

Vulnerability and Capacity Assessment with regard to Social Protection

*A Study of districts
Lower Dir, Nowshera,
Rahim Yar Khan
and Sargodha*

2017



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July 2017

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Disclaimer

This publication has been developed and produced with the support of the German Federal Ministry for Economic Cooperation and Development (BMZ) through the Support to Social Protection – Social Health Protection project implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The views expressed in this publication do not necessarily represent those of GIZ Pakistan.

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List of Acronyms

BISP	Benazir Income Support Programme	PES	Pakistan Economic Survey
CBN	Cost-of-Basic Needs	PGI	Poverty Gap Index
CCI	Council of Common Interest	PML	Pakistan Muslim League
CCT	Conditional Cash Transfer	PMT	Proxy Means Testing
CPI	Consumer Price Index	PPAF	Pakistan Poverty Alleviation Funds
CSP	Child Support Program	PPS	Probability Proportional to Size
CSW	Civil Society Wing	PRSP	Poverty Reduction Strategy Paper
EOBI	Employees Old Age Benefits Institutions	PSC	Poverty Score Card
FGDs	Focus Group Discussions	PSPA	Punjab Social Protection Authority
FGT2	Foster, Greer, and Thorbecke	PSUs	Primary Sampling Units
FHH	Female Headed Households	R.Y.Khan	Rahim Yar Khan
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	SP	Social Protection
GoP	Government of Pakistan	SPDC	Social Policy and Development Centre
HH	Household	SP-SHP	Social Protection/Social Health Protection Programme
HIES	Household Integrated Economic Survey	TORs	Terms of References
IFA	International Financial Assistance	TV	Television
KP	Khyber Pakhtunkhwa	UNDP	United Nations Development Programme
LFS	Labor Force Survey	VCI	Vulnerability and Capacity Indices
LZCs	Local Zakat Committee	VCR	Videocassette Recorder
Med	Median	VEP	Vulnerability as Expected Poverty
MHH	Male Headed Households	VEP	Vulnerability as Expected Poverty
MIS	Management Information System	VER	Vulnerability as uninsured Exposure to Risk
MP	Multidimensional Poverty	VEU	Vulnerability as Expected low Utility
MPI	Multidimensional Poverty Indices	WHO	World Health Organization
NCRCL	National Center for Rehabilitation of Child Labour	WWF	Workers Welfare Fund
NFC	National Finance Commission		
NGOs	Non-Governmental Organizations		
OPHI	Oxford Poverty & Human Development Initiative		
PBM	Pakistan Bait-ul-Mal		
PBS	Pakistan Bureau of Statistics		
PCO	Public Call Office		

Executive Summary

Social protection has now occupied a central position on the policy agenda of developing countries with regard to poverty eradication and reducing the vulnerability of people's livelihood in relation to various economic and natural shocks. Given the complex dynamics of vulnerability, it is essential to understand the nature of its underlying drivers for developing efficacious strategies for social protection.

In the case of Pakistan, formal social protection system largely remains fragmented with a leading role played by the federal government. After the devolution of major social service functions from federal to provincial governments through 18th Constitutional Amendment in 2010, provincial governments have shown their enhanced commitment towards social protection.

The main objective of this study is to carry out an empirical investigation of poverty, vulnerability and the capacity of the people to cope with the shocks in the selected districts of Punjab and Khyber Pakhtunkhwa. It also quantifies the coverage of various social protection schemes in the sample areas. The study was conducted in four districts – Rahim Yar Khan and Sargodha from Punjab and Lower Dir and Nowshera from Khyber Pakhtunkhwa. The methodology is primarily based on a quantitative survey of 836 households, which was supplemented by 12 focus group discussions.

Some of the key findings of study and recommendations are presented below. The

provincial poverty and vulnerability is estimated by using Household Income and Expenditure Survey (HIES) of 2013-14 while the rest of the findings summarized here are based on the household survey conducted for this study.

Provincial Poverty and Vulnerability Estimates

- Close to 25 and 26 percent population of the provinces of Khyber Pakhtunkhwa (KP) and Punjab respectively was poor during the year 2014 as compared to the national estimate of 29 percent. The estimated incidence of poverty in urban areas is significantly low as compared to rural areas. These estimates are based on the official poverty line.
- Estimates for vulnerability as expected poverty (risk of falling into poverty) show that overall 62 and 47 percent of the population of KP and Punjab respectively was relatively vulnerable to poverty in 2014, while the national estimate is 53 percent. It is also important to note, that even 59 and 39 percent of rural non-poor population of KP and Punjab respectively was vulnerable to poverty.
- Vulnerability to poverty is higher amongst the rural households as compared to the urban households. Close to 68 and 55 percent of the population in rural areas of KP and Punjab respectively was vulnerable, whereas, the vulnerable population in urban areas was close to 30 percent.

- The incidence of vulnerability to poverty in KP province is quite high as compared to Punjab, while in case of consumption poverty the estimates for KP are relatively lower.

Economic Characteristics of Sample Household

- The estimates of asset-poverty reveal the highest incidence in Sargodha (65 percent) followed by Rahim Yar Khan (42 percent), Lower Dir (39 percent) and Nowshera (30 percent).
- Per capita monthly income of poor households is almost half than that of non-poor households in Lower Dir, Nowshera and Rahim Yar Khan, whereas, in Sargodha the gap is relatively low.
- The incidence of benefits from overseas remittances is exceptionally high (32 percent) in district Lower Dir. In contrast, 3 to 7 percent households in other sample districts confirmed the receipt of overseas remittances.
- Overall, adult literacy rate is estimated in the range of 53 percent (Sargodha) to 65 percent (Lower Dir). However, sharp differences are observed across household poverty status. The literacy rates among the head of non-poor households are in the range of 70 to 76 percent, while the comparative figures in poor households range from 30 to 48 percent.
- The gap across household poverty status in terms of enrollment in the age cohort 5-16 years is also perceptible. However, it is encouraging to observe that the overall enrollment rate is 70 percent or more in the sample districts.
- Labor Force Participation rate in the sample districts ranges from 41 to 51 percent as

compared to the national estimate of 36 percent.

- The estimates for unemployment rate are high in comparison with the national figures (1.1 for urban and 1.3 for rural). The highest (5.4 percent) unemployment rate is observed in district Lower Dir and the lowest (2.4 percent) in Sargodha.
- Incidence of child labor is significantly high in the sample districts of Punjab province – Rahim Yar Khan (4.9 percent) and Sargodha (9.5 percent). Another important feature in these districts is the percentage of ‘idle’ (neither studying nor working) children –13 and 8 percent in Rahim Yar Khan and Sargodha respectively. In contrast, incidence of child labor as well as ‘idle’ children is much lower in sample districts of KP.
- Occupation of head of household in Lower Dir, Nowshera and Sargodha districts is clustered around three categories: non-agriculture skilled and unskilled labor and self-employed businessman (shopkeeper). In contrast, agriculture is dominated in Rahim Yar Khan where 36 percent of the household heads are linked with this sector.
- A significant proportion of the head of households works as daily wager in Lower Dir (45 percent of the poor) and Nowshera (60 percent of the poor). However, the magnitudes of comparative percentages are relatively low in sample districts of Punjab. Regarding the status of work, about 55, 73, 32 and 25 percent of heads in poor households reported non-permanent work status in Lower Dir, Nowshera, Rahim Yar Khan and Sargodha districts respectively.

Awareness and Incidence of Public Social Assistance

- Majority of households in sample districts were aware of Benazir Income Support Programme (BISP) as this initiative has been highly publicized by the federal government.
- Awareness about provincial Sehat Insaf Card is also verified by significant percentage of households in Lower Dir and Nowshera (26 and 44 percent respectively).
- Not surprisingly, very low incidence of public assistance is observed in sample districts. The percentage of households who confirmed any assistance from federal or provincial governments during last five years ranges from 13 to 19 percent only. Barring BISP and Sehat Insaf Card, very low and insignificant incidence of other social assistance initiatives was reported.

Coverage of Social Security Institutions

- Benefits received from various social security institutions were also probed through the household survey. As expected, insignificant incidence is observed. Percentages of households receiving pension from Employees Old Age Benefits Institution (EOBI) are reported in the range of 3 to 7 percent. Overall, only 44 out of 836 (5 percent) households confirmed receiving pension from EOBI, while only one household confirmed the receipt of any amount in the category of Workers Welfare Fund (WWF). No respondent reported receiving benefit from provincial Employees Social Security Institutions (ESSIs).

Incidence of Shocks and Household Coping Strategy

- The percentage of households that reported vulnerability in terms of shocks (during last 10

years) is 31, 52, 51 and 33 in Lower Dir, Nowshera, Rahim Yar Khan and Sargodha respectively.

- Major sources of shocks include crop damage, loss of business, health problems of earner and health problems of any household member.
- Health shocks were reported to be highest in Rahim Yar Khan (56 percent) followed by 29 percent in Nowshera. Economic shocks range between 24 to 46 percent. Higher incidence of natural shock (floods) was reported in Nowshera (25 percent).
- Significant inter-district variations are observed in the risk management strategies adopted by the households. For instance, borrowing strategy is noticeable in sample districts of Punjab (43-49 percent), while use of own savings (11-26 percent) and reduction of consumption (24-29 percent) is narrated by most of the sample households in KP.

Estimation of Vulnerability and Capacity Indices (VCI)

- Household level VCIs of 836 sample households were constructed using household and community survey data. Since VCI provides a comparative assessment, the scores have been classified into groups of high, medium, low and resilient populations by using Jenk's Natural Breaks Optimization method.
- Overall, 31 percent of sample households lie in the category of high vulnerability while about the same percentage is in the moderate category. Only 14 percent of households may be termed as resilient with very low score of VCI.
- Significant variations are observed across the districts. Majority of the households (51 percent) in Sargodha are highly vulnerable followed by Rahim Yar Khan (36 percent).

Altogether, 81 percent of households in Sargodha and 75 percent in Rahim Yar Khan fall in the category of high or moderate vulnerability. Situation in sample districts of KP is relatively better where percentage of highly vulnerable households is 24 and 16 in Lower Dir and Nowshera respectively. The proportion of resilient households is also relatively higher in these two districts.

- Coverage of social protection was incorporated in the VCI construct. However, no significant link of social protection with VCI has been observed in the sample. However, it should not imply that social protection has actually no role to play in reducing vulnerability of households. The results are not plausible due to a number of reasons. First, the coverage of social protection is quite low among the sample households. Second, the nature and amount of assistance provided through these schemes may not be sufficient enough to reduce the level of vulnerability of these households. Finally, the lack of effective targeting mechanisms also poses a challenge in reaching out to the poor and vulnerable population.

Recommendations

- While most of the poor households are vulnerable, the study also shows a higher level of vulnerability to poverty among the non-poor households, which do not qualify for social assistance due to having incomes or assets beyond social assistance thresholds. Therefore, some appropriate mechanisms for providing assistance to the non-poor population need to be developed.
- The coverage of social assistance initiatives needs to be expanded significantly, which is currently very low compared to the prevailing

incidence of poverty and vulnerability. Further, people are generally unaware about the procedures and eligibility criteria of various social assistance programs, except for BISP. Federal and provincial governments need to launch public awareness campaigns in this regard.

- The existing social security schemes cover the formal sector only, thereby excluding the poor workers, which are engaged in the informal sector. Therefore, new initiatives should be developed that are focused on temporary and daily-wage employment.
- The study shows that bulk of the unemployed labour force in the sample districts consists of young people of age 15-25 years. Therefore, initiation of labour market interventions for youth requires greater attention of the policymakers.
- The presence of social networks and self-help groups for collective actions was not found in most of the sample communities, particularly in Punjab. There is a need to develop programs for fostering community mobilization particularly in the rural areas.
- The importance of involving local governments in the implementation of social protection programs needs to be realized by the higher tiers of government. Local governments can play an instrumental role in the success of social protection programs particularly by helping the provincial governments in identification of beneficiaries and close monitoring of the initiatives.

Preamble

In recent years, social protection has emerged as a key approach to reduce poverty and vulnerability in developing countries.

1 | Preamble

Economists have long recognized that a household's sense of well-being depends not just on its current status of income or expenditure, but on the risk it faces as well, particularly in households with fewer resources. It implies that poverty is not necessarily a stagnant state. People or households move overtime into and out of poverty due to the dynamics of wide variety of economic and social deprivations and external shocks. Thus, a complete appraisal of poverty requires incorporation of these dynamic aspects in the measurement of poverty and vulnerability as well as in formulating the policies for poverty alleviation.

In recent years, social protection has emerged as a key approach to reduce poverty and vulnerability in developing countries. It is now widely recognized as an effective vehicle to help the poor and vulnerable. Therefore, understanding the dynamics of vulnerability by identifying its sources and drivers and assessing the coping/adaptation capacity of individuals and communities is crucial for devising and implementing effective strategies for social protection and poverty reduction.

In the case of Pakistan, the persistence of high levels of absolute poverty suggests that

public interventions through social assistance programs which only consider static measure of poverty have failed to protect the poor from the consequences of their vulnerability. Similarly, public forms of social insurance have also failed on this count. Social security schemes are confined to the formal economy and the urban working class. They cover less than four percent of the total employed labor force. The phenomenon thus necessitates an articulated social protection framework by explicitly incorporating vulnerability¹.

This study assesses the extent of poverty, vulnerability (risk of falling into poverty) and the capacity of people to react and to cope with the shocks in selected sample districts of Pakistan, in the provinces of Punjab and Khyber Pakhtunkhwa. The study also quantifies the extent to which the households are covered by public transfers and insurance mechanisms. The findings would help provincial governments in designing effective and more tailored interventions through efficient social protection programs to address differential vulnerabilities and their underlying drivers.

