

Assessing Impacts of
Macroeconomic
Shifts on Microeconomy
of Pakistan's Poor and Ultra-Poor
Households

January 2021

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January 2021

Final Report by
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National Poverty Graduation Programme
Pakistan Poverty Alleviation Fund

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List of Abbreviations

BISP	Benazir Income Support Programme
CAPI	Computer-Assisted Personal Interviewing
CBN	Cost of Basic Needs
CCT	Conditional Cash Transfer
CIs	Community Institutions
CNIC	Computerized National Identity Card
CPI	Consumer Price Index
CRPs	Community Resource Persons
EGS	Employment Guarantee Scheme
FAO	Food and Agriculture Organization
FGDs	Focus Group Discussions
FM-OLS	Fully Modified Least Squares
FY	Fiscal Year
GDP	Gross Domestic Product
GoP	Government of Pakistan
HCR	Head Count Ratio
HHs	Households
HIES	Household Integrated Economic Survey
ICT	Information and Communication Technology
IFL	Interest Free Loan
Inf	Inflation
KIIs	Key Informant Interviews (KIs, Key Informants)
KP	Khyber Pakhtunkhwa
LAYS	Learning-Adjusted Years of Schooling
LFS	Labor Force Survey
NPGP	National Poverty Graduation Programme
NSER	National Socioeconomic Registry
PBS	Pakistan Bureau of Statistics
PKR	Pakistani Rupee
PMT	Proxy Means Test
POs	Partner Organizations
PoU	Prevalence of Undernourishment
SBP	State Bank of Pakistan
SE	Street Economy
SMEs	Small and Medium Enterprises
UCs	Union Councils
UCT	Unconditional Cash Transfers
US	United States
WDI	World Development Indicators
ZTBL	Zarai Taraqiyati Bank Limited

Executive Summary

Background and Objectives

As of January 2021, the COVID-19 pandemic had infected more than 0.54 million people in Pakistan, resulting in 11,683 deaths.¹ It has severely impacted Pakistan's economy in the last quarter of FY20. Estimated annualized economic growth for FY20 is between -0.4% and -1.3%, driven primarily by contraction in the Industry and Services sectors. Adverse effects of the pandemic, exacerbated by the locust attacks and recent floods – which led to widespread crop damage, food insecurity, and inflationary pressures – could remain damaging in FY21 for Pakistan. The projected GDP growth rate for FY21 varies between 1.33% and -1.4%.

These macroeconomic shifts would push millions of people into poverty and cause a significant rise in unemployment. Poor workers, especially those dependent on a daily wage with no savings, would be faced with a particularly daunting challenge in coping with any possible lockdowns in response to the pandemic. The macroeconomic shifts also pose enormous implications for vulnerable employment and, therefore, for the poor.

Therefore, this Study analyzes the impacts of macroeconomic shifts on microeconomy of poor and ultra-poor households of Pakistan. It also presents potential policy and programmatic changes for governments and social protection programmes, which may be conducive to absorbing impacts of such macroeconomic shifts. The Study closes with programmatic recommendations which can categorically optimize sustainable poverty graduation impacts of the National Poverty Graduation Programme (NPGP).

Methodological Note

Using a three-stage stratified random sampling, we survey 423 poor and ultra-poor households (Beneficiaries of National Poverty Graduation Programme and Benazir Income Support Programme) and conduct 34 Key Informant Interviews (KIIs) and 45 Focus Group Discussions (FGDs) across 16 Union Councils in 8 districts across 4 provinces. To capture differential microeconomic impacts across gender and age, we sample women and men across categories of youth and non-youth adults for KIIs and FGDs. The household survey collects information on key socioeconomic indicators across three time slots: Before COVID-19 (January-March 2020), During COVID-19 (April-July 2020), Relaxation in Lockdown (August-November 2020). This Study develops a micro-econometric simulation/model to quantify the impacts of macroeconomic shifts on poverty, unemployment, and school enrollment.

Microeconomic Analysis: Key Findings

The Study has shown that monthly income has declined by 59% among poor and ultra-poor households during COVID-19 (April-July 2020) in Pakistan among surveyed households. Over 64% decline in monthly income has been observed among daily wage workers during the same time period. The Study shows that average monthly expenditure has declined by 10% among sampled households. Around 62% households reported 'huge shock' to livelihood and 68% of women (versus 61% of men) reported adverse impacts on income. Around 39% households reported their overall wellbeing being negatively affected during COVID-19 (April-July 2020) among surveyed households in Pakistan.

Poor and ultra-poor households report using various coping strategies to smoothen their consumption expenditures in the aftermath of these macroeconomic shifts. To mitigate negative consequences of COVID-19, nearly 76% households bought less

¹ covid.gov.pk. Figures taken on January 31, 2021.

expensive food, nearly 45% shifted their children to less expensive schools, nearly 70% acquired less expensive healthcare services, nearly 24% households reduced their number of meals, and nearly 10% households sold their assets (such as livestock) and used up their savings.

Governmental institutions and non-governmental organizations (NGOs) played pivotal roles in supporting the poor during macroeconomic shocks. Around 81% of our respondent households reported being financially supported by Ehsaas Emergency Cash Program – the largest government-led initiative to provide direct cash of PKR 12,000 per family.² Around 60% of surveyed households expressed satisfaction with the government’s financial support to them to smoothen consumption during COVID-19. Around 51% of surveyed households took loans from friends/relatives and 9% of households reported that they took loans from banks during COVID-19 for consumption smoothening and to absorb macroeconomic shocks due to COVID-19, locust attacks, and floods.

Our multivariate analysis shows that households which received government’s one-time emergency cash support (PKR 12,000) are 15% less likely to report that shocks had affected their livelihood by a great extent, compared to those which did not receive this cash support. Community support (from friends/relatives) is significantly correlated with a 13% reduction in the probability of household livelihood being negatively affected by a great extent due to macroeconomic shifts. Similarly, loan facility is also significantly correlated with a 20% reduction in the probability of household livelihood being negatively affected by a great extent. Paid employees are nearly 43% less likely than unemployed people to experience adverse effects of macroeconomic shifts on their livelihoods.

Macroeconomic Analysis: Impacts of Macroeconomic Shifts

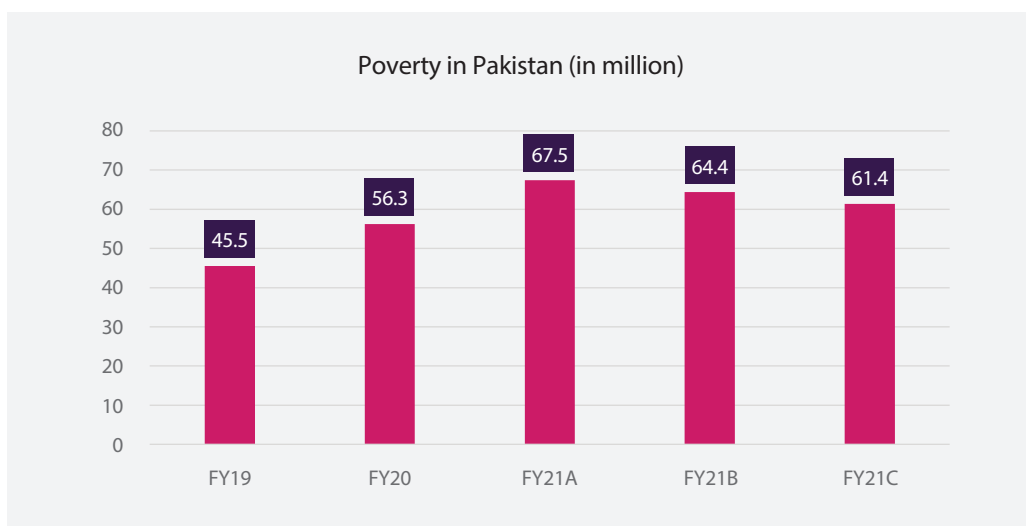
In this Study, we have used a micro-econometric model to simulate the impacts of macroeconomic shifts on poverty, unemployment, and education by considering three projected scenarios: i) No economic recovery; ii) Partial economic recovery, and iii) Full economic recovery.

Impact on Poverty

Around 22% of people in Pakistan live below the poverty line in FY19. Approximately 11% of its total population lives below the poverty line in urban, and nearly 28% in rural areas in FY19. Due to the recession in economy and inflationary shocks along with COVID-19, it is projected that the poverty rate will increase from 22% (baseline poverty of FY19) to 26% in FY20, and 28% to 31% in FY21. Poverty is projected to have increased from 45 million people in FY19 to 56 million people in FY20.

Thus, the projected poverty for FY21 under our 3 projected scenarios is:

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. Projected poverty is 67.5 million people.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. Projected poverty is 64.4 million people.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. Projected poverty is 61.4 million people.



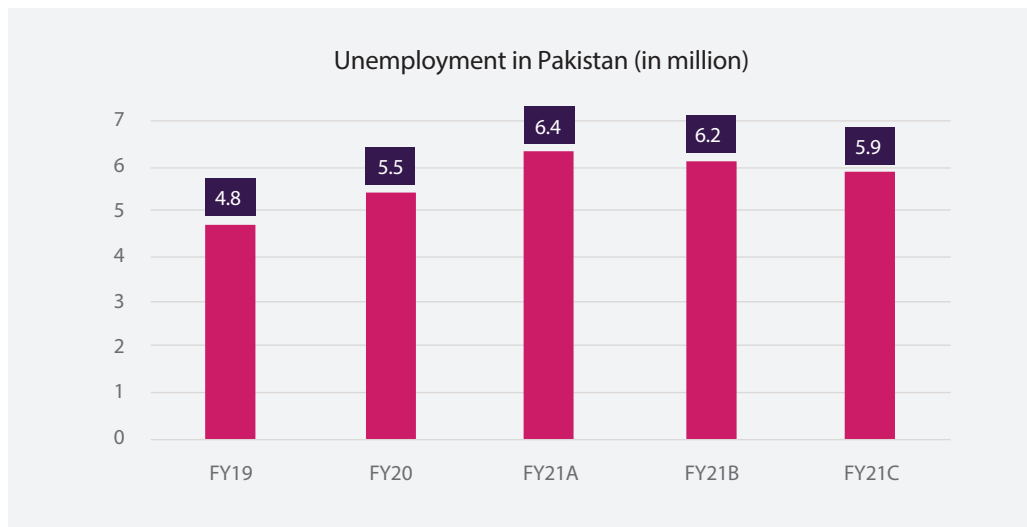
² BISP targeting is family-based; it is possible that there are multiple families in the same household.

Impact on Unemployment

The unemployment rate in Pakistan is around 7.1% in FY19 compared to 5.8% in FY18. It will increase from 7.1% in FY19 to 8.0% in FY20 due to macroeconomic policy shifts resulting from low economic growth and inflationary pressures. A significant increase in unemployment has been noted among the female and youth population in FY20. In FY21, the unemployment rate ranges from 8.5% to 9.1% depending upon the economic recovery situation. It is projected that unemployment will increase from 4.76 million people in FY19 to 5.47 million people in FY20. Projected unemployment in FY21 under our 3 scenarios is:

Projected unemployment in FY21 under our 3 scenarios is:

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. 6.4 million unemployed people.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. 6.2 million unemployed people.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. 5.9 million unemployed people.



Impact on School Enrollment

When considering school closures (due to COVID-caused lockdown), income losses, inflationary pressures, and poverty, FY20 will have around 1.97 million additional school dropouts, apart from existing dropouts.

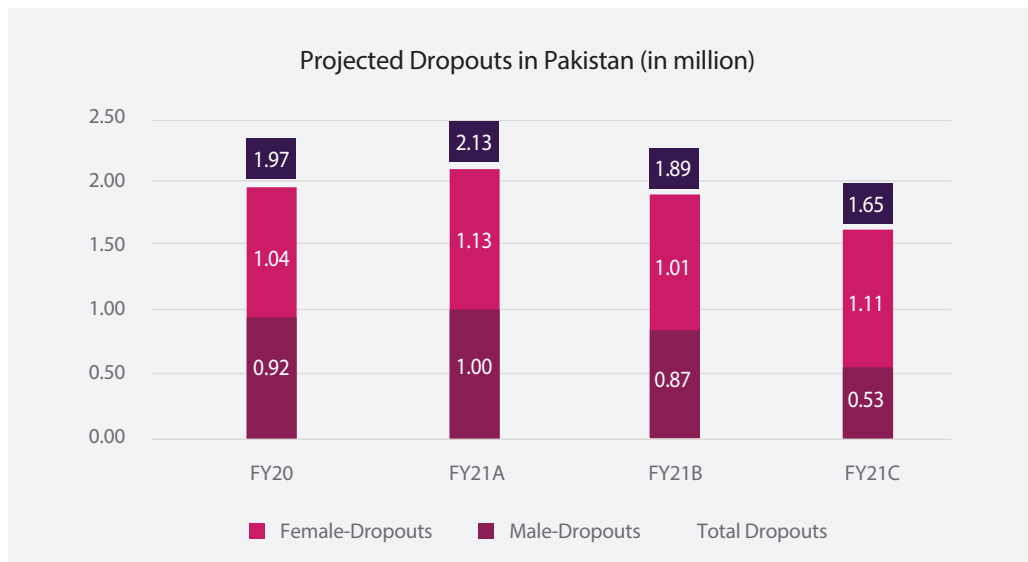
Projected additional school dropouts in FY21 under our 3 scenarios are:

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. 2.13 million additional dropouts.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. 1.89 million additional dropouts.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. 1.65 million additional dropouts.

School dropouts are much higher for primary level classes and among girls in FY20 and FY21.

School closures have shown to erode learning capacity of students, affecting income outcomes in the long run adversely. Estimates show that Learning Adjusted Years of Schooling in Pakistan will decrease by 14.6% (from 4.78 to 4.08 years)³ during FY20.

³ The decrease is for academic year, and data on academic year are available on FY basis so the decrease in learning is on annual basis. This means that Learning Adjusted Years of Schooling in Pakistan will decrease by 14.6% during FY20.



Diluting Impacts of Macroeconomic Shifts: A Policy Framework

Evidence presented above shows that Pakistan's recent macroeconomic shifts have increased poverty, unemployment, and education deprivation. These impacts are more profound on women and youth than on men. A policy framework containing both macro- and micro-levels interventions is proposed to dilute these adverse impacts.

Macro-Level Interventions

A prudent macroeconomy policy environment is required to regain growth and generate employment in the short run. The following interventions can achieve this:

- 1st** The government should increase the level of public investment to stimulate economic growth. This public investment should include the Employment Guarantee Scheme (EGS) provisions to provide guaranteed wage employment for a specified time to every household, whose adult members volunteer to work and which lost a job due to the pandemic.
- 2nd** Government investment in agriculture should be increased to generate economic activities targeted at vulnerable populations. In the short-run, immediate season's crops need to be identified, and farmers should be facilitated categorically to grow those crops. This facilitation can come through easy credit availability on a priority basis through Zarai Taraqati Bank Limited and other commercial banks.
- 3rd** The government should facilitate Small and Medium Enterprises (SMEs) through directed credit schemes and reduction in input costs, mainly by tariff reductions and adjustment facility in utility bills. The government should make it mandatory for commercial banks to lend loans to SMEs.
- 4th** The government should take necessary measures to control inflation below 6% to boost economic activities as inflation below 6% is growth-enhancing in Pakistan.
- 5th** Markets are heavily regulated in Pakistan. This increases the cost of doing business. Being competitive requires lowering the cost of doing business. To facilitate business, measures like reducing documentation, introducing one-window operations, allowing online processes, exempting attestation requirements, must be pursued. On a priority basis, the government should introduce mega reforms, apart from the amnesty scheme, and reduce regulation in the Construction industry to generate economic opportunities.

6th The government should work towards increasing the tax base to finance social protection programs with domestic resources to achieve long term financial stability. Social protection financing should be based on equitable financing relying on fair, sustainable, and diversified taxation systems.

Micro-Level Interventions: Program Level Recommendations for NPGP

Right targeting, transparent beneficiary enrollment, efficient and low-cost service delivery, and long-term financial sustainability are prerequisites to achieving poverty graduation and social development. Two programmatic interventions can enable social protection programs to achieve these prerequisites.

Shock-Adjusted Dynamic Targeting

Social protection programs in Pakistan mainly use static welfare scores to target their beneficiaries. Evidence presented above shows that economic and climatic shocks adversely impact socioeconomic and welfare indicators of households, which then face various shocks, including individual-level (idiosyncratic) and community-level (covariate) shocks. These shocks have more profound adverse impacts on the welfare of the bottom quintile of population, due to their vulnerable income sources and lack of productive assets. Furthermore, during natural shocks (floods, earthquakes, viral attacks, pandemic), a quick assessment is recommended to launch shock-responsive social protection for the poor. Targeting methods should therefore be shock-adjusted to expand social protection, especially during these natural shocks. Social protection programmes like Benazir Income Support Programme (BISP) can use a shock-adjusted proxy means test (PMT) which integrates household exposure to shocks for better targeting. A detailed study is needed to determine welfare loss due to various idiosyncratic and covariate shocks to construct a shock-adjusted targeting method accurately.

Revamping Safety Nets

Moving from direct cash transfers to graduation-based approach: Unconditional Cash Transfers (UCTs) have shown to be not enough to reduce income-related poverty. As a standalone, UCT does not categorically generate livelihoods to sustain improved living conditions beyond the duration of cash transfers. For example, the UCT program by BISP has shown to have no significant impact on reducing poverty. Global experience suggests that cash transfer programs have been more successful and sustainable when combined with complementary, well-sequenced interventions on the uptake of education, health, nutrition, and additional livelihood support for the poor. These holistic interventions enable beneficiaries to move beyond financial dependency and embrace more sustainable livelihoods. Hence, to make poor people economically better off, in addition to an inclusive macroeconomic policy, specifically targeted poverty graduation programs which create sustainable income streams are needed.

A package-based model for better coverage and optimal utilization of resources: Ongoing social security programs such as UCT by BISP generally provide the same financial support across all beneficiaries by assuming similar problems and similar needs of the target group. However, demographic structures and socioeconomic needs differ across households, showing heterogeneity in the needs of the poor. Therefore, a package-based model is more advisable where beneficiaries decide on the social safety package they are given, based on a self-assessment of their needs. Based on the target group's current needs, 4 packages can be considered.

- a) **Employment-Intensive Package:** This package focuses on technical training, financial support to start micro-business, compulsory savings, and insurance coverage. The primary beneficiary is the head of household with a focus on adults. At least 50% support will be for women and especially for young women. As part of this package, unconditional financial support for consumption smoothing can be provided to households for a fixed time.
- b) **Education-Intensive Package:** This package includes free education for all children in the household up until their graduation. The educational expense, along-with a stipend amount for each student, would be paid directly to educational institutions. Key beneficiaries of the program will be children and youth. Overall, priority will be given to female students. For technical skills training, youth and women will be prioritized.
- c) **Health-Intensive Package:** This package includes free health services, both indoor and outdoor, with a focus on women, older people, and people with disabilities. To overcome wasting and stunting, the package also covers children younger than 5. The package includes general health insurance for all, and unconditional financial support for consumption smoothing for a fixed time.

- d) **Food-Intensive Package:** This package includes electronic ration cards to be issued to a primary female beneficiary from the household, for purchase of groceries at different intervals during the month with a fixed amount limit.

Women and Youth Specific Interventions

- a) Women-specific livelihood opportunities should be promoted but by moving away from traditional approaches (which generally include giving them livestock, sewing machines, and kitchen gardening tools). Women should be trained in newer and more value-added fields through women trainers. These fields include home-based business, tourism, hoteling, packaging (mainly vegetables and dairy products), travel service, and selling and servicing of ICT products.
- b) Access of women to potential markets is a huge challenge and needs to be addressed by institutions working on poverty reduction. Finding spaces to offer products to customers physically (since they cannot do online business easily due to accessibility issues) is very costly for women and youth. Special zones should be developed for them at specified accessible locations. Special sale zones can be established at the village level by engaging local youth. These zones can create a link between micro home-based businesses and mainstream urban markets.
- c) Improvement in social skills like communication, marketing, conflict management, and business strategizing, among others, is a significant challenge for poor youth and needs to be addressed with increased priority. Youth should be trained in ICTs and market access skills for long term sustainability of livelihoods [in line with point b].
- d) The cost of starting and running a business is still very high in Pakistan, categorically for the poor. Owing to high input costs and difficulty in locating business space, it becomes cumbersome, especially for poor women, to start a business. This has to be addressed by subsidizing inputs and providing financial support to establish a new business.

Revitalizing Street Economy

Pakistan has a large Street Economy (SE) comprised of micro-enterprises across the country, and mostly in urban areas. These SE micro-enterprises are a part of Pakistan's informal economy which provides employment and livelihood to the poor who have low formal literacy. The informal sector's role is loosely tied and involves businesses which are not registered with the government and/or are not measurable. Thus, the government does not facilitate this sector and often discourages the informal economy. Lack of legal protection, and organizational incoherence have made the street vendor community susceptible to local authorities' frequent eviction campaigns. More vulnerable segments such as women, children, and refugee laborers usually bear a greater burnt of these evictions. NPGP can explore developing a mechanism to support street entrepreneurs to promote the street economy in its target districts. A study may be conducted to identify characteristics of micro-entrepreneurs operating in the SE and identify their categoric, district-wise operational challenges.

Potential Impacts of Proposed Interventions on Poverty and Unemployment

Our proposed pro-poor interventions both at the macro and micro level will potentially dilute the identified impacts of recent macroeconomic policy shifts by causing approximately a 4-percentage point increase in GDP growth rate. Our Econometric Model shows that a 4-percentage point increase in GDP growth rate will

- Create around 1.5 million new jobs
- Reduce unemployment by 1.2 percentage points
- Reduce poverty by 2.5 percentage points

We project that in the medium to long run, these interventions will help break the vicious circle of poverty through the generation of decent employment and diversified income-generating activities.

1 Background and Rationale of Macroeconomy Study

As of January 2021, the COVID-19 pandemic had infected more than 0.54 million people in Pakistan, resulting in 11,683 deaths.⁴ It has severely impacted Pakistan's economy in the last quarter of FY20. Estimated annualized economic growth for FY20 is between -0.4% and -1.3%, driven primarily by a contraction in the Industry and Services sectors. Adverse effects of the pandemic, exacerbated by the locust attacks and recent floods, could remain damaging in FY21. The locust attacks and floods led to widespread crop damage, food insecurity, and inflationary pressures.⁵ The projected GDP growth rate for FY21 varies between 1.33% and -1.4% (Nasir, Khalid, Jalil, Faraz, & Iqbal, 2020). While Pakistan faced double-digit inflation in FY20 due to economic and climatic shocks, the second wave of COVID-19 further increased economic uncertainty (GoP, 2020b; Lakner et al., 2021).

These macroeconomic shifts, caused by COVID-19, floods, and locust attacks, present a substantial decline in GDP with high inflation, and are expected to push millions of people into poverty and cause a significant rise in unemployment (Cuesta & Pico, 2020; Janssens et al., 2021; Liu et al., 2021; Suryahadi, Al Izzati, & Suryadarma, 2020; Valensisi, 2020).⁶ Poor workers, especially those dependent on a daily wage and having no savings, would be faced with a particularly daunting challenge in coping with possible lockdowns in response to the COVID-19 pandemic. Vulnerable employment is around 56% in Pakistan (71% among females; 52% among males) (Iqbal, 2020b).⁷ These macroeconomic shifts pose enormous implications for vulnerable employment and, therefore, categorically for the poor as they constitute a large percentage of those in vulnerable employment.

Various studies have shown that macroeconomic shifts especially due to COVID-19 resulted in a significant increase in global poverty. For example, Cuesta and Pico (2020) show that COVID-19 resulted in a roughly 3 to 9 percentage point increase in headcount poverty (in Columbia). Cuesta and Pico (2020) further indicate that both women and men face similar poverty impacts from the pandemic. Another study shows that in the absence of COVID-responsive social protection, the poverty rate would increase from roughly 17% to 26% in the San Francisco Bay Areas (Martin, Markhvida, Hallegatte, & Walsh, 2020).⁸ Suryahadi et al. (2020) find that the poverty rate will increase between 0.5 to 7 percentage points in Indonesia under different economic growth scenarios. These studies suggest that the COVID-19 pandemic would increase poverty and unemployment due to economic recession and business closures, especially in developing countries.

Pakistan has also witnessed a significant decline in economic activities and business closures during first wave of COVID-19 along with floods and locust attacks.⁹ A recent survey conducted by the Pakistan Bureau of Statistics (PBS) shows that 37% of the working population in Pakistan lost their jobs due to these shocks and around 12% experienced a

Box 1 The Government Response

Besides an amnesty scheme for the Construction sector, the Government of Pakistan announced a comprehensive relief package of PKR 1.2 trillion aimed at mitigating the consequent disruptions in economic activities caused by COVID-19, locust attacks, and floods. Aimed at stimulating the economy, the government has proposed the following measures in its FY21 budget.

- i. Increasing allocation for the Ehsaas Program [financial assistance program for poor implemented by BISP] from PKR 187 billion to PKR 208 billion.
- ii. Allocating PKR 179 billion to provide subsidies in energy, food, and other sectors for vulnerable segments of population.
- iii. Allocating PKR 70 billion for coronavirus mitigation related schemes.
- iv. Reducing policy rate [short-term interest rate, for 2 months, announced by SBP and subsequently used by commercial banks for lending and borrowing] from 13% to 7%.

⁴ covid.gov.pk. Figures taken on January 31, 2021.

⁵ <https://www.worldbank.org/en/country/pakistan/overview> and <http://www.fao.org/pakistan/resources/in-depth/desert-locust-situation-in-pakistan/en/>

⁶ The COVID-induced global new poor are estimated to be 124 million in 2020, and set to rise up to 143-163 million in 2021 under different economic growth scenarios (Lakner et al., 2021).

⁷ Vulnerable employment is measured as the proportion of own-account workers (also including daily wage earners) and unpaid family workers in total employment. Approximate sectoral allocation of vulnerable employment in Pakistan is over 80% in Agriculture; 75% in Wholesale and Retail; over 60% in Real Estate; 50% in Hospitality; and 40% in Transport and Communication.

⁸ The San Francisco Bay Area is a region in Northern California spanning the city of San Francisco and surrounding counties.

⁹ Pakistan was severely hit by monsoon rains and urban flooding during August-September 2020, resulting in 409 deaths and damages across Pakistan, mainly in Sindh and KP including Gilgit-Baltistan and Azad Jammu and Kashmir (NDMA, 2020). The floods have destroyed main crops including cotton, wheat, and chili. The locust attacks adversely damaged crops in Pakistan, mainly in Balochistan, Punjab, and Sindh. FAO estimates show that the losses to agriculture due to these locust attacks is around PKR 205 billion, considering a 15% damage level of the production of wheat, gram, and potato only (FAO, 2020).

reduction in income in Pakistan (GoP, 2021).¹⁰ This implies that half of the working population was adversely affected due to closure of economic activities and lockdown due to COVID-19. At household level, approximately 53% of households at the national level reported reduction in income, either earned or unearned, during COVID-19 (April-July 2020).¹¹ Around 10% of households reported facing severe food insecurity, and 30% of households reported moderate food insecurity, during the first wave of COVID-19 in Pakistan (GoP, 2021).¹²

1.1 Objectives of Study

This Study examines the impacts of macroeconomic shifts due to the COVID-19 pandemic, exacerbated by locust attacks and recent floods, on the microeconomy of poor and ultra-poor households which are targeted as beneficiaries by the Benazir Income Support Program (BISP)¹³ and Pakistan Poverty Alleviation Fund (PPAF)¹⁴ in Pakistan. BISP provides unconditional cash transfers to ultra-poor while PPAF provides Assets and Interest-Free Loans through National Poverty Graduation Program (NPGP) to both ultra-poor and poor households.

The Study measures the microeconomy of poor and ultra-poor households by measuring their income, poverty, employment, and education. It also categorially quantifies the macroeconomic impacts on women and youth among the poor. Further, the Study aims at determining how macroeconomic factors guide HHHs' socioeconomic environments, preferences, and ability to graduate out of poverty through community mobilization, asset transfers, interest free loans, and trainings received under NPGP. Given these analyses, the Study analyzes for and determines the ability of target HHHs to survive macroeconomic shifts and sustainably graduate out of poverty with NPGP intervention.

The Study presents the impacts of macroeconomic policy shifts across the following.

1.1.1 Microeconomic Analysis

- Income and employment
- Socioeconomic wellbeing
- Food consumption, education, and health spending
- Saving and borrowing patterns
- Changes to livelihood strategies
- Future preparedness and role of the state

1.1.2 Macroeconomic Analysis

- Poverty
- Employment
- Education

Box 2 An Overview of National Poverty Graduation Programme (NPGP)¹⁵

NPGP is a flagship initiative of Pakistan Poverty Alleviation Fund (PPAF), contributing to the Ehsaas Amdan Programme, and is supported by the International Fund for Agricultural Development (IFAD) and the Government of Pakistan. The overarching goal of NPGP is to assist the ultra-poor and poor of Pakistan in graduating out of poverty on a sustainable basis. Simultaneously, the Programme aims at improving food security, nutritional status, and resilience to climate change of its beneficiary communities. NPGP has two major components.

1. Poverty Graduation (US\$ 130.8 million): This component mainly focuses on assets creation (or transfer), Interest Free Loan (IFL), and training of assets and IFL beneficiaries.
2. Social Mobilization and Programme Management (US\$ 19.2 million): This component entails formation and training of Community Resource Persons (CRPs), capacity building of Community Institutions (CIs), operating costs of both NPGP and its Partner Organizations (POs), research studies, policy briefs, and research conferences.

NPGP is planned to be implemented in 397 Union Councils of 25 districts across Pakistan with an estimated cost of US\$ 150 million over six years from 2017 to 2023.

¹⁰ PBS figures represent a nationally representative sample.

¹¹ Households have different sources of income including earned income from jobs/businesses and unearned income from remittances, gifts, and assistance.

¹² Food security exists 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 (FAO, 2016). PBS uses 3 scales to measure food security: i) Food Secure ii) Moderate Food Insecure iii) Severe Food Insecure (GoP, 2021).

¹³ <https://bisp.gov.pk>

¹⁴ <http://www.pfaf.org.pk>

¹⁵ As of January 2021.

1.2 Scope of Work (undertaken for the Study)

- a) Analyzing impacts of macroeconomic shifts on costs of basic needs of poor and ultra-poor HHs.
- b) Analyzing impacts of macroeconomic shifts on HHs' socioeconomic wellbeing and financial inclusion at the microeconomic level (these include their access to earning opportunities, wages, patterns of spending on HH goods and services, poverty dynamics, and income disparity, among others).
- c) Analyzing how these macroeconomic shifts impact urban and rural HHs differently.
- d) Creating an econometric simulation/model to serve as a predictor of macroeconomic shifts and their impacts on HH microeconomy.
- e) Exploring impacts of macroeconomic shifts on various gender dynamics and women's wellbeing.
- f) Developing policy and programmatic recommendations for social protection programs to capacitate poor and ultra-poor HHs to absorb macroeconomic shocks and sustainably graduate out of poverty.

2 Evaluation Method for Microeconomic Analysis

This Study adopts a mixed-method approach to assess the impacts of macroeconomic shocks on ultra-poor and poor across various impact areas and their indicators. The microeconomic analysis is based on a Household Survey, Focus Group Discussions (FGDs), and Key Informant Interviews (KIIs).

2.1 Household Survey

This Study uses a three-stage stratified random sampling technique to collect data from NPGP and BISP beneficiary households across Pakistan. We obtained relevant administrative dataset from PPAF to develop a sampling framework. This dataset covers detailed information on targeted beneficiary households along with their Proxy Mean Test (PMT) poverty scores. Based on this administrative data, we devised a three-stage stratified random sampling methodology to select respondent households for the field survey. The stepwise elaboration of the sampling methodology is

a) Stage 1 The primary sampling units are districts covered under NPGP. As mentioned earlier, NPGP covers 25 districts across Pakistan.¹⁶ We purposely select 2 districts from each province based on poverty ranking, geographic diversity, and NPGP target coverage using administrative data.

b) Stage 2 We purposely select 2 Union Councils (UCs), from each selected district, where maximum existing and potential NPGP and/or BISP beneficiary households were present. To capture regional heterogeneities, we ensured that both UCs selected from each district fall in different tehsils.¹⁷

c) Stage 3 From selected UCs, we randomly chose around 40 NPGP and/or BISP beneficiary households for the survey to interview 400 households in eight districts.¹⁸ PPAF provided contacts of NPGP Partner Organizations (POs) with local offices in our sampled districts to obtain administrative data which contains complete address information to enable us to select respondent households randomly. These POs also facilitated the survey teams in locating and conducting surveys with the sampled households. This sampling framework enabled us to survey 423 households across Pakistan, as indicated in Appendix Figure 1.¹⁹

¹⁶ At the time of our HH Survey, NPGP had not yet rolled out its interventions in our sampled districts of Balochistan. Therefore, from Balochistan we surveyed only BISP beneficiaries.

¹⁷ In case where there was only one tehsil in a district, both UCs were selected from the same tehsil. Only one tehsil is sampled from Lower Kohistan (KP) as there is only tehsil present in the district.

¹⁸ We over-sampled the households (600 households) to achieve the desired sample size, in view of a 30% non-response rate. The representative sample is calculated using the formula: $n = \frac{z^2 NP(1-P)}{(e^2(N-1) + z^2 P(1-P))}$ where n represents sample size, N represents NPGP and/or BISP Beneficiary Population Size, P represents Households' Population Proportion, and e represents Margin of Error.

¹⁹ The survey teams interviewed 445 respondents in 16 UCs across eight districts. After reviewing data, we excluded surveys with incomplete information and were left with 423 households in sampled districts.

We developed a survey questionnaire to collect information on family roster, employment, impacts of the pandemic on socioeconomic wellbeing, adaptation strategies used by households to mitigate adverse consequences of macroeconomic shocks, and role of state during these shocks according to households. To determine impacts of macroeconomic shocks on income, expenditures, and other socioeconomic wellbeing indicators, we collected information for these 3 timeslots using the recall method:

- Before COVID-19 (January-March 2020)
- During COVID-19: The 1st Wave and Lockdown (April-July 2020)
- Relaxation in Lockdown (August-November 2020)²⁰

The survey questionnaire was digitized using a survey design application developed by the World Bank.²¹ The Computer-Assisted Personal Interviewing (CAPI) method was used to collect survey data over Android tablets and mobile phones, using online software 'Survey Solution' developed by the World Bank. The CAPI enables real-time data entry. 4 enumerators (2 females and 2 males) along with 1 field supervisor were hired for primary data collection. The supervisor reviewed field activities and data collected, on a daily basis. The supervisor also shared daily progress report with survey teams to ensure data quality and timely completion of field activities.

2.2 Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs)

Primary data for qualitative analysis was collected from the sampled districts through FGDs and KIIs. The primary focus of these discussions and interviews with participants was to understand in greater detail, the impacts of macroeconomic shocks on their livelihoods and their responses to regain/sustain their livelihoods. The research instrument for KIIs was an Interview/Topic Guide containing a list of themes and related questions (Annexure A). The Key Informants (KIs) were local residents from each sampled tehsil and who knew local geography and socioeconomic structures. 34 KIIs were conducted across eight sampled districts in Pakistan.

FGDs were conducted to gather layered data across discussion-oriented themes like collective action, agency, coping mechanism, community response to shocks, and community development. A template containing questions was prepared to structure FGDs around the proposed objectives of the Study (Annexure B). FGDs were conducted separately with women and men and across different age groups as given below:

- a) Youth female (aged 18 to 29)
- b) Youth male (aged 18 to 29)
- c) Adult female (aged 30 or above)
- d) Adult male (aged 30 or above)

45 FGDs were conducted across eight sampled districts in Pakistan, including 9 youth female, 15 youth male, 8 adult female, and 13 adult male FGDs, respectively.

²⁰ The 2nd COVID-19 wave started in Pakistan in late November 2020 with an increase in positivity rate of cases. In early March 2021, the 3rd COVID-19 wave started in major cities of Pakistan. The Government of Pakistan then reimposed few restrictions on business activities and partial closure of schools in few cities across Pakistan.

²¹ Survey design application is an online platform to develop survey questionnaire. For further details, see https://dimewiki.worldbank.org/wiki/Questionnaire_Design. The Survey design application is integrated with Survey Solution for data collection. Survey Solution provides a platform to collect data using Android tablets and mobiles. For further details on use of Survey Solution, see <https://mysurvey.solutions>.

3 Methodological Note on the Macroeconomic Analysis

The data on macroeconomic variables are taken from the Economic Survey of Pakistan, and data on poverty are taken from Iqbal (2020c).²² This Study uses a three-step methodology to calculate projected poverty, unemployment, and school enrollment.

Step 1 We calculate the growth elasticity of poverty, unemployment, and school enrollment. Various studies have used a similar approach to estimate impacts of macroeconomic shifts on poverty and employment (Amjad & Kemal, 1997; Nwosa, 2016). To calculate growth elasticity, the following model is developed:

$$X_t^i = f(MP_t, Z_t) \dots\dots\dots (1)$$

where X_t^i is the dependent variable. i refers to the poverty rate (POV), and unemployment rate (UNE), and total school enrollment (SE). MP captures macroeconomic policies/shifts including inflation and economic growth (overall economic policy), and Z captures other macroeconomic variables (control variables) such as expenditures, food security, and income inequality. We use log transformation and add an error term (ε_t) to capture data's randomness to develop an empirical model (Chandrashekar, Sakthivel, Sampath, & Chittedi, 2018; Chang, 2015; Nawaz, Iqbal, & Anwar, 2014; Shahbaz, Raghutla, Song, Zameer, & Jiao, 2020).

The log-linear transformation of the model is given as:

$$\ln(X_t^i) = \alpha + \beta_i \ln(MP_t) + \delta_i \ln(Z_t) + \varepsilon_t \dots\dots\dots (2)$$

where α is constant and (ε_t) is an error term. β_i are coefficients attached to policy variables and provide direct elasticities. δ_i are coefficients attached with control variables. This Study uses Fully Modified Least Squares (FM-OLS) to estimate the causal relationship of each independent variable including poverty, unemployment, and school enrollment with macroeconomic policy shifts.²³ This model gives the direct elasticity of macroeconomic policy shifts with poverty, unemployment, and school enrollment. This Study uses time-series data on all these variables ranging from FY01 to FY19 to estimate the direct elasticities.²⁴

Step 2 We distribute the aggregate household expenditures shock across each expenditure category while using the household consumption expenditure pattern by utilizing the Household Integrated Economic Survey (HIES) 2015-16 and 2018-19. Aggregate household expenditures shocks are calculated for each quintile (across 20 quintiles) by taking differences in mean expenditures from 2015-16 and 2018-19 using HIES datasets. These differences are subsequently adjusted with GDP growth rates for the same periods. We find that the variations (differences) in expenditures is higher among bottom quintiles than it is in upper quintiles. Earlier, Suryahadi et al. (2020) have used a similar approach to adjust the consumption expenditures across different quintiles to estimate the expected increase in poverty due to a decline in economic growth during the COVID-19 pandemic in Indonesia.

Step 3 We use readjusted per capita household consumption expenditure distribution to measure the projected poverty for FY20 and FY21. To measure unemployment and school enrollment, we use the growth elasticity of unemployment and school enrollment. Further, we adjust the elasticity estimates to capture the effect of the unprecedented closure of economic activities due to the COVID lockdown. The elasticity approach to forecasting has been extensively used in literature, particularly for short-run projections (Iqbal & Javid, 2020; Islam, 2002; Rangarajan, Kaul, & Seema, 2007).

²² Iqbal (2020c) measures poverty using the cost of basic need (CBN) methodology based on HIES conducted by the Pakistan Bureau of Statistics (PBS).

²³ For further details on FM-OLS, see Phillips (1995).

²⁴ Appendix Tables 1 to 3 provide direct elasticities for poverty, unemployment, and school enrollment with respect to economic growth and inflation.

3.1 Projection Scenarios

Various projection scenarios are used to quantify the impacts of macroeconomic policy shifts on the poor's socioeconomic wellbeing. Inflation rates are estimated at 10.7% for FY20 and 9.0% for FY21.²⁵ Considering the estimated GDP growth rate for FY20, which is -1.0%, the projected GDP growth rates under 3 projected scenarios for FY21 are:

- A Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. GDP will grow at -1.3%
- B Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. GDP will grow at 0.1%
- C Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. GDP will grow at 1.3%

4 Microeconomic Analysis: Results and Discussion

This section provides microeconomic analysis based on our HH Surveys, FGDs, and KIs. First, we present the socioeconomic profiles of respondent households who participated in the survey. Then, we present survey findings on impacts of macroeconomic shocks on microeconomy of these households. This section also presents adaptation measures taken by the households to cope with these shocks. We close the section with a discussion on the role of state and other entities in supporting these households during the shocks.

4.1 Socioeconomic Profile

The national average household size is 7.7 members among our surveyed households (HHs). Further analysis establishes that differences exist in HH size among provinces. The average HH size is 8.6 members in KP, 8.1 members in Sindh, 7.2 members in Punjab, and 6.3 members in Balochistan. The head of HH's average age is 47 years across Pakistan, with the lowest age in Punjab (45 years) and the highest age in Sindh (50 years). Around 97% heads of our surveyed HHs are married.

Table 1 Household (HH) Demographic Characteristics

Indicators	Punjab	KPK	Balochistan	Sindh	Pakistan
HH Size (Average)	7.2	8.6	6.3	8.1	7.7
Gender Composition					
Male	50.3%	56.5%	48.6%	51.0%	52.0%
Female	49.7%	43.5%	51.4%	49.0%	48.0%
Age of HH Head (Average)	44.9	47.0	45.4	49.8	46.9
Married HH Heads	98.0%	98.0%	99.0%	92.5%	96.8%

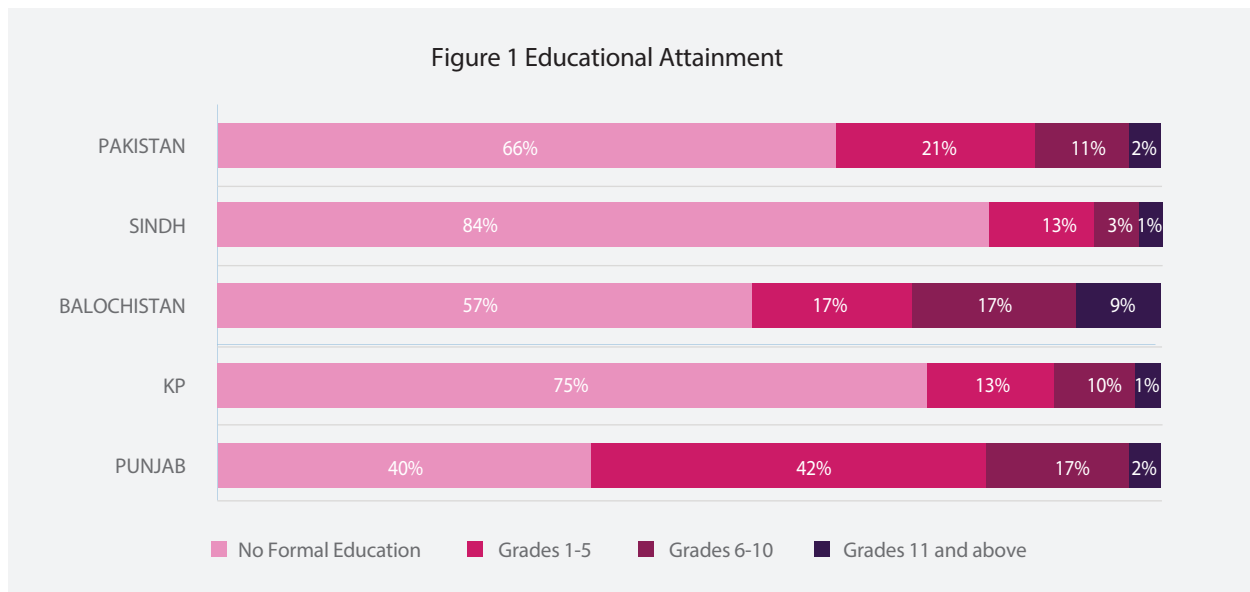
Source: Author's Formulation

Around 66% of surveyed individuals have no formal education, followed by 21% individuals who have primary education (Grades 1-5), and nearly 11% individuals with Grades 6-10 education.²⁶ A small portion of the surveyed population (2.5%) had Grade 11 and above education (Figure 1).²⁷

²⁵ Based on State Bank of Pakistan (SBP) estimates.

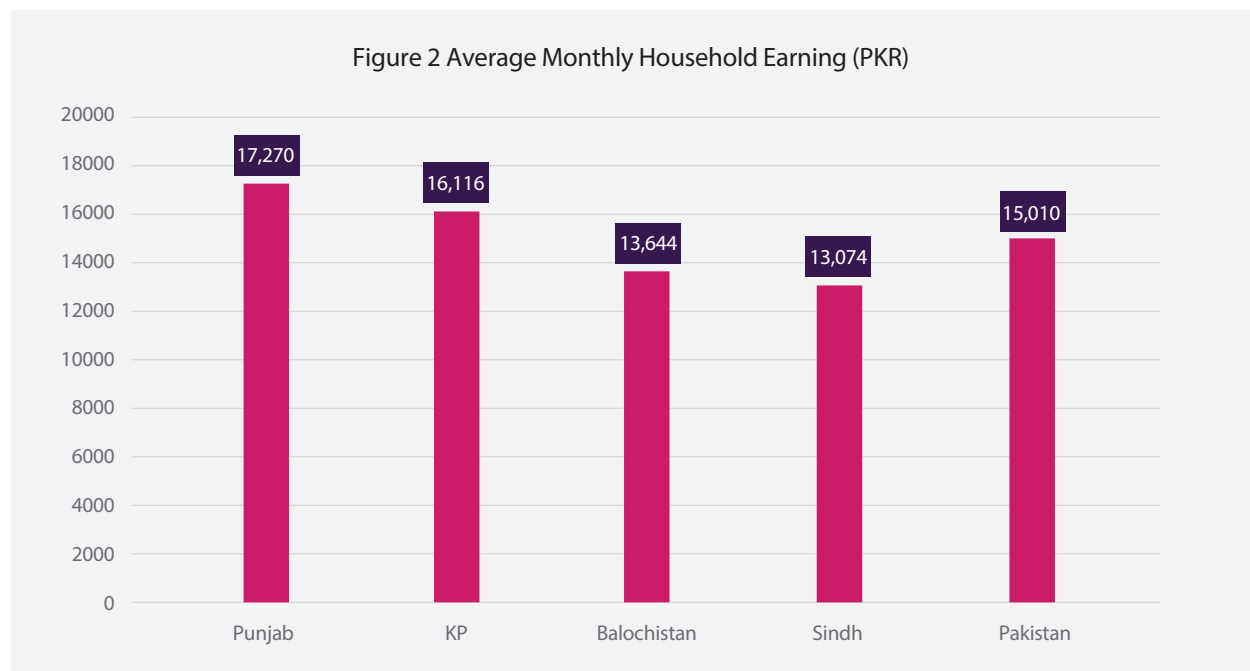
²⁶ 'No formal education' means the individual has never enrolled in formal school. Education from madrasa is considered part of 'no formal education'. Information on educational attainment is recorded for all individual age 5 and above.

²⁷ We collected information both at individual (all household members) and household (aggregate at household) levels during field survey. Figure 1 (educational attainment) is based on individual level data, while Figure 2 (average monthly household earning) is based on household level information.



Source: Author's Formulation

Figure 2 presents the average monthly income of households both at national and provincial levels. The average income earned by our surveyed households is PKR 15,010 per month. The highest average monthly income is observed in Punjab (PKR 17,270) and the lowest average monthly income in Sindh (PKR 13,074).



Source: Author's Formulation

Around 50% of HH members aged 10 years and above are engaged in some level of economic activity among surveyed households. This includes both paid and non-paid employments, such as contributing family workers.²⁸ The employment rates are highest in Punjab (72%) and lowest in Sindh (32%). Table 2 presents the type of employment among employed members of households. It is observed that daily wage workers and contributing family workers are two major employment types. Among employed members, around 37% members are engaged as daily wage workers at a national level among our surveyed households. The share of daily wage workers is highest in Sindh (52%), followed by Balochistan (37%), KP (35%), and Punjab (28%). At a national level, a small portion of this labor force (6.6%) is self-employed (doing their own business). The self-employment share is highest in Sindh, followed by Punjab, Balochistan, and then KP among surveyed households.

²⁸ Contributing Family Worker (Unpaid Family Worker) is a member of the family who works for the family enterprise without being paid. Although they are not paid, their efforts result in an increase in the household income therefore they are considered employed persons (GoP, 2020c).

Table 2 Employment Status and Type of Employment

Employment Status	Punjab	KP	Balochistan	Sindh	Pakistan
Employed	71.8%	48.8%	58.8%	31.9%	50.0%
Type of Employment					
Agriculture and Livestock	2.2	6.6	2.6	16.1	6.4
Daily Wage Workers	28.0	34.9	37.3	52.3	36.8
Paid Employees	11.9	7.4	12.4	6.9	9.7
Own Business/Work	8.6	2.6	3.9	10.9	6.6
Contributing Family Worker	49.3	48.5	43.8	13.8	40.5

Source: Author's Formulation

Table 3 presents the socio-demographic characteristics of individuals who participated in FGDs. For the FGDs, four different groups were defined based on gender and age dimensions (as mentioned in the previous section). Average age of female youth group participants is 24 years, and of male youth group participants is 25 years. Average age of female adult group participants is 39 years, and of male adult group participants is 42 years. Around 68% of female youth participants are married, while over 49% of male youth participants are married. Among adult groups, 100% of female participants are married, while 90% of male participants are married. More than 84% of the female adults have no formal education, while only 54% of the male adults have no formal education. Around 90% of female members, from both youth and adult groups, are engaged in economic activities (Table 3).

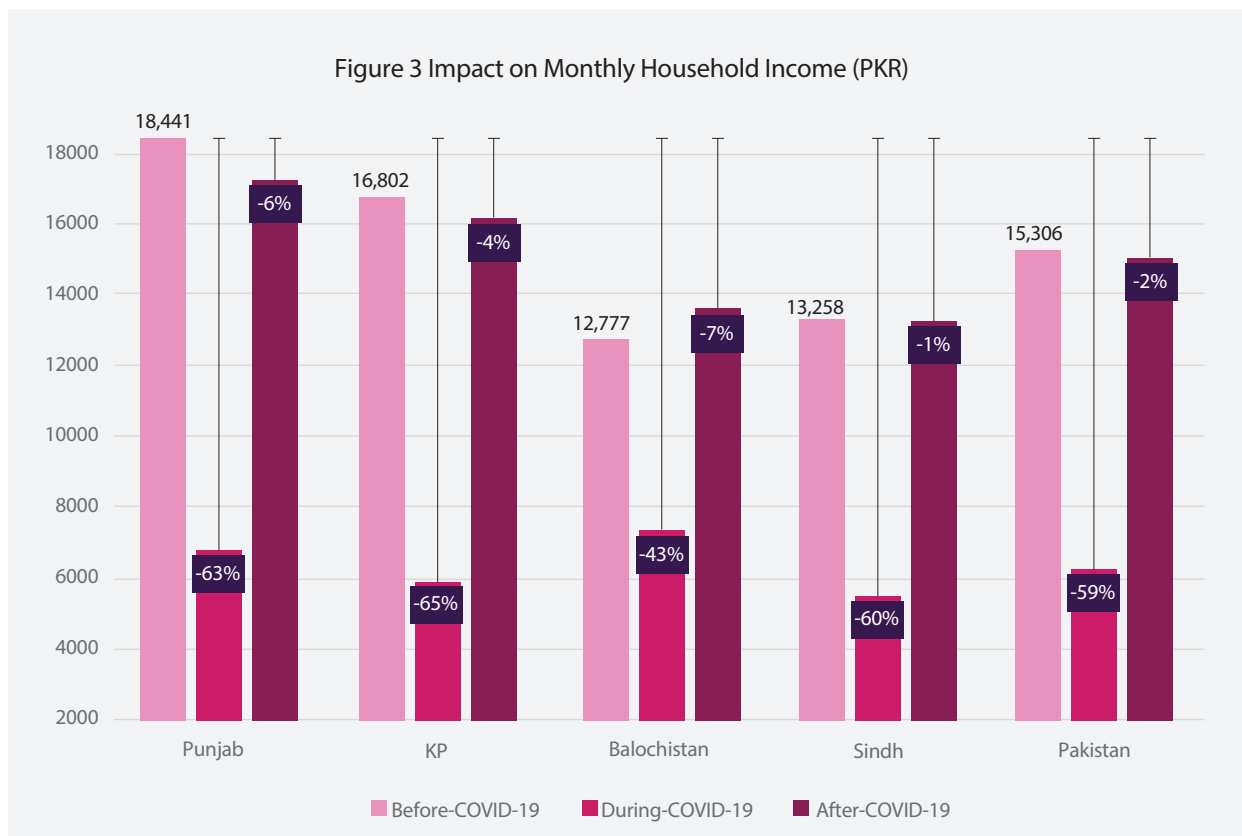
Table 3 Socio-Demographic Profile of FGD Participants

Indicators	Female-Youth	Male-Youth	Female-Adult	Male-Adult
Mean Age of Participants	24	25	39	42
Marital Status (Married)	6.8%	49%	100%	90%
Average Number of Participants	5	5	5	5
Educational Attainment				
No Formal Education	50%	35.1%	84.4%	54.0%
Grade 1-5	18.4%	12.3%	3.1%	8.0%
Grade 6-10	10.5%	17.5%	3.1%	10.0%
Grade 11 & Above	21.1%	35.1%	9.4%	28.0%
Employment Status				
Employed	90.3%	92.9%	90.6%	71.4%
Type of Employment				
Agriculture and Livestock	0.0	15.4	13.8	6.7
Daily Wage Workers	10.7	48.7	3.5	63.3
Paid Employees	10.7	15.4	0.0	13.3
Own Business/Work	3.6	20.5	10.3	16.7
Contributing Family Worker	75.0	0.0	72.4	0.0

Source: Author's Formulation

4.2 Impact on Monthly Income

Figure 3 presents the impact of macroeconomic shocks on the average monthly income at national and provincial levels for our three different time slots, as mentioned above. The average monthly income was PKR 15,306 among surveyed households at the national level before COVID-19 pandemic (that is, January-March 2020).²⁹ Around 59% decline is noted in monthly income nationally during COVID-19 due to pandemic, floods, and locusts.³⁰ A similar decrease has been observed across provinces. The maximum fall in monthly income during COVID-19 (lockdown) has been in KP, followed by Punjab, Sindh, and Balochistan. During this lockdown, the income of daily wage workers has fallen by 64% (Appendix Table 4).³¹ Figure 1 shows that lockdown and other shocks leave adverse impacts on the average monthly income of the poor and ultra-poor households in Pakistan. Nonetheless, as lockdown restrictions are relatively released, the rise in average monthly income is visible, which is still slightly lower than pre-pandemic income levels (Figure 3).



Source: Author's Formulation

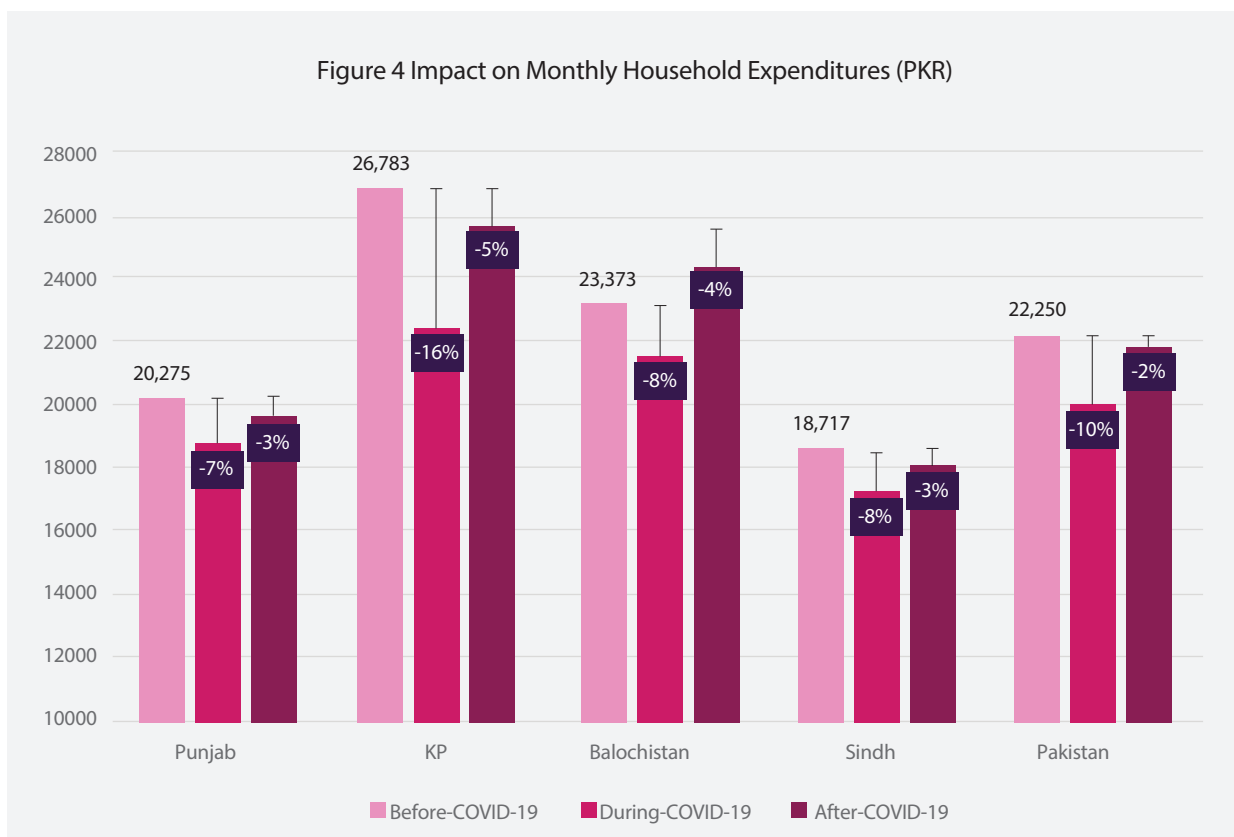
4.3 Impact on Household Expenditures

Figure 4 presents average household expenditures at national and provincial levels for our three different time slots as mentioned above. Around 10% decline is noted in overall household expenditures level during COVID-19 (lockdown) at national level. Household expenditures have gone down during COVID-19, and then increased in the post-COVID-19 scenario (compared to the during COVID-19 scenario) in all four provinces. The fall in expenditures has been the sharpest in KP, followed by both Balochistan and Sindh, and then Punjab, respectively (Figure 4).

²⁹ This income is comparable with the income reported by the HIES (2018-19) for the bottom quintile (poorest) in Pakistan. Each quintile contains 20% of the total population. The bottom quintile contains lowest 20% of the population, and the fifth quintile contains richest 20% of the population.

³⁰ Percentage change in income during COVID-19 is calculated using income reported before COVID-19 (January-March 2020) and income reported during COVID-19 (April-July 2020). Percentage change in income after COVID-19 is calculated using income reported during COVID-19 (April-July 2020) and after COVID-19 (August-November 2020). PBS has also used similar method to calculate income changes during COVID-19 and after COVID-19 (GoP, 2021).

³¹ Especially for daily wage workers who do not own any livestock.



Source: Author's Formulation

Table 4 presents per capita household expenditures (expenditures are adjusted by household size) on food, education, and health before, during, and after COVID-19 among sampled households at national and provincial levels. Table 4 shows that per capita expenditure has declined by around 8% during COVID-19 (compared to before-COVID levels) among poor and ultra-poor in Pakistan among surveyed households.³² The findings reveal a significant increase in per capita expenditures nationally in the after COVID-19 scenario. The same pattern has been observed across all provinces. Table 4 shows that per capita expenditure on food has declined by 7% during COVID-19. Per capita expenditure on education has declined by 71% during the same period. Similarly, per capita health expenditure has declined by 17% among surveyed households during COVID-19. There is a significant recovery in per capita expenditures on food, education, and health categories after relaxation in lockdown (after-COVID-19) compared to during COVID-19 situation (Table 4).

Table 4 Per Capita Expenditure Changes across Different Categories

	Punjab	KP	Balochistan	Sindh	Pakistan
Total					
Before COVID-19	3115	3728	4998	2868	3666
During COVID-19	2898	3119	4412	3071	3369
After COVID-19	3015	3557	5102	2753	3595
Change during COVID-19	-7%	-16%	-12%	7%	-8%
Change after COVID-19	-3%	-5%	2%	-4%	-2%
Food					
Before COVID-19	1816	2486	2977	1700	2238
During COVID-19	1701	2346	2908	1396	2079
After COVID-19	1798	2679	3105	1556	2275

³² The overall monthly household expenditures decline is 10% (as given in Figure 4) while per capita household expenditure decline is 8% (as given in Table 4) during COVID-19 (April-July 2022) compared to before COVID-19 situation. This reflects that family composition (that is, family size) plays an important role in determining income changes.

	Punjab	KP	Balochistan	Sindh	Pakistan
Total					
Change during COVID-19	-6%	-6%	-2%	-18%	-7%
Change after COVID-19	-1%	8%	4%	-8%	2%
Education					
Before COVID-19	495	123	355	62	257
During COVID-19	150	10	75	61	74
After COVID-19	515	114	379	65	266
Change during COVID-19	-70%	-92%	-79%	-2%	-71%
Change after COVID-19	4%	-7%	7%	4%	4%
Health					
Before COVID-19	413	508	627	350	473
During COVID-19	441	493	431	204	390
After COVID-19	456	481	608	280	454
Change during COVID-19	7%	-3%	-31%	-42%	-17%
Change after COVID-19	10%	-5%	-3%	-20%	-4%
Others					
Before COVID-19	391	610	1040	756	699
During COVID-19	606	270	997	1410	826
After COVID-19	245	284	1009	852	599
Change during COVID-19	55%	-56%	-4%	87%	18%
Change after COVID-19	-37%	-53%	-3%	13%	-14%

Source: Author's Formulation

Note: Percentage change in income during COVID-19 is calculated using income reported before COVID-19 (January-March 2020) and income reported during COVID-19 (April-July 2020). Percentage change in income after COVID-19 is calculated using income reported during COVID-19 (April-July 2020) and after COVID-19 (August-November 2020).

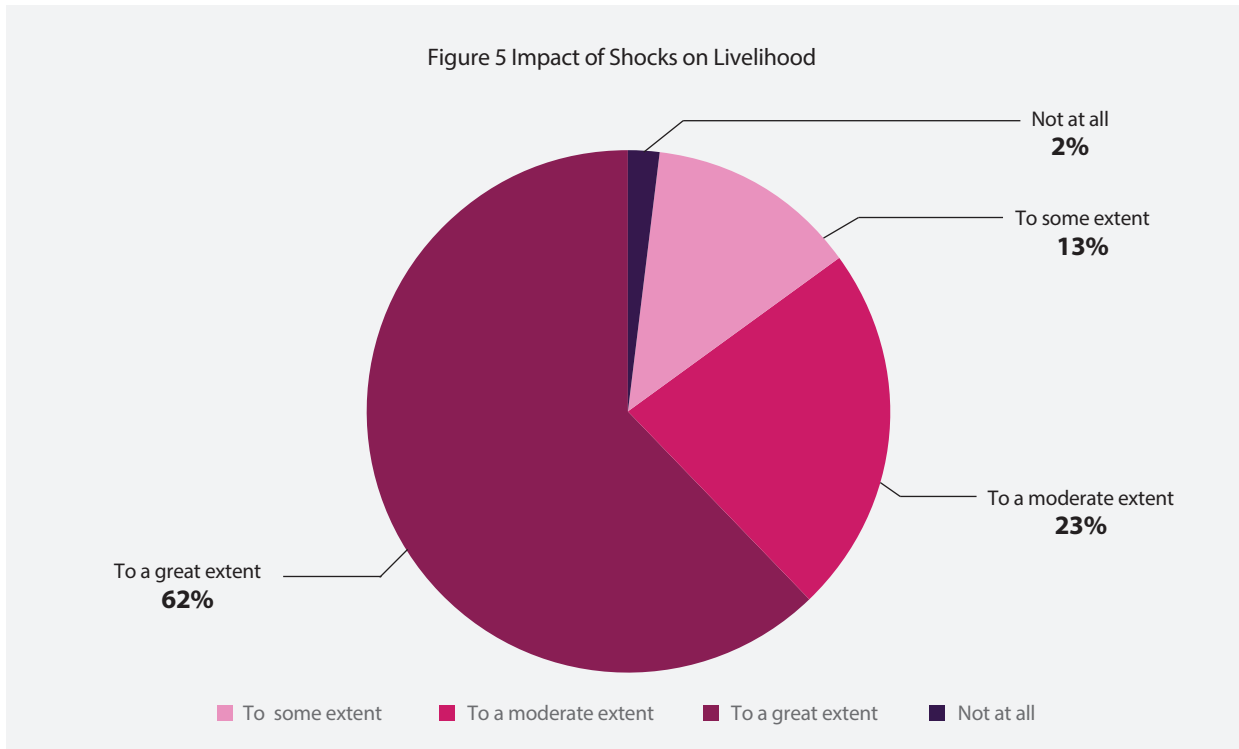
4.4 Macroeconomic Shocks and their Socioeconomic Effects

This sub-section presents findings on perceptions of the respondent households regarding the impact of macroeconomic shocks on their livelihood, employment, and overall wellbeing. Gender perspectives are also discussed in this section.

4.4.1. Impact on Livelihood

Figure 5 presents perceived effects of the macroeconomic shocks on livelihood opportunities available to surveyed households. Around 62% households respond with the 'great extent' option, implying that the macroeconomic shocks have impacted them to a great extent. 23% households respond with the 'moderate extent' option, and 13% households respond with 'some extent'.³³

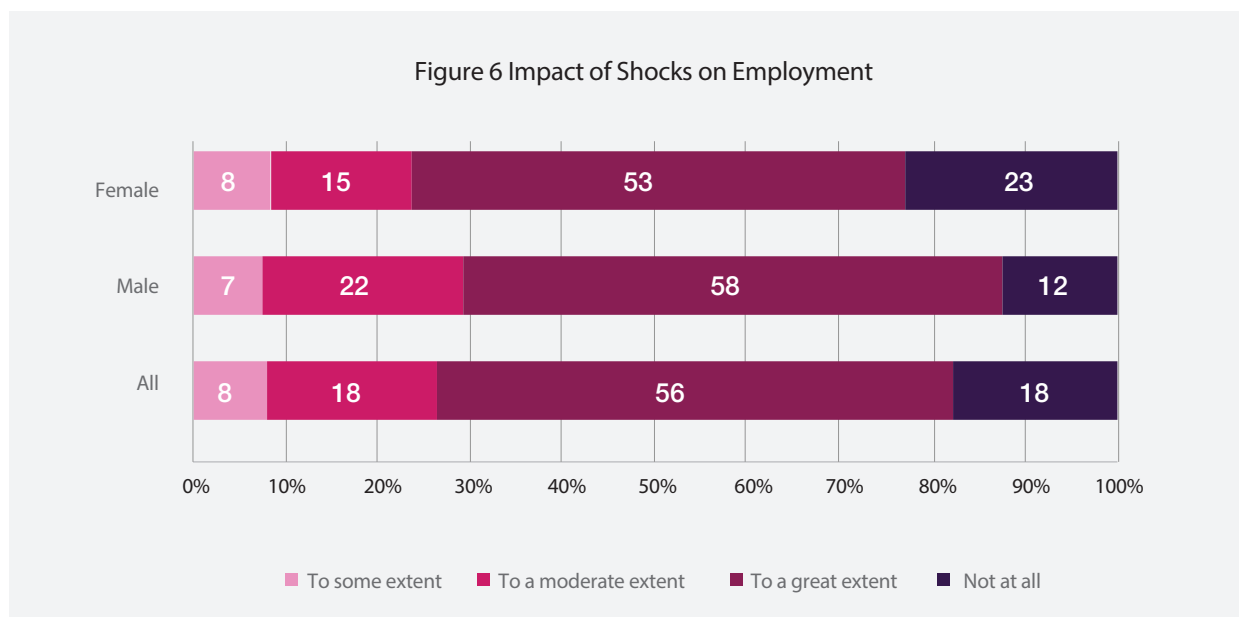
³³ The intensity of impacts on livelihood due to macroeconomic shocks is measured using Likert Scale. 'To some extent' represents marginal impact on livelihood and 'to a great extent' represents severe impact.



Source: Author's Formulation

4.4.2 Impact on Employment and Income

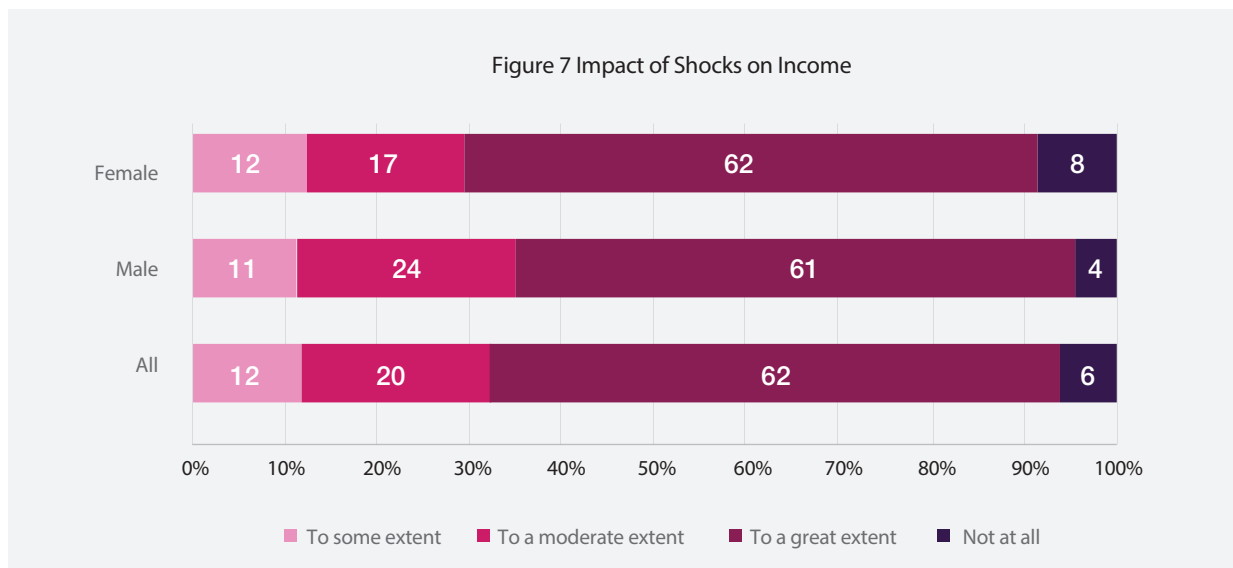
Figure 6 presents the perceived impacts of macroeconomic shocks on employment across the whole sample as well as across genders among surveyed households. Around 82% surveyed households documented that macroeconomic shocks impacted their employment, ranging from minor impact (on 8%) to moderate impact (on 18%) and severe impact (on 56%).³⁴ Employment of both women and men is affected by a great extent due to lockdown during COVID-19. Percentages of this impact are comparable for women and men (53% for women; 58% for men).



Source: Author's Formulation

³⁴ The intensity of impacts on employment due to shocks is measured using Likert Scale. 'To some extent' represents marginal impact on employment and 'to a great extent' represents severe impact.

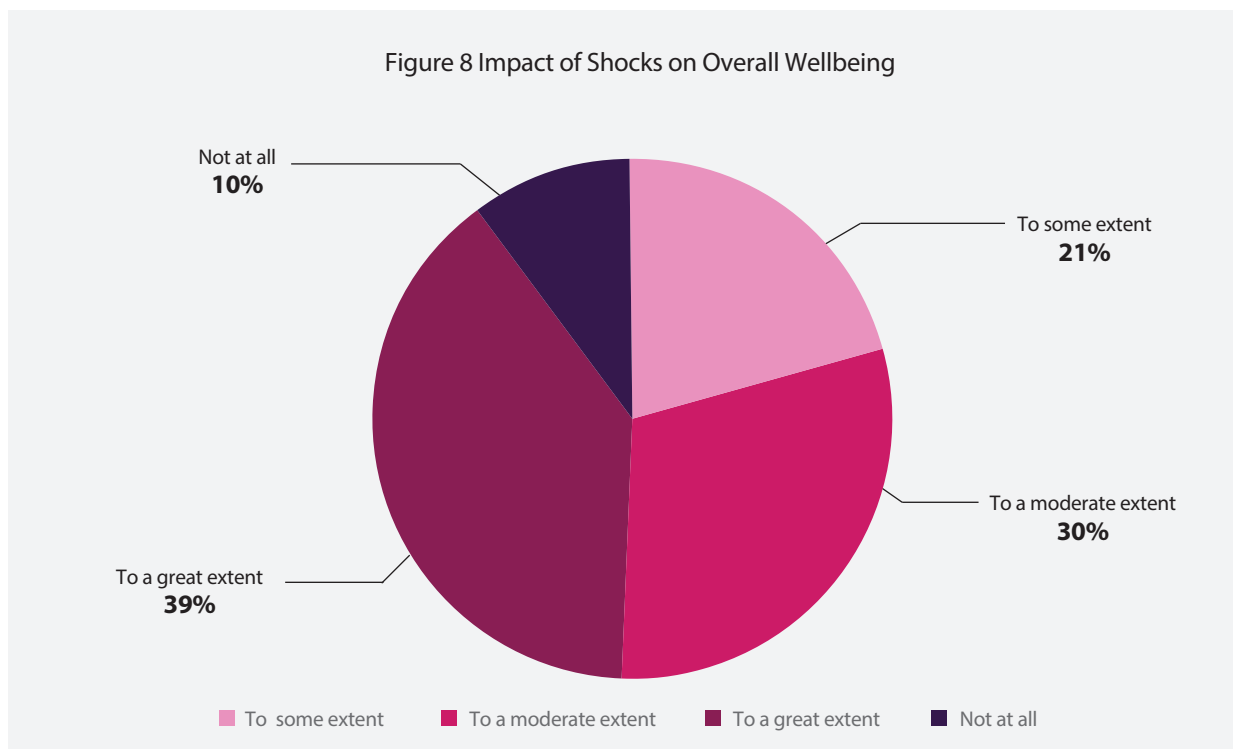
Figure 7 presents the perceived impacts of macroeconomic shocks on income across three levels, namely 'to some extent', 'to a moderate extent' and 'to a great extent' among surveyed households during COVID-19. Figure 7 shows that 62% of households reported that their income is affected by a great extent due to shocks. However, as compared to men, more women (62%) reported that their income had been adversely impacted by the economic shocks than did men during COVID-19 due to macroeconomic shocks (61%) (Figure 7).



Source: Author's Formulation

4.4.3 Impact on Overall Wellbeing

Figure 8 presents perceived impacts of macroeconomic shocks on overall wellbeing of the households among sampled households. Around 39% of surveyed households reported that their overall wellbeing had been impacted to a great extent as a result of recent macroeconomic shocks. 30% of households reported their overall wellbeing being moderately impacted and 21% reported experiencing impacts to only some extent owing to macroeconomic shocks (Figure 8). Only 10% of surveyed households think their overall wellbeing has not been impacted by these shocks at all.



Source: Author's Formulation

Box 3 Women at the Face of Adversity in COVID-19

Macroeconomic shocks have adversely impacted socioeconomic wellbeing of women:

The shock has adversely impacted women, particularly the ones who lack facilities and access to information. They also lack opportunities and hence lag behind. The pandemic has shifted office work to home through an online system. Those who had access to internet have somewhat managed to secure the jobs but those working in other fields were deprived of jobs because they lack the skills to use technology. The shock has affected female employment rate. Female adults are born into a conservative social setting which creates hurdles in their employability.

(KII, UC: Kot Sai Singh; District: Jhang)

Similarly, a conversational excerpt from an FGD conducted with female participants (age; 18-29) in UC Pir Abdur Rehman in Ahmed Pur Sail, Jhang reverberated:

Participant 1: *“Yes, female youth face more problems than men do when it comes to securing employment. It is simply because we are more sensitive to shocks than are men of any age. Corona has badly affected our education, we are socially disconnected, we are relegated to domestic spheres...*

Participant 2: *And why aren't you bringing in the social problems?*

Moderator: *Such as?*

Participant 2: *Abuse, calling out for ruining cultural values, going against religious sentiment, harassment, all of which push us towards mental illness.*

The pandemic has affected women on four fronts: (i) their access to education was already difficult due to social conservatism and the pandemic has created further bottlenecks, (ii) the employment for women who are informally employed is in serious jeopardy, (iii) those who lack technological prowess are vulnerable to lose jobs including those who do not have frequent access to internet, and (iv) being confined within domesticity, exposes women to mental illness. Similar views were resonated by a participant in an FGD, as:

Initiatives? Which ones? Women in our community are not equally treated like men. They are always paid less. There are very few opportunities available for them. This has been the case since the beginning... Corona is just the extension of widening inequalities which already exist in many forms in our community.

(FGD, above 29 years, Pismi Shumali, Gwader)

The findings of the FGD conducted in the same UC with females of age 18-29 are not any different.

Yes, the women in our society succumb to social problems including unemployment, discrimination, unequal opportunities... Women are always paid lesser than the men on the same posts in the same departments.

FGDs conducted in UCs of Sindh and KP also corroborate similar narratives of gendered dimension of COVID-19, confinement of women in domestic domains, lack of access to technological, educational, and informational sources, and female unemployment.

4.5 Shocks and Adaptation Measures

The poor and ultra-poor households we surveyed adopted various measures to cope with the macroeconomic shocks which resulted in massive income decline as reported above.

To mitigate the negative consequences of COVID-19 for example, nearly 76% households reported buying less expensive food and around 24% households also reduced their number of daily meals. Around 18% of sampled households reported that they stopped children from going to school during COVID-19 and 45% reported shifting their children to less expensive schools. Approximately 70% reported acquiring less expensive healthcare services, compared to pre-COVID baselines and 9% reported purchasing cheaper medicine. Furthermore, 21% of respondent households reported that they have avoided medical treatment during COVID-19. Approximately 10% households reported having sold their assets such as livestock and having used their savings to absorb the macroeconomic shocks.

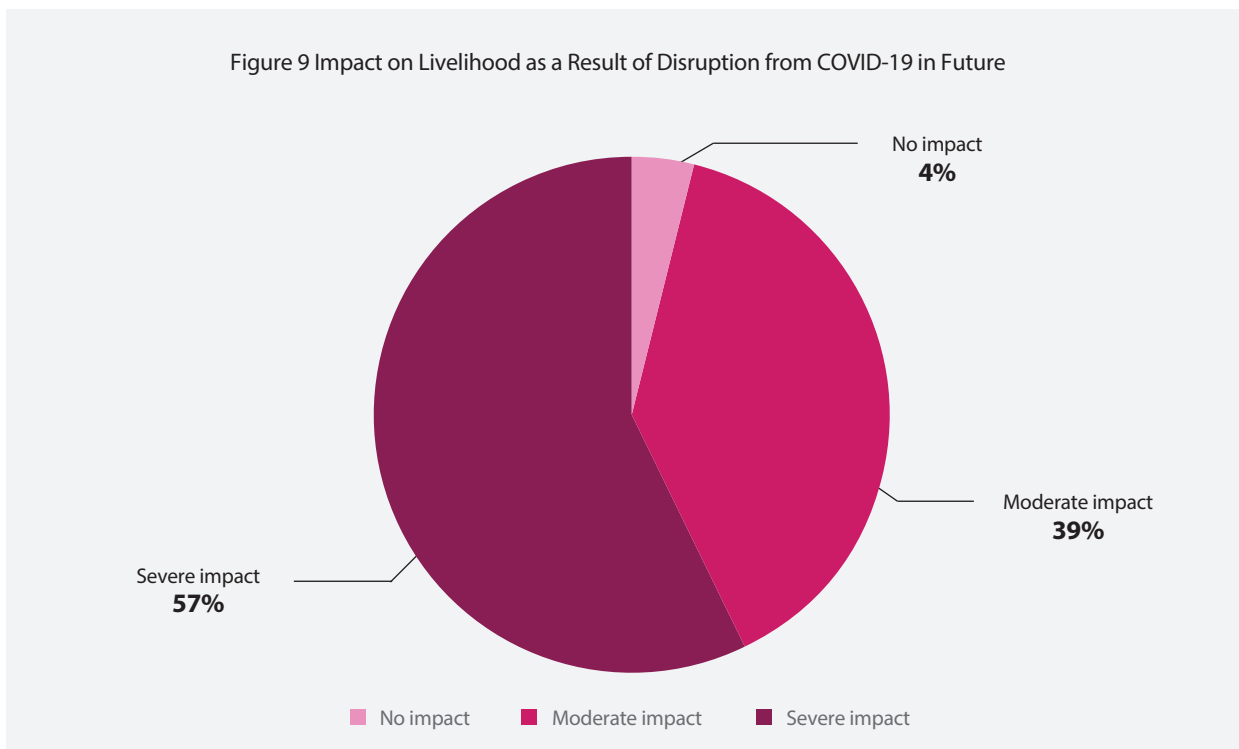
Table 5 Coping Strategies During Macroeconomic Shocks

	Share (%)
Food Expenditures	
Bought less expensive food	75.6
Reduced number of daily meals	24.4
Education Expenditures	
Moved children to less expensive schools	45.4
Stopped children from going to school	18.1
Health Expenditures	
Opted for less expensive health service	70.0
Purchased cheaper medicines	9.0
Avoided treatment	21.0

Source: Author's Formulation

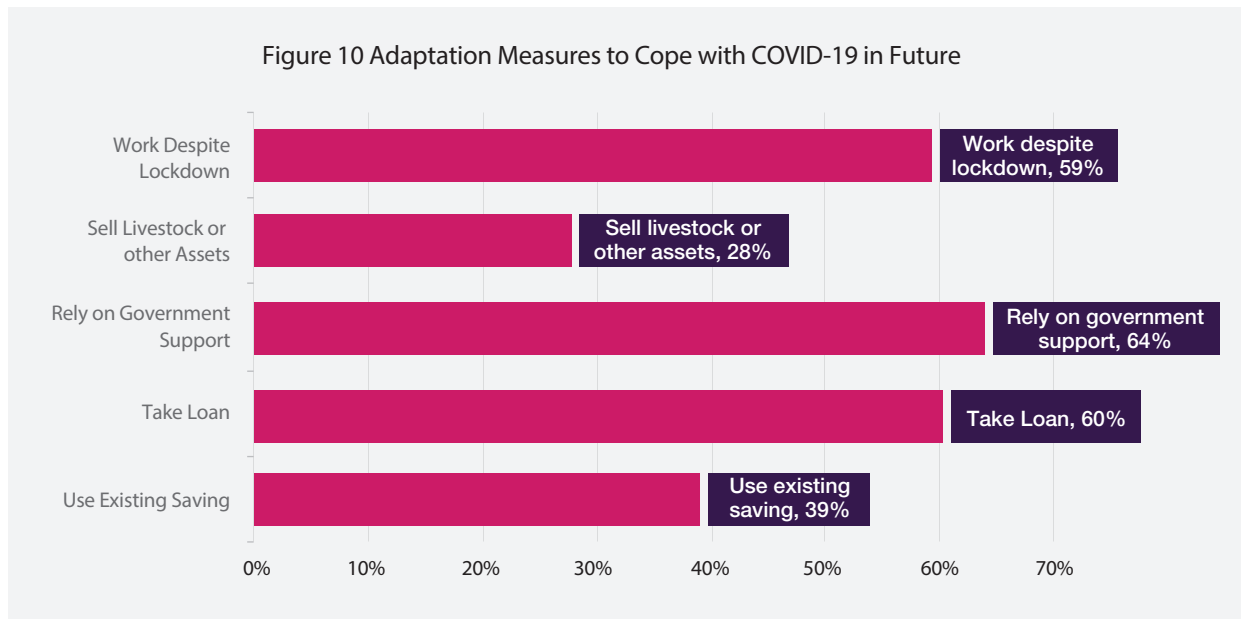
4.6 Macroeconomic Shocks and Future Adaptation Plan

In view of the start of second wave of COVID-19 (from December 2020 onward) and the possibility of subsequent lockdown and closure of economic activities, we assessed the likely impacts perceived by households of future shocks on the livelihoods. Figure 9 shows that around 57% households reported that they perceived severe impact on their livelihoods due to second wave of COVID-19 and other macroeconomic shocks in future (if happened), while 39% reported moderate effects, and only 4% reported expecting no impact. This explains that our sampled group (poor and ultra-poor) is vulnerable to macroeconomic shocks due to their weak financial position, limited employment opportunities, and limited livelihood diversity.



Source: Author's Formulation

Further, we gather information on future coping strategies of households to respond to the expected income decline (if occurred) due to macroeconomic shocks, resulting from closure of economic activities due to lockdown in future. The respondent households mentioned multiple adaptive measures to cope with future expected income losses. Most importantly, 59% of respondents mentioned that they will continue to look for work to earn livelihood, despite the fear of COVID-19 pandemic. This implies that the respondent group (poor and ultra-poor) does not have any saving or other financial support to meet future consumption needs. They prefer work over health to support family needs during shocks. Around 64% of respondent households will rely on government support in the form of social assistance. Around 60% of households will take loans and 39% will also depend on existing savings. Around 28% of households reported that they will sell their livestock and assets to cope with income decline, resulting from similar macroeconomic shocks in future.



Source: Author's Formulation

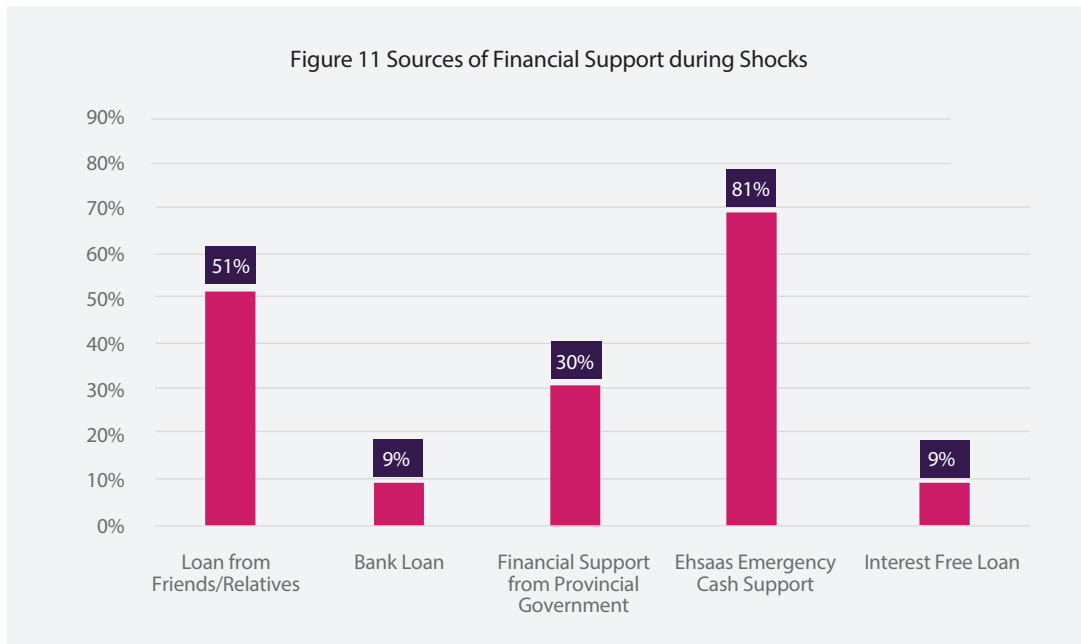
4.7 Government and Non-Governmental Support

The government institutions and non-governmental organizations (NGOs) play pivotal role in supporting the poor and ultra-poor during various socioeconomic crisis (Iqbal, 2020b; Loayza & Pennings, 2020). The Government of Pakistan has expanded the direct cash transfers scheme to support the poor and ultra-poor during COVID-19 lockdown, floods, and locust attacks (GoP, 2020b). Besides the government, various financial institutions extended interest-free loans to support a speedy socioeconomic recovery.³⁵ Our surveyed households have shown to receive financial support from both government and non-government institutions to meet financing needs during COVID-19.

Figure 11 shows that around 81% of respondent households reported that they were financially supported by government's Ehsaas Emergency Cash Program – the largest government-led initiative to provide direct cash of PKR 12,000 per family. This scheme was part of the ongoing unconditional cash transfers (UCT) program implemented by the Benazir Income Support Programme (BISP).³⁶ Around 60% of respondent households stated satisfaction with the government's financial support to them during COVID-19. Approximately 51% respondent households mentioned that they took loans from friends/relatives, 9% took loan from banks, and 9% availed interest free loan facility to fulfill financial needs to absorb the macroeconomic shocks.

³⁵ For example, the Prime Minister Interest Free Loan (PM-IFL) programme for poverty graduation executed by PPAF.

³⁶ BISP, the government's largest cash transfers programme, runs national cash transfers programme since 2008. BISP provides PKR 6,000 per quarter to over 5 million eligible families (ultra-poor) on regular basis. During COVID, government increased the tranche amount from PKR 6,000 to PKR 12,000 for one quarter. Apart from existing BISP beneficiaries, BISP also extended financial support of PKR 12,000 to poor families, targeted through National Socioeconomic Registry (NSER) data.



Source: Author's Formulation

Box 4 Efficacy of Interventions to Support Women during Pandemic

Speaking about efficacy of social protection programmes, one female respondent from youth (aged 18-19) FGD in UC Gandawa, District Gwadar asserted:

Participant 1: *In our community, women do not go beyond domestic work. There are a few women who work on agricultural lands along with their husbands. There is a local NGO which is extending credits to deserving women. We secured those amounts and handed them over to our men to meet household needs. Those who received monetary help from local NGOs were also deserving recipients but there has been no such timely intervention from the Government of Pakistan. Till date, I have not observed any state or non-governmental intervention when it comes to healthcare during the pandemic.*

Supporting her point, another respondent said:

Participant 2: *It is futile to expect anything from the government. Even before the outbreak of this virus, inflation ceased consumption and savings of the poor. We were already suffering and now this pandemic has snatched livelihoods from us. There is a lot a State can do in this situation.*

Speaking on the question of interventionist policies, a female participant from youth FGD in UC Chaubara, District Layyah shared:

Cultural boundaries and social forces already restrict our survival options. No relief has been granted to us from government or private sector. Very few have received PKR 12,000 and mostly BISP amounts have been disseminated to the rich. So, what is the credibility of such interventions?

Similarly, a female participant from adult (aged above 29) FGD in UC Chaubara, District Layyah said:

I agree that PKR 12,000 may prove to be a big push for women who run homes on their own, but I cannot claim that all the women have received the designated amount. Those who have received are the fortunate ones, but many deserving women are yet to receive the amount. We appreciate government initiatives, but coverage and identification of the deserving recipients are still major issues.

To quantify the relative contribution of financial support in mitigating adverse consequences of recent macroeconomic shocks, we conducted a multivariate analysis using the Probit regression model.³⁷ Our dependent variable is a dummy. Our model takes a value of 1 if a respondent household's livelihood has been affected by a great extent due to macroeconomic shocks and 0 otherwise. Table 6 presents our Probit estimation results.

Our estimation results show that households which received emergency cash support (PKR 12,000) are 15% less likely than those which do not receive cash support, to report that their livelihood was affected to a great extent by macroeconomic shocks. Community support (from friends and relatives) caused a significant reduction in being affected to a great extent by macroeconomic shocks. The estimated result has shown that the probability of being affected to a great extent by macroeconomic shocks was decreased by 13% due to community support. Similarly, financial support through loan has significantly reduced the chances of being affected to a great extent by macroeconomic shocks. The results have shown that the probability of being affected to a great extent was decreased by 20% due to financial support through loan. We also find that paid employees are 43% less likely to experience adverse effects, of macroeconomic shocks, on their livelihood than are unemployed people.³⁸

Table 6 Factor Determining Whether COVID-19 Crisis Affected Livelihood by a Great Extent

Independent Variables	Marginal Effect	SE
Emergency Cash Support (Yes = 1, 0 = Otherwise)	-0.153**	(0.0743)
Community Support (Yes = 1, 0 = Otherwise)	-0.127*	(0.0738)
Formal loans (Yes = 1, 0 = Otherwise)	-0.196**	(0.0973)
Gender (1 = Male, 0 = Otherwise)	0.0449	(0.0984)
Log Initial Income (Continuous)	-0.135**	(0.0534)
Household Size (Continuous)	0.00594	(0.0144)
Employed in Agriculture and Livestock (Yes = 1, 0 = Otherwise)	-0.127	(0.146)
Daily Wage Worker (Yes = 1, 0 = Otherwise)	-0.120	(0.104)
Paid Employees (Yes = 1, 0 = Otherwise)	-0.434***	(0.125)
Self-Employed (Own Business)	-0.00450	(0.170)
Observations	237	

Source: Author's Estimates (based on Probit model)
Standard Errors (SEs) in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Box 5 Social Security: Reachable to the Poor Youth?

Detailing the access and coverage of existing governmental credit extension programs, FGD youth participants (aged 18-29) from UC Jhakar, District Layyah in Punjab stated:

Participant 1: *I am not satisfied with the role of government or private sector in this recession phase. Here, only the interests of the rich are prioritized. Members of Parliament are only facilitating the ones who they know, their own people.*

Participant 2: *I concur. The government's role is to extend credits to the deserving people only.*

Participant 3: *Baring BISP, I have not seen any other source of monetary help. I have not been helped by any other transfer program. I have not seen anyone in my social vicinity being benefitted.*

Participant 4: *I have seen ration being distributed to the Deras (gathering points) of influential landlords and I can guarantee that not all such recipients were the deserving ones.*

The narrative as detailed above is explicit of the multiplicity of issues such as coverage constraints, politicization of distribution of ration, and targeting issues in identification of poor.

³⁷ A Probit model is a way to perform regression analysis over binary outcome variables. Binary outcome variables are dependent variables with two possibilities, for example Yes/No. In this Study, we assign 1 if a respondent's livelihood has been affected by a great extent by macroeconomic shocks, and 0 otherwise.

³⁸ Daily wage workers are not included in paid employees. Similar findings have been reported in Kansime et al., 2021.

4.8. Impact of NPGP on Wellbeing: Multivariate Analysis

In this Study, we examine the impact of asset support provided by PPAF through NPGP. Impacts of NPGP on log income and log expenditure after controlling for socioeconomic indicators are presented in Table 7 (Models 1 and 2). We find that being an NPGP beneficiary has a positive and significant impact on income. The estimated coefficient shows that at pre-COVID baseline, household income of NPGP beneficiary is 24% higher compared to non-NPGP beneficiary due to support from PPAF.³⁹ Further results reveal that NPGP has a positive and significant impact on household expenditures. Our estimates show that NPGP would lead to nearly a 49% increase in monthly consumption expenditures of households.

These results convey the importance of a graduation scheme, mainly through asset transfers, to break the vicious cycle of poverty. Literature shows that asset transfer programmes such as NPGP would help diversify income-generating activities and promote savings among ultra-poor (Banerjee et al., 2015; Phadera, Michelson, Winter-Nelson, & Goldsmith, 2019). These programmes significantly increase resilience among poor against macroeconomic shocks (Phadera et al., 2019).

Apart from asset support, being employed would also have a positive and significant impact on household income and consumption expenditures. Literature supports that employment scheme could be useful in alleviating poverty and promoting overall socioeconomic wellbeing of poor and ultra-poor households (Dasgupta, 2013; Mukherjee & Sinha, 2013).

Table 7 Impact of NPGP Support on Income and Consumption Expenditure: Multivariate Analysis

Variables	(1)	(2)
	Ln(Income)	Ln(Expenditures)
NPGP (dummy; 1 if NPGP beneficiary, 0 otherwise)	0.240 (0.089)***	0.489 (0.056)***
Employed (1 if employed, 0 otherwise)	0.049 (0.074)	0.088 (0.044)**
Gender (1 if male, 0 otherwise)	0.000 (0.072)	-0.114 (0.045)**
Household Size (Continuous)	0.059 (0.014)***	-0.120 (0.009)***
Observations	321	391
R-squared	0.099	0.399

Note: Standard Errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Author's Estimates

³⁹ Based on baseline income and consumption of NPGP beneficiaries (before COVID-19).

5 Macroeconomic Analysis

Previous sections elaborate that macroeconomic shocks resulted in massive income decline and job loss among vulnerable segments of society. We project that these shocks may lead to a significant increase in poverty and unemployment. There is thus a need to assess the projected magnitude of poverty and unemployment in order to accurately design effective policy responses and correctly determine budgetary requirements for social protection programmes.

This section presents the direct impacts of recent macroeconomic shifts on unemployment, poverty, and school enrollment in Pakistan, using the micro-econometric model presented earlier using 3 projected scenarios:

- A Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. GDP will grow at -1.3%
- B Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. GDP will grow at 0.1%
- C Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. GDP will grow at 1.3%

5.1. Poverty and Unemployment: Pre-Recession Situation

Here we provide the pre-recession situation of poverty and unemployment in Pakistan.⁴⁰ Table 8 presents poverty estimates at the national level as well as for Pakistan's rural and urban areas for FY19. Around 22% people live below poverty line in FY19 in Pakistan.⁴¹ Nearly 11% population lives below the poverty line in urban, and nearly 28% in rural areas in FY19. Table 8 shows that Punjab is the least poor province (nearly 16%) while Balochistan is the poorest province (nearly 41%) in Pakistan. Around 13% people live below poverty line among female headed households in Pakistan.⁴²

Table 8 Poverty Estimates in FY19

Regions	All	Urban	Rural	Male-Headed	Female-Headed	Youth (Aged 18-29)	Adult (Aged>29)
Pakistan	21.5	10.7	27.6	22.1	13.4	21.5	21.5
Punjab	16.3	8.8	20.6	16.7	11.7	16.8	16.2
Sindh	24.6	10.4	40.0	24.9	14.0	26.6	24.4
KP	27.0	16.8	29.0	28.3	16.5	23.7	27.2
Balochistan	40.7	24.7	46.7	40.7	38.2	33.0	41.2

Source: Author's Estimates based on HIES 2018-19 data

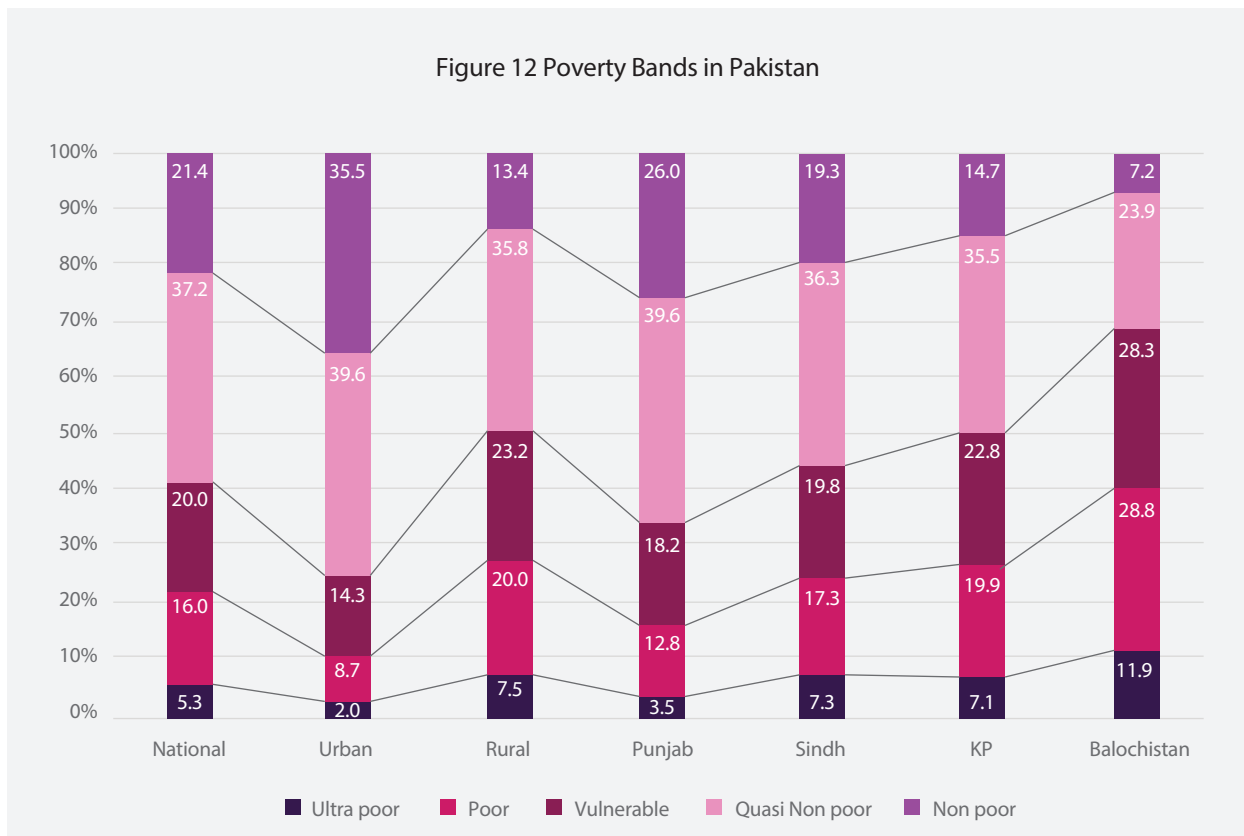
Figure 12 shows that almost 5.5% of population across Pakistan falls in the category of ultra-poor.⁴³ It is worth noting that 16% of Pakistan's population are border-line cases (population close to poverty line) and almost 20% are vulnerably placed (slightly above the poverty line). We project that a longer economic recession would push these people into poverty.

⁴⁰ Pre-recession situation presents economic situation before FY20 (that is, FY19 and before) whereas pre-COVID situation presents situation before April 2020.

⁴¹ The Government of Pakistan uses the cost of basic need (CBN) approach to estimate national poverty line. The estimated poverty line for FY19 is PKR 3,776 per adult equivalent per month. A household is defined as poor if monthly per adult equivalent consumption expenditures are less than national poverty line, and non-poor otherwise (Iqbal, 2020c).

⁴² According to HIES 2018-19 data, around 10% of the households are headed by females and 90% are headed by males. The head of the household is that person who is considered as the head by the household members. In practice, when husband, wife, married and unmarried children form a single household, the husband is generally reported as the 'head'. Poverty among female-headed households differs from poverty among male-headed households.

⁴³ Poverty bands are defined using monthly per adult consumption expenditures of the household: Ultra-poor (if monthly per adult consumption expenditures < 75% of Poverty Line), Poor (if monthly per adult consumption expenditures > 75% and < 100% of Poverty Line), Vulnerable (if monthly per adult consumption expenditures > 100% and < 125% of Poverty Line), Quasi Non-Poor (if monthly per adult consumption expenditures > 125% and < 200% of Poverty Line), and Non-Poor (if monthly per adult consumption expenditures > 200% of Poverty Line). See footnote 38 for definition of Poverty Line used in Pakistan.



Source: Author's Estimates based on HIES 2018-19 data

Table 9 shows that unemployment rate is around 7% in FY19 (compared to 5.8% in FY18) in Pakistan. Unemployment rates are highest in KP and lowest in Balochistan. On a national level, unemployment rate is high among females compared to males, and is much higher among youth (18-29) compared to adults (above 29) in Pakistan. A similar trend has been observed across provinces.

Table 9 Unemployment Rates in FY19

Regions	All	Urban	Rural	Female	Male	Youth (Aged 18-29)	Adult (Aged >29)
Pakistan	7.1%	8.8%	6.2%	10.1%	6.2%	11.7%	3.8%
Punjab	7.3%	8.8%	6.6%	9.1%	6.6%	11.5%	3.8%
Sindh	6.0%	8.9%	3.3%	14.0%	4.8%	12.1%	2.8%
KP	8.8%	10.1%	8.4%	10.9%	8.3%	12.2%	6.8%
Balochistan	5.0%	7.2%	4.3%	20.8%	3.5%	11.2%	1.3%

Source: Author's Estimates based on LFS data 2017-18

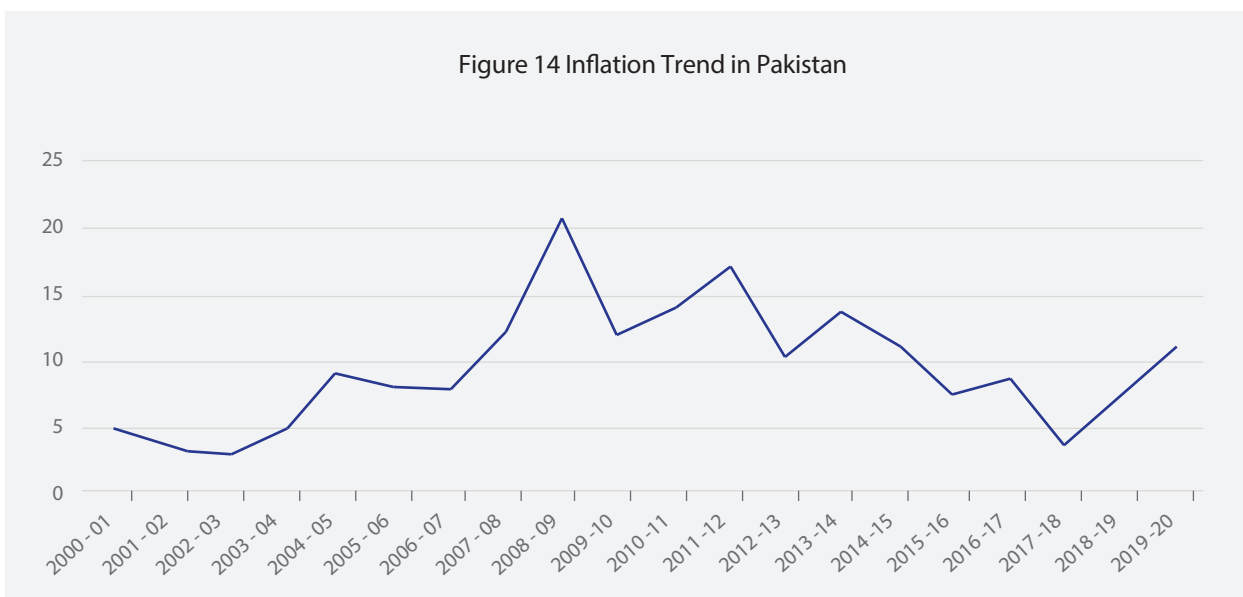
5.2 Macroeconomic Policies: Pre-Recession Situation

Over the last three decades, Pakistan has witnessed falling GDP growth rates, increase in unemployment, and inflationary shocks (GoP, 2020b). Figure 13 presents GDP growth rates and GDP per capita growth rates from FY01 to FY20. The annual GDP growth rate is sharply declining during last couple of years. The highest GDP growth rate during the last two decades is estimated at 7.5% and was observed in FY05, while during the last two years, historical decline has been observed.



Source: World Development Indicators (WDI)

We observe from Figures 13 and 14 that Pakistan has an unstable macroeconomic environment. The COVID-19 pandemic has caused significant decline in economic growth (Figure 13) and substantial increase in inflation (Figure 14). Inflation is an important macroeconomic indicator and directly affects individuals and communities. Figure 14 shows spikes and volatility in annual inflation, measured by Consumer Price Index (CPI).⁴⁴ These trends reflect worsening economic situation and recession in the economy.



Source: Pakistan Economic Survey, various years

⁴⁴ Consumer Price Index (CPI) measures changes in the cost of buying a representative fixed basket of goods and services, and generally indicates inflation rate in the country.

5.3 Impact of Macroeconomic Shifts

5.3.1 Impact on Poverty

Our micro-econometric results show that Pakistan's poverty rate will increase from 21.5% (baseline poverty) to 26% in FY20 (Table 10).⁴⁵ Poverty in urban areas will increase from 10.7% to 15.2%, and from 27.6% to 32.2% in rural areas from FY19 to FY20. We also note a significant increase in poverty across all provinces and across genders and age groups due to the macroeconomic shocks.

Table 10 Projected Poverty for FY20

Regions	All	Urban	Rural	Male-Headed	Female-Headed	Youth (Aged 18-29)	Adult (Above 29)
Pakistan	26.0	15.2	32.2	26.7	17.9	26.0	26.0
Punjab	20.8	13.3	25.2	21.3	16.2	21.3	20.7
Sindh	29.1	14.9	44.5	29.5	18.5	31.2	28.9
KP	31.5	21.3	33.5	32.8	21.0	28.2	31.7
Balochistan	45.2	29.2	51.2	45.2	42.7	37.5	45.7

Source: Author's Estimates based on HIES 2018-19 data and Micro-Econometric Model

Projected poverty rate in FY21 ranges between 27.8% and 30.5%, depending on our 3 projected scenarios of economic recovery (Table 11). Under Scenario A, poverty rate in rural areas will increase from nearly 32% in FY20 to nearly 37% in FY21, and from nearly 15% to 20% in urban areas, during the same period. Under Scenario B, poverty rate in rural areas will increase from nearly 32% in FY20 to nearly 35% in FY21, and from nearly 15% to 18% in urban areas, during the same period. Under Scenario C, poverty rate in rural areas will increase from nearly 32% in FY20 to nearly 34% in FY21, and from nearly 15% to 17% in urban areas, during the same period.

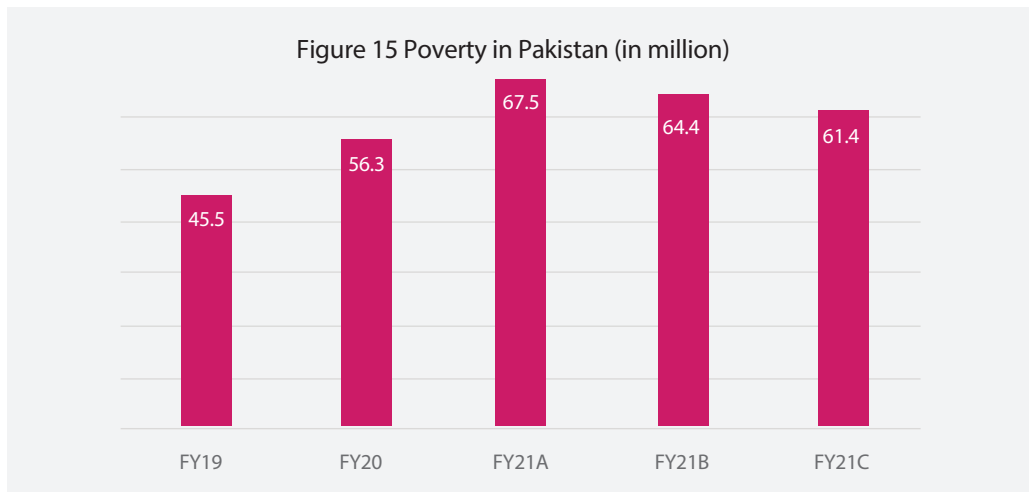
Table 11 Projected Poverty for FY21 under 3 Different Projected Scenarios

Regions	All	Urban	Rural	Male-Headed	Female-Headed	Youth (Aged 18-29)	Adult (Above 29)
Scenario A: No Economic Recovery							
Pakistan	30.5	19.7	36.7	31.2	22.5	30.6	30.5
Punjab	25.3	17.9	29.7	25.8	20.7	25.9	25.3
Sindh	33.7	19.5	49.1	34.0	23.1	35.7	33.5
KP	36.0	25.8	38.1	37.4	25.6	32.7	36.3
Balochistan	49.7	33.8	55.8	49.8	47.3	42.1	50.3
Scenario B: Partial Economic Recovery							
Pakistan	29.1	18.3	35.3	29.8	21.1	29.2	29.1
Punjab	23.9	16.5	28.3	24.4	19.4	24.5	23.9
Sindh	32.3	18.1	47.7	32.6	21.7	34.3	32.1
KP	34.6	24.4	36.7	36.0	24.2	31.3	34.9
Balochistan	48.3	32.4	54.4	48.4	45.9	40.7	48.9
Scenario C: Full Economic Recovery							
Pakistan	27.8	17.0	34.0	28.5	19.7	27.8	27.8
Punjab	22.6	15.1	27.0	23.1	18.0	23.1	22.5
Sindh	30.9	16.7	46.3	31.3	20.3	33.0	30.7
KP	33.3	23.1	35.3	34.6	22.8	30.0	33.5
Balochistan	47.0	31.0	53.0	47.0	44.5	39.3	47.5

Source: Author's Estimates based on HIES 2018-19 data and Micro-Econometric Model

Based on these poverty rates, it is projected that poverty in Pakistan will increase from 45 million people in FY19 to 56.3 million people in FY20 (Figure 9). Projected poverty for FY21 under our 3 projected scenarios is:

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. Projected poverty is 67.5 million people.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. Projected poverty is 64.4 million people.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. Projected poverty is 61.4 million people.



Source: Author's Estimates based on HIES 2018-19 data and Micro-Econometric Model

5.3.2 Impact on Unemployment

We estimate the impacts of macroeconomic shocks on unemployment in Pakistan using our micro-econometric model, at national, regional, and provincial levels. Table 12 shows that according to our estimates, the unemployment rate is 8.0% in FY20 in Pakistan (10% in urban areas and 7% in rural areas).

Table 12 Projected Unemployment Rates for FY20

Regions	All	Urban	Rural	Female	Male	Youth	Adult
Pakistan	8.0%	10.0%	6.9%	11.4%	7.0%	13.2%	4.3%
Punjab	8.2%	9.9%	7.4%	10.3%	7.4%	12.9%	4.3%
Sindh	6.8%	10.0%	3.7%	15.7%	5.4%	13.6%	3.1%
KP	9.9%	11.4%	9.5%	12.3%	9.4%	13.8%	7.6%
Balochistan	5.7%	8.1%	4.9%	23.4%	3.9%	12.6%	1.5%

Source: Author's Estimates based on LFS data 2017-18 and Micro-Econometric Model

In FY21, this unemployment rate will range between 9.1% (Scenario A: No Economic Recovery) and 8.5% (Scenario C: Full Economic Recovery), depending upon the economic recovery situation (Table 13). Based on these unemployment rates, we project that 5.47 million people will be unemployed in FY20.

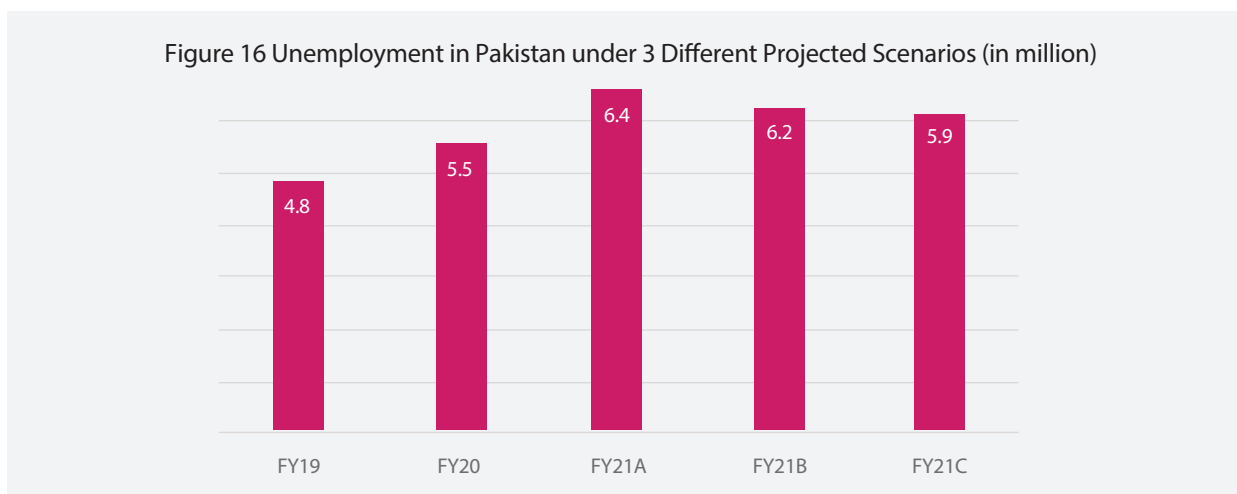
Table 13 Projected Unemployment Rates for FY21 under 3 Different Projected Scenarios

Regions	All	Urban	Rural	Female	Male	Youth	Adult
Scenario A: No Economic Recovery							
Pakistan	9.1%	11.4%	7.9%	13.1%	8.0%	15.1%	4.9%
Punjab	9.4%	11.3%	8.5%	11.8%	8.5%	14.8%	5.0%
Sindh	7.8%	11.5%	4.3%	18.0%	6.2%	15.6%	3.6%
KP	11.3%	13.1%	10.9%	14.1%	10.7%	15.8%	8.7%
Balochistan	6.5%	9.2%	5.6%	26.9%	4.5%	14.5%	1.7%
Scenario B: Partial Economic Recovery							
Pakistan	8.8%	11.0%	7.6%	12.6%	7.7%	14.6%	4.8%
Punjab	9.1%	10.9%	8.2%	11.3%	8.2%	14.3%	4.8%
Sindh	7.5%	11.1%	4.1%	17.4%	6.0%	15.1%	3.5%
KP	10.9%	12.6%	10.5%	13.6%	10.3%	15.2%	8.4%
Balochistan	6.2%	8.9%	5.4%	25.9%	4.3%	14.0%	1.7%
Scenario C: Full Economic Recovery							
Pakistan	8.5%	10.6%	7.4%	12.1%	7.4%	14.0%	4.6%
Punjab	8.7%	10.5%	7.9%	10.9%	7.9%	13.7%	4.6%
Sindh	7.2%	10.6%	4.0%	16.7%	5.7%	14.5%	3.3%
KP	10.5%	12.1%	10.1%	13.1%	10.0%	14.6%	8.1%
Balochistan	6.0%	8.6%	5.2%	24.9%	4.1%	13.4%	1.6%

Source: Author's Estimates based on LFS data 2017-18 and Micro-Econometric Model

Our projected unemployment in FY21 under the 3 projected scenarios is (Figure 16):

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. 6.4 million unemployed people.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. 6.2 million unemployed people.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. 5.9 million unemployed people.



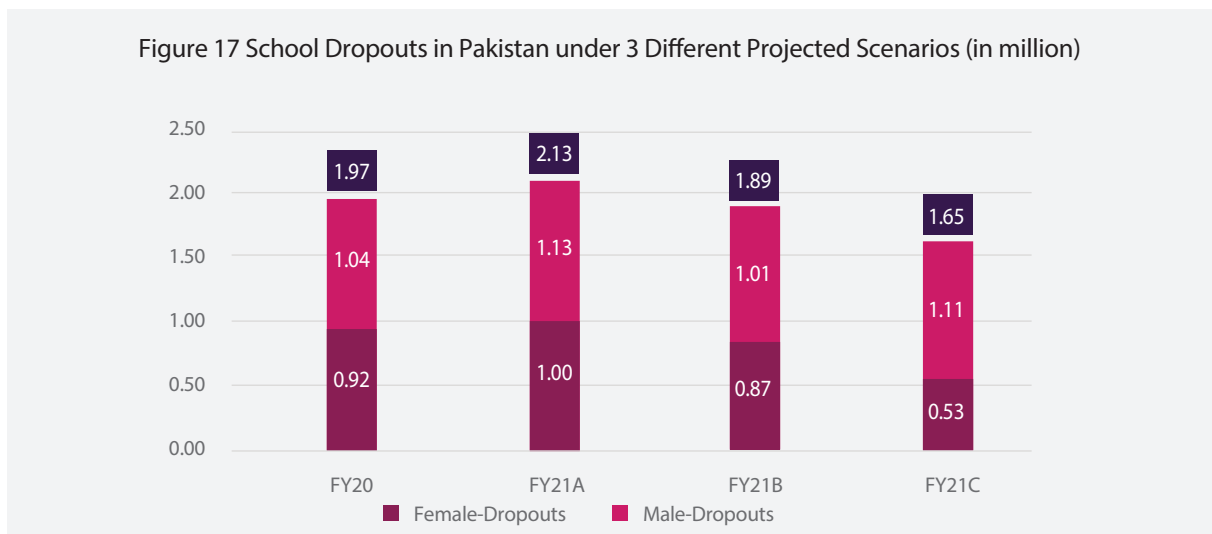
Source: Author's Estimates based on LFS data 2017-18 and Micro-Econometric Model

5.3.3 Impact on School Enrollment

The massive decline in households’ education expenditures and school closures, as a consequence of recent macroeconomic shocks and especially COVID-19 lockdown, resulted in a significant increase in school dropouts and subsequently in reduced learning capacity of students. By considering school closures, income losses, inflationary pressures, and poverty, our estimates show that around 1.97 million additional children will drop out of schools in Pakistan in FY20 alone (Figure 17).

In FY21, additional school dropouts under our 3 projected scenarios will be:

- Scenario A, FY21A: Pessimistic Scenario, No Economic Recovery. 2.13 million additional dropouts.
- Scenario B, FY21B: Moderate Scenario, Partial Economic Recovery. 1.89 million additional dropouts.
- Scenario C, FY21C: Optimistic Scenario, Full Economic Recovery. 1.65 million additional dropouts.



Source: Author’s Estimates based on Micro-Econometric Model

The dropouts are much higher for primary level classes in FY20 and FY21 (Table 14). School closures have shown to erode the learning capacity of students, affecting income outcomes in the long run adversely (Geven & Hasan, 2020; Khan & Ahmed, 2020; Kuhfeld et al., 2020). Estimates show that Learning-Adjusted Years of Schooling (LAYS) in Pakistan will decrease by 14.6%, from 4.78 to 4.08 years in FY20, due to the COVID-19 pandemic (Khan & Ahmed, 2020).

Table 14 Projected School Dropouts under the 3 Different Projected Scenarios (000)

Levels	FY20	FY21		
		No Economic Recovery	Partial Economic Recovery	Full Economic Recovery
Primary School (I-V)				
Total	1,229	1,327	1,203	1,081
Male	655	710	652	809
Female	573	617	551	273
Middle School (VI-VIII)				
Total	453	488	422	357
Male	236	252	221	191
Female	217	236	201	165
High School (IX-X)				
Total	284	320	264	209
Male	153	169	141	114
Female	131	150	122	95

Source: Author’s Estimates based on Micro-Econometric Model

6 Diluting Impacts of Macroeconomic Shifts: A Policy Framework

Evidence presented above establishes that Pakistan's recent macroeconomic shifts have increased poverty, unemployment, and education deprivation. These impacts are more profound on women and youth than on men. A policy framework containing both macro- and micro-level interventions is proposed to dilute these adverse impacts.

6.1 Macro-Level Interventions

A prudent macroeconomy policy environment is required to regain growth and generate employment in the short run. The following interventions can achieve this.⁴⁶

1st The government should increase the level of public investment to stimulate economic growth. This public investment should include the Employment Guarantee Scheme (EGS) provisions to provide guaranteed wage employment for a specified time to every household whose adult members volunteer to do the work which lost a job due to the pandemic.⁴⁷

2nd Government investment in agriculture should be increased to generate economic activities targeted at vulnerable populations. In the short-run, immediate season's crops need to be identified, and farmers should be facilitated categorically to grow those crops. This facilitation can come through easy credit availability on a priority basis through ZTBL⁴⁸ and other commercial banks.

3rd The government should facilitate Small and Medium Enterprises (SMEs) through directed credit schemes and reduction in input costs, mainly by tariff reductions and adjustment facility in utility bills. The government should make it mandatory for commercial banks to lend loans to SMEs.⁴⁹

4th The government should take necessary measures to control inflation below 6% to boost economic activities as inflation below 6% is growth-enhancing in Pakistan.⁵⁰

5th Markets are heavily regulated in Pakistan. This increases the cost of doing business. Being competitive requires lowering the cost of doing business. To facilitate business, measures like reducing documentation, introducing window operations, allowing online processes, exempting attestation requirements, must be reduced. On a priority basis, the government should introduce mega reforms, apart from the amnesty scheme, and reduce regulation in the construction industry to generate economic opportunities.

6th Increase the tax base to finance social protection programs with domestic resources to achieve long term financial stability. Social protection financing should be based on equitable financing relying on fair, sustainable, and diversified taxation systems.

⁴⁶ This section is heavily drawn from Nasir et al. (2020).

⁴⁷ EGS follows the public works approach to enhance livelihood security by providing employment at minimum wage rate for four months. EGS can be made part of the Ehsaas Amdan Programme wherein educated youth can be engaged in teaching children to increase literacy rates in the long run. Formally uneducated youth can be involved in labor-based infrastructure development projects. Since 1970, India runs a similar scheme under its National Rural Employment Guarantee Act (NREGA) as a right of the poor to get up to 100 days of work per year.

⁴⁸ Zarai Taraqiati Bank Limited (ZTBL) is a premier financial institution in Pakistan, focused on provision of financial services and technical expertise to the agriculture sector.

⁴⁹ SBP is already facilitating commercial banks to provide loans to SMEs. The need now is to make allocation of fixed funds for SMEs, compulsory.

⁵⁰ Iqbal & Nawaz, 2009.

6.2 Micro-Level Interventions – Program Level Recommendations for NPGP

Right targeting, transparent enrollment, efficient and low-cost service delivery, and long-term financial sustainability are prerequisites to achieving poverty alleviation and social development. Two programmatic interventions can enable social protection programs to achieve these prerequisites.

6.2.1 Shock-Adjusted Dynamic Targeting

Social protection programs in Pakistan mainly use static welfare scores to target their beneficiaries. Evidence presented above shows that economic and climatic shocks adversely impact socioeconomic and welfare indicators of households, which then face various shocks, including individual-level (idiosyncratic) and community-level (covariate) shocks. These shocks have more profound adverse impacts on the welfare of the bottom quintile of the population, due to their vulnerable income sources and lack of productive assets. Furthermore, during natural shocks (floods, earthquakes, viral attacks, pandemic), a quick assessment is required to launch shock-responsive social protection for the poor. Targeting methods should therefore be shock-adjusted to expand social protection, especially during these natural shocks. BISP can use a shock-adjusted proxy means test (PMT) which integrates household exposure to shocks for better targeting (Iqbal, 2020d). A detailed study is needed to determine welfare loss due to various idiosyncratic and covariate shocks to construct a shock-adjusted targeting method accurately.

6.2.2 Revamping Safety Nets

6.2.2.1 Moving from direct cash transfers to graduation-based approach

Unconditional Cash Transfers (UCTs) are not enough to reduce income-related poverty. As a standalone, UCT does not generate livelihoods to sustain improved conditions beyond the program duration. For example, the UCT program by BISP has shown to have no significant impact on reducing poverty (GoP, 2020a; Nayab & Farooq, 2020). Global experience suggests that cash transfer programs have been more successful and sustainable when combined with complementary, well-sequenced interventions on the uptake of education, health, nutrition, and additional livelihood support for the poor.⁵¹ These holistic interventions enable beneficiaries to move beyond financial dependency and embrace more sustainable livelihoods. Hence, to make poor people economically better off, in addition to an inclusive macroeconomic policy, specifically targeted poverty graduation programs which create sustainable income streams are needed.

6.2.2.2 A package-based model for better coverage and optimal utilization of resources

Ongoing social security programs such as UCT by BISP generally provide the same financial support across all beneficiaries by assuming similar problems and similar needs of the target group. However, demographic structures and socioeconomic needs differ across households, showing heterogeneity in the needs of the poor. Therefore, a package-based model is more advisable where beneficiaries decide on the social safety package they are given, based on a self-assessment of their needs. Based on the target group's current needs, 4 packages can be considered.

- a. **Employment-Intensive Package:** The package focuses on technical training, financial support to start micro-business, compulsory savings, and insurance coverage. The primary beneficiary is the head of household with a focus on adults. At least 50% support will be for women and especially for youth. As part of the package, unconditional financial support for consumption smoothing is provided to households for a fixed time.
- b. **Education-Intensive Package:** This package includes free education for all children in the family up until their graduation. The educational expense, along-with a stipend amount for each student, would be paid directly to educational institutions. Key beneficiaries of the program will be children and youth. Overall, priority will be given to female students. For technical skills training, youth and women will be prioritized.
- c. **Health-Intensive Package:** This package includes free health services, both indoor and outdoor, with a focus on women, older people, and people with disabilities. To overcome wasting and stunting, the

⁵¹ <https://www.povertyactionlab.org/policy-insight/building-stable-livelihoods-ultra-poor>. Various countries, including Brazil, Bangladesh, Mexico, Colombia, and India, have introduced comprehensive graduation programs to sustainably break poverty traps.

package also covers children younger than 5. The package includes general health insurance for all, and unconditional financial support for consumption smoothing for a fixed time.

- d. **Food-Intensive Package:** This package includes electronic ration cards to be issued to a primary female beneficiary from the household, for the purchase of groceries at different intervals during the month with a fixed amount limit.

In the first round of validation, assessment of the BISP NSER⁵² – which contains detailed profiles on each household – can indicate the kind of customized package which needs to be provided to each household based on its demographics, skillset, and asset ownership (including housing condition), among other factors. The second round of validation and improvement to the menu of the packages should be undertaken at BISP Registration Centers present in multiple districts, where households seeking support will be invited and further details about their specific needs will be gathered. They will then be linked to programs most suited to their dynamics and needs, offered by the public and private sectors.

The proposed packages have the edge over existing poverty reduction programs, in terms of their i) Coverage and targeting efficiency ii) Cost efficiency iii) Consumer sovereignty.⁵³ Each package requires a different set of targeting criteria; hence, separate targeting criteria may be devised.

6.2.3. Women and Youth Specific Interventions

- a. Women-specific livelihood opportunities should be promoted but by moving away from traditional approaches, which include giving them sewing machines and kitchen gardening tools. Women should be trained in newer and more value-added fields through women trainers. These fields include home-based business, tourism, hoteling, packaging (mainly vegetables and dairy products), travel service, and selling and servicing of IT products.
- b. Access of women to potential markets is a huge challenge and needs to be addressed by organizations working on poverty reduction. Finding spaces to offer products to customers physically (since they cannot do online business easily)⁵⁴ is very costly for women and youth. Special zones should be developed for them in a number of localities at no cost to them. Special sale zones can be established at the village level by engaging educated youth. These zones create a link between micro-home-based businesses and urban markets.
- c. Lack of social skills like communication, marketing, conflict management, and business strategizing, among others, is a significant challenge for poor youth and needs to be addressed on increased priority. Youth should be trained in ICTs and market access skills for long-term sustainability of livelihoods [in line with point b].
- d. The cost of starting and running a business is still very high in Pakistan, especially for the poor. Owing to high input costs and difficulty in locating business space, it becomes cumbersome, especially for women, to start a business. This has to be addressed by subsidizing inputs and providing financial support to establish a new business.

6.2.4. Revitalizing Street Economy

Pakistan has a large Street Economy (SE) operated by individuals and micro-enterprises across the country, mostly in urban areas.⁵⁵ These individuals and micro-enterprises working in SE are parts of the informal economy, which provides employment and livelihood to the poor with low formal literacy. The informal sector's role is loosely tied and involves businesses which are either not registered with the government or are not measurable.⁵⁶ Thus, the government does not facilitate this sector, and often discourages the informal economy. Lack of legal protection and organizational incoherence have made the street vendor community susceptible to local authorities' frequent eviction campaigns.⁵⁷ More vulnerable segments such as women, children, and refugee laborers usually bear a

⁵² National Socioeconomic Registry (NSER).

⁵³ For further details, see Iqbal (2020a).

⁵⁴ Only 24% households have access to internet in rural areas of Pakistan, and only 6% rural females have access to a computer/tablet. This low penetration of ICT makes it exceedingly difficult to do online business.
https://www.pbs.gov.pk/sites/default/files/pslm/publications/pslm2018-19/pslm_report_2018-19_national_provincial.pdf.

⁵⁵ Pakistan has a large informal economy (around 56% of GDP). Informal sector accounts for 72% of Pakistan's employment, more in rural areas (76%) than in urban areas (68%) (Arif et al., 2020; GoP, 2018).

⁵⁶ Though some studies have reported the size of the informal sector (as mentioned in footnote above), the calculation of its true size is a big challenge.

⁵⁷ Karachi's Street Economy. <https://www.dawn.com/news/1599420>

greater burnt of this exploitation. NPGP should develop a mechanism to support street entrepreneurs to promote the street economy in its target districts. A study may be conducted to explore the characteristics of micro-entrepreneurs operating in the SE and identify their categoric, district-wise operational challenges.

6.3. Potential Impact of Proposed Interventions on Poverty and Unemployment

Our proposed pro-poor interventions both at the macro and micro level will potentially dilute the identified impacts of recent macroeconomic policy shifts. The proposed interventions would cause approximately a 4-percentage point increase in GDP growth rate. The econometric model shows that a 4-percentage point increase in GDP growth rate will

- Create around 1.5 million new jobs
- Reduce Unemployment by 1.2 percentage points
- Reduce Poverty by 2.5 percentage points

In the medium to long run, these interventions will help break the vicious circle of poverty through the generation of decent employment and diversified income-generating activities.

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Appendix

Policy Brief

The Poor's Readiness for Climate Emergency Improving What They Know and How They Respond

Pakistan is world's 5th most vulnerable country to climate emergency.⁵⁸ It faces adverse climate shocks and environmental poverty, including lack of access to environmental services such as clean water, health facilities, modern fuels, and sanitation amenities. About 86% of its population uses traditional fuel⁵⁹ to cook, and over 40 million do not have access to electricity.⁶⁰

The Policy Brief examines awareness among the ultra-poor in Pakistan towards climate emergency and examines their readiness for it.

Climate emergency poses far-reaching impacts on socio-economic development, consumption, employment, and poverty reduction. Globally, climate crises are a severe threat to the poor's livelihood, where 22% of world population and 75% of its poorest depend on agriculture. Climate shocks such as abnormal rainfalls and increasing temperatures also increase severe health risks.⁶¹ Estimates from Institute for Health Metrics and Evaluation show that death rate from air pollution is 99 per 100,000 individuals in Pakistan.⁶² Exposure to household air pollution is high among women and girls, especially in poor households, who spend the most time cooking.⁶³

Therefore, an urgent adaptation to climate emergency is mandatory for survival, especially for women who remain poorly informed about its implications, due to informational asymmetries. Despite knowing that climate crises in Pakistan disproportionately impact poor women, gender-specific climate adaptive strategies remain mostly undocumented. Climate emergency adaptation is severely limited among the poor due to their lack of knowledge on diversification of economic livelihood and their categoric vulnerability to economic shocks. Female vulnerability to climate emergency is compounded because poor women have little or no income sources except working in agricultural lands or as contributing family members, making them dependent on transient sources of income.

Climate Vulnerabilities among Ultra-Poor

Following findings are based on our mixed-method primary data collected with 400 ultra-poor households across 16 Union Councils (UCs) in 8 sampled districts and including 34 Key Informant Interviews (KIIs) and 55 Focus Group Discussions (FGDs) with women, men, and youth.

I. Occupational Vulnerabilities

Most people from sampled UCs were dependent on occupations particularly vulnerable to climate crises. Table 1 shows that around 84% women across sampled households are engaged in family contributing activities such as agriculture and cooking. This indicates that women are more vulnerable to impacts of climate crises due to their limited employment options. Due to widespread reliance on traditional fuel for cooking, and due to lack of protective measures to avoid climate shocks, women face enormous health complications. Table 1 shows that male members are mainly engaged in agriculture and livestock (11%) or daily wage work (65%) – these occupations too are increasingly vulnerable to climate crises.⁶⁴

⁵⁸ Global climate risk index 2020 (Vol. 20) https://germanwatch.org/sites/germanwatch.org/files/20-2-01e_Global_Climate_Risk_Index_2020_10.pdf

⁵⁹ Nawaz, S., and Iqbal, N. (2020). The impact of unconditional cash transfer on fuel choices among ultra-poor in Pakistan: Quasi-experimental evidence from Benazir Income Support Program. *Energy Policy*, 142, 111535. Mainly wood is used as traditional fuel.

⁶⁰ IEA (2020). *World energy balances and statistics*. International Energy Agency.

⁶¹ Ashrafuzzaman, M., and Furini, G. L. (2019). Climate change and human health linkages in context of globalization: An overview from global to southwestern coastal region of Bangladesh. *Environment International*, 127, 402–411.

⁶² <https://vizhub.healthdata.org/sdg/>

⁶³ <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>

⁶⁴ Arora, (2019) Impact of climate change on agriculture production and its sustainable solutions. *Environmental Sustainability* 2, 95–96. Rojas-Downing, et al. (2017). Climate change and livestock: Impacts, adaptation, and mitigation. *Climate Risk Management*, 16, 145-163.

Table 1 Employment Status and Type of Employment

Type of Employment	Male	Female	Both
Agriculture and Livestock	10.9%	1.5%	6.4%
Daily Wage	65.3%	5.6%	36.8%
Paid Work	15.1%	3.8%	9.7%
Own Business	7.7%	5.3%	6.6%
Contributing Family Work	0.9%	83.8%	40.5%

II. Environmental Poverty

Our findings reveal that environmental poverty is very high among ultra-poor households.⁶⁵

Nearly 52% households have houses made up of raw bricks and mud, followed by 36% with burnt bricks and blocks. Almost 86% households are deprived of modern fuels – these households use only traditional firewood for cooking. Around 35% households do not have access to an improved toilet facility. Approximately 48% households do not have access to clean drinking water. These findings show that provision of even essential environmental services is meagre among NPGP and BISP⁶⁶ beneficiaries.

III. Awareness of Climate Emergency

Around 37% respondents expressed that climate change is not an important issue for them, followed by 42% who term it as somewhat important. Only 20% found climate crises to be an extremely important issue (Figure 1). Our gender-wise findings show that only 11% women and only 29% men feel that climate crisis is an extremely important issue. More than

Box 1: Understanding Climate Crises

Our FGDs reveal that very few respondents have any information about climate crises. Since most did not consider it a threat, due to limited knowledge about it, they did not associate their poverty and associated vulnerability with their vulnerability to climate crises.

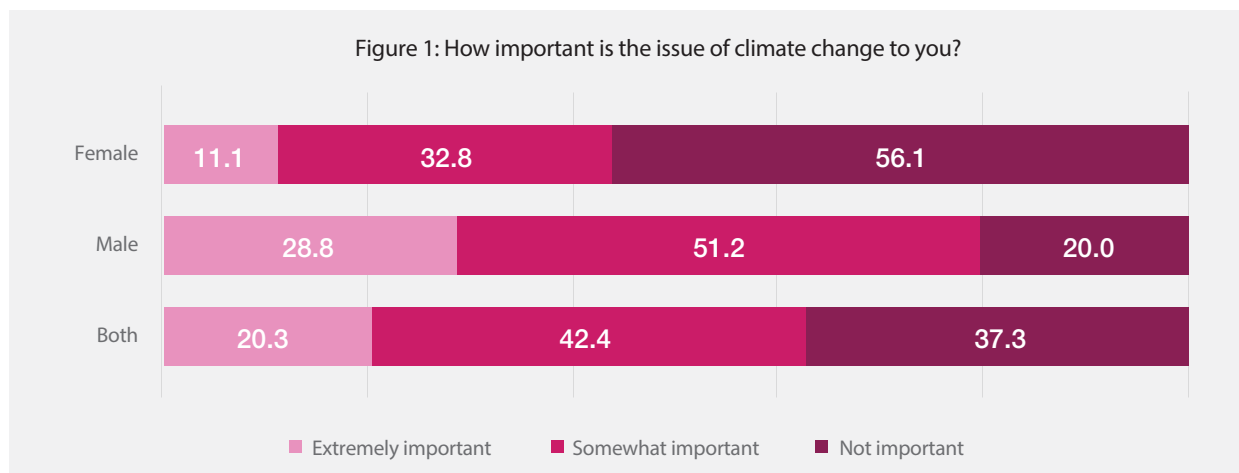
A female respondent from UC Gandawa, District Jhal Magsi commented: *We have no awareness regarding climate change.*

A male respondent from UC Jhal Magsi, District Jhal Magsi commented: *Climate change is a natural process. It has no specific impact on poor segments of society.*

A female respondent from UC Bhanbhiar, District Shikarpur commented: *Climate change somehow is change in weathers and nothing more.*

A female respondent from UC Gwadar Shumali, District Gwadar commented: *Climate change is an issue, but I have not taken any measures to address climate change.*

Figure 1: How important is the issue of climate change to you?



⁶⁵ Environmental Poverty is 'a situation in which a household does not have access to or cannot afford basic environmental services such as water, sanitation, housing, and energy to protect themselves from environmental damage.' Over 55 million people face Environmental Poverty in Pakistan. Around 65% households do not have access to clean fuel; 20% households do not have access to improved toilet facilities, and 50% households do not have a specific place in the house to wash hands with soap and water (Nawaz and Iqbal, 2020).

⁶⁶ National Poverty Graduation Programme (NPGP). Benazir Income Support Programme (BISP).

half the respondents among women (around 56%) report that climate crisis is not an important issue. These results reflect an alarming lack of awareness about the urgency of climate crises among ultra-poor, especially poor women.

Gradual shifts in weather patterns and more extreme weather events such as heatwaves and abnormal rainfalls are evident across Pakistan, depicting rapidly changing climate. The annual mean temperature has increased by 0.5°C in last five decades. Frequency of heatwaves has increased fivefold, and rainfalls have

Table 2: Information about Climate Shocks

Observation/Awareness Regarding Specific Events	Male	Female	Both
Abnormal Rainfalls	71.3%	54.0%	63.0%
Abnormal Seasons	80.8%	42.2%	62.3%
Abnormal Droughts	31.0%	17.6%	24.6%

shown higher variability in last 3 decades.⁶⁷

Do the ultra-poor know about these massive climate shifts?

Our household survey reveals that knowledge about these extreme climate events is exceedingly limited among ultra-poor. In each of the classified weather shocks – abnormal rains, seasonal shifts, and droughts – women’s awareness was more limited than that of men (Table 2). It is this lack of awareness which can severely undermine any efforts to mitigate adverse climate shocks, especially those which impact health, especially maternal and child health.⁶⁸

Among those respondents who do have some knowledge about the climate crisis and its urgency, around 67% took some steps for mitigation, such as using additional clothes and/or protecting their house from rains by make-shift methods. Our gender-wise analysis shows that women are less likely to take precautionary measures for climate shocks than are men. Only 55% female respondents had taken any such precautionary measures.

How to Prepare Poor Communities for Climate Emergency?

1 Economic Empowerment: Augmented National Poverty Graduation Program

Poverty graduation programs are effective in that they aim at diversifying income-generating activities among the poor. In doing that, these programs are also effective in mitigating adverse effects of climate change by way of economic empowerment.⁶⁹ Poverty graduation programs should be augmented to respond to climate emergency in following ways:

- a. Include an additional component in existing set of graduation interventions to overcome the climate crises knowledge gap and to induce adaptation to climate crises among the poor. This intervention could cover awareness of environmental services, of household-level adaptation measures, and of employment-related climate risks.⁷⁰ The programs should also include assessment on adaptation to climate, in their existing evaluations over the program cycle.
- b. Introduce climate-resilient employment opportunities to minimize vulnerabilities to climate shocks. Climate-resilient sectors include retail business, construction industry, and transportation, among others.

⁶⁷ Chaudhry, Q. Z. (2017). Climate Change Profile of Pakistan, Asian Development Bank <https://www.adb.org/sites/default/files/publication/357876/climate-change-profile-pakistan.pdf>

⁶⁸ Nawaz, S. (2020). Energy Poverty, Climate Shocks, and Health Deprivations. *Energy Economics*.

⁶⁹ Asfaw, et al (2017). Cash transfer programmes, weather shocks, and household welfare: Evidence from a randomized experiment in Zambia. *Journal of Development Effectiveness*, 9:4, 419-442.

⁷⁰ Risks occur due to extreme weather events including droughts, heavy rainfalls, rising temperature, and smog. These events led to job losses both in rural and urban markets and adversely impacted health.

⁷¹ Ullah, S. (2017) Climate Change Impact on Agriculture of Pakistan – A Leading Agent to Food Security, <https://juniperpublishers.com/ijesnr/pdf/IJESNR.MS.ID.555690.pdf>

- c. Agriculture and livestock sectors are particularly sensitive to climate variability.⁷¹
 - i. Climate-Smart Agriculture (CSA)⁷²: Introduce climate-resilient crop varieties and cropping systems.
 - ii. Climate-Smart Livestock (CSL): Introduce CSL production strategies to meet the increasing demand for livestock products with scarce natural resources. Efficient use of natural resources is essential for decoupling growth in livestock sector from climate risks. Efficiency in natural resources can be

Box 2: Importance of Community Capital

While speaking to women about different forms of capital which the community possesses, they identified social, human, financial, and environmental capital. According to them, the most important to their community is social capital, followed by financial capital, and then environmental capital. Among all forms, only human capital carried least importance. Ways in which the community classifies capital are:

Social Capital: Networking, norms, institutions, organizations.

Human Capital: Labor supply, education, healthcare, human capabilities.

Financial Capital: Community financial institutions, funds, community loan banks.

Environmental Capital: Natural resources, weather, recreational opportunities.

Women classified environmental capital more important for men than for themselves despite the fact that they were equally and differently impacted by it. They are equally impacted because they work as agricultural laborers like their male counterparts. They are differently impacted because unlike males, they engage in domestic work with traditional fuels. Women also talked at length about major devastation due to floods in the form of devastating impact on crops, derailed transportation, and lack environmental services like clean water, health facilities, modern fuels, and sanitation amenities.

achieved by improving animal health, livestock breeds, feed crop varieties, technology, and management.

2 Social Empowerment: Building social capital to up-scale poor people's responsiveness to climate emergency

The social sector is increasingly focusing on community forums, as a way of social empowerment, to disseminate program level information among target communities.⁷³ These forums, especially women-led forums, can help improve adaptation to climate emergency among the poor by overcoming informational gaps. Information flows have shown to positively affect the poor's attitude towards climate crises preparedness, enriching their knowledge about adaptation and increasing their willingness to bear adaptation costs.⁷⁴

⁷² CSA is an integrated approach to managing landscapes — including cropland, livestock, forests, and fisheries — and addresses interlinked challenges of food security and of accelerating climate change through increased productivity, enhanced resilience, and reduced emissions. World Bank: <https://www.worldbank.org/en/topic/climate-smart-agriculture>

⁷³ BISP uses community forums, namely BISP Beneficiary Committee (BBC) to disseminate information on various social safety net programs especially related to Waseela-e-Taleem program to enhance enrolment. NPGP has similar structure at village level to disseminate information on key programme features.

⁷⁴ Verma (2020) argues that women-led forums are effective in 'climate change adaptation, including participatory vulnerability assessments, adaptation planning, and training in climate-change and gender-sensitive adaptation' in Bangladesh. Verma, S. (2020) Women-led forums enhance livelihoods and reduce risks to climate hazards, Climate and Development Knowledge Network, <https://cdkn.org/wp-content/uploads/2020/06/Christian-Aid-Basundhara-Forum-Case-Study-2.pdf>. Oxford Policy Management, OPM (2019) report shows that BISP Beneficiary Committees (BBCs) are effective in disseminating program-level information among BISP beneficiaries. OPM (2019) Qualitative Assessment of Waseela-e-Taleem (WeT) with focus on BISP Beneficiary Committees (BBCs), Third Party Report.

3. Women Empowerment: Women-centric interventions to promote climate emergency adaptation

Our findings from the field show that women are particularly vulnerable to climate crises for two reasons: i) Their dependence on occupations which are specifically vulnerable to climate crises ii) Their lack of information on adaptation to climate change. Hence, there is a need to categorically focus on women's access to information and resources. Women should be engaged in livelihood sectors which are more tolerant and less vulnerable to climate shocks,⁷⁵ such as the retail sector (for example small shops) and services sector (for example beauty salons) rather than being engaged in climate-prone livestock.⁷⁶

4. Environmental Empowerment: Payment for Environmental Services

Financial liquidity constraints prevent the poor from using environmental services⁷⁷ as they may not know overall benefits of and/or cannot afford these services.⁷⁸ To overcome financial stress, a conditional cash transfer (CCT) can be designed to promote environmental services among the poor. Components of this CCT could be:

- a. Provision of unconditional cash support for consumption smoothing (BISP already incorporates this component).
- b. Additional income support for providing low-cost environmental services including clean water, housing, and for provision of sanitation facilities through a household-driven and community-driven participatory approach. NPGP may use existing mechanisms to ensure a participatory approach to providing low-cost environmental services.
- c. Health insurance coverage (through Sehat Sahulat Program).⁷⁹
- d. Awareness among beneficiaries, on importance of environmental services, through community institutions/organizations.
- e. Financial support (interest-free loan) to promote Climate-Smart Agriculture (CSA) and generate green jobs in areas of waste management, reforestation, and soil conservation. Government can pay people at the community level to stabilize soil and mountain-slopes, and to undertake similar activities to reduce floods and siltation.

5. Green Empowerment: Green measures as mandatory program components

Pakistan has scarce natural resources which are being used in unsustainable manner. Green economy is a potential solution to addressing this scarcity of natural resources.⁸⁰ Social protection programmes aimed at promoting employment and income-generating activities for the poor must consider these green economy requirements for inclusive and sustainable development.

- i. Reducing carbon emissions and pollution
- ii. Enhancing energy and resource efficiency
- iii. Preventing loss of biodiversity and physical ecosystems

⁷⁵ For example, Nestlé Pakistan experimented with Nestlé BISP Rural Women Sales Program to provide livelihood opportunities to BISP beneficiaries and engaged over 1,300 women as sales agents/retailers. The pilot showed impressive results in enhancing household income <https://www.nestle.pk/csv/ruraldevelopment/nestle-bisp-rural-women-sales-program>

⁷⁶ For example, in Bangladesh, due to growing risk of floods, women have been supported in moving away from raising chickens to raising ducks. CARE, 2008: Bangladeshi Women Are Knowledge Keepers in Mitigating Climate Change.

⁷⁷ Such as clean water, health facilities, modern fuels, and sanitation amenities.

⁷⁸ Duflo, et al. (2012) Improving access to urban services for the poor: open issues and a framework for a future research agenda, J-PAL Urban Services Review Paper.

Sombo, et al. (2010) Constraints to Improving Water and Sanitation Services.

⁷⁹ Sehat Sahulat Program, through a micro health insurance scheme, provides free indoor healthcare services to people below the poverty line, to persons with disabilities, and to transgender community members registered with NADRA and having specialized CNICs. <https://www.pmhealthprogram.gov.pk/about-us/>

⁸⁰ Green economy promotes resource efficiency through lower carbon emission and social inclusivity. In a green economy, employment and income are driven by public and private investment into economic activities, infrastructure, and assets which allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of loss of biodiversity and ecosystem services. <https://www.unenvironment.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy>

Green initiatives⁸¹ can be encouraged by incorporating the following parameters in design of social protection programmes.

- i. Provision of free technical support to target groups on adaptation of green measures
- ii. Provision of additional financial support during transition to green measures, such as assistance in purchase of green technology, in human capital development, and in developing market linkages

Typical green economy activities can include waste management and recycling, forestation, reclaiming wastelands to create agricultural lands, making organic fertilizers, and growing herbs, among others. Green economy can be pursued at the village level where its potential is greatest and where willing (and unemployed) locals may be especially available to work. Government should simultaneously pursue increasing the natural resource base through reforestation, improving the Karez system in Balochistan,⁸² and employing the poor in these activities to help them earn sustainable livelihoods.

6. Shock-Responsive Social Protection

Social protection programmes in Pakistan mainly use static welfare scores to target their beneficiaries. However, our findings indicate that climatic shocks adversely impact socio-economic and welfare indicators of households. These shocks have more profound adverse impacts on the bottom quintile's welfare due to their vulnerable income sources and lack of ownership of productive assets. During climatic and viral shocks, like floods, earthquakes, pandemics, a quick assessment is required to launch shock-responsive social protection for poor and ultra-poor households. Therefore, poverty targeting methods should be shock-adjusted to make social protection accurately responsive during climate and viral shocks.⁸³

Note: Our proposed interventions may be experimented at smaller levels before being scaled.

Data and Methodology

To examine awareness and readiness to climate emergency among ultra-poor, we adopted a mixed-methods research design. Both quantitative and qualitative data were collected from 8 sampled districts across 4 provinces.

For quantitative data, a three-stage stratified random sampling technique was used to interview NPGP and BISP beneficiaries in 400 households from 16 sampled UCs across 8 districts.⁸⁴

For qualitative data, 34 Key Informant Interviews (KIIs) and 55 Focus Group Discussions (FGDs) were conducted across sampled districts. To ensure pluri-vocality of views, women, and men from two different age groups, including youth⁸⁵ and non-youth adults,⁸⁶ were sampled. Qualitative data is analyzed using thematic analysis, which structured the data across multiple narratives and coding themes.

⁸¹ Green Initiatives: Which develop and support sustainable, locally produced, and locally consumed products, leading to resource-efficient community using low-cost, low-carbon methodologies. Examples:

Construction

- i) Use of indigenous but structurally-sound and disaster-resilient material and techniques for infrastructure construction
- ii) Use of clay and sun-dried bricks for constructing floor tiles, pavements, pots, toilets, washstands

Agriculture and Irrigation

- i) Rainwater harvesting for non-potable uses such as within toilets and kitchen gardening
- ii) Processing and packaging locally grown herbs
- iii) Making compost from toilet waste
- iv) Solar water treatment

Manufacturing, Sustainable Farming, Heritage

- i) Production of organic soap
- ii) Building animal shelters which segregate and reuse waste to make compost
- iii) Generating income from cultural and natural heritage

⁸² Abudu et al. (2019) A Karez System's Dilemma: A Cultural Heritage on a Shelf or Still a Viable Technique for Water Resiliency in Arid Regions. https://doi.org/10.1007/978-3-030-00728-7_22

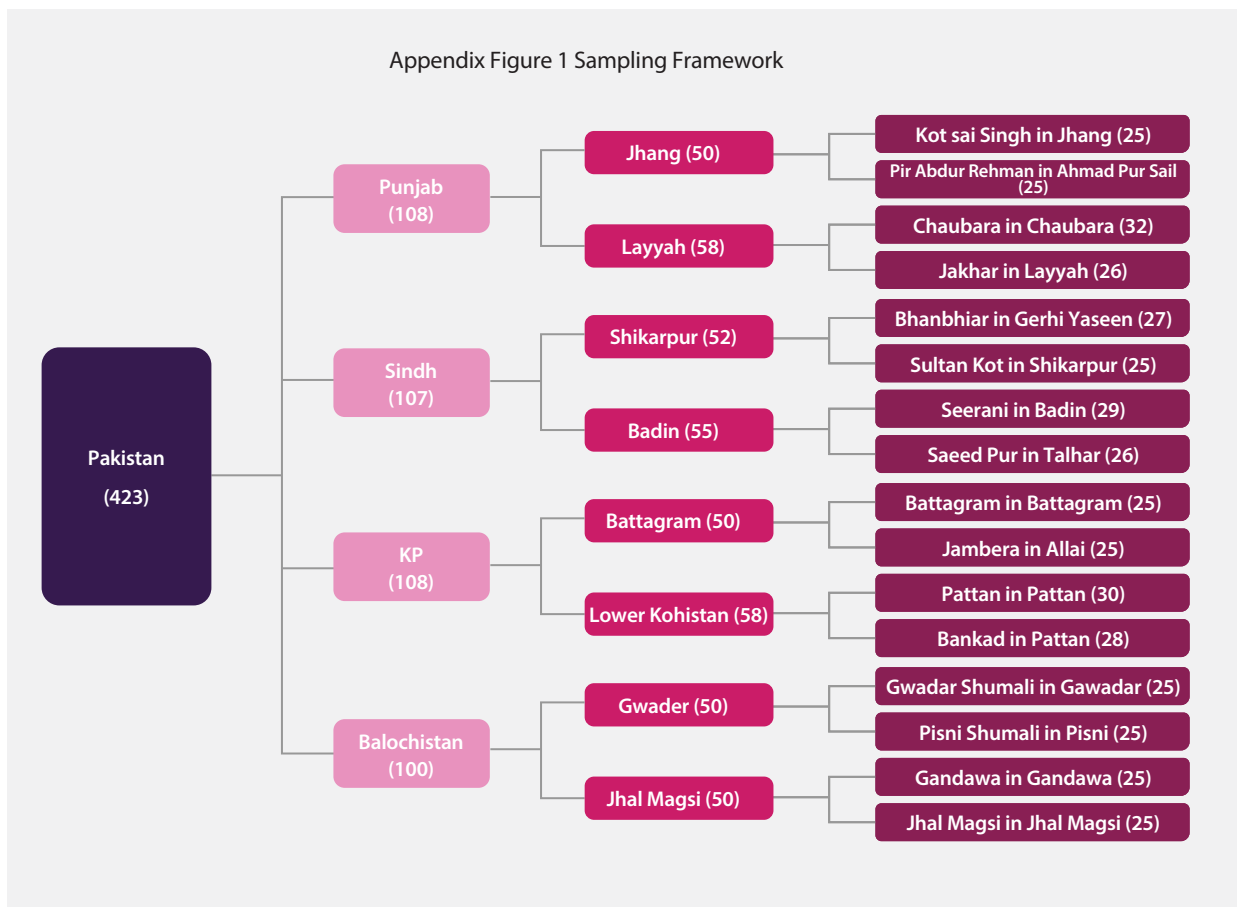
The Karez system is not only economically viable, it is also a feasible water supply technique for irrigation and domestic uses.

⁸³ Iqbal (2021) Diluting Impacts of Macroeconomic Shifts on Poverty Graduation Capacities of the Poor, Policy Brief, PPAF, Pakistan.

⁸⁴ Including 2 UCs from each sampled district.

⁸⁵ 18-29 years old.

⁸⁶ Older than 29.



Source: Author's Formulation

Appendix Table 1 Impact of Macroeconomic Variables on Poverty: Direct Elasticities

Variables	(1)	(2)	(3)	(4)	(5)
Ln(GDP)	-1.031 (0.116)***	-1.060 (0.025)***			-0.956 (0.037)***
Ln(Inf)		0.162 (0.015)***		0.204 (0.015)***	0.133 (0.009)***
Ln(PoU)					0.165 (0.063)***
Ln(Gini)					-0.293 (0.132)**
Ln(Exp)			-2.308 (0.096)***	-2.410 (0.058)***	
Observations	17	17	17	17	17
R-squared	0.919	0.985	0.836	0.918	0.968

Source: Author's calculation

Note: Time series data from FY01 to FY19

Dependent variable is poverty rates (head count ratio)

FM-OLS estimates

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix Table 2 Impact of Macroeconomic Variables on Unemployment: Direct Elasticities

Variables	(1)	(2)	(3)	(4)	(5)
Ln(GDP)	-0.258 (0.069)***	-0.258 (0.021)***			-0.118 (0.017)***
Ln(Inf)		-0.118 (0.012)***		-0.104 (0.004)***	-0.143 (0.004)***
Ln(PoU)					0.260 (0.028)***
Ln(Gini)					-0.160 (0.059)***
Ln(Exp)			-0.636 (0.192)***	-0.642 (0.016)***	
Observations	17	17	17	17	17
R-squared	0.546	0.816	0.648	0.882	0.891

Source: Author's calculation

Note: Time series data from FY01 to FY19

Dependent variable is unemployment rates

FM-OLS estimates

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix Table 3 Impact of Macroeconomic Variables on School Enrollment: Direct Elasticities

	(1)	(2)	(3)	(4)	(5)	(4)
VARIABLES	Ln(Primary)	Ln(Primary_F)	Ln(Middle)	Ln(Middle_F)	Ln(High)	Ln(Middle_F)
Ln(GDP)	0.363 (0.018)***	0.440 (0.020)***	0.613 (0.013)***	0.728 (0.014)***	0.910 (0.016)***	0.728 (0.014)***
Ln(Inf)	-0.036 (0.011)***	-0.017 (0.012)	-0.019 (0.008)**	-0.017 (0.009)**	-0.045 (0.010)***	-0.017 (0.009)**
Observations	17	17	17	17	17	17
R-squared	0.919	0.923	0.971	0.977	0.981	0.977

Source: Author's calculation

Note: Time series data from FY01 to FY19

Dependent variable is school enrollment

FM-OLS estimates

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix Table 4 Income Changes and Socioeconomic Characteristics

Sector of Employment	Income			Percent Change	
	Before COVID-19	During COVID-19	After COVID-19	Change in income during COVID-19	Change in income after COVID-19
Agriculture and Livestock	16,820	7,360	16,840	-56%	0.0%
Daily Wage Work	19,434	7,023	18,411	-64%	-5%
Paid Employment	19,955	11,818	21,273	-41%	7%
Own Business/Work	18,667	6,000	16,722	-68%	-10%
Livestock Ownership					
No Livestock	13,809	5,848	13,898	-58%	1%
Livestock	15,945	6,498	15,485	-59%	-3%
Type of Social Protection					
NPGP	21,046	5,722	20,115	-73%	-4%
BISP	13,412	6,451	13,746	-52%	2%
Both (NPGP+BISP)	14,870	6,194	14,025	-58%	-6%

Source: Author's Formulation

Note: Percentage change in income during COVID-19 is calculated using income reported before COVID-19 (January-March 2020) and income reported during COVID-19 (April-July 2020). Percentage change in income after COVID-19 is calculated using income reported during COVID-19 (April-July 2020) and after COVID-19 (August-November 2020).

Annexure A:

Guideline Questions for Key Informant Interviews (KIIs)

Role of Non-Governmental Organization (NGO)/Department

1. What is the local NGO/Department's role in helping people in the wake of current macroeconomic shocks?
2. What mechanism(s) does your organization use to develop a sustainable solution, to uplift target groups, in collaboration with federal/provincial governments, especially during current shocks?
3. Did you receive any support from federal/provincial governments or any NGOs to support affectees during current shocks?

Operational Modalities and Coverage

4. What are the modalities/mechanisms of intervention you used to support the community during current shocks?
5. Which sector did you provide the most help in?
6. What operational bottlenecks do you face in supporting the target groups, especially during a lockdown?
7. What was the hurdle in identifying the target beneficiaries to expand your intervention's coverage, especially during a lockdown?
8. Did you seek any support from federal/provincial governments to identify target beneficiaries? If yes, what kind of support did you seek and receive? Are you satisfied with the support you received? If not, why?

Promoting value-chain and gender-related support

9. How does your organization facilitate target communities to engage in local businesses and value chains to smoothen their income streams?
10. Did you provide help to females of the local community in the face of current macroeconomic shocks?
11. In what way your assistance/targeting to women has and will continue to facilitate them?
12. Do you provide any training/skill development program to youth (both female/male) to ensure their capacity building against the recent macroeconomic shocks?
13. What are your recommendations on what should be done against current shocks with a specific focus on youth and women?
14. Do you have any idea about climate emergency? If yes, did your organization take any action to promote safety measures against climate emergency, with your target communities?
15. Is your organization promoting green economy? If yes, how?

Annexure B:

Guideline Questions for Focus Group Discussions (FGDs)

Name of Surveyors:

Date of FGD (dd/mm/yy):

FGD Location:

1. Province.....
2. District.....
3. Tehsil.....
4. UC

FGD Type

1. Youth Female (Age 18-29)
2. Youth Male (Age 18-29)
3. Adult Female (Age above 29)
4. Adult Male (Age above 29)

Questions for Female Youth (18-29 years)

1. To your knowledge, is youth able to maintain employment during the recent macroeconomic shocks?
2. Did female youth face more problems regarding maintaining their employment levels in your community against current shocks?
3. To what extent is female youth at risk of exploitative labor conditions in certain sectors in the wake of current shocks? (Please focus on sectors where according to you, female employees are likely to be more exploited than are male members).
4. In what sort of business/self-employment is female youth involved in your community? (Please focus on 'local' businesses/value chains which do not necessarily require migration).
5. Has any female-youth specific intervention been extended to your community by private/government organizations especially in light of the current shocks?
6. Are female youth workers facing any social problems in your community?
7. Do you feel people who have received any assistance from private/government organizations during these current shocks, are deserving?
8. Who are the providers of services (government or private sector), such as medical services, in your community against macro-level shocks?
9. Do female youth in your community face harassment at workplace?
10. Are you satisfied with the initiatives of federal/provincial governments regarding female development, especially initiatives aimed at building female workforce's capacity to cope with current macroeconomic shocks?
11. Looking ahead, how do you expect your livelihood will be impacted as result of disruptions from COVID-19?

Questions for Male Youth (18-29 years)

1. How do you perceive current macroeconomic shocks (caused for example by COVID-19, Floods, Locust Attacks)? What has been (if any) and would be the impact of these shocks on your livelihood?
2. To your knowledge, is youth able to maintain employment during the recent shocks?
3. To what extent is youth at risk of exploitative labor conditions in certain sectors in the face of these shocks?
4. What are the challenges which male youth face when seeking formal/informal employment opportunities, especially in light of the current shocks?
5. What sort of help are you seeking from private and/or government organization/departments in terms of employment?

6. How have wages of employed male youth, who are casual wage earners or working in private firms, been affected in your community, due to these shocks?
7. Do you feel people who have received any assistance from private/government organizations during these current shocks, are deserving?
8. In what sort of business/self-employment is male youth involved in your community? (Please focus on 'local' businesses/value chains which do not necessarily require migration).
9. During current shocks, what kind of intervention is extended to youth by private/public organizations in your community?
10. Are you satisfied regarding the initiatives of the public/private organizations regarding capacity building of the youth against shocks?
11. Looking ahead, how do you expect your livelihood will be impacted as result of disruptions from COVID-19?

Questions for Female Adults (above 29 years)

1. To your knowledge, were female adults able to maintain employment during the recent macroeconomic shocks?
2. In your community, did female adults face more problems (than do male adults) in maintaining their employment levels against current shocks?
3. To what extent are female adults at risk of exploitative labor conditions in certain sectors in the wake of current shocks? (Please focus on sectors where according to you, female employees are likely to be more exploited than male members).
4. In what sort of business/self-employment are female adults in your community, involved?
5. Has any female-adult specific intervention been extended to your community by private/government organizations, especially in light of the current shocks?
6. Are female adult workers in your community facing any social problems?
7. Do you feel people who have received any assistance from private/government organizations during these current shocks, are deserving?
8. Who are the providers of services (government or private sector) in your community against macro-level shocks?
9. Do female adults in your community face harassment at workplace?
10. Are you satisfied with the initiatives of federal/provincial governments regarding female adult development, especially initiatives aimed at building female workforce's capacity to cope with current shocks?
11. Do you have any idea about climate emergency? If yes, did you take any measure to address climate emergency?
12. Looking ahead, how do you expect your livelihood will be impacted as result of disruptions from COVID-19?

Questions for Male Adults (above 29 years)

1. To your knowledge, were male adults able to maintain employment during the recent macroeconomic shocks?
2. To what extent are male adults at risk of exploitative labor conditions in certain sectors in the face of current shocks?
3. What are the challenges that male adults face when seeking formal/informal employment opportunities, especially in light of the current shocks?
4. How have wages of male employed adults, who are casual wage earners or working in private firms, been affected in your community, in light of the current shocks?
5. In what sort of business/self-employment are male adults involved in your community?
6. During current shocks, what kind of intervention is extended to male adults in your community, by private/public organizations?
7. Are you satisfied with the initiatives of public/private organizations regarding capacity building of male adults against current shocks?
8. Do you have any idea about climate emergency? If yes, did you take any measure to address climate emergency?
9. Looking ahead, how do you expect your livelihood will be impacted as result of disruptions from COVID-19?

Annexure C:

Household Survey Questionnaire

A. Respondent Information			
No.	Question	Response	Instruction
A1	ID of enumerator	System based	Autofill
A2	Name of enumerator	System based	Autofill
A3	Date of interview	System generated data	Autofill
A4	Province Name	Pre-filled list of provinces	Select from list
A5	District Name	Pre-filled list of districts	Select from list
A6	Tehsil	Pre-filled list of tehsil	Select from list
A7	Union Council	Pre-filled list of UC	Select from list
A8	Village /Town	Filled by enumerator	Select from list
A9	Respondent Household ID	From the list provided by PPAF	Select from list
A10	Respondent Household Found	1= Yes 2= No	>>Q12
A11	Reasons for Respondent Household not being Found	1= Household not found 2= Household has migrated 3=Household has changed address 4=Household/Premises empty for the survey period after at least two visits 96=Other (specify)	>> End interview
A12	Informed consent: Would you like to participate in this survey? (filled by enumerator)	1 =Yes, I agree to participate in this survey 2= No	If No, End interview >> 13
A13	Respondent's Name/Alias	Name filled by enumerator	Single answer
A14	Respondent's Gender	1=Male 2=Female	
A15	Are you or any other member of household currently NPGP or BISP Beneficiary?	1=NPGP 2=BISP 3=Both 4=Not a Beneficiary	
A16	What type of asset do you get from NPGP?	From the list provided by PPAF	Only for NPGP Beneficiaries chosen in Q15
B. Household Roster			
B1	How many people (only permanent family members – excluding the tenants and temporary guests) live in your house?	Number filled by enumerator	
B2	Name of household member	Text	
B3	Gender of the household member	1 = Male 2 = Female	
B4	Age of the household member	Number	

No.	Question	Response	Instruction
B5	What is current marital status?	1= Never Married 2= Married 3= Widowed 4= Divorced 5= Separated 6= Nikkah solemnized but Rukhsati not taken place	
B6	Highest level of education Of the member of household	1 = No formal education 2=Primary school (grades 1-5) 3=Middle school (grades 6-8) 4=Matric pass (9th and 10th grade) 5=Intermediate Pass (11th and 12th grade) 6 = Undergraduate (BSc/BCom)/ Masters/PhD 7 =Vocational training 8=Adult literacy program 9=Madrasa 96 = Other (specify))_____	
B7	Employment Status of the Member of household	1=Agricultural share/contract cultivator 2= Agricultural owner/cultivator 3=Daily wage earner (non-agricultural) 4= Casual paid employee 5=Business/Shop worker 6 = Domestic worker 7 = Salaried job in private sector 8=Raising livestock 9 =Own shop/business 10=Cart Vendor 11=Sewing/embroidery 12=Unpaid Family Worker (Housewife) 13=Student 14=Government Employee 15=Unemployed 16=Retired	
B8	Income before COVID-19 Pandemic of the member of household	Number	
B9	Income during COVID-19 Pandemic of the member of household	Number	
B10	Income after COVID-19 Pandemic of the member of household	Number	
C. Monthly Household Consumption (Expenditures)			
C1	Monthly Food expenditures before COVID-19 or other shock? COVID-19	Number	
C2	Monthly Food expenditures during COVID-19 or other shock? COVID-19	Number	
C3	Monthly Food expenditures after COVID-19 or other shock? COVID-19	Number	
C4	Monthly Education expenditures before COVID-19 or other shock? COVID-19	Number	

No.	Question	Response	Instruction
C5	Monthly Education expenditures during COVID-19 or other shock? COVID-19	Number	
C6	Monthly Education expenditures after COVID-19 or other shock? COVID-19	Number	
C7	Monthly Health expenditures before COVID-19 or other shock? COVID-19	Number	
C8	Monthly Health expenditures during COVID-19 or other shock? COVID-19	Number	
C9	Monthly Health expenditures after COVID-19 or other shock? COVID-19	Number	
	Monthly total expenditures before COVID-19 or other shock (including food and non-food)	Number	
	Monthly total expenditures during COVID-19 or other shock (including food and non-food)	Number	
	Monthly total expenditures after COVID-19 or other shock (including food and non-food)	Number	
D. Assets and Income Information			
D1	What is your present occupancy status? (single code)	[1] Owner occupied (not self-hired) [2] Owner occupied (self-hired) [3] On rent [4] Subsidized rent [5] Rent free	
D2	Which material is used for walls?	[1] Burned bricks/blocks [2] Raw bricks/mud [3] Wood/Bamboo [4] Stone [5] Others	
D3	How many rooms does your household occupy, including bedrooms and living rooms? (Do not count storage rooms, bathrooms, toilets, kitchen, or rooms for business)	----- (in number)	
D4	What is the main fuel used for cooking?	[1] Firewood [2] Gas [3] Kerosene Oil [4] Dung Cake [5] Electricity [6] Crop residue [7] Charcoal/ Coal [96] Other	
D5	What type of toilet is used by your household?	[1] Flush connected to public sewerage [2] Flush connected to pit [3] Flush connected to open drain [4] Dry raised latrine [5] Dry pit latrine [6] No toilet in household	
D6	What is the main source of drinking water for the household?	[1] Piped water [2] Hand pump [3] Motorized pumping/Tube well [4] Open well [5] Closed well [6] Pond/Canal / River / Stream [7] Spring [8] Mineral water [9] Tanker /Truck/Water bearer [10] Filtration plant [96] Others	
D7	Does the household have an electricity connection?	[1] Yes [2] Yes, extension [3] No	
D8	Does the household have a gas connection?	[1] Yes [2] Yes, extension [3] No	
D9	Does the household own any livestock (buffalo, cow, goat/sheep, horse/mule/donkey, camel) presently?	[1] Yes [2] No	If Yes>>

No.	Question	Response	Instruction
D9a	If yes, how many? (in numbers)	Buffalo (in numbers____) Cow/Cattle (in numbers____) Goat/Sheep (in numbers____) Horse/Mule/Donkey (in numbers____) Camel (in numbers____)	
D10	Do you or your household members own any agricultural land?	[1] Yes [2] No	
D12	If yes, how much land is owned in total? (in numbers) Unit of land: [1] Marla [2] Kanal [3] Jerib [4] Acre [5] Murabba	
E. Impact of Shocks and Macroeconomic Policies			
E1	Did household face any of the following shocks during this year (that is, 2020)?	1. Locust 2. Flooding 3. Any other economic shock 4. No shock	Select multiple
E2	Did your locality face such weather shocks during this year?	1. Normal span of rainfall 2. Longer span of rainfall 3. Extreme events of rainfall 4. No shock	
E3	Please indicate to what extent the following crises affected your livelihood.		
E3a	COVID	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E3b	Locust	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E3c	Flood	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E4	How did these shocks (any reported above) impact your employment?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E5	How did these shocks impact your monthly income?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E6	How did these shocks impact your food consumption?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E7	How did these shocks impact your health?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E8	How did your overall wellbeing get affected by these shocks?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
E9	For how many days did you remain unemployed due to these shocks?	Days (number)	
E10	Did any of your family members lose a job due to these economic and non-economic shocks?	1.Yes 2.No	
E11	How many hours did you work each day during the last week at the main occupation?	Hours	

No.	Question	Response	Instruction
F. Women-Specific Questions			
F1	What is your employment status?	1=Unemployed 2=Employed 3=Unpaid Family Worker (Housewife) 4=Don't like having a job/working outside 5=Not allowed to do the job 96=Other (specify)_____	
F2	If employed, please mention employment sector	1=Agriculture-related activities 2=Daily wage earner (non-agricultural) 3= Casual paid employee 4=Business/Shop worker 5 = Domestic worker 6 = Salaried job in private sector 7=Raising livestock 8 =Own shop/business 9=Sewing/embroidery 10=Government employee 96=Other (specify)_____	If employed in case of Q 44
F3	How many hours did you work each day during the last week at the main occupation?	Hours	If employed in case of Q 44
F4	How did these shocks (any reported above) impact your employment?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
F5	How did these shocks impact your monthly income?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
F6	How did these shocks impact your food consumption?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
F7	How did these shocks impact your health?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
F8	How has your overall wellbeing been affected by these shocks?	1 = Not at all; 2 = To some extent; 3 = To a moderate extent; 4 = To a great extent	
F9	Did you face domestic violence during current shocks?	1. Yes 2. No	
G. Coping Strategies: (Choose What Sort of the Coping Strategies You Have Adopted to overcome Impacts of Shocks)			
G1	How you managed the expenditure on Food?	1. Bought less expensive food 2. Reduced proportions/number of meals by adult men 3. Reduced proportions/number of meals by adult women 4. Reduced proportions/number of meals by children 5. Reduced proportions/number of meals by elderly	
G2	How you managed the expenditure on Education during the crises time?	1. Moving male children to less expensive schools 2. Moving female children to less expensive school 3.Stopped male children from going to school 4.Stopped female children from going to schools	

No.	Question	Response	Instruction
G3	How you managed the expenditures on Health during the time of crises?	<ol style="list-style-type: none"> 1. Opted for less expensive health service 2. Purchased cheaper medicines having higher side effects 3. Avoided treatment in minor/less severe sickness of women 4. Avoided treatment in minor/less severe sickness of men 5. Avoided treatment in minor/less severe sickness of children 	
G4	What you did with the saved stock?	<ol style="list-style-type: none"> 1. Used savings of the Household 2. Used seed stocks kept for next season 3. Used personal savings of women and children 	
G5	Did you sell your livestock or any other assets during the time of crises?	<ol style="list-style-type: none"> 1. Sold large ruminants (bullock, cow, buffalo etc.) 2. Sold small ruminants (goats and sheep) 3. Sold transport (cycle, motorcycle etc.) 4. Sold jewellery 	
G6	Looking ahead, how do you expect your livelihood will be impacted as result of disruptions from COVID-19?	<ol style="list-style-type: none"> 1. No impact 2. Moderate impact 3. Severe impact 	
G7	How do you meet livelihood requirement if government imposes lockdown to control pandemic	<ol style="list-style-type: none"> 1. Use existing saving 2. Take loan 3. Rely on government support 4. Sale livestock or other assets 5. Work despite lockdown 	If employed in case of Q 44

H. Government and non-Governmental Support and Environment

H1	Did you receive any assistance from community/ friends/ relatives during shocks?	<ol style="list-style-type: none"> 1. Yes 2. No 	
H2	Did you receive any loan from commercial banks at a low-interest rate?	<ol style="list-style-type: none"> 1. Yes 2. No 	
H3	Did you receive any help from local body governments/ provincial/federal governments?	<ol style="list-style-type: none"> 1. Yes 2. No 	
H4	Did you receive PKR 12000 under Ehsaas Emergency Cash Programme?	<ol style="list-style-type: none"> 1. Yes 2. No 	
H5	Are you satisfied with the response of the government against shocks?	<ol style="list-style-type: none"> 1. Yes 2. No 	
H6	What is your top priority during the time of Covid-19?	<ol style="list-style-type: none"> 1. Income 2. Health 3. Both Income and Health 	
H7	Do you and members of your household follow the precautionary measures against the Coronavirus?	<ol style="list-style-type: none"> 1. To a great extent 2. To a moderate extent 3. To some extent 4. Do not follow 	
H8	How important is the issue of climate change?	<ol style="list-style-type: none"> 1. Not at all important 2. Somewhat important 3. Extremely important 	

No.	Question	Response	Instruction
H9	Did your locality face following weather shocks during this year?	<ol style="list-style-type: none"> 1. Abnormal rainfalls 2. Abnormal winter 3. Abnormal summer 4. Abnormal drought 5. Earthquakes 	
H10	Did you/your household take any precautionary measures to overcome negative effect of weather shock?	<ol style="list-style-type: none"> 1. Yes 2. NO 	
H11	In the last 12 months, did you or any member of your family do any following activities	<ol style="list-style-type: none"> 1. Clean-up activities in your street neighbourhood/village 2. Plantation in your street/ neighbourhood/village 3. Water purification (boiling water, purification tablets etc.) 4. Cleaning bathroom/ sanitation in the house 5. Use of soap for handwashing 6. Household waste management 	
H12	In your opinion, how is your living standard now compared to before COVID?	<ol style="list-style-type: none"> 1. Better 2. Same 3. Worse 	



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