BISP recipient households earn less than Rs. 4,500 per month, placing them below the extreme poverty level. This difference is statistically significant (p = 0.000), according to the data. This demonstrates how well BISP is reaching the population's ultra-poor portion. The fact that BISP clients have a far larger percentage of severely poor households attests to the program's ability to reach the most vulnerable. But it also shows how deeply impoverished the recipients are, indicating that even with assistance, they are still extremely vulnerable. These households probably find it difficult to pay for health care, education, and other necessities in addition to food and housing. The results highlight the value of ongoing BISP assistance and suggest that further cash transfers or integrated support services may be required to help these families escape extreme poverty.

4.4 Determinants of BISP

Table:4.3 Determinants of BISP

VARIABLES	Dependent Variables BISP Beneficiary
Educ of HH head (years)	-0.061***
	(0.006)
Female HH head	-0.129
	(0.098)
HH size	0.229***
	(0.012)
Adult HH members	0.009
	(0.019)
No. of HH members who own smart phone	-0.197***

	(0.037)
Land owned (acres)	-0.029*
	(0.016)
HH own residence	0.049
	(0.079)
Kaccha house	0.276***
	(0.061)
Monthly HH income (Rs)	-0.000***
	(0.000)
Foreign remittances received	-0.000***
	(0.000)
Urban	-0.579***
	(0.069)
province = Punjab	-1.301***
	(0.070)
province = Sindh	0.111*
	(0.063)
province = Balochistan	-1.965***
	(0.125)
Constant	-2.316***
	(0.108)
Observations	24,750
Pseudo R2	0.179

(Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1)

Table 4.3 presents the logistic regression model's variables that describe the probability of receiving BISP benefits are broken down here. The coefficients show the change in the log odds of receiving BISP, and the dependent variable is binary (1 = beneficiary, 0 = non-beneficiary). BISP recipients are substantially less likely to be heads of households with higher levels of education. The BISP's focus on low education and, thus, lower-income households is reinforced by the negative and highly significant coefficient ($p < 0.01$), which indicates that every extra year of school lowers the likelihood of program participation. The coefficient shows that households headed by women are neither systematically more nor less likely to receive BISP help, even if it is negative and not statistically significant. This implies that BISP participation is not significantly -0.129 predicted by the gender of the head of the family. Household Size: 0.229 BISP clients are far more likely to be larger households. Households with more members—likely to have more dependents face greater financial strains and are more likely to qualify for aid, as indicated by the positive and positive and highly significant coefficient.

There is no significant correlation between the number of people living in the home and BISP participation 0.009, suggesting that having more adults does not always affect eligibility for the program—possibly because it is not a good indicator of income-earning capacity. Household Members Owning a Smartphone -0.197 The likelihood of receiving benefits is considerably lower for households with a higher number of Smartphone owners. This implies that having access to technology—astand-in for wealth or digital literacy—is linked to improved economic position, which lowers the likelihood that such households will be eligible for BISP. In keeping with BISP's emphasis on households who are landless or land-poor, there is a modest but statistically significant negative effect ($p < 0.1$) on land ownership, indicating that individuals

who own more land are somewhat less likely to be BISP users.

Owning one's residence did not significantly predict BISP receipt 0.049, showing that homeownership especially in rural or informal contexts, may not be a reliable measure of economic well-being. Living in a kaccha (mud or semi-permanent) house is a strong and significant positive 0.276 predictor of BISP participation. This highlights that poor housing quality is a significant factor or characteristic of program targeting. As anticipated, a reduced chance of receiving BISP is substantially correlated with increasing household income. Despite being numerically modest because of the unit, the negative coefficient is statistically strong and supports pro-poor targeting. Participation in the BISP is substantially and adversely correlated with receiving remittances. A household's eligibility or need for government aid may be diminished because of external income acting as a buffer.

The likelihood of receiving BISP is much lower in urban households. This is a result of BISP's increased emphasis on rural regions, where opportunities are scarcer and poverty is more pervasive. Compared to the reference province, which is either Khyber Pakhtunkhwa or Islamabad, Punjabi households are far less likely to be BISP beneficiaries. This could reflect targeting priorities or regional differences in poverty. A tiny but statistically significant positive correlation between Sindh and BISP participation suggests that the program has a somewhat higher reach in this province, maybe because of higher rates of rural poverty. Despite high levels of poverty, Baluchistan's households are much less likely to receive benefits. This could be a sign of administrative difficulties, under-coverage, or problems with access to the province's program delivery. The baseline log odds of becoming a benefit when all predictors are 0 are represented by the constant. Its significant and negative number -2.316 illustrates the population's generally low likelihood of receiving BISP.

4.5 Impact of BISP on Food Security Indicators

Table 4.4: Linear Probability model for the impact of BISP on food security indicators

VARIABLES	Dep Var: Non health food	Dep Var: Less food diversity	Dep Var: Skipped meal	Dep Var: No food for a day
BISP Beneficiary	0.131***	0.118***	0.037***	0.024***
	(0.011)	(0.012)	(0.008)	(0.007)
Educ of HH head (years)	-0.014***	-0.014***	-0.006***	-0.003***
	(0.001)	(0.001)	(0.000)	(0.000)
Female HH head	-0.086***	-0.083***	-0.028***	-0.027***
	(0.010)	(0.010)	(0.007)	(0.005)
HH size	0.008***	0.010***	0.008***	0.010***
	(0.002)	(0.002)	(0.001)	(0.001)
Adult HH members	-0.024***	-0.024***	-0.016***	-0.014***
	(0.002)	(0.002)	(0.002)	(0.001)
No. of HH members who own smart phone	-0.026***	-0.027***	-0.006***	-0.001
	(0.003)	(0.003)	(0.001)	(0.001)
Land owned (acres)	-0.001**	-0.001**	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
HH own residence	-0.016**	-0.028***	-0.024***	-0.016***
	(0.008)	(0.008)	(0.005)	(0.004)
Kaccha house	0.150***	0.117***	0.082***	0.058***

	(0.009)	(0.009)	(0.007)	(0.005)
Monthly HH income (Rs)	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Foreign remittances received	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Urban	-0.040***	-0.026***	-0.020***	-0.011***
	(0.006)	(0.006)	(0.004)	(0.003)
province = Punjab	-0.199***	-0.158***	0.075***	0.050***
	(0.008)	(0.008)	(0.005)	(0.004)
province = Sindh	-0.068***	-0.023**	0.031***	0.019***
	(0.009)	(0.009)	(0.005)	(0.004)
province = Balochistan	-0.223***	-0.147***	-0.037***	-0.024***
	(0.012)	(0.012)	(0.007)	(0.005)
Constant	0.626***	0.583***	0.133***	0.051***
	(0.013)	(0.013)	(0.008)	(0.006)
Observations	24,750	24,750	24,750	24,750
R-squared	0.169	0.151	0.066	0.052

(Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1)

Table 4.4 The estimates from a Linear Probability Model (LPM) evaluating the effect of receiving BISP on four important food security indicators.
(1) Consuming unhealthy food
(2) Having less variety in food
(3) Skipping meals
(4) Going without food for a full day

Are shown in Table 4.4 A range of household and demographic variables are controlled in each model; standard errors are included in parenthesis.Food insecurity is positively and strongly correlated with BISP recipient status across all four outcomes. At the 1% level, BISP recipients are specifically 13.1 percentage points more likely than non-beneficiaries to eat unhealthy food, 11.8 percentage points more likely to have less variety in their diet, 3.7 percentage points more likely to skip meals, and 2.4 percentage points more likely to go a day without eating. Although these outcomes can seem paradoxical, they are indicative of the program's goals: Families that are already experiencing food insecurity are being reached by BISP. As a result, the positive correlation emphasizes that the households getting assistance are the most food insecure, rather than suggesting a causal relationship (i.e., BISP increases food insecurity). Across all four measures, food insecurity is consistently negatively and significantly correlated with the household head's level of education. The protective function of education in household well-being is shown by the fact that a one-year increase in education lowers the likelihood of eating unhealthy foods, having poor dietary diversity, skipping meals, and going without food entirely.

Food insecurity is also less common in households headed by women, with significant negative coefficients in all models. This may indicate that households led by women may prioritize food security more directly or control food consumption more conservatively.

Food insecurity and household size are strongly correlated; larger households are more likely to skip meals, eat unhealthy foods, have a diet with little variety, or go without food altogether. This demonstrates how it could be difficult for larger families to meet their food needs. It's interesting to note that the number of adult household members has a negative influence, suggesting that having more adults may help reduce food insecurity because they may help with food preparation or household income. In three out of the four models, digital access—measured by the number of smart phone owners in a household—is associated with less food insecurity, most likely because it makes it easier to access social support networks, employment prospects, and information. With extremely slight but substantial negative coefficients, land ownership

has a modest correlation with increased food security. Land ownership can be a significant asset or a buffer through subsistence farming.

All types of food insecurity are positively and substantially correlated with living in a kaccha (mud) home, thus solidifying its status as a stand-in for extreme poverty and suffering. Reductions in food insecurity are substantially correlated with both monthly household income and international remittances. Increased income inflows give households improved access to food; therefore these outcomes are to be expected. Due to easier access to markets and job possibilities, urban households often show lower levels of food insecurity than rural ones. There are clear geographic variances. In Punjab and Balochistan, households are more likely to skip meals or go a day without eating, but they are also far less likely to consume unhealthy foods or have a diverse diet. This suggests that regional food insecurity dynamics are complex. Sindh homes exhibit a mixed pattern, with greater rates of full-day food deprivation and skipped meals but somewhat lower dietary concerns.

4.6 Logit Model for the Impact of BISP on Food Security Indicators

This segment shows the outcomes of logistic regression models that estimated how the BISP affected the following food security indicatorsi.e:eating unhealthy food; eating a less varied diet; skipping meals; going a full day without eating. The coefficients are log odds, and the dependent variables are binary. The models account for regional factors, income, assets, and household demographics.

Table 4.5: Logit model for the impact of BISP on food security indicators

VARIABLES	Dep Var: Non health food	Dep Var: Less food diversity	Dep Var: Skipped meal	Dep Var: No food for a day
BISP beneficiary	0.577***	0.402***	0.232***	0.341***
	(0.053)	(0.053)	(0.073)	(0.094)
Educ of HH head (years)	-0.083***	-0.062***	-0.064***	-0.115***
	(0.003)	(0.004)	(0.006)	(0.009)
Female HH head	-0.366***	-0.760***	-0.808***	-0.485***
	(0.058)	(0.062)	(0.094)	(0.127)
HH size	0.037***	0.097***	0.154***	0.207***
	(0.008)	(0.008)	(0.012)	(0.015)
Adult HH members	-0.139***	-0.041***	-0.077***	-0.329***
	(0.012)	(0.013)	(0.020)	(0.026)
No. of HH members who own smart phone	-0.379***	-0.199***	-0.312***	-0.737***
	(0.023)	(0.025)	(0.056)	(0.088)
Land owned (acres)	-0.029	-0.059**	-0.088**	-0.133***
	(0.021)	(0.024)	(0.035)	(0.050)
HH own residence	-0.084*	-0.212***	-0.363***	-0.346***
	(0.043)	(0.044)	(0.065)	(0.087)
Kaccha house	0.619***	0.318***	0.560***	0.908***
	(0.042)	(0.042)	(0.058)	(0.079)
Monthly HH income (Rs)		-0.000***	-0.000***	
		(0.000)	(0.000)	
Foreign remittances received	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)

Urban	-0.261***	-0.002	-0.071	-0.400***
	(0.036)	(0.037)	(0.060)	(0.088)
province = Punjab	-1.112***	-0.892***	1.050***	1.182***
	(0.043)	(0.045)	(0.080)	(0.113)
province = Sindh	-0.398***	-0.185***	0.445***	0.404***
	(0.047)	(0.048)	(0.085)	(0.118)
province = Balochistan	-1.173***	-0.709***	-0.183	-0.471***
	(0.063)	(0.064)	(0.113)	(0.158)
Constant	0.882***	0.950***	-1.492***	-3.009***
	(0.069)	(0.071)	(0.115)	(0.156)
Observations	24,750	24,750	24,750	24,750

(Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1)

Looking at table 4.5, even after adjusting for other variables, receiving BISP benefits is positively and significantly linked to experiencing greater food insecurity across all four outcomes. In particularBISP recipients are 0.577 log-odds more likely to eat unhealthy food. The coefficient for decreased food diversity is 0.402. It is 0.232 when it comes to missing meals. The coefficient for going a day without eating is 0.341. Although these findings do not imply that BISP exacerbates food insecurity, they do show that BISP is successfully addressing households that experience food insecurity. Instead, they show that the program is reaching the most vulnerable. In all models, there is a substantial correlation between decreased food insecurity and the family head's level of education. The log-odds of suffering food insecurity diminish with each extra year of schooling, underscoring the contribution of education to bettering household food outcomes. In all four models, households headed by women are likewise substantially less likely to experience food insecurity. This conclusion can indicate that women are better at prioritizing household needs and food consumption, or it could indicate that specialized programs and remittances favor households led by women.

Food insecurity is consistently more common in larger households (HH size), which is indicative of higher consumption needs. Nonetheless, a higher proportion of adult members is associated with less food insecurity, most likely as a result of adults' potential to manage household food or make financial contributions. The probability of food insecurity, particularly "no food for a day" (with a coefficient of -0.737), is considerably decreased when family members have access to smartphones. Better information availability, social media, or mobile financial services could be the cause of this. Landownership is linked to reduced food insecurity, particularly severe signs of deprivation such as missing meals or going without food. Land ownership may provide some protection, according to the significant and negative coefficients. Though less frequently, home ownership also lowers food insecurity. On the other hand, across all models, residing in a kaccha (mud) home is highly linked to increased food insecurity, with the greatest log odds (0.908) for "no food for a day." This demonstrates even further how extreme poverty and vulnerability are strongly correlated with substandard housing.

As anticipated, there is a significant correlation between decreased food insecurity and increasing household income and remittances. Since income is measured in rupees, the marginal effects are minor, but their consistent importance shows how important financial resources are for food access.The prevalence of eating unhealthy foods and going a day without eating is much lower in urban homes. Less food diversity and missed meals, on the other hand, do not significantly differ, indicating that urban food poverty may take multiple forms. While households in Punjab and Balochistan are considerably more likely to skip meals or go without food (in Punjab), they are far less likely to report eating bad food or having little variety.Sindh has a somewhat reduced chance of having a bad diet, but a higher chance of

missing meals and going days without eating. These findings draw attention to regional differences in coping mechanisms and food access, which ought to guide location-specific initiatives.

4.7 The Impact of BISP on Poverty

The Linear Probability Model (LPM) and Logit Model has been estimated to explore the effect of BISP on poverty on all HH that lies below the poverty line. A household whose HH income is less than Rs. 4500 per adult will be considered below the poverty line, and defined as poor=1, while other families are recorded as 0 (non-poor).

Table 4.6: LPM and Logit model results for the impact of BISP on poverty; Dep. Variable: Poor Household

VARIABLES	Linear Probability Model	Logit Model
BISP beneficiary	0.090***	0.476***
	(0.009)	(0.055)
Educ of HH head (years)	-0.009***	-0.073***
	(0.001)	(0.004)
Female HH head	0.465***	2.466***
	(0.009)	(0.059)
HH size	-0.034***	-0.225***
	(0.001)	(0.009)
Adult HH members	0.079***	0.518***
	(0.002)	(0.014)
No. of HH members who own smart phone	-0.062***	-0.570***
	(0.003)	(0.024)
Land owned (acres)	0.001***	0.011**
	(0.000)	(0.004)
HH own residence	0.024***	0.212***
	(0.007)	(0.054)
Kaccha house	0.117***	0.649***
	(0.007)	(0.045)
Foreign remittances received	0.000***	0.000***
	(0.000)	(0.000)
Urban	-0.103***	-0.774***
	(0.006)	(0.042)
province = Punjab	-0.040***	-0.267***
	(0.007)	(0.047)
province = Sindh	-0.034***	-0.249***
	(0.008)	(0.052)
province = Balochistan	-0.097***	-0.641***
	(0.011)	(0.071)
Constant	0.236***	-1.305***
	(0.011)	(0.077)
Observations	24,750	24,750
R-squared	0.247	

(Note: For the calculation of poverty, the Ministry of Planning commission's 4500 Rs. per adult household member has been used as the cutoff poverty line. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1)

Being a BISP beneficiary dramatically raises a household's probability of being categorized as poor in both the LPM and Logit models, with coefficients of 0.090 (LPM) and 0.476 (Logit), both of which are statistically significant at the 1% level. This demonstrates that BISP is successfully focusing on households that are more likely to be below the poverty line, hence enhancing its function as a program that aims to reduce poverty. In both models, the household head's level of education is substantially linked to a lower chance of poverty. With coefficients of -0.009 (LPM) and -0.073 (Logit), the likelihood of being poor decreases with each more year of school, underscoring the significance of education in rescuing households from poverty. Those households controlled by women are more likely to be classified as poor, with values of 0.465 (LPM) and 2.466 (Logit). These results demonstrate that households headed by women face more financial challenges and are more likely to fall below the poverty line, possibly because of their limited access to economic opportunities and social services. According to the LPM, poverty is negatively correlated with household size, with bigger households having a somewhat lower likelihood of being impoverished (coefficient: -0.034). But when other characteristics are considered, the connection is strongly negative (coefficient: -0.225) in the Logit model, meaning that larger households are far less likely to be non-poor.

The probability of living in poverty is positively correlated with the number of adult household members. With values of 0.079 (LPM) and 0.518 (Logit), the chance of poverty rises with the number of adult household members. This could reflect the difficulty larger families with more adults may have finding enough employment or resources to help them escape poverty. Poverty is negatively impacted by the number of smartphone owners in the home, with coefficients of -0.062 (LPM) and -0.570 (Logit). This implies that households may be able to access better opportunities, information, or services that could assist in lowering poverty if they have access to digital tools like cell phones. In all models, there is a minor positive correlation between poverty and landownership, although it is not very strong. Despite its value, land ownership does not significantly alleviate poverty, as indicated by a coefficient of 0.001 (LPM) and 0.011 (Logit). This could be because of the tiny scale of landownership or the absence of productive use.

Two important indicators of poverty are having a home and residing in a kaccha (mud) home. The risk of being poor is higher for those who live in kaccha houses (coefficient: 0.117 in LPM and 0.649 in Logit), whereas the likelihood is lower for those who own a home (coefficient: 0.024 in LPM and 0.212 in Logit). This implies that more economic stability is linked to formal housing.In both models, receiving foreign remittances had a negative correlation with poverty, with statistically significant coefficients near zero. This suggests that for the households that receive them, remittances help to reduce poverty. Both models show that urban households had a much lower likelihood of being impoverished, with coefficients of -0.103 (LPM) and -0.774 (Logit). This supports the notion that poverty rates are normally lower in metropolitan regions since these places typically offer greater economic options. With coefficients of -0.040, -0.034, and -0.097, respectively, Punjabi, Sindhi, and Balochistan households have lower odds of being categorized as poor in the LPM. Balochistan, on the other hand, exhibits a substantially negative correlation with poverty in the Logit model, whereas Punjab and Sindh display more inconsistent findings.

It is concluded that the dependent variable captures household poverty status (or food insecurity), defined in binary terms. The main independent variable of interest is whether the household is a beneficiary of BISP, while a range of socio-economic and demographic characteristics are included as controls to account for heterogeneity across households. These control variables include household size, education of the household head, gender of household head, region of residence, housing quality, asset ownership, and access to technology, among others. Table 1 below provides a

detailed description of each variable, its measurement, and the expected direction of relationship with household poverty status. The key variables that determine the BISP participation Educ of HH head (years), Female HH head, HH size, Adult HH members, No. of HH members who own smart phone, Land owned (acres), HH own residence, Kaccha house, Monthly HH income (Rs), Foreign remittances received, Urban, Punjab, Sindh, Balochistan, KP are positively affected.

CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

The BISP is effectively reaching Pakistan's most needy citizens, according to this study. Strong evidence that BISP recipients are disproportionately from low-income households—especially those in rural areas—with larger household sizes, lower levels of education, subpar housing, and less access to digital tools like smart phones is provided by the results of both the Linear Probability Model (LPM) and Logit models. All these traits are strongly linked with structural poverty, demonstrating that the program has helped the same populations it was intended to assist. It's interesting to note how greater food insecurity among BISP recipients shouldn't be seen as a program flaw. Rather, this trend illustrates how well BISP can find and enroll households that are at risk. In this sense, rather than being a criticism of impact, food insecurity becomes evidence of precise targeting. Frequently deprived households require more than simply money; they also need better infrastructure, chances to acquire new skills, access to high-quality healthcare and education, and better nutrition. A more comprehensive, multi-sect oral development strategy should incorporate BISP to provide more transformative and durable results. In conclusion, BISP is necessary for reducing poverty because it reaches the most disadvantage and impoverished households; nevertheless, its long-term effects will rely on how well it is combined with other social and economic programs. The most vulnerable residents of Pakistan must be protected and genuinely empowered with a multifaceted, people-centered approach.

5.2 Policy Recommendation

Based on the conclusions provided, the following policy recommendations can be drawn to enhance the impact of BISP and address the broader challenges of Dietary diversity and food insecurity. It is suggested that formulated to improve the effectiveness of the (BISP) and tackle the wider issues of food insecurity. First, introduce **education-linked conditional top-ups** (e.g., school attendance stipends for children, especially girls) to break intergenerational poverty linked to low household head education. Second, promote **digital and financial inclusion** by pairing cash transfers with affordable smart phone access, mobile wallet training, and rural banking infrastructure addressing the digital divide observed among beneficiaries.

Third, develop **housing improvement support** or concessional microfinance for kaccha house households to reduce vulnerability to climate shocks. Fourth, expand **livelihood support programs** (e.g., vocational training, women-focused entrepreneurship grants, linkages with rural markets) to complement cash transfers with income-earning opportunities. Finally, implement **region-specific interventions,** since most beneficiaries are rural, policies should prioritize agricultural productivity, water management, and community-based nutrition programs to improve food security and resilience. BISP should be complemented with **nutrition-sensitive interventions.** Introducing **conditional or hybrid cash-plus programs** linking transfers with children's school meals, maternal health check-ups, or food vouchers for diverse and healthy items could improve dietary outcomes. Additionally, **community-based nutrition education campaigns** should be integrated into BISP delivery to promote better food choices.

BISP should refine its **targeting mechanisms** to reduce regional and urban-rural imbalances. For instance, strengthening outreach in Punjab and Balochistan, where participation is disproportionately low, could ensure more equitable coverage. Since larger households and those in poor-quality housing are more likely to qualify, the program should consider **household-size-adjusted benefits** to account for higher consumption needs. To reduce digital exclusion, beneficiaries should be supported with **digital literacy training and**

affordable smartphone access, enabling them to better utilize cash disbursement platforms. Furthermore unconditional cash should be complemented with **food vouchers or in-kind transfers for nutrient rich items** (milk, pulses, and fruits, vegetables) to reduce reliance on non-healthy food. The **housing and infrastructure support** for kaccha-house households would reduce vulnerability to food insecurity.

REFERENCES

Abdul Mumin, Y. and Abdulai, A. (2020) Informing Food Security and Nutrition Strategies in Sub-Saharan African Countries: An Overview and Empirical Analysis. *Applied Economic Perspectives and Policy, 44*, 364-393.

Abdulai, A. and Huffman, W. (2014) The Adoption and Impact of Soil and Water Conservation Technology: An Endogenous Switching Regression Application. *Land Economics, 90*, 26-43.https://doi.org/10.3368/le.90.1.26

Abdulai, A., &Kuhlgatz, C. (2012). Food security policy in developing countries. *The Oxford Handbook of the Economics of Food Consumption and Policy*.

Abid, Muhammad & Schneider, Uwe & Scheffran, Jürgen. (2016). Adaptation to climate change and its impacts on food productivity and crop income: Perspectives of farmers in rural Pakistan. *Journal of Rural Studies. 47*. 254-266. 10.1016/j.jrurstud.2016.08.005.

Ahmad, S. (2018). Can BISP be used for Poverty Reduction?. *Journal of History Culture and Art Research*, *7*(3), 713-723.

Ahmed, Vaqar & Sugiyarto, Guntur & Jha, Shikha. (2010). Remittances and Household Welfare: A Case Study of Pakistan. *Journal of Social and Policy Sciences. 1*. 10.2139/ssrn.1632200.

Alam,M.,M. Hussain,S.,I. Hussain,A.& Hassan,I. (2023) Rural Poverty profile in Pakistan: Incidence, Severity, and Correlates through Consumption Based Approach, *CogentEconomicsFinance, 11*:2, DOI: 10.1080/23322039.2023.2276794

Alderman, H. C. (2002). Price and Tax Subsidization of Consumer Goods. *Social Safety Net Primer Series. World Bank*.

Ali A, Erenstein O, Rahut DB. (2015) Impact of gender participation in non-farming activities on household income and poverty levels in Pakistan.

Work. 2015; 52(2):345-51. doi: 10.3233/WOR-152103. PMID: 26409349.

Ambler, Kate & De Brauw,Alan, 2017. "The impacts of cash transfers on women's empowerment: learning from Pakistan's BISP program," Policy Research Working Paper Series 113161, *The World Bank.*

Amjad, R., & Kemal, A. R. (1997). Macroeconomic policies and their impact on poverty alleviation in Pakistan. *The Pakistan Development Review*, *36*(1), 39-68.

Amrin,S., &Ashfaq,M. (2020). The impact of Benazir Income Support Program BISP on household food expenditures in faisalabad. *Pakistan Journal of Agricultural Sciences*, *57*(1).

Andrews, C., Kryeziu, A., &Seo, D. (2014). World Bank support for social safety nets 2007-2013: a review of financing, knowledge services, and results. *World Bank Group, Washington, DC.*

Antipoverty transfers and labor market outcomes: Regression discontinuity design findings. *The Journal of Development Studies*, *51*(9), 1224-1240.

Ariq, I., Aslam, T., & Khan, M. (2021). Impact of selected social welfare programs on poverty alleviation and health outcomes in pakistan. *Biological and Clinical Sciences Research Journal,2*(1), 214-232. https://doi.org/10.47264/idea.jhsms/2.1.18

Arouna, Aminou & Michler, Jeffrey & Yergo, Wilfried & Saito, Kazuki. (2020). One Size Fits All? Experimental Evidence on the Digital Delivery of Personalized Extension Advice in Nigeria. *American Journal of Agricultural Economics*. 103. 10.1111/ajae.12151.

Bano,Sahira & Anwar, Sofia & Quddoos, Abdul. (2024). 2024 (Nov)SOCIOECONOMIC factors affecting the adoption of digital devices at household level. *Journal of Economic Impact*. 6. 2024-187. 10.52223/econimpact.2024.6301'

Barrett, C. B., Holden, S. T., & Clay, D. C. (2013). Can food-for-work programs reduce vulnerability?. *SSRN*.

Bocchiola, Daniele & Brunetti, Lavinia & Soncini, Andrea & Polinelli, Francesco & Gianinetto, Marco. (2019). Impact of climate change on agricultural productivity and food security in the Himalayas: A case study in Nepal. *Agricultural Systems*. 171. 10.1016/j.agsy.2019.01.008.

Burlingame GM, Rosendahl J. A scientific response to Moritz et al. (2022). *Psychotherapy (Chic). 2022*

Jun;59(2):136-139. doi: 10.1037/pst0000433. PMID: 35666917.

Cheema, Farooq-Eazam. (2016). do taglines have a positive impact on building the brand perception? a case study on kit kat. *IBT Journal of Business Studies. 12*. 10.46745/ilma.jbs.2016.12.01.05.

Cheema, I., Hunt, S., Javeed, S., Lone, T., O'Leary, S., (2016)Benazir Income Support Programme Final Impact Evaluation Report. *Oxford Policy Management*

Christian Kuhlgatz & Awudu Abdulai, 2012. "**Food Aid and Malnutrition in Developing Countries: Evidence from Global Food Aid Allocation**," *Journal of Development Studies, Taylor & Francis Journals, vol. 48*(12), pages 1765-1783, December.

Citaristi, I. (2022). World Food Programme WFP. In *The Europa Directory of International Organizations 2022* (pp. 302-306).

Coates, Jennifer & Swindale, Anne & Bilinsky, Paula. (2007). Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: *Indicator Guide (v. 3)*. Academy for Educational Development. 3. Contribution to sustainable development policies, https://doi.org/10.1016/j.jclepro.2018.05.224

Cornelissen G, Pandit NR, Taylor P, Pandit BH, Sparrevik M, Schmidt HP (2016) Emissions and Char Quality of Flame-Curtain "Kon Tiki" Kilns for Farmer-Scale Charcoal/Biochar Production. PLoS ONE 11(5): e0154617. https://doi.org/10.1371/journal.pone.0154617

Dahan, Y., Lerner, H., &Milman-Sivan, F. (2012). Shared Responsibility and the International

Labour Organization. *Mich. J. Int'l L.*, *34*, 675.

De Groot, R., Palermo, T., Handa, S., Ragno, L. P., & Peterman, A. (2017). Cash transfers and child nutrition: pathways and impacts. Development policy review: *the journal of the Overseas Development Institute*, *35*(5), 621-643.

Durr-e-Nayab and Shujaat Farooq The Pakistan Development Review Vol. 53, No. 2, Special Issue on Poverty and Social Dynamics in Pakistan (Summer 2014), pp. 145-174 (30 pages)

Dwyer, J. T., &Drewnowski, A. (2017). Overview: food and nutrition security. *Sustainable Nutrition in a Changing World*, 3-24.

Farooq, S. (2014). Effectiveness of cash transfer programmes for household welfare in Pakistan: The case of the Benazir Income Support Programme. *The Pakistan Development Review*, *53*(2), 145-174.

Gazdar, H., &Mallah, H. B. (2013). Inflation and food consumption among the poor in Pakistan. *Development in Practice*, *23*(4), 533-546.

Gebre, G. G. (2021). Prevalence of household food insecurity in East Africa: Linking food access with climate vulnerability. *Climate Risk Management*, *33*, 100333

Hameed, A., Ali, T. M., &Najam, M. O. (2024). The impact of unconditional cash transfers on enhancing household wellbeing in Pakistan: evidence from a quasi-experimental design. *Humanities and Social Sciences Communications*, *11*(1), 1-12.

Haris Gazdar & Hussain Bux Mallah, 2013. "Inflation and Food Security in Pakistan: Impact and Coping Strategies," IDS Bulletin, *Blackwell Publishing, vol. 44*(3), pages 31-37, May.

Hashmi, S., Safdar, N. F., Zaheer, S., &Shafique, K. (2021). Association between dietary diversity and food insecurity in urban households: A cross-sectional survey of various ethnic populations of Karachi, Pakistan. *Risk Management and Healthcare Policy*, 3025-3035.

Hashmi, Umair & Ab Rashid, Radzuwan & Ahmad, Mohd. (2020). The representation of Islam within social media: a systematic review. *Information, Communication & Society. 24*. 1-20. 10.1080/1369118X.2020.1847165.

Hassan, T., & Bibi, N. (2016). To assess the role of benazir income support programme in achieving food security. *International Journal of Pure and Applied Management Sciences*, *1*(1).

Horwood, Christiane & Luthuli, Silondile & Chiliza, Jessica & Mapumulo, Sphindile & Haskins, Lyn. (2022). It's not the Destination it's the Journey: Lessons From a Longitudinal 'Mixed' Mixed-Methods Study Among Female informal Workers in South Africa. *International Journal of Qualitative Methods. 21*. 160940692211237. 10.1177/16094069221123718.

Hou, X. (2016). How does women's decision-making power affect budget share, nutrition and education in Pakistan?. *Journal of Family and Economic Issues*, *37*, 115-131.

Hou, X., & Ma, N. (2011). Empowering women: the effect of women's decision-making power on reproductive health services uptake--Evidence from Pakistan. *World Bank policy research working paper*, (5543).

Hyder, Zeeshan & Imran, Muhammad & Shafiq, Kashif. (2021). Greenwash and green purchase behavior: an environmentally sustainable perspective. Environment, Development and Sustainability. 23. 1-22. 10.1007/s10668-020-01202-1.

Iftikhar, H. (2016). Pakistani Society Averse to Entrepreneurship. *The Express Tribune*

Iqbal, M. A., Rizwan, M., Abbas, A., Makhdum, M. S. A., Kousar, R., Nazam, M., Samie, A., & Nadeem, N. (2021). A Quest for Livelihood Sustainability? Patterns, Motives and Determinants of Non-Farm Income Diversification among Agricultural Households in Punjab, Pakistan. *Sustainability*, *13*(16), 9084. https://doi.org/10.3390/su13169084

Iqbal, N., Anwar, S. and Haider, N. (2015) Effect of Leadership Style on Employee Performance. Arabian *Journal of Business and Management Review, 5*, 1-6.

Iqbal, S.Z., Abdull Razis, A.F., Usman, S., et al. (2021) Variation of Deoxynivalenol Levels in Corn and Its Products Available in Retail Markets of Punjab, Pakistan and Estimation of Risk Assessment. *Toxins, 13*, Article No. 296.

Iqbal, T. (2020). Understanding the Perception of Women Entrepreneurs and Their Adoption of Social Media: Strategies and Challenges in the Kingdom of Saudi Arabia. *Journal of Entrepreneurship Education, 23*, 1-21.

Iqbal, T., Farooq, S., &Padda, I. U. H. (2021). Can empowerment be enhanced by putting cash in the hands of poor women? Learning from Pakistan's BISP Program. *The European Journal of Development Research*, *33*(3), 760-792.

Iqbal, T., Padda, I. u. h., & farooq, s. (2020). Sustainable impacts of social safety nets: The Case of BISP in Pakistan. *Pakistan Journal of Applied Economics*, *30*(2), 153-180.

Iqbal, T., Padda, I. U. H., & Farooq, S. (2020). Unconditional cash transfers and women empowerment: the case of Benazir Income Support Programme (BISP) in Pakistan. *Journal of Business and Social Review in Emerging Economies*, *6*(2), 401-418.

Iqbal, Tehmeena & Farooq, Shujaat & Padda, Ihtsham. (2020). Can Empowerment be Enhanced by Putting Cash in the Hands of Poor Women? Learning from Pakistan's BISP Program. *The European Journal of Development Research. 33*. 10.1057/s41287-020-00320-w.

Iqbal, Tehmeena & Padda, Ihtsham & Farooq, Shujaat. (2020). Unconditional Cash Transfers and Women Empowerment: The Case of Benazir Income Support Programme (BISP) in Pakistan. *Journal of Business and Social Review in Emerging Economies. 6.* 401-418. 10.26710/jbsee.v6i2.1098.

Jabeen, S., Haq, S., Jameel, A., Hussain,A., Asif, M., Hwang, J., and Jabeen, A.(2020).Impacts of Rural Women's Traditional Economic Activities on

Household Economy: Changing Economic Contributions through Empowered Women in Rural Pakistan march 2020, *Sustainability 2020, 12, 2731*; doi:10.3390/su12072731

Jalal, A. (2017)The Targeting Performance and Short-Term Welfare Effects of Female Income Support Programs: *Evidence from Pakistan*

Jamal, Haroon. (2011). Assessing Poverty with Non-Income Deprivation Indicators: Pakistan, 2008-09. *The Pakistan Development Review. 50*. 10.30541/v50i4IIpp.913-927.

Jamal, Mohd & Anwar, Imran & Khan, Nawab & Saleem, Imran. (2021). Work during COVID 19: Assessing the Influence of Job Demands and Resources on Practical and Psychological Outcomes for Employees. *Asia-Pacific Journal of Business Administration. 13*. 293-319. 10.1108/APJBA-05-2020-0149.

Kronebusch, N., & Damon, A. (2019). The impact of conditional cash transfers on nutrition outcomes: Experimental evidence from Mexico. *Economics & Human Biology*, *33*, 169-180.

Kumar, R., Mahmood, T., Naeem, N., Khan, S. A., Hanif, M., &Pongpanich, S. (2024). Minimum dietary diversity and associated determinants among children aged 6–23 months in Pakistan. *Scientific Reports*, *14*(1), 2639.

Lanka Prabal K. (2011) Impact of Remittances on Household Income, Asset and Human Capital: Evidence from *Sri De World Bank*

Lipper, Leslie & Thornton, Philip & Campbell, Bruce Morgan & Baedeker, Tobias & Braimoh, Ademola & Bwalya, Martin & Caron, Patrick & Cattaneo, Andrea & Henry, Kevin & Hottle, Ryan & Jackson, Louise & Jarvis, Andrew & Kossam, Fred & Mann, Wendy. (2014). *Climate-smart agriculture for food security. Nature Climate Change. 4*. 1068–1072. 10.1038/nclimate2437.

Lokshin, M., & Sajaia, Z. (2004). Maximum Likelihood Estimation of Endogenous Switching Regression Models. *The Stata Journal, 4*, 282-289. https://doi.org/10.1177/1536867X0400400306

Lucas, C. J., McMahon, A. T., & Charlton, K. E. (2020). Developing professional education for primary healthcare providers about nutrition. *Australian Journal of Primary Health*, *25*(6), 534-538.

Luthuli, S., Haskins, L., Mapumulo, S., &Horwood, C. (2022). Does the unconditional cash transfer program in South Africa provide support for women after child birth? Barriers to accessing the child support grant among women in informal work in Durban, South Africa. *BMC Public Health*, *22*(1), 112.

Mehboob, Komal & Rafiq, Shahid & Iram, Bazgha. (2024). Podcasting as an Emerging Educational Tool in Pakistan: The Potential and Challenges. Gomal University *Journal of Research. 40*. 301-315. 10.51380/gujr-40-03-03.

Meyer, M., Qazi, Maria., Rajashekar, Anirudh., Zhang, Y., (2022) behind on rent or left behind: measuring housing poverty in urban pakistan

Muhammad Farooq, Dr. Abdul Nasir Kiyazi, Saleh Muhammad, Relationship of Corporal Punishment and Student's Behavior of Secondary School Students of Quetta City , sjesr: Vol 5 No 2 (2022): April - June 2022 (Spring)

Mustafa, E.K., et al. (2019) Simulation of Land Use Dynamics and Impact on Land Surface Temperature Using Satellite Data. *Geo Journal, 1*-19. https://doi.org/10.1007/s10708-019-10115-0

Mustafa, G., Ali, A., & Iqbal, N. (2019). Impact of unconditional cash transfer on child nutrition in pakistan: evidence from benazir income support program (BISP). *Global Economics Review, IV*(IV), 71-88. https://doi.org/10.31703/ger.2019(iv-iv).07

Mustafa, Ghulam & Glavee-Geo, Richard & Grønhaug, Kjell & Almazrouei, Hanan. (2019). Structural Impacts on Formation of Self-Efficacy and Its Performance Effects. *Sustainability. 11.* 10.3390/su11030860.

Mutenje, Munyaradzi & Farnworth, Cathy Rozel & Stirling, Clare & Thierfelder, Christian & Mupangwa, Walter & Nyagumbo, Isaiah. (2019). A cost-benefit analysis of climate-smart agriculture options in Southern Africa: Balancing gender and technology. *Ecological Economics.* 163. 10.1016/j.ecolecon.2019.05.013.

Naqvi, A.A., Maslehuddin, M., Kalakada, Z., et al. (2014) Prompt Gamma Ray Evaluation for Chlorine Analysis in Blended Cement Concrete. *Applied Radiation and Isotopes, 94*, 8-13.https://doi.org/10.1016/j.apradiso.2014.06.011

Naqvi, S., Sabir, H., Shamim, A., & Tariq, M. (2014). Social safety nets and poverty in pakistan (a case study of bisp in tehsil mankera district bhakkar). *Journal of Finance and Economics, 2*(2), 44-49. https://doi.org/10.12691/jfe-2-2-1

Naseer., Z., A . Hongwei Hu A, Yaseen., M., b, Tariq, M. (2021).Rural women empowerment through social protection programs: A case of Benazir income support programme in Punjab, Pakistan

Nixon, R., Z. Ma, T. Birkenholtz, B. Khan, L. Zanotti, L. S. Lee, and I. A. Mian. (2023). The relationship between household structures and everyday adaptation and livelihood strategies in northwestern Pakistan. *Ecology and Society 28*(2):31. https://doi. org/10.5751/ES-14026-280231

Padda, Ihtsham & Khan, Murad & Khan, Talah. (2018). The Impact of Government expenditures on human welfare: An empirical analysis for Pakistan The impact of government expenditures on human welfare: An empirical analysis for Pakistan. 63-82.

Pasha, M. A., Shah, P., &Rahpota, S. (2018). Benazir Income Support Programme (BISP): Its Benefits and Implications. *IBT Journal of Business Studies (JBS), 14*(2), 198-208.

Pérez-Escamilla, R. (2017). Food security and the 2015–2030 sustainable development goals: From human to planetary health. *Current developments in nutrition*, *1*(7), e000513.

Quisumbing, A. R., Baulch, B., & Kumar, N. (2011). Evaluating the long-term impact of anti-poverty interventions in Bangladesh: an overview. *Journal of Development Effectiveness*, *3*(2), 153-174.

Quisumbing, Agnes & Meinzen-Dick, Ruth & Raney, Terri & Croppenstedt, Andre & Behrman, Julia & Peterman, Amber. (2014). Closing the Knowledge Gap on Gender in Agriculture. Gender in agriculture and food security: *Closing the knowledge gap. 1*-19. 10.1007/978-94-017-8616-4_1.

Rashid Amjad & A.R. Kemal, 1997. "Macroeconomic Policies and their Impact on Poverty Alleviation in Pakistan," The Pakistan Development Review, *Pakistan Institute of Development Economics*, vol. 36(*1*), pages 39-68.

Rehman, A. et al. (2022). Sustainable Development and Pollution: The Effects of CO2 Emission on Population Growth, Food Production, Economic Development, and Energy Consumption in Pakistan. *Environmental Science and Pollution Research, 29*, 17319-17330.

Rehman, G. (2022). Evaluating the short run and long run impacts of unconditional cash transfers on food-seeking behavior: new insights from BISP, Pakistan. *The Pakistan Development Review*, 85-102. https://doi.org/10.30541/v61i1pp.85-102

Reuge, N., Jenkins, R., Brossard, M., Soobrayan, B., Mizunoya, S., Ackers, J.,&Taulo, W. G. (2021). Education response to COVID 19 pandemic, a special issue proposed by UNICEF: Editorial review. *International Journal of Educational Development*, 87, 102485.

Saddique, Fahad & Mushtaq- Khokhar, Nauman & Asghar, Muhammad. (2023). Impact of Ethical Leadership on Creative Work Performance: The Empirical Mediating Roles of Work Engagement and Attitude Toward Performing Wells in Construction Organizations in Pakistan. *Journal of Social Sciences Review. 3*. 607-622. 10.54183/jssr.v3i1.194.

Saddique, R., Zeng, W., Zhao, P. *et al.* (2023). Understanding multidimensional poverty in Pakistan: implications for regional and demographic-specific policies. *Environ Sci Pollut Res* (2023). https://doi.org/10.1007/s11356-023-28026-6

Saleem Z, Godman B, Hassali MA, Hashmi FK, Azhar F, Rehman IU. Point prevalence surveys of health-care-associated infections: a systematic review. *Pathog Glob Health*. 2019 Jun;113(4):191-205.

Salvatore Di Falco; *Marcella Veronesi* and *Mahmud Yesuf*, (2011), Does Adaptation to Climate Change Provide Food Security? A Micro-Perspective from Ethiopia, *American Journal of Agricultural Economics*, *93*, (3), 825-842

Shair, W., Hassan, R. U., Khatoon, J., Amjad, K., & Nawaz, S. (2024). Bridging the Gap: Exploring Mobile Ownership Disparities among Vulnerable Population. *Journal of Excellence in Social Sciences*, *3*(3), 177–190. https://doi.org/10.69565/jess.v3i3.380

Siddiqua Alibhai & Haroon Jamal & Dr Qazi Masood Ahmed, 2023. "Gender Inequality in Education - Determinants of Girls' Enrolment at the Primary, Middle & Secondary/High School Level," Social Inequality Lab Working Paper Series wpsil4, *School of Economics and Social Sciences, IBA Karachi.*

Uddin, I. (2021). Impact of benazir income support program (BISP) on consumption, health and education. *Economic Consultant, 36*(4), 42-50. https://doi.org/10.46224/ecoc.2021.4.5

Unconditional Cash Transfer and Poverty Alleviation in Pakistan BISP's Impact on Households' *Socioeconomic Wellbeing (2020)*

World Bank (2017) Pakistan National Social Protection Program-for-Results technical assessment *world bank*

World Bank (2020) Responsive Social Protection Program and Systems to Serve Pakistan's Poorest People *World Bank*

Zaib, Khan & Muhammad, Salman. (2024). Socioeconomic and Health Impacts Evaluation of Collective Welfare Grids in Pakistan.

Zeng, G., Hou, H., & Peng, K. (2016). Effect of Growth Mindset on School Engagement and Psychological Well-Being of Chinese Primary and Middle School Students: The Mediating Role of Resilience. *Frontiers in Psychology*, 7, 1873. https://doi.org/10.3389/fpsyg.2016.01873