The study was carried out in four districts – Rahim Yar Khan and Sargodha from Punjab and Lower Dir and Nowshera from Khyber

¹ There is a draft National Social Protection Framework which has not been finalized and implemented yet. Post-18th Constitutional Amendment, social protection was devolved to the provinces. It remains to be seen how provinces would align their social protection policies with the broader national framework.

² Sampling framework of the household survey is provided in Annexure-1.

Pakhtunkhwa. A quantitative survey of 836 households was conducted in 56 localities/communities (41 rural and 15 urban²) using a structured questionnaire. A community questionnaire was also administered in the selected localities to get information regarding available facilities, infrastructure and various characteristics of the community. The quantitative survey was supplemented by Focus Group Discussions (FGDs) that were held in 12 localities; 3 in each district.

The report is divided into five sections. Section 2 provides the analysis of poverty and vulnerability in the macro context. Provincial estimates are derived by using micro data set of

the Household Income and Expenditure Survey of Pakistan. A brief overview of the social protection in Pakistan is also presented in this section. Section 3 presents salient characteristics of sample households including poverty status, income and expenditure, education and literacy, extent of coverage of the social assistance programs, type of shocks confronted by the households and the coping strategies. Reflections from FGDs are also portrayed in this section. Section 4 presents quantitative analysis of households' vulnerability and capacities, while a set of policy recommendations is furnished in Section 5.

Poverty, Vulnerability and Social Protection in the Macro Context

The estimated urban provincial poverty incidences are significantly low as compared with their rural counterpart.

2 | Poverty, Vulnerability and Social Protection in the Macro Context

Pakistan has been using consumption based poverty to keep track of changes in poverty incidence. Nonetheless, this approach reflects the static nature of poverty and is criticized on the ground that it ignores the risk and uncertainty that a household faces while maintaining the minimum level of sustainable livelihood. In contrast, under the dynamic aspect of poverty a household is considered to be ‘vulnerable to poverty’ if it is likely to be poor in near future. Poverty analysts advocate that this forward-looking approach of poverty measurement deals

vulnerability should be conceptualized as a component of poverty.

This section portrays a macro picture of both the prevailing poverty incidence and the extent of vulnerability to poverty. Provincial estimates are derived using individual data of Household Income and Expenditure Survey (HIES) of 2013-14. A brief overview of the social protection sector in Pakistan is also presented to comprehend the government response.

2.1. Consumption Poverty

The Planning Commission of Pakistan has released new poverty numbers in the Pakistan Economic Survey (PES) of 2015-16 by adopting revised methodology for poverty estimation. PES narrates “Using Cost-of-Basic Needs (CBN) a new poverty line is estimated using patterns of consumption of reference group and it comes to Rs. 3030 per adult equivalent per month using the HIES 2013-14 data³. According to this methodology 29.5 percent of the population is estimated to live below poverty line. Using the population estimate of 186.2 million for 2013-14 implies that around 55 million people of Pakistan are living below the poverty line”. Incidentally, PES does not provide provincial poverty estimates. Thus, an attempt is made to derive provincial⁴ poverty numbers using the

more with people’s well-being than does the static approach. The dynamic approach recognizes that the experience of negative shocks can make the endowment level volatile leading to permanent poverty (Ratul and Das, 2015). It has therefore been recommended that risk and



³ Pakistan Economic Survey does not furnish poverty line for a household. However with an average family of seven, poverty threshold would be Rs. 21,000/- per month.

⁴ It is not feasible to derive district poverty estimates using HIES data as the survey is not representative at district level.

Exhibit – 1 | Poverty Estimates – 2014

[Percentage of Population]

	Pakistan			Khyber Pakhtunkhwa			Punjab		
	Overall	Rural	Urban	Overall	Rural	Urban	Overall	Rural	Urban
Poverty Incidence	29.31	35.83	17.19	25.16	27.55	14.14	26.23	31.23	16.17
Poverty Gap	5.96	7.49	3.12	4.21	4.66	2.14	5.56	6.89	2.89
Poverty Severity	1.78	2.29	0.84	1.11	1.24	0.51	1.74	2.19	0.82

Source: Estimated from HIES (2013-14) data.

recommended official poverty line and household level (unit record) data of HIES 2013-14.

As shown in Exhibit 1, close to 25 and 26 percent of the population of Khyber Pakhtunkhwa (KP) and Punjab respectively was poor during the year 2014 as against the national poverty estimates of about 30 percent. Although the overall poverty incidence is almost same in both the provinces, rural poverty incidence is relatively lower in KP as compared to Punjab. One of the plausible reasons⁵ is perhaps the significantly higher inflow of domestic and overseas remittances in KP province.

The estimated urban provincial poverty incidences are significantly low as compared with their rural counterpart. The national urban headcount is estimated at 17 percent, while the incidence for urban poverty in KP and Punjab is

around 14 and 16 percent respectively. Similar trends are also observed in other poverty aggregates⁶ i.e. poverty depth and poverty severity.

2.2. Multidimensional Poverty

The approach to measure poverty solely in terms of financial deprivation has been widely criticized in the literature of welfare and wellbeing. It is argued that in order to understand the complex phenomenon of poverty or to evaluate wellbeing of household or individual, a multidimensional exercise is imperative. Fortunately, Planning Commission of Pakistan (PC) has recently started to develop Multidimensional Poverty Index (MPI) to know the nature and extent of deprivations.

The concept of Multidimensional Poverty (MP) recognizes poverty as being a multi-faceted

⁵ Government of Pakistan uses same poverty line (cut-off threshold) for both urban and rural areas to estimate consumption poverty. This may perhaps be another reason for getting unexpected provincial estimates, as provinces have varying degree of urbanization. It is worth mentioning here that the poverty estimates derived from the same dataset (HIES 2013-14) but using the methodology adopted by SPDC are 37.9, 34.9 and 38.2 for overall Pakistan, Punjab and KP respectively. SPDC uses slightly different methodology and separate poverty lines for urban and rural areas (see Jamal, 2013).

⁶ Poverty headcount index indicates proportion of households/population whose consumption falls below the poverty line but ignores the depth of poverty. The Poverty Gap Index (PGI) is calculated to measure the average distance from the poverty line. Although, PGI shows the depth of poverty, it is insensitive to the distribution among the poor. To capture the distributional sensitivity, poverty severity is estimated. This index takes into account inequality amongst the poor and shows the severity of poverty by assigning greater weights to those households who are far from the poverty line.

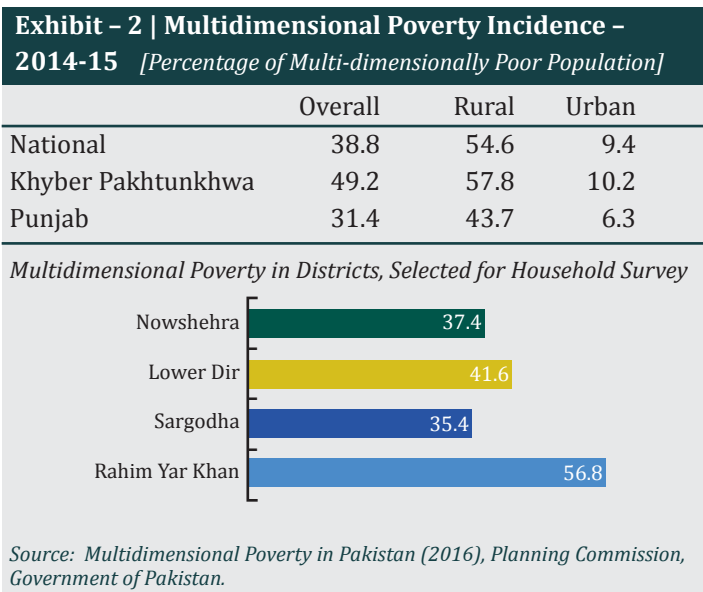
⁷ For detail methodology and results, see Government of Pakistan (2016), "Multidimensional Poverty in Pakistan", Planning Commission of Pakistan, Ministry of Planning, Development and Reform, Government of Pakistan, available at http://www.pk.undp.org/content/pakistan/en/home/library/hiv_aids/Multidimensional-Poverty-in-Pakistan/, accessed May 17, 2017.

phenomenon that comprises multiple aspects of deprivation. The MPI constitutes three dimensions: health, education and standard of living. These dimensions are reflected through 15 indicators including 3, 4 and 8 indicators pertaining to education, health, and standard of living respectively⁷. Exhibit 2 furnishes estimates of multidimensional poverty incidences for Pakistan and the provinces of KP and Punjab for year 2014-15.

According to the estimates, about 49 and 31 percent of population of KP and Punjab respectively was poor in terms of selected indicators used in constructing the MP. Interestingly, using the multidimensional poverty approach, the incidence of poverty is much higher in KP compared to the estimates given by the consumption poverty approach. This is due to the fact that consumption poverty approach measures the poverty incidence solely in terms of financial or income deprivation while the multidimensional approach also takes into account some non-monetary factors that affect the quality of life of households, such as health, education and housing⁸.

Similar to consumption poverty, rural poverty incidence is quite large in absolute as well in relative terms. Close to 58 and 43 percent of population residing in rural areas of KP and Punjab respectively was multi-dimensionally poor, while the urban incidence was in the range of 6 to 10 percent.

The exhibit also furnishes MP estimates in the districts⁹ selected for the household survey. Interestingly, MPIs in two districts (one from each province) are comparatively higher as against the



other two districts indicating diversity among the sample districts.

District Nowshera has remained a part of district Peshawar (the provincial capital of KP) till 1988. The district is linked with highway and also has a good agriculture and economic base. Therefore, Nowshera possesses a relatively better socio-economic position with respect to poverty and deprivation as compared to Lower Dir district which is a remote mountainous zone with low economic base.

Regarding the sample districts of Punjab, Rahim Yar Khan lies in the South Punjab region which is more deprived in terms of socioeconomic characteristics than middle and upper Punjab mainly due to highly unequal land ownership pattern, poor or lack of infrastructure and low level of human development. In contrast, district Sargodha is relatively more developed in terms of road infrastructure and commercialization of agriculture.

⁸ Similar difference was observed by Jamal (2009a) where incidence of consumption poverty and multidimensional poverty in Pakistan was 30 percent and 54 percent respectively in 2004-05.

⁹ District-wise MP estimates are also available in the Planning Commission’s report mentioned in the footnote 7.

2.3. Assessment of Vulnerability to Poverty

A most common definition of vulnerability to poverty is that a household is vulnerable to poverty if it is likely to be poor in the future. In general, there are three approaches to measure vulnerability in the literature: vulnerability as expected poverty (VEP), vulnerability as expected low utility (VEU), and vulnerability as uninsured exposure to risk (VER). These approaches, although using different methodologies, assess vulnerability through household consumption expenditure which is a widely used measure of household well-being. In a way, vulnerability assessment has a predictive function which informs that whether a household's consumption is likely to be affected in the future in view of the socio-economic characteristics of household/ community and the external shocks.

The measurement of VEU and VER approaches deal with changes in household welfare over time and therefore require panel or pseudo panel data which is rarely available in developing countries.

Thus the VEP which can be calculated with cross-section data¹⁰ is the most suitable/feasible approach to estimate vulnerability. According to this approach, vulnerability is measured by comparing future consumption with a socially defined poverty line. In general, VEP is the probability that a household will fall below the poverty line (typically defined by a threshold of consumption) in future if the household is currently 'non-poor'. It is also the

probability that a currently 'poor' household will remain in poverty or will fall deeper into poverty in near future¹¹.

Consequently, in the absence of appropriate panel or pseudo panel data in the context of Pakistan, this research uses VEP approach proposed by Chaudhuri et al. (2002) to measure vulnerability to poverty from the nationally representative HIES data for the year 2013-14.

As shown in Exhibit 3, 62 and 47 percent of the population of KP and Punjab provinces respectively was relatively¹² vulnerable to poverty in 2014, while the corresponding national estimate was 53 percent. As expected, vulnerability to poverty is higher amongst the rural households as compared to the urban households. Close to 68 and 55 percent of the population in rural areas of KP and Punjab respectively was vulnerable, whereas, the

Exhibit - 3 | Estimates of Vulnerability to Poverty - 2014 [Percentage of Population]

	Poor	Population Vulnerable to Poverty		
	Population	Overall	Poor	Non-Poor
NATIONAL:				
Overall	29.3	53.3	90.2	37.3
Rural	35.8	65.1	92.3	49.4
Urban	17.2	30.4	81.8	19.2
KHYBER PAKHTUNKHWA:				
Overall	25.2	62.0	91.4	51.9
Rural	27.6	67.9	92.0	58.6
Urban	14.1	32.8	85.7	23.7
PUNJAB:				
Overall	26.2	47.4	87.7	32.0
Rural	31.2	55.4	89.0	39.3
Urban	16.2	29.9	82.2	19.2

Source: Estimated from HIES (2013-14) data.

¹⁰ For detail methodology, bibliography of studies on vulnerability and justification for using VEP, see Ratul and Daisy (2015). A brief methodology of measuring vulnerability to poverty as proposed by Chaudhuri et al. (2002) is provided in Jamal (2009). He adopted this approach for deriving vulnerability estimates for the year 2005.

¹¹ VEP is an ex-ante position i.e. the knowledge about the actual shocks beforehand while poverty is the ex-post situation where outcome is observed after the experience of the shocks (Holzmann and Jørgensen, 2001).

¹² Relative to observed poverty incidence, i.e., probability of being vulnerable is greater than the poverty incidence.

vulnerable population in urban areas was about 30 percent. It is worth mentioning that vulnerability estimates for KP province are quite high as compared with Punjab, while in case of consumption poverty the estimates for KP are relatively lower. The finding thus indicates that consumption by households in KP is more volatile than that in Punjab.

The vulnerable households not only include those that are already poor but also those who are currently above the poverty line and are subject to possible risk with little resources to mitigate such risk. The exhibit also presents the distribution of vulnerable population among poor and non-poor categories. It is alarming to observe that even 59 and 39 percent of non-poor rural population of KP and Punjab provinces respectively were vulnerable to poverty which suggests, that in near future, it is probable that these rural non-poor households would become poor. The estimates also suggest that around 90 percent of the poor households are likely to remain poor in the near future as well.

2.4 Brief Overview of Social Protection Sector in Pakistan

Social protection is referred to as the set of policies and programs designed to reduce poverty and vulnerability by diminishing people's exposure to risks, enhancing their capacity to protect themselves against hazards and interruption/loss of income and promoting efficient labor markets. In other words, it is an intervention intended to assist individuals, households and communities in managing risk in

order to reduce vulnerability, smooth consumption and improve equity. Moreover, social protection is also needed as an element of pro-poor growth to ensure that economic growth benefits the poor. Effectively administered and carefully targeted social protection measures increase employment, reduce loss of human capital, and prevent people from falling into poverty as a result of financial or economic shocks. Thus, proficient protection measures form a key component of social policy and promote social cohesion.

Unfortunately, the relevant literature on social protection sector in the context of Pakistan suggests that there is no clearly articulated government social protection framework yet¹³. The social protection initiatives have been developed largely as a series of ad-hoc responses to problems arisen in particular circumstances or recommended by international donor agencies (Jamal, 2010). Thus, in the absence of any functional definition of social protection and comprehensive policy guidelines, the various schemes or programs initiated by respective governments were developed arbitrarily without any coordinated and organized effort for achieving efficiency, equity and impact. Moreover, they are fragmented, duplicated, and neither coordinated nor monitored. These initiatives are characterized by low coverage, political interference and poor mechanisms of targeting vulnerable households or persons.

Traditionally, the Federal Government of Pakistan was the main agency for designing,

¹³An effort was made to draft a comprehensive social protection strategy by the Planning Commission of Pakistan. Consequently, the National Social Protection Strategy (NSPS) was prepared in 2008 (Government of Pakistan, 2008). Although it was formally adopted by the Government of Pakistan, no progress was made towards its implementation. Post-18th Constitutional Amendment, social protection was devolved to the provinces. Currently, provincial governments either have developed or are in the process of developing their own social protection strategies and frameworks. It remains to be seen how provinces would align their social protection policies with the broader national framework.

developing and implementing major social protection initiatives for all federating units till the 18th Amendment to the Constitution of Pakistan was passed in 2010. The amendment redefined the structural contours of governance in Pakistan through a paradigm shift from a heavily centralized to a predominantly decentralized federation. Accordingly, all such responsibilities pertaining to shared and overlapping functions have been devolved to provinces, particularly relating to social services. Arising from the amendment, most of social protection functions have been devolved and subsequently matched by transfer of higher financial resources to the provinces through the 7th National Finance Commission (NFC) Award. Each federating unit now is responsible to develop its own social protection policy to match its particular socio-economic environment.

In accordance to the devolution of social protection function, the Government of Punjab has created the Punjab Social Protection Authority (PSPA) with the Chief Minister of Punjab as its Chairperson and Finance Minister as Vice Chairperson. The mandate of PSPA is to provide an over-arching framework for the social policy design, execution and monitoring/evaluation of all welfare programs in Punjab. According to the Draft Social Protection Policy of Punjab (2016), "PSPAwill work towards joint planning and design of various interventions so that duplications can be avoided and experiential learning is shared across programs. Developing common standards and integrated Management Information Systems will also be critical for such coordination of interventions. Through these, the Government plans to share registries of target groups and beneficiary databases on continuous basis. This will enable pooling of resources and development of complimentary programs by different departments to help target different vulnerabilities".

On the other hand, under its Social Protection Policy, the government of Khyber Pakhtunkhwa (KP) has established the Sustainable Development Unit within the Planning and Development Department as a Policy Planning and Implementation Cell which would be responsible for implementation and monitoring of social protection and other social sector policies. The KP policy document argues that "..... in view of the leading role of federal government institutions in the area of cash transfers and pensions, coordinating role may be given to the concerned institutions (education, health, labor, social welfare, planning and development etc.)".

Thus, currently the governance and administration of social protection delivery system in Pakistan is in a phase of transformation. Nonetheless, federal government still continues to play a leading role in the area of social security (except for provincial ESSIs and WWF) and major cash transfer schemes such as Benazir Income Support Programme (BISP). Federally designed social protection initiatives and few provincial initiatives are briefly described in Annexure-2.

Major Findings of the Field Survey

Incidence of social assistance is observed to be very low in the sample districts.

3 | Major Findings of the Field Survey

As mentioned earlier, a random survey of 836 households was conducted for this study in four districts – Lower Dir and Nowshera from Khyber Pakhtunkhwa while Rahim Yar Khan and Sargodha from Punjab. The quantitative survey was supplemented by Focus Group Discussions (FGDs). This section summarizes major finding of the field survey.

Important household characteristics are described to exhibit the capacity of households to manage risks and vulnerability to poverty. After determining household poverty status, socioeconomic aspects such as income and wealth, education and literacy, participation in labor force and characteristics of unemployed members are highlighted¹⁴. Besides providing information on the awareness and incidence of social assistance programs, the section also documents responses with respect to household vulnerability in terms of shocks and the coping strategy to manage these shocks.

3.1 Estimating Household Poverty

An important objective of all social protection interventions is to contribute to poverty alleviation or prevention. Thus, an understanding of the level of poverty in sample districts is essential for making decisions regarding

designing and implementing these interventions. This sub-section presents three scenarios for estimating poverty from sample household survey data.

The Poverty Score Card (PSC) for Pakistan adopted by Benazir Income Support Programme (BISP) has been developed with the assistance of the World Bank (2009) as a tool to measure poverty in an effective way in case income data can't be provided. The PSC uses proxy means testing (PMT) which are based on proxies of income such as family characteristics, ownership of assets, and housing features. The scorecard uses 12 indicators which are highly related to poverty and changes in poverty. Statistically optimal weights, assigned to the indicators or components, improve the predictive power of household poverty status. To determine household poverty status through PSC in the sample districts, the exact methodology regarding components, weights and cut-off points, adopted by BISP as well as by Pakistan Poverty Alleviation Funds (PPAF) for estimating household poverty status is applied to the household survey data¹⁵. PSC methodology assigns poverty scores to each household in the range of zero to hundred, while a household with score below 24 points¹⁶ is designated as poor.

¹⁴ Housing and demographic characteristics are collated in the Annexure-3.

¹⁵ However, various problems are highlighted by researchers for determining household poverty status. For instance, a score of 15 is assigned to those households which have less than or equal to 2 dependents. Thus, very low dependency ratio prevailing in the Balochistan province results in extremely low poverty incidences.

¹⁶ 24 is the highest cut off point used for designating household poverty status under various social assistance schemes in Pakistan.

The second alternative was to apply national poverty line which was announced by the Planning Commission of Pakistan to assess the incidence of household poverty. According to Pakistan Economic Survey (2015-16), Rs. 3030 per adult equivalent unit was declared as official poverty line for the year 2014. As the household survey for this study was conducted in early months of 2017, this cutoff or benchmark was adjusted with inflation (by using Consumer Price Index) to determine poverty status of households in sample districts for the year 2017. Accordingly, a household is designated as poor if the per adult equivalent unit consumption expenditure of household is less than Rs. 3242¹⁷ per month.

Both the above methodologies (PSC and consumption poverty) determine absolute level of deprivation using a benchmark or cut-off point. In contrast, Household Wealth (Asset) Score provides a relative picture of asset poverty, which is represented through below average household wealth. Asset Poverty is estimated with the help of household assets (possessions) including house ownership and quality of housing. Categorical Principal Component Technique of Factor Analysis¹⁸ is used to combine these assets and to develop asset score (Weighted Factor Score) for each household. The deprived households are defined as those which have asset score less than 50 percent of the median score¹⁹.

The estimates of poverty incidences derived by applying the above methodologies are presented in Exhibit 4. As expected, low incidences are estimated through PSC

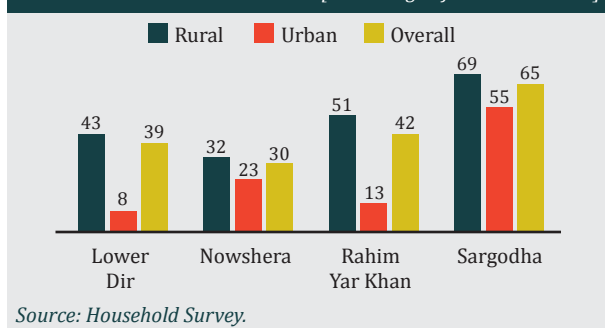
Exhibit – 4 | Estimates of Household Poverty Status [Percentage of Poor Population]

Status	Poverty Score Card	Consumption Poverty	Asset Poverty
Lower Dir	24.07	7.9	38.9
Nowshera	21.15	26.0	29.8
Rahim Yar Khan	18.75	32.7	42.3
Sargodha	36.27	22.1	65.2

Source: Household Survey.

methodologies mainly due to low dependency rates and possession of motor-cycle, washing machine and refrigerator in sample households. The reported expenditures by households which are used in deriving consumption poverty are also not yielding plausible poverty levels²⁰. Thus, it is recommended to use relative concept of poverty for the classification of households in terms of poverty status. Accordingly, the percentage of households which were designated as poor are 39, 30, 42 and 65 percent in Lower Dir, Nowshera, Rahim Yar Khan and Sargodha respectively. Exhibit 5 provides regional (urban-rural) asset-poverty incidences.

Exhibit – 5 | Poverty Status According to Household Asset Score [Percentage of Poor Household]



¹⁷ The poverty line of Rs 3030 in 2014 becomes equivalent to Rs 3242 in 2017 after adjusting for inflation.

¹⁸ For detail description of estimating wealth score, see Filmer and Pritchett (2001).

¹⁹ This is analogous to relative poverty measure and as such not comparable either with PSC or with Consumption Poverty. A measure of relative poverty defines "poverty" as being below some relative poverty threshold. For example, the statement that "households with an accumulated income less than 50% of the median income are living in poverty" uses a relative measure to define income poverty.

²⁰ The low consumption poverty incidence in Lower Dir is because of remittances; a significant (32 percent) percentage of households reported the receipt of inland or overseas remittances.

3.2 Income and Wealth Status

Exhibit 6 provides information regarding per capita monthly income and expenditure reported by sample households. It reveals that sample districts of KP are relatively better-off than the sample districts of Punjab. It is also noted that the gap between income and expenditure is high which perhaps indicates that expenditures either are under-reported or not fully covered during the survey, especially for non-food items. It is worth mentioning that expenditures include the imputed values of consumption from own production or received as gifts or charity besides cash purchases.

The comparative picture across poverty status is portrayed in Exhibit 7. Barring Sargodha district, per capita monthly income of poor households is almost half of that reported by the non-poor households. However, the gap between poor and non-poor households in per capita monthly expenditure is not so wide. The consumption differences are more distinct in KP sample districts across household poverty status.

Relatively higher income and expenditure in sample districts of KP is perhaps due to higher incidence of overseas remittances. The data reveals that the incidence of benefits from overseas remittances is exceptionally high (32 percent) in district Lower Dir, while a good (7 percent) percentage of households of Nowshera district also reported receiving overseas remittances.

Exhibit 8 displays ownership of household assets across poverty status. Clear differences are visible in the ownership of sewing machine, electric washing machine, refrigerator, and even in the possession of TV.

The poverty analysis of the households shows that the incidence of asset poverty is higher in the sample districts of Punjab compared

Exhibit – 6 | Reported Per Capita Monthly Income and Expenditure [Average Rupees]

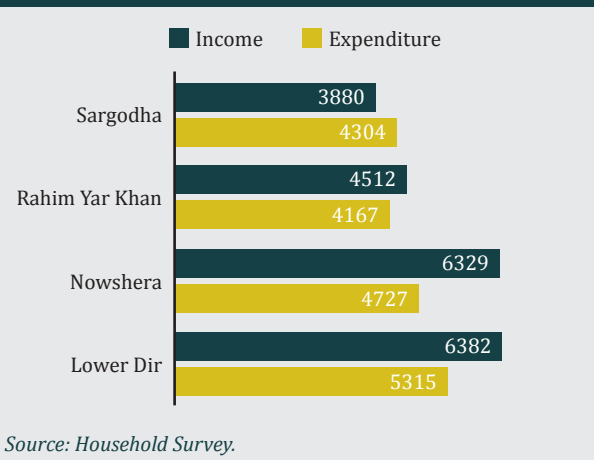


Exhibit – 7 | Income and Expenditure by Household Poverty Status

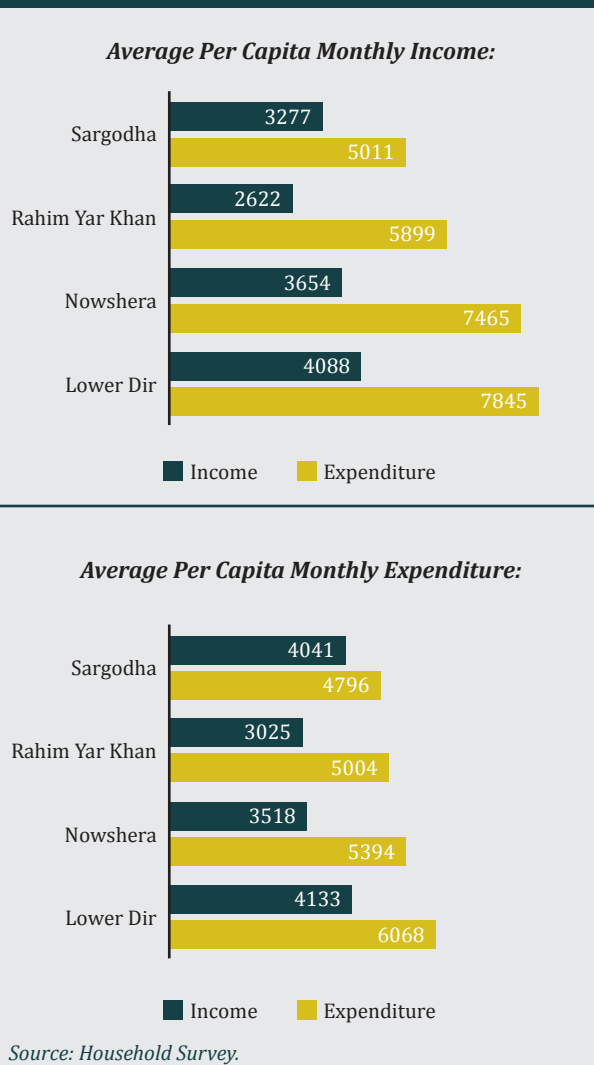


Exhibit – 8 | Ownership of Household Assets

[Percentage of Household who Confirmed Possession of]

	<u>Lower Dir</u>		<u>Nowshera</u>		<u>Rahim Yar Khan</u>		<u>Sargodha</u>	
	Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor
Television	58.3	6.0	85.6	25.8	85.8	38.6	78.9	45.1
Sewing Machine	87.9	27.4	89.0	37.1	91.7	28.4	91.5	36.1
Washing Machine	96.2	33.3	96.6	29.0	81.7	8.0	85.9	15.8
Refrigerator	87.9	9.5	93.2	8.1	86.7	5.7	62.0	2.3
Computer	18.9	-	32.2	-	24.2	-	16.9	-
Air Condition	1.5	-	13.0	1.6	10.8	-	-	-
VCR or Dish	12.1	-	9.6	-	18.3	6.8	5.6	-
Car-Jeep-Van	30.3	1.2	21.9	3.2	13.3	2.3	5.6	3.0
Motor Cycle	20.5	3.6	45.9	8.1	93.3	36.4	54.9	18.8
Jewelry	31.1	20.2	21.2	3.2	24.2	3.4	1.4	-
Agricultural Land	38.6	23.8	35.6	19.4	41.7	27.3	25.4	6.8
House Ownership	93.2	88.1	93.2	79.0	92.5	78.4	93.0	72.2

Source: Household Survey.

to KP. The incidence is much pronounced in Sargodha with almost two-third of the households being poor. Moreover, the poverty incidence in rural households is considerably higher than the urban households. As far as per capita monthly income and expenditure is concerned, relatively wider gap between poor and non-poor households is observed in income than in expenditure.

3.3 Education and Literacy

Literacy and schooling are important correlates of household poverty and vulnerability. This section furnishes information on adult literacy rates, percentage of literate head or spouse in districts and access to schools in the age cohort 5-16 years. All these information are disaggregated across gender and household poverty status. The overall adult literacy rate is estimated in the range of 53 (Sargodha) to 65 (Lower Dir); however, sharp differences are observed across household poverty status (Exhibit 9).

Exhibit – 9 | Adult Literacy Rate

[Percentage of Adult Respective Literate Population]

		Overall	Male	Female
<i>Lower Dir</i>	Overall	65.3	81.4	43.8
	Non-Poor	72.9	89.0	50.3
	Poor	50.1	65.2	32.2
<i>Nowshera</i>	Overall	63.8	76.0	48.9
	Non-Poor	72.4	86.1	55.7
	Poor	39.9	48.1	29.7
<i>Rahim Yar Khan</i>	Overall	60.1	70.7	48.4
	Non-Poor	75.7	84.9	65.1
	Poor	33.7	45.1	22.3
<i>Sargodha</i>	Overall	53.2	68.3	37.5
	Non-Poor	70.5	84.9	55.0
	Poor	40.2	55.5	24.9

Source: Household Survey.

The literacy rate among head of poor households ranges from 30 to 48 percent, which are approximately half of the literacy rate among the heads of non-poor households (Exhibit 10). Barring the magnitude, a similar trend is observed in the literacy rate of spouse. The gap across household poverty status in terms of

Exhibit – 10 | Percentage of Literate Head of Household and Spouse

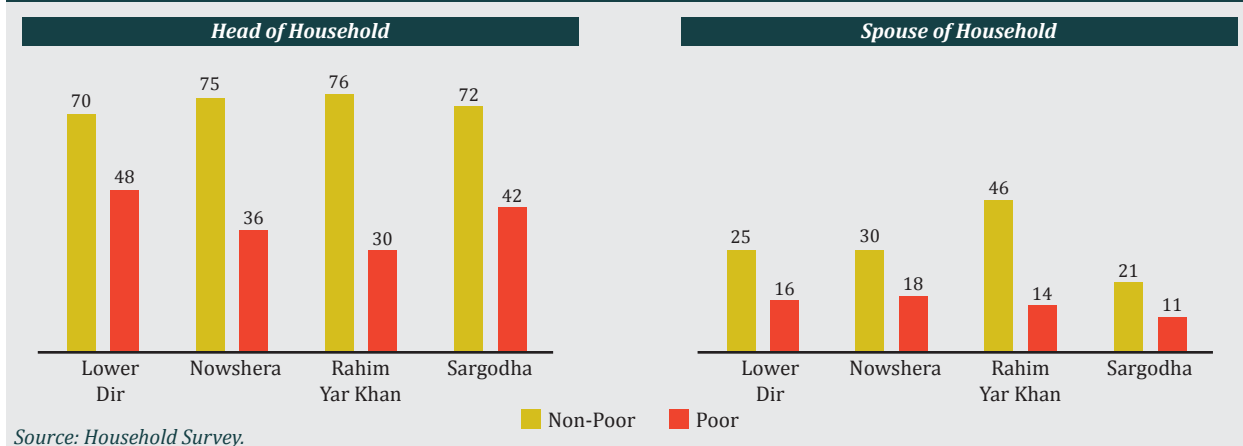
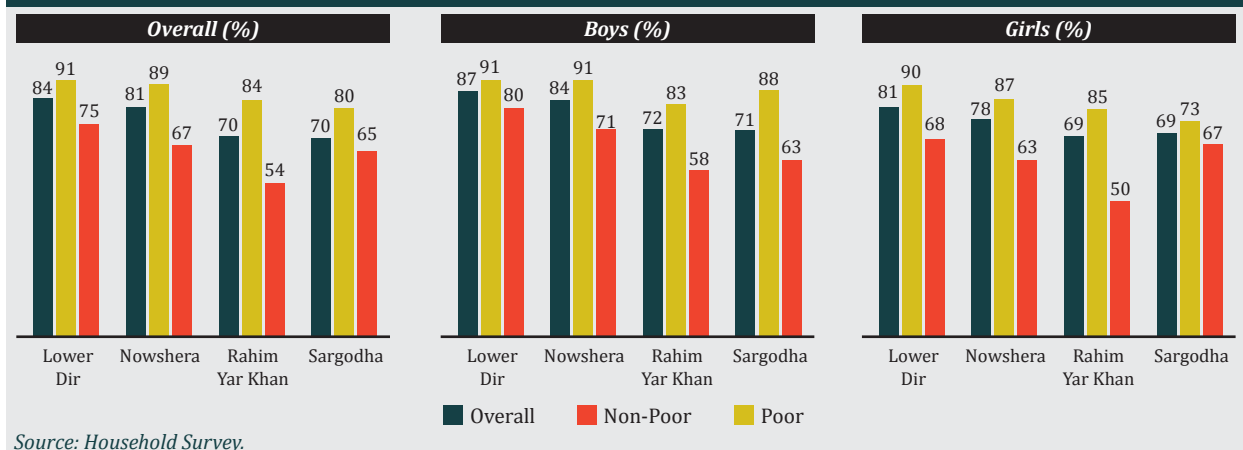


Exhibit – 11 | Enrollment in the Age Cohort 5 to 16 years



enrollment in the age cohorts 5-16 years is also perceptible (Exhibit 11); however, it is encouraging that overall enrollment rate is 70 or more in sample districts.

As highlighted in the income and expenditure section, sample districts of KP are relatively in a better position as compared with the sample districts of Punjab in terms of literacy and access to schools.

3.4 Occupation and Unemployment

Salient characteristics of labor force participation in sample districts are displayed in this section. Exhibit 12 furnishes percentage distribution of population in the age cohort 15-64 years. According to Pakistan Labor Force Survey (LFS,

2014-15), national crude augmented participation rate is 36 percent (rural 39 and urban 30 percent) for the age cohort 15 years and above. With the exception of Lower Dir, quite high participation rate is evident in the sample districts. Further, the unemployment estimates are also high as compared with the national estimates which are reported in the range of 1.1 and 1.3 percent in the LFS. The highest (5.4 percent) unemployment rate is observed in District Lower Dir and the lowest (2.4 percent) in Sargodha district. The exhibit also indicates percentage of students in this age cohort. In this respect, the highest percentage (21.3) of students is recorded in Lower Dir.

Exhibit – 12 | Percentage Distribution of Active Population [15 - 64 Years]

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Employed (<i>Participating</i>)	35.8	44.9	44.4	48.2
Unemployed (<i>Searching for Work</i>)	5.4	3.6	3.9	2.4
Ill-Injured (<i>Unable to Work</i>)	2.1	1.7	1.2	4.8
Old Aged (<i>Not Willing to Work</i>)	4.4	3.4	4.2	2.5
Housewife	31.0	33.3	37.7	35.6
Student	21.3	13.0	8.6	6.5

Source: Household Survey.

Exhibit – 13 | Percentage Distribution of Population Aged [10 - 14 Years]

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Child Labor	1.0	0.7	4.9	9.5
Searching for Work	1.0	1.4	1.2	0.7
Neither Studying nor Working	1.4	6.8	12.9	7.6
Housewife	4.8	2.1	8.0	4.4
Student	91.8	89.0	73.0	77.8

Source: Household Survey.

In order to capture the incidence of child labor, percentage distribution of population in the age cohort 10-14 is provided in Exhibit 13. The estimates reveal that incidence of child labor is significantly high in the sample districts of Punjab province: Rahim Yar Khan (4.9 percent) and Sargodha (9.5 percent). Another important feature in these districts, which is evident in the exhibit, is the percentage of 'idle' (neither studying nor working) children. Close to 13 and 8 percent of children in the age cohorts 10-14 years reported no activity in Rahim Yar Khan and Sargodha districts respectively. In contrast, incidence of child labor as well as 'idle' children is much lower in sample districts of KP. One possible explanation could be that relatively more work opportunities are available in sample districts of Punjab as compared with KP. It is also worth mentioning that the incidence of asset poverty is also comparatively high in sample districts of Punjab which is a push factor for the child labor force participation.

Occupation of head of households in the sample districts are collated in the Exhibit 14. More or less similar pattern in terms of occupation of head of household is observed in Lower Dir, Nowshera and Sargodha districts. Occupations of head in these districts are clustered around three categories: non-agriculture skilled and unskilled labor and self-employed businessman (shopkeeper). In contrast, agriculture dominates in District Rahim Yar Khan where close to 36 percent of household heads are linked with this sector.

Job vulnerability of head of household is analyzed in terms of work as daily wager and not having permanent work. Among the various categories of employment status (salaried employees, employer, self-employed), daily wager are more prone to shocks in terms of riots, unrest, agitation, weather shocks and other economic shocks such as changes in business climate.

As shown in Exhibit 15, a significant proportion of employed persons are working as

Exhibit – 14 | Occupation of Head of Household in Sample Area [Percentage]

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Agriculture - Share Cropper	3.2	1.3	6.9	1.8
Agriculture - Landlord	9.5	10.8	22.6	9.4
Agriculture -Unskilled Labor	0.6	1.3	6.9	5.9
Unskilled Labor (<i>Non- Agriculture</i>)	24.1	19.7	10.1	27.6
Skilled Labor (<i>Non-Agriculture</i>)	27.8	21.0	22.0	18.2
Businessman/Shop Keeper	20.9	27.4	20.8	31.8
Salesman	1.9	1.9	3.8	1.8
Office Worker	12.0	16.6	6.9	3.5

Source: Household Survey.

Exhibit – 15 | Occupation of Head of Household [Percentage]

	Lower Dir		Nowshera		Rahim Yar Khan		Sargodha	
	Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor
Daily Wager	12.5	45.2	23.9	60.4	8.8	26.5	29.8	34.5
Others ^a	87.5	54.8	76.1	39.6	91.2	73.5	70.2	65.5
Temporary Work ^b	19.8	54.8	28.5	72.9	9.9	32.4	15.8	25.7
Permanent Work	80.2	45.2	71.5	27.1	90.1	67.6	84.2	74.3

a) Includes salaried employees, self-employed, and employers. | b) Also includes seasonal work.
Source: Household Survey.

daily wagers, particularly those belonging to the poor households. Daily wage employment is more prominent in sample districts of KP. Similar trend is observed in case of the nature of work. Close to 55, 73, 32 and 25 percent of heads in poor households reported non-permanent work status in districts Lower Dir, Nowshera, Rahim Yar Khan and Sargodha districts respectively.

Various characteristics of unemployed persons in the age cohort 15-64 years are tabulated in Exhibit 16. This information perhaps

would be useful for public or non-governmental²¹ interventions. Few important observations emerge: majority of unemployed persons are young and belong to the age-cohort 15-25 years, a significant percentage of unemployed persons have education graduate or above in districts Lower Dir and Nowshera, a significant percentage have technical training except in district Nowshera, and a considerable percentage of unemployed is searching for white collar jobs (office work).

²¹ NGOs working in these areas may also get benefits from these information for designing their interventions.

Exhibit – 16 | Characteristics of Unemployed Persons in Age Cohort [15 - 64 Years]

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Mean Age (Years)	25	26	24	23
<i>Percentage in Age Category:</i>				
15-25 Years	58.9	62.8	81.3	70.6
26-49 Years	41.1	34.3	18.7	23.5
50-64 Years	0.0	2.9	0.0	5.9
Proportion of Women (%)	8.9	17.1	0.0	0.0
Unemployed Period (Months)	14	10	10	19
Average Expected Monthly Wages (Rs.)	25000	22000	15000	16000
Unemployed - Illiterate (%)	3.6	17.1	18.8	5.9
Unemployed - Graduate or Above (%)	37.5	57.1	12.8	6.0
Have Technical Training	30.4	11.4	37.5	35.3
<i>Type of Work Searching (%)</i>				
Unskilled Labor	7.4	22.6	16.1	6.7
Skilled Labor	24.1	16.1	22.6	20.0
Shop Keeper	9.2	6.5	19.4	6.7
Salesman	5.6	6.5	16.1	-
Office Work	53.7	48.3	25.8	66.6

Source: Household Survey.

3.5 Awareness Regarding Government Social Assistance

During the household survey, awareness regarding major social assistance initiatives was assessed by enquiring about programs executed by national or provincial governments²². It is important to mention here that respondents were explicitly asked about social assistance initiatives such as BISP, Zakat, etc. Awareness about social security institutions like Employees Old Age Benefits Institutions (EOBI) or Employees Social Security Institution (ESSI) was not included since

these initiatives only cover a small proportion of the formal sector employees²³.

The relevant findings are displayed in Exhibit 17. As expected, majority (80-90 percent) of households in sample districts was aware of BISP as this program has been highly publicized by the federal government, while the knowledge about Zakat and Bail-ul-Mal institutions is more pronounced in district Rahim Yar Khan. Awareness about Sehat Insaf Card is also verified by significant percentage of households in districts Lower Dir and Nowshera.

²² An open ended question regarding private (non-governmental) assistance was also included in the social protection module of the household questionnaire. Overall close to 11 percent households were aware of various NGOs working in the areas. The respective percentages are 13.9, 21.2, 4.5 and 3.4 for districts Lower Dir, Nowshera, Rahim Yar Khan and Sargodha.

²³ Information on income received from EOBI and WWF was however obtained, which is presented in sub-section 3.7.

Exhibit – 17 | Awareness Regarding Government Social Assistance Initiatives

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Number of Households	216	208	208	204
<i>Percentage of Households Who were Aware</i>				
Benazir Income Support Programme (BISP)	85.2	88.5	80.3	78.9
Zakat-Guzara Allowance	8.8	21.6	29.3	19.0
Zakat-Education Stipends	9.7	13.5	28.4	7.8
Zakat-Health Care	8.3	13.9	27.9	10.3
Zakat-Social Welfare, Eid Grant etc.	11.1	13.0	30.8	37.3
Bait ul Mal – Food Program	8.3	12.0	27.9	7.4
Bait ul Mal – Others programs	11.1	13.9	28.4	6.9
Sehat Card (National and Provincial) ²⁴	25.9	43.8	18.4	3.4

Source: Household Survey.

3.6 Incidence of Beneficiaries of Government Social Assistance

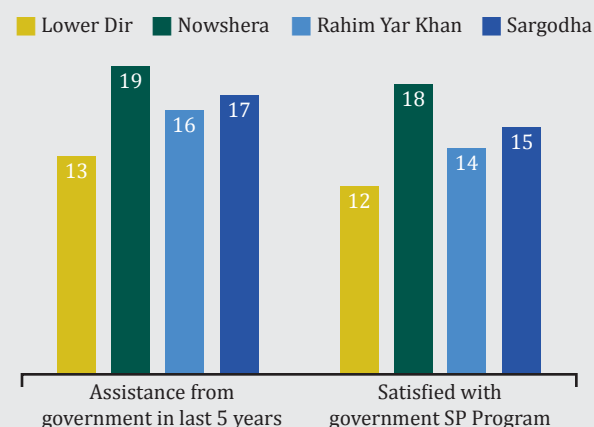
Not surprisingly, very low incidence of public assistance is observed in sample districts. The percentage of households who confirmed any assistance from federal or provincial governments during last five years ranges from 13 to 19 percent (Exhibit 18). It is however,

encouraging that majority of recipients was satisfied at least with the procedural arrangement of these initiatives.

Percentages of beneficiary households of individual initiatives are collated in Exhibit 19. Barring BISP and Sehat Card initiatives, very low and insignificant incidences of beneficiaries of other initiatives are evident.

Exhibit – 18 | Incidence of and Satisfaction with Government Social Assistance

[Percentage of Households who Confirmed Receiving Public Assistance During Last Five Years]



Source: Household Survey.

Exhibit – 19 | Public Social Assistance Initiatives – Percentage of Beneficiary Households

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Number of Households	216	208	208	204
<i>% of households who reported assistance from Government during last 5 years</i>				
Benazir Income Support Programme	8.8	13.9	9.6	11.8
Zakat				0.5
Sehat Card	1.9	8.2	5.8	2.9
Kisan Package			1.4	
Watan Card		1.4	0.5	
Livestock				1.0
Aid at Time of Flood/Aid				1.5
Aid on Earthquake	3.7			

Note: Multiple Response
Source: Household Survey.

²⁴ These include Sehat Insaf Card (KP) for benefits related to health service and Pakistan Card of Prime Minister's National Health Program.

3.7 Incidence of Beneficiaries of Social Security Institutions

Benefits received from various social security channels were probed through structured questionnaire during the household survey. Insignificant coverage of these institutions is observed as expected (Exhibit 20). Percentages of households receiving pension from EOBI are

recorded in the range of 3 to 7 in sample districts. Overall, only 44 out of 836 (5 percent) household confirmed receiving pension from EOBI, while only one household confirmed the receipt of any amount in the category of Workers Welfare Fund (WWF). No respondent reported receiving benefit from provincial Employees Social Security Institutions (ESSIs).

Exhibit – 20 | Households Reported Receiving Transfers from Social Security Institutions

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Number of Households	216	208	208	204
<i>Percentage of Beneficiary Households</i>				
Pension - EOBI	6.9	7.7	3.4	2.9
Workers' Welfare Fund or Provident Fund	0.0	0.0	0.0	0.5

Source: Household Survey.

3.8 Incidence of Idiosyncratic and Covariate Shocks in Sample Areas

Micro vulnerability refers to the household level risks including health risks, economic shocks, social shocks, natural disasters, and demographic shocks (including factors affecting mortality, migration and fertility). For this study, nine types of shocks (one covariate and eight idiosyncratic) were structured in the household questionnaire to evaluate household micro vulnerability in sample areas.

Exhibit – 21 | Incidence of Shocks in Sample Areas during Last 10 Years [Percentage of Household]

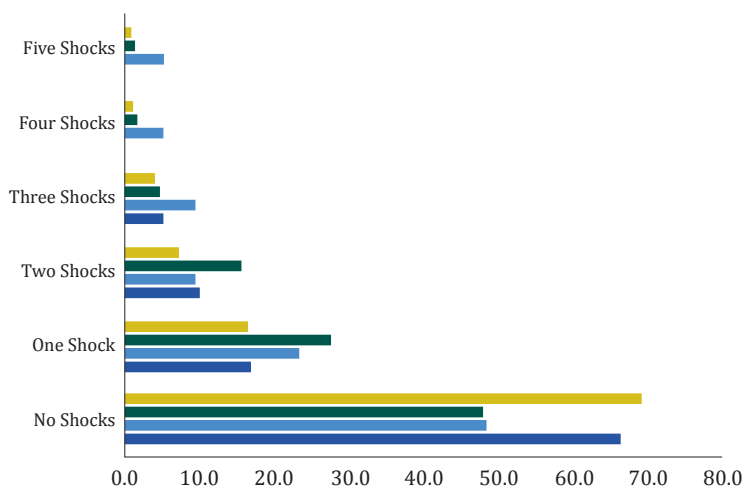


Exhibit 21 displays percentage distribution of households according to the number of reported shocks during the last 10 years. The percentages of household reported vulnerability in terms of shocks are 31, 52, 51 and 33 in districts Lower Dir, Nowshera, Rahim Yar Khan and Sargodha respectively. In terms of multiple shocks, districts Nowshera and Rahim Yar Khan are perceptible where multiple shocks are reported by 24 percent and 28 percent of households respectively.

Types of shocks by category are presented in Exhibit 22 which also confirms the miserable situation in district Rahim Yar Khan. Moreover, percentages of vulnerable households in terms of economic and health shocks are also relatively high in Nowshera as compared with Sargodha and Lower Dir.

Source: Household Survey.

Exhibit – 22 | Incidence of Shocks in Sample Areas by Category [Percentage of Households]

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Natural Shocks (Flood)	7.9	24.5	10.0	10.3
Economic Shock	26.1	35.5	46.2	23.6
Health Shock	21.3	28.9	55.8	22.1

Source: Household Survey.

Exhibit – 23 | Type of Shocks Reported by Sample Households

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Number of Households	216	208	208	204
Shocks due to:		Percentage of Households which Reported		
<i>Natural Shocks:</i>				
Flood	7.9	24.5	10.1	10.3
<i>Economic Shocks:</i>				
Death of Earner	4.2	6.3	5.3	6.4
Unemployment of Earner	6.5	6.7	10.6	3.4
Crop Damage	9.3	11.5	17.3	6.4
Loss in Business	4.2	9.6	12.0	4.9
Other Reasons for Economic Losses	1.9	1.4	1.0	2.5
<i>Health Shocks:</i>				
Health Problem of Earner	9.7	15.4	25.5	13.2
Injury of Earner	3.7	2.4	11.5	2.5
Health Problem of any HH Member	7.9	11.1	18.8	6.4

Note: Multiple Responses

Source: Household Survey.

Findings with respect to individual shocks are summarized in Exhibit 23. Major sources of shocks include; crop damage, loss of business, health problems of earner and health problems of any household member.

3.9 Summarizing Risk Management Strategies

An open ended question “What was the coping mechanism/strategy?” was put before the respondents of sample households against each shock. These responses are summarized in Exhibit 24. Significant inter-district variations are observed. For instance, borrowing strategy is noticeable in sample districts of Punjab, while use of own saving and reduction of consumption are

narrated by most of the sample households in Lower Dir and Nowshera districts.

To simplify the risk management phenomenon adopted by sample households these responses are classified into asset, borrowing, assistance and behavior based categories. The Exhibit 25 provides these classified responses. It is evident that behavior based strategies (reduction in consumption expenditure, pulling out children from school, searching for extra work and increasing extra hours in existing occupation) are dominant in districts Lower Dir and Nowshera. Nonetheless, a significant percentage of sample respondents in these districts also confirmed adaptation of asset-based (sale of assets and use of own saving) coping mechanism.

Exhibit – 24 | Risk Management Strategy Adopted by Households*[Percentage Distribution of Affected Households]*

	Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Sales of Asset/Animals	8.5	14.5	15.5	8.9
Borrow loan from relative/friends	17.8	20.4	42.5	49.1
Borrow loan from Microfinance	0.8	1.1	4.7	0.9
Borrow loan from Commercial Banks	0.8	0.0	2.1	0.0
Borrow from Moneylender	0.8	0.5	7.7	0.9
Reduce Consumption Expenditure	28.8	23.7	22.7	11.6
Pull out children from school	1.9	0.5	1.7	0.0
Search for extra work	8.5	15.6	0.4	7.1
Extra hours in existing occupation	2.5	2.7	1.4	2.7
Used Own Saving	26.3	11.3	0.0	1.7
Government Helped	2.5	3.8	0.4	4.5
NGO Help - Charity	0.8	2.7	0.9	9.9
Temporary Migration	0.0	3.2	0.0	0.0
Spouse Joined Labor Force	0.0	0.0	0.0	2.7

*Source: Household Survey.***Exhibit – 25 | Risk Management Strategy Adopted by Households - Classified***[Percentage Distribution of Affected Households]*

	Assets Based	Borrowing Based	Assistance Based	Behaviour Based
Lower Dir	34.7	20.3	3.5	41.5
Nowshera	25.8	22.0	6.5	45.7
Rahim Yar Khan	15.5	57.1	1.3	26.2
Sargodha	10.8	50.9	14.2	24.1

*Source: Household Survey.***Exhibit – 26 | Risk Management Strategy Adopted by Households by Poverty Status***[Percentage Distribution of Affected Households]*

		Assets Based	Borrowing Based	Assistance Based	Behaviour Based
Lower Dir	Non-Poor	37.4	15.6	1.6	45.3
	Poor	31.4	26.0	5.6	37.0
Nowshera	Non-Poor	23.3	19.9	9.4	47.4
	Poor	30.0	25.7	1.4	42.9
Rahim Yar Khan	Non-Poor	16.2	54.7	0.7	28.4
	Poor	14.5	60.2	2.0	23.3
Sargodha	Non-Poor	16.7	51.8	7.4	24.1
	Poor	5.3	50.0	20.6	24.1

Source: Household Survey.

Exhibit – 27 | Shocks, Risks and Needs Identified by the FGD Participants

District	Locality of FGDs	Shocks/Risks			Pressing Needs for Social Protection					Business Loans
		Floods/ Heavy Rains	Health	Crop Failure	Drinking Water	Health Facility	Vocational Centre	BISP/ Health Card	Sanitation/ Sewerage	
Nowshera	Rural-1	●					●●			
Nowshera	Rural-2	●	●		●		●●			
Nowshera	Urban	●	●		●	●	●			
Lower Dir	Rural-1		●	●	●	●				
Lower Dir	Rural-2						●			
Lower Dir	Rural-3		●			●			●	
R. Y. Khan	Rural-1	●	●		●			●		
R. Y. Khan	Rural-2	●	●						●	
R. Y. Khan	Urban				●		●	●		
Sargodha	Rural-1				●			●		●
Sargodha	Rural-2	●						●		
Sargodha	Urban						●	●		●

●● Vocational centre for women.

It is also important to understand the impact of household poverty status on the decision regarding risk management strategy. The Exhibit 26 presents these disaggregated results. Barring assistance-based strategies, no clear trend of differentiation is visible across household poverty status with respect to asset, borrowing, and behavior based risk management strategies.

3.10 Reflections from Focus Group Discussions

The main purpose of Focus Group Discussions (FGDs) was to elicit information on the shocks and social protection needs of the communities. Altogether, 12 FGDs were conducted, three in each sample district to supplement the quantitative data collected through the household survey. The number of participants ranged from 8 to 12, which included people from various spectrum of life such as laborer, farmers, shopkeepers, skilled workers, etc. Most of the FGDs were conducted in the sample village except for two FGDs that were conducted in the nearby

localities in order to get some flavor of the non-sample villages. The FGD participants did not include people who were interviewed during the household survey.

Overall, the issues identified by the FGD participants supplement the findings of household survey presented in the earlier sections. The major shocks and risks identified by the participants included natural disasters, health and economic shocks such as crop failure – a mapping is presented in Exhibit 27.

Regarding the natural shocks, floods were reported in Nowshera and Sargodha while heavy rains in Rahim Yar Khan. All the three localities in Nowshera where FGDs were conducted are prone to floods. The participants particularly mentioned the flood in 2010 which badly affected their sources of livelihood such as crop and livestock along with damaging their houses. Natural disasters often force people to flee their homes and migrate to safer areas. FGD participants informed that they had to leave the area and look for shelter in camps or with relatives elsewhere.

Government assistance was provided in these cases. The participants informed that 60 to 80 percent of the families received government assistance of Rs 60,000 per family through Watan Card²⁵.

Village *Sada Kamboh* in Sargodha is also prone to floods since it is located on the left bank of river Jhelum. The community consists of brick kiln workers. The participants informed that the village is frequently affected by floods and also by heavy rains. In both cases, the brick kiln work has to stop for few months. During this period, people usually work outside the village in the agricultural fields, as well as, engage themselves in other non-agriculture labor related activities.

Heavy rainfall was also reported to be the major hazard in two communities in Rahim Yar Khan. Participants in one community mentioned that heavy rainfall results in loss of crops and most of the people have to take loans for survival since there is no help from government. The participants of the other community informed that heavy rainfall affects their employment opportunities as most of them work as laborer on a daily wage basis.

Floods and heavy rainfall lead to stagnant pools of water and combined with poor sanitary conditions, these become breeding grounds for mosquitoes and water borne diseases, which leads to an increase in illness and a negative effect on the health of people. Their miseries are compounded by the lack of public health infrastructure.

Health related risks were reported by half of the communities where FGDs were conducted. In two villages (one in Nowshera and the other in Lower Dir), participants mentioned exactly the same health risk. They reported that due to

unsafe and contaminated drinking water, the incidence of hepatitis A has significantly increased over the last few years²⁶. Similarly, residents of village *Bhotty Wahan* in Rahim Yar Khan stated that they face serious problems of drinking water since the aquifer is not good for human consumption and they are experiencing health issues like diarrhea particularly among children, women and the aged.

The participants also shared their pressing needs regarding absence of an effective infrastructure for provision of social services, which makes them more vulnerable. The participants were asked to identify at most three needs. The most important needs identified in terms of social service infrastructure are drinking water and health care.

The lack of required skills for employment was also cited as a major concern among the communities that called for establishment of vocational centres by the government. Participants in two villages of Lower Dir stressed the need for setting up such centres for women as well.

Interestingly, in almost all the communities in Rahim Yar Khan and Sargodha, the participants identified BISP or Health Card as their pressing need. Some participants complained that they do not know the process of acquiring or registering for BISP cards. A complete absence of social protection for middle income group also appeared as a concern in some communities. They were of the opinion that due to high cost of private health service provision, any type of insurance should also be provided to middle income group since they are not eligible for health cards according to existing government criteria.

²⁴ Watan Card was launched by the federal government in 2010 to provide cash grant to the victims of floods.

²⁵ According to WHO, the hepatitis A virus is transmitted through ingestion of contaminated food and water or through direct contact with an infectious person. <http://www.who.int/mediacentre/factsheets/fs328/en/>, accessed July 14, 2017.

Quantifying Household Vulnerability and Capacities

About one thirds of the sample households lie in the category of high vulnerability.

4 | Quantifying Household Vulnerability and Capacities

One of the objectives of the study was to develop vulnerability and capacity index at micro level. Among the various indices proposed in the literature (e.g. Anderson & Woodrow, 1989), this study uses the Vulnerability and Capacities Index (VCI) methodology formulated by Mustafa et al (2010) with a slight modification. Particularly, coverage of social protection schemes was included to see their effect on reducing vulnerability of households.

The VCI was chosen over other vulnerability indices for a number of reasons. One, the architecture of the VCI is simple and analytically encompasses three important dimensions of vulnerability (material, institutional and attitudinal). Two, it provides a robust comparative metric of vulnerability that is easy to understand. Three, it is a peer reviewed and field-tested tool²⁷ and hence, has an academic credibility.

The VCI identifies twelve drivers of vulnerability both at individual and community level. These are divided into three categories: 1) Material – Income/livelihoods sources, education, assets, and exposure to hazard; 2) Institutional – social networks, extra-local kinship ties,

infrastructure, social protection²⁸, employment and minority/disadvantaged status; and 3) Attitudinal vulnerability – knowledge and empowerment. The maximum VCI score is 100. Weights assigned to material, institutional and attitudinal vulnerabilities are 35, 50 and 15 respectively²⁹.

Since VCI provides a comparative assessment, the scores have been classified into groups of high, medium, low and resilient populations by using Jenk's Natural Breaks Optimization method. Jenk's routine is a data clustering method that classifies the data by maximizing the variance between categories and minimizing the variance within categories. The VCI score boundaries for the categories are as follows:

Resilient 0-34	Low Vulnerability 35-42
Moderate Vulnerability 43-49	High Vulnerability 50 and above

²⁷ Also in Pakistan, see SPDC (2015).

²⁸ Social Protection is represented in the construction of VCI through information on household receiving public or private social assistance (See Annexure-4) and households getting benefit from EOBI and WWF institutions. It is worth to mention that social security schemes cover only employees of formal urban sectors. In our sample (majority of rural) 3 to 7 percent households reported receiving benefits of EOBI, while only one household out of 836 reported receiving WWF benefit.

²⁹ Details of variables and weights are provided in Annexure-4.



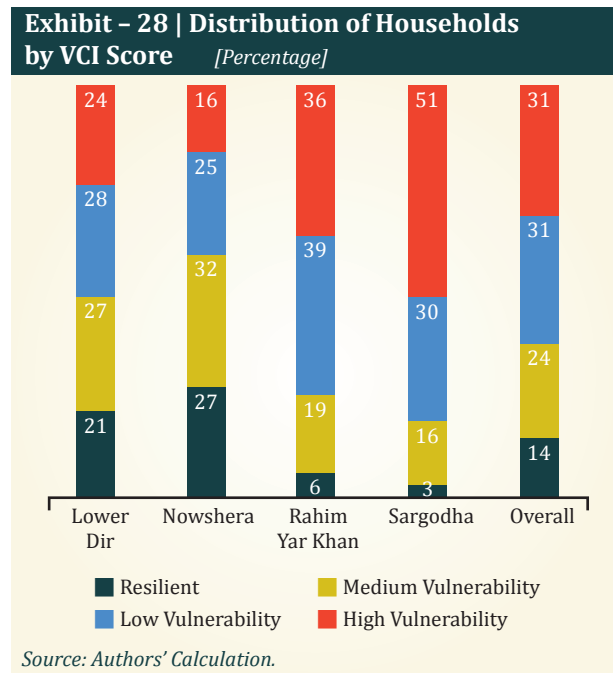
It is important to note that VCI is a tool for comparative analysis rather than an absolute indicator of vulnerability. Therefore, while interpreting the results of the VCI survey, it should be borne in mind that vulnerability is a dynamic process but the VCI score can only capture a snapshot in time of the state of vulnerability.

4.1. Estimation of Vulnerability and Capacity Indices

Micro level VCIs (overall and by components) of 836 sample households were constructed using household and community survey data. According to Exhibit 28, overall 31 percent of sample households lie in the category of high vulnerability while the same percentage (31) is in the moderate category. Only 14 percent of households may be termed as resilient with very low score of VCI.

Significant variations can be observed across the districts. Majority of the households (51 percent) in Sargodha are highly vulnerable followed by Rahim Yar Khan (36 percent). Altogether, 81 percent of households in Sargodha and 75 percent in Rahim Yar Khan fall in the category of high or moderate vulnerability.

The situation in sample districts of KP is relatively better where percentage of highly vulnerable households is 24 and 16 respectively in Lower Dir and Nowshera. The proportion of resilient households is also relatively higher in these two districts³⁰.



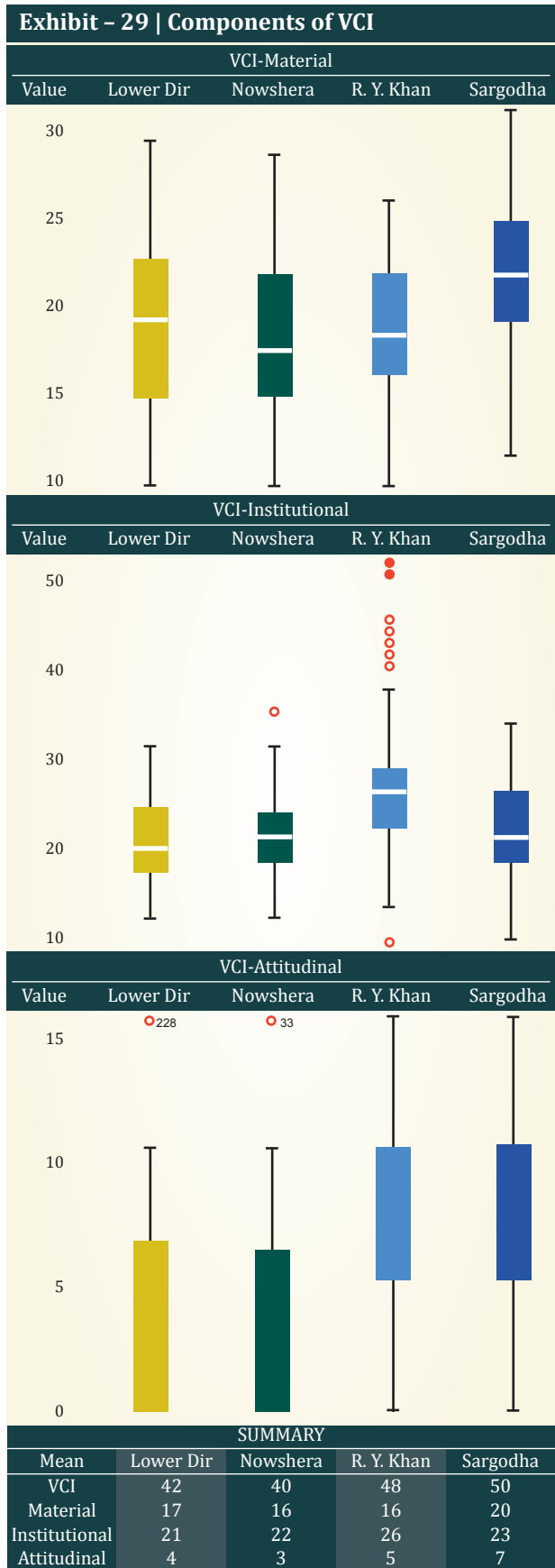
³⁰ The estimates for vulnerability to poverty (Section 3) for KP province are quite high as compared with Punjab province. It is important to note that provincial vulnerability estimates refer to whole province (based on provincially representative sample), while in this section sample districts are referred to which do not represent the province. Moreover, different methodologies for vulnerability assessment are used for Macro and Micro levels. The vulnerability to poverty in the Macro context is based only household consumption data (monetary value), while in this section VCI is estimated using multi-dimensional non-monetary indicators. Thus both vulnerability score are not comparable.

At the aggregate district level, average values of VCI also vary ranging from 40 in Nowshera to 50 in Sargodha (Exhibit 29). Disaggregated components of VCI – material, institutional and attitudinal vulnerabilities also reflect some variations among the districts, as well as, between the two provinces.

A clear difference between the districts of Punjab and KP is evident in attitudinal vulnerability where mean values in the districts of Punjab are on a higher side. Analysis of the background data reveals that the main driver of attitudinal vulnerability is the self-proclaimed empowerment in terms of proximity/ access of the communities to district level leadership/ authorities. In KP, 50 percent of the respondents (42 percent in Lower Dir and 59 percent in Nowshera) claimed that they can easily approach the district level leadership or government authorities. The corresponding response in Punjab was only 12 percent (19 percent in Rahim Yar Khan and 5 percent in Sargodha). Similarly, access to provincial and national level leadership is also high in the sample districts of KP.

In sample districts of Punjab, the level of material vulnerability in Sargodha is higher than that of Rahim Yar Khan due to the same reason (exposure to hazards) where four primary sampling units (PSUs) were exposed to floods. On the other hand, institutional vulnerability is high in Rahim Yar Khan due to comparatively low level of infrastructure. In addition, stable source of income and household’s asset base also appear to be important factors behind the material vulnerability in all the districts.

Within the institutional factors, lack of social networks has contributed significantly to the vulnerability of households, particularly in sample districts of Punjab, where only one and three percent of respondents were found to be member of a local self-help group or organization



in Rahim Yar Khan and Sargodha respectively. The situation is slightly better in KP with 15 and 12 percent of households being a member of such groups in Lower Dir and Nowshera respectively.

As mentioned earlier, coverage of social protection was incorporated in the VCI construct. However, no significant link of social protection with VCI has been observed in the sample. Mean VCI scores of households with regard to assistance received through social protection schemes are presented in Exhibit 30. It is clear that mean VCI scores of households in all the categories are almost same regardless of any assistance received through social protection.

Exhibit – 30 | Mean VCI Scores with regard to Social Protection

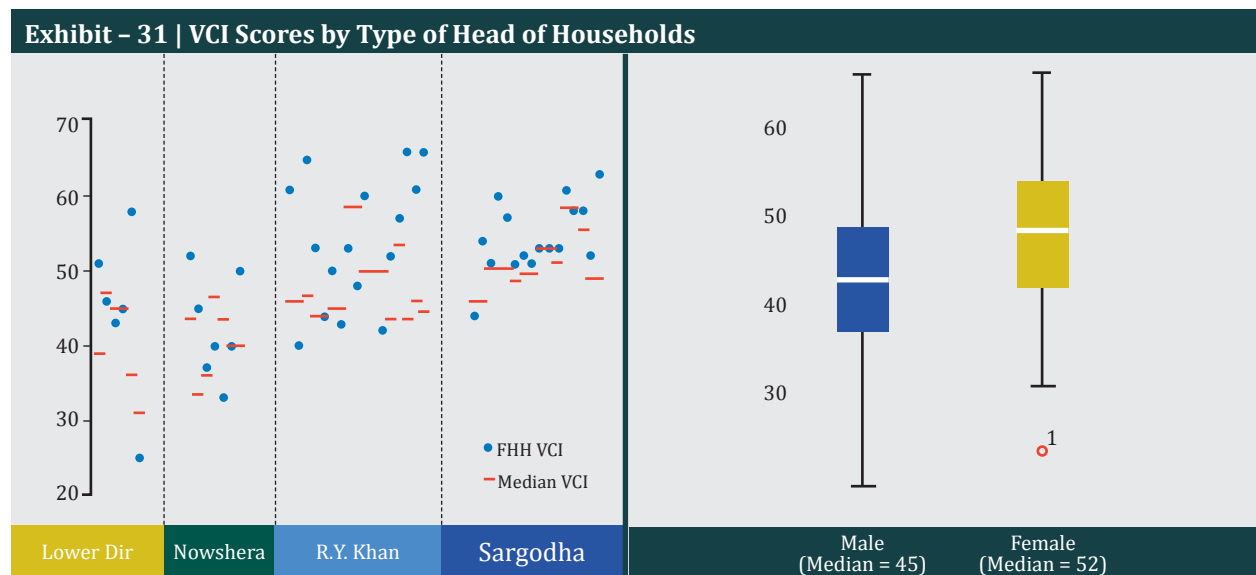
	<i>Benefited from Social Protection</i>	
	Yes	No
Resilient	29.9	30.1
Low Vulnerability	39.2	39.1
Medium Vulnerability	45.9	45.8
High Vulnerability	53.8	55.6

Source: Household Survey.

However, it should not imply that social protection has actually no role to play in reducing vulnerability of households. The results are not plausible due to a number of reasons. First, as

shown in the earlier section that coverage of social protection is quiet low among the sample households. Therefore, no statistical inference can be made due to insufficient number of observations. Second, the nature and amount of assistance provided through these schemes may not be sufficient enough to reduce the level of vulnerability of these households. Finally, the lack of effective targeting mechanisms also poses a challenge in reaching out to the poor and vulnerable population.

Female headed households are often the most vulnerable among any community. Notable differences are observed in VCI scores for male and female headed households. The number of female headed households (FHH) found in the sample is only 46 (out of 836) which is not sufficient for making inference. Nevertheless, the median values of VCI are indicative of FHHs being relatively more vulnerable (Exhibit 31). Concerning the categories of vulnerability (mentioned above), 65 percent of FHHs fall in the category of high vulnerability as compared to 29 percent of MHHs. Left panel of the Exhibit shows that VCI scores of FHHs are mostly located above the median values of their respective PSUs, particularly in Rahim Yar Khan.



4.2. Analysis of VCI Correlates

The estimated household vulnerability score, developed through VCI is also used to evaluate the correlates of household vulnerability. A multivariate regression analysis is carried out by regressing the VCI score on important socioeconomic and locational characteristics of a household. The regression results³¹ are furnished in the Exhibit 32, while few important observations regarding correlates of vulnerability are described below.

As expected, the estimated coefficients of income and wealth have a negative sign and thus are inversely correlated with the magnitude of vulnerability. According to the estimated results, higher dependency rate increases the vulnerability (positive sign) while the sign of age of household head, which is a proxy for experience, is negative indicating inverse correlation with the vulnerability estimates. An important observation also emerges from this analysis is that higher share of food from own production reduces the extent of vulnerability.

Exhibit – 32 Estimated Standardized Regression Coefficients <i>[Dependent Variable – Household Vulnerability and Capacity Score]</i>			
	Coefficients	t-Statistics	P-Value
<i>Household Characteristics:</i>			
Age of Head of Household	-0.063	-2.5	0.013
Dependency Rate	0.075	3.0	0.003
Per Capita Income of Household	-0.059	-2.0	0.051
Household Wealth (Asset) Score	-0.439	-14	0.000
Share of Own Produced Food	-0.120	-4.7	0.000
Years of Schooling of Head of Households	-0.050	-1.7	0.085
Head working as Daily Wager	0.080	3.0	0.003
Household Receiving Remittances	-0.075	-2.7	0.008
Head is Member of Social organizations	-0.133	-5.4	0.000
<i>Locational Variables:</i>			
Residence of Rural Areas	0.083	3.2	0.001
Residence of District Rahim Yar Khan	0.218	7.2	0.000
Residence of District Nowshera	-0.051	-1.7	0.089
Residence of District Sargodha	0.174	5.5	0.000
<i>Summary Statistics:</i>			
Adjusted R-Square			0.55
F-Value			77.7
Condition Index			18.16

Source: Authors' Estimates.

³¹ Exhibit 32 indicates that all estimated coefficients are statistically significant at least at 10 percent level of significance and have a priori expected signs (direction). The adjusted R-Square, which is a measure of goodness of fit, is 0.55 which is considered well enough for acceptability of the model in the cross-sectional analysis. Multicollinearity among independent variables, which makes the coefficients statistically less efficient and insignificant, is tested through the condition index. Index value greater than 30 indicates severity of multicollinearity and points to less reliable magnitudes of the coefficients. The estimated results however, indicate that the value of the condition index is much less than 30.

Further, schooling of head of household reduces the level of vulnerability to risk, while the household heads working as daily wagers are relatively more vulnerable according to the positive sign of the coefficient. Social capital also plays an important role in effecting household vulnerability against risks and hazards. Although cause and effect is not clear, the negative sign associated with households where the head is a member of any social network or organizations points to low vulnerability in these households.

Locational variables are included in the regression to control the heterogeneity in the sample. According to coefficient estimates, rural households are relatively more vulnerable. Similarly, households residing in Rahim Yar Khan and Sargodha are more vulnerable than KP sample districts (Lower Dir and Nowshera).

³¹ There are numerous definitions of social capital found in the literature. For instance, according to Putnam et al (as cited in Adger, 2001), the concept of social capital encapsulates 'features of social organisation such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions'. However, for the purpose of this report, social capital mainly refers to empowerment and ability of people to act collectively. In the VCI construct, it is reflected by various indicators such as membership of social networks/organisations, presence of self-help groups, access of people to the leadership at various levels, etc.

Recommendations

5 | Recommendations

The analyses presented in the study indicate that the lack of stable income, asset base, social infrastructure, and social capital are among the major drivers of vulnerability in the sample households. Based on the survey findings, some recommendations are presented below that may be useful for provincial governments to devise strategies for social protection initiatives.

- Social protection programs mostly attempt to target the poorest of the poor which is desirable given the high incidence of poverty. However, the study also shows a higher level of vulnerability to poverty among the non-poor households – about 50 percent. So far, this segment of population is not ‘poor enough’ to qualify for social assistance and therefore, is at a risk of falling into poverty in case of any economic or social shock. It is thus important that social protection programs also cater to the needs of the vulnerable non-poor population. This was particularly mentioned during FGDs regarding the health card that due to lack of public facilities and high cost of private health services, even the middle income households are unable to afford good quality health service.
- The coverage of social assistance initiatives is found to be very low (about 14 percent in the sample households). Given the high incidence of poverty, as well as, the level of vulnerability to poverty, the coverage needs to be extended significantly in both the provinces. Further, while people are generally aware about the BISP, they do not have much procedural knowledge about other initiatives such as health card, particularly about the criteria and procedures to get registered under such programs. There is need for launching public awareness campaigns. In addition to traditional print and electronic channels, other forms of communication such as mobile phone can be used as an effective tool for dissemination of relevant information.
- Protection through Social Security Institutions has not yet gained the due attention of policy makers in Pakistan. Currently, initiatives like Employees Old-Age Benefits Institution (EOBI) cover the formal sector only. Majority of the poor workers are engaged in the informal sector and have unstable sources of income. Therefore, new interventions related to employment insurance and old-age benefits targeting the temporary and daily-wage employment need to be developed.
- The incidence of child labor is alarmingly high in the sample districts of Punjab – Rahim Yar Khan (4.9 percent) and Sargodha (9.5 percent). Although legislation has been enacted recently in

both the provinces for prohibition of employment of children, there is a need for putting effective implementation mechanisms in place.

- The study shows that majority of unemployed persons are young and belong to the age-cohort of 15-25 years. The provincial governments will need to initiate labor market interventions for youth such as microfinance and larger business loans, employment guarantee schemes, training for the unemployed, etc. Moreover, a significant percentage of unemployed persons have attained education level of graduation or above, particularly in districts of Lower Dir and Nowshera. The governments can also offer paid internship opportunities for the educated youth on merit-basis by setting a quota for them in public offices.
- Vocational training (both for men and women) is another area which needs special attention of the government. This may also be focused more on the youth; however, it is important to first conduct a mapping and the capacity needs assessment so that context-specific capacity building strategies and action plans can be formulated.
- Since private sector is the major source of employment, all the initiatives related to employment and skill development should be designed in a way to promote the role of private sector in employment generation.
- Lack of public health facilities and safe drinking water has emerged as the most serious concern among the communities. The provincial governments need to pay particular attention to development of social services infrastructure, particularly in the remote areas. Proper incentives should be provided to the professionals deployed in these areas.
- Social capital is among the key drivers of differential vulnerability at the household level. The survey reveals the lack of social networks among the communities, particularly in the sample districts of Punjab. There is a need to develop policy and create an enabling environment for fostering self-help groups particularly in rural communities.
- The local governments can play a vital role in the implementation of social protection programs since they have a certain advantage over higher tiers of government predominantly because of their proximity to the communities. Local governments can be involved in identification of beneficiaries and monitoring of initiatives. Meaningful involvement of the local government can be instrumental in the trust building process and will eventually contribute to the sustainability of such programs.

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Annexures

A1 | Sampling Framework for Household Survey

Sampling Strategy

Multi-stage stratified random sampling strategy was adopted for the quantitative household survey. The TORs of the study suggests including two districts of KP and Punjab each. The proposed districts were Rahim Yar Khan and Sargodha from Punjab and Lower Dir and Nowshera from KP province.

Sample Size: Two important parameters are vital for deciding the statistically desirable sample size, viz., the confidence level (Z) and sampling error (e). The confidence level is expressed as a percentage and represents how often the true percentage of the population lies within the confidence level. On the other hand, all samples are subject to sampling error, which is the difference between the results obtained from the survey sample and those that would have been obtained had the entire area surveyed. In most household surveys, a tolerated sampling error of 5 percent with 95 percent confidence level is generally considered acceptable.

However, keeping the time and budget available for this study, it was agreed to conduct a random survey of 200 households from each proposed district. According to the formula³³ which is used to determine the optimal sample for a fairly homogenous cluster, a sample size of 200 for each district yields 7 percent of tolerance error with 95 percent level of significance.

The sample was allocated to rural and urban areas in the actual proportion of population distribution. Following is a schematic view of the sample distribution for this study.

Distribution of Realized Sample						
	Primary Sampling Units			Households		
	Rural	Urban	Total	Rural	Urban	Total
Lower Dir	12	2	14	192	24	216
Nowshera	10	4	14	160	48	208
Rahim Yar Khan	10	4	14	160	48	208
Sargodha	9	5	14	144	60	204
Total	41	15	56	656	180	836

Selection of Sample Locations, Households and Respondents: Primary Sampling Units (PSUs), (villages in rural areas and circles in urban areas) were randomly selected from the list given in the district reports of Population Census, 1998. To control for the variations in the size of population of PSUs and following the criteria of Pakistan Bureau of Statistics (PBS), sample PSUs were selected with Probability Proportional to Size (PPS) method of sampling technique. Population of enumeration block or villages according to 1998 census was treated as the measure of size for selection of sample PSUs.

In each PSU, household survey started from various points. For the selection of starting points in the urban area, a list of important landmarks (schools, mosque etc.) was first

³³ Optimal Sample Size = $Z^2 [p(1-p)]/e^2$. The p in the formula depicts estimated proportion of indicators of interest. The proportion value of 0.5 is normally used which gives maximum sample size.

developed in the selected urban circle (PSU). Two starting points were preferred in urban areas for each randomly selected location. In rural area, villages were divided into four hypothetical quarters as starting points. Appropriate numbers of interviews were conducted around each starting point to cover the required sample of the respective PSU.

Household (Secondary Sampling Units) were selected by systematic random procedure with a random start. Following PBS criteria,

sixteen and twelve households were targeted from each sample village and urban circle respectively. A skipping of ten and five households was made after one successful interview in urban and rural area respectively. Majority of respondents for the survey were either head of the household or the spouse.

A2 | Major Federal and Provincial Social Protection Initiatives

Contributory Social Security and Social Insurance

All existing social security schemes are in the formal sector of the economy and designed for employed labor force and retirees both in private and government sector. These schemes which are financed by employers or employees; generally, provide benefits regarding contingencies of sickness, invalidity, maternity, old age, and work related injury. It is however estimated that less than 4 percent of the non-agriculture labor force actually benefits from the entitlement built into these programs. These initiatives³⁴ include:

- Government Servants Pension Fund
- Provincial Employees Social Security Scheme or Employees Social Security Institutions
- Public Sector Benevolent Funds and Group Insurance
- Workers Welfare Funds (WWF)
- Workers' Children Education Ordinance
- Employees Old Age Benefits Institutions (EOBI)

Federal Initiatives for Social Assistance

Social assistance schemes of cash or in-kind transfers are especially aimed at those who are outside the ambit of the labor market and are considered poor or destitute. *Zakat* and Pakistan *Bait-ul-Mal* (PBM) are two important institutions which are deep rooted in Pakistan's poverty alleviation strategy and provide unconditional

financial cash or in-kind assistance to the poor. These two institutions also assist in rehabilitation of needy and destitute individuals. The Benazir Income Support Program (BISP) is relatively a new program launched in 2008. Although the *Zakat*, PBM and BISP share a similar objective of providing basic support (unconditional cash transfer) to the poorest households, they have different histories, target groups and financing mechanisms. A brief introduction of these programs is furnished below.

Benazir Income Support Programme (BISP): The BISP was launched in 2008 as the flagship social safety net program introduced by the Federal Government. The immediate objective of the program was to address the negative effects of the food, fuel and financial crises on the poor, but its longer-term objectives are to provide a minimum income support to protect poor and vulnerable population against chronic and transient poverty. Unconditional cash grants of Rupees 4,500 every quarter are distributed under this largest and most systematic social protection initiative. About 5 million beneficiary families had received cash benefits by the end of 2014-15. Payments are made in the form of Smart or Debit cards, mobile banking or through post offices.

The BISP initiative also has four closely associated and complementary components: *Waseela-e-Rozgar* (Technical & Vocational Training), *Waseela-e-Haq* (Micro-finance),

³⁴ For detail about these initiatives, see Jamal (2010).

Waseela-e-Sehet (Life & Health Insurance) and *Waseela-e-Taleem* (Primary Education). *Waseela-e-Sehet* and *Waseela-e-Taleem* provide additional cash grant to BISP beneficiary families. In the *Waseela-e-Taleem* program, BISP beneficiaries receive Rupees 200 for sending and retaining their children in schools. BISP has launched “*Waseela-e-Taleem*” as co-responsibility or joint responsibility cash transfer (CCT) program for the primary education of children aged 5-12 years of its beneficiary families. Similarly, *Waseela-e-Sehet* comprises a Health Insurance and Group Life Insurance Program providing extreme and chronic underprivileged individuals with basic income support measures, to access health care and to cope with a variety of illnesses. It also insures the breadwinner of a family to compensate the dependents (widows/mothers/children) of the deceased with Rupees 100,000 in case of his/her natural or accidental death. Under the *Waseela-e-Rozgar* program, vocational training is provided with a cash stipend of rupees 6000 to one individual per beneficiary family. *Waseela-e-Haq* is designed to promote self-employment among women beneficiaries or their nominees to improve their livelihood by providing Rupees 300,000 long-term interest free financial assistance based on social capital instead of any physical asset as collateral. However, in the aftermath of 18th Constitutional Amendment, BISP is planning to shift these components to concerned provinces.

Zakat: The institution of *Zakat* is a well-established form of cash transfer in Pakistan. The program which was introduced in 1980 is entirely based on private contributions and administered by the government. Under the Central *Zakat* Council, there are provincial councils and further councils at each level of government. The lowest level, which also decides eligibility, is the Local

Zakat Committee (LZCs). About 25 percent of the *Zakat* budget is distributed through institutions while the remaining 75 percent is disbursed to individuals through LZCs.

As a consequence of 18th Constitutional Amendment, the subject *Zakat* has devolved to the provinces and provincial ministries are now manages *Zakat* disbursement in their respective province. However, in view of Council of Common Interest (CCI) decision of 8th November, 2012 and subsequent change in Rules of Business, the federal government (Ministry of Religious Affairs and Inter-Faith Harmony) has been assigned the job of collection of *Zakat* at federal level and disbursement among provinces under the CCI approved formula till the next NFC award.

Pakistan Bait-ul-Mal: PBM is also a federal initiative. It was established in February 1992 under the provisions laid down in the Pakistan *Bait-ul-Mal* Act of 1991. It was created to support the welfare of widows, orphans, disabled, and the poor irrespective of sex, caste, creed or religion. The primary purpose for establishment of the PBM was to provide assistance to vulnerable segments of society not covered by *Zakat*. PBM comes under an autonomous board of management consisting of a chairman, five non-official members and three official members. The program categories are, Child Protection, Women’s Empowerment, Institutional Rehabilitation, Financial Assistance (IFA), Old Age and Disabled Friends. The amount is disbursed to the poor under a wide variety of programs that encompass Pakistan Sweet Homes, National Center for Rehabilitation of Child Labour (NCsRCL), Child Conditional Cash Transfer (CCT), Institutional Rehabilitation for community based Developments Civil Society Wing (CSW), Direct Relief Services in Emergencies/Natural Calamities, Great Home and Special Friends

Program. There is no specific criterion with regard to targeting beneficiaries for the *Bait-ul-Mal's* programs.

Another federal initiative is the Child Support Program which is executed through PBM. The first Conditional Cash Transfer (CCT) program of the country i.e., Child Support Program (CSP) was approved by the Government of Pakistan in 2005 to assure its commitment to achieve goal of *Universalization* of Primary Education under Millennium Development Goals. PBM mobilizes funds from the Government of Pakistan (GoP) and distributes them as a cash subsidy to eligible beneficiaries for sending their children aged between 5-16 year to school to get primary education. Cash incentive is being paid to the eligible beneficiaries at the rate of rupees **300** per month to the families with one child and rupees **600** per month to the families with two or more than two children. The program comprises of four interlinked process i.e. Targeting (BISP Score Card), enrolment, compliance and payments. All the processes are automated through Management Information System (MIS). PBM also executes other small programs such as Pakistan Sweet Home, Great Homes for senior citizens, vocational training etc.

Labor Market Programs

The Public works program was the only prominent intervention in this category of social protection. Known as the Peoples Works Program, it was termed the *Khushal* Pakistan Programme and *Tameer-e-Watan* Programme in the tenures of the Pervez Musharraf and PML governments respectively. The program includes schemes which have an immediate impact on the standard of living of ordinary people in facilities such as roads, electrification, gas, telephone, education, health, water supply and sanitation.

People's *Rozgar* Program (formally known as President's *Rozgar* Scheme) is also considered an instrument of social protection in PRSP-II document. The program provides access to credit with subsidized interest rates to enable unemployed persons to start a small business. Under the scheme, National Bank of Pakistan is offering (i) Community Transport, (ii) Community Utility Stores, (iii) Community Mobile Utility Stores, (iv) PCO or Tele-Centers, (v) Commercial Vehicle Financing, (vi) Shopkeeper Financing and (vii) Primary Healthcare Equipment to Medical Graduates. However, provincial governments are now financing many of these schemes.

Food Subsidy

Besides providing general subsidy on wheat, sugar and fertilizer, federal government also provides food subsidy through the Utility Stores Corporation network which was established in 1971. Passing through various stages of expansion and reorganization, the Corporation at present is operating 5954 stores throughout Pakistan. It is now one of the biggest Corporation of Ministry for Industries and Production having its network spread all over the country. The regional breakdown of its network is close to 34 and 66 percent in the urban and rural areas respectively. The basic objectives for which the Corporation has been established include; to protect the real income of the people by selling essential consumer items at prices lower than those prevailing in the open market, to act as a price moderator in the market and deterrent to profiteering, hoarding and black marketing by the private sector, to provide Government's relief packages in the holy month of Ramadan and to provide food security during crisis.

Provincial Initiatives

The major category in the provincial SP initiatives is social assistance which encompass a range of support services that reduce social vulnerability, strengthen resilience and capacity of people to cope with and overcome shocks. These services include Community-based rehabilitation for persons with disabilities, institutional support to vulnerable children, resettlement of street children etc. The prime responsibility of

providing social care services to deserving and needy persons rests with the provincial Social Welfare Departments. Main objectives of the department include; organizing rehabilitation program for the destitute and under privileged women; to establish service for the rehabilitation of handicapped and disabled children and adults and to register, guide and regulate voluntary Social Welfare Organizations for better provision of social care services.

A3 | Demographic and Housing Characteristics of Sample Households

Demographic Characteristics of Sample Households							
	Family Size	Sex Ratio	Dependency Ratio	Population Proportions [%]			
				Children 0-5 Years	Population 5-14 Years	Population 15-65 Years	Population 65 & above
Lower Dir	9	126	54	11	22	65	2
Nowshera	9	110	49	12	19	67	3
Rahim Yar Khan	8	112	64	11	25	61	2
Sargodha	7	94	69	12	24	59	5

Source: Household Survey.

Housing Status of Sample Households					
		District			
		Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Residential Status	Personal residence	91.2	88.9	86.5	79.4
	On rent	5.1	8.2	4.3	8.8
	On subsidized rent		0.5		0.5
	Without rent	3.7	2.4	9.1	11.3
Number of Rooms	Average Numbers	3.0	3.0	3.0	2.0
Type of Roof Material	RCC/RBC	48.6	56.3	35.1	3.9
	Wood/Bamboo	41.7	33.7	18.8	35.8
	Iron/Cement sheets	9.3	8.7	2.4	9.8
	Guarder	0.5	1.4	43.8	48.5
	Cloth				2.0
Material Used in Walls	Burned bricks/blocks	66.2	75.0	77.4	83.3
	Raw bricks/mud	14.4	20.2	22.1	15.2
	Wood/Bamboo	1.4	0.5	0.5	
	Stone	18.1	4.3		
	Other-Cloth				1.5

Source: Household Survey.

Housing Services Reported by Sample Households					
		Lower Dir	Nowshera	Rahim Yar Khan	Sargodha
Sources of Drinking Water	Tap (in home, courtyard)	30.6	34.1	7.7	1.5
	Tap (outside the home)	5.6	11.1	6.7	1.0
	Hand pump		6.3	36.1	80.4
	Tube-well/Motorized Pump	15.7	29.8	39.9	9.3
	Covered well	14.8	12.0		
	Open well	17.6	6.3		
	River, stream, pond etc	14.8		0.5	
	Tanker truck, water fetcher	0.5		5.3	0.5
	Other-Filtration Plant	0.5	0.5	3.8	7.4
Type of Sanitation Facility	Facility not available	3.2	3.4	2.9	3.4
	Flush connected to public sewerage	1.4	9.6	24.5	2.0
	Flush connected to pit	86.1	74.0	33.2	62.7
	Flush connected to open drain	0.9	10.6	7.2	8.8
	Dry raised latrine	6.5	2.4	25.0	2.0
	Dry pit latrine	0.9		7.2	20.6
	Fields	0.9			0.5
Fuel for Cooking	Fire-wood	79.2	33.2	72.6	75.0
	Gas	19.9	64.4	26.9	23.5
	Kerosene oil		0.5		
	Cow-dung cakes	0.9	1.4	0.5	1.5
	Electricity		0.5		
Sources of Lighting	Electricity	97.2	98.6	92.3	98.0
	Gas	0.5		1.9	0.5
	Kerosene oil			0.5	1.0
	Fire-wood			1.4	
	Candle	0.5		1.4	
	Charging Light	0.5	0.5	1.0	0.5
	Solar Light	1.4	1.0	1.4	
Type of Phone Used	None	0.9	5.3	6.3	6.4
	Landline only		0.5		0.5
	Mobile	98.6	90.4	92.3	93.1
	Both (landline and mobile)	0.5	3.8	1.4	

Source: Household Survey.

A4 | Computational Details of Composite Household Level VCI

Particular / Indicator	Vul.	Cap.
A Material Vulnerability	31	
1 Income Source: start value	10	
<ul style="list-style-type: none"> Start value represents If 100 per cent dependent on local level productive asset, e.g., fishing, land, shop, etc. Add 2 to the score if the income sources are unstable [<i>for example daily labor, unskilled labor</i>] [<i>Agriculture and associated income, daily wage work, unskilled work are considered as unstable source of livelihood</i>] Subtract 2 if the income sources are stable and insensitive to local hazard [<i>Agriculture, livestock, and daily wage with in the village sensitive to local hazard</i>] Lower score by 1 for every 10% of non-local income reported [<i>Professional government jobs and private jobs, jobs in other cities not daily wage are considered as non-local income</i>] 	+2	-2
2 Educational Attainment: start value	5	
<ul style="list-style-type: none"> Start value represents no member of the household being literate Lower score by 1 for every 5 years of schooling of the most educated male member of the household Lower the score by 2 for every female member's 5 year schooling 		-1 -2
3 Assets: start value	8	
<ul style="list-style-type: none"> Start value represent no immediately fungible assets [<i>for example, farm implements, animals, jewelry, savings, household items</i>] Lower the score by 1 for every Rs. 40,000 of fungible assets [<i>Will have to be calibrated empirically</i>] 		-1
4 Exposure: start value	6	
<ul style="list-style-type: none"> Start value represents location in high likelihood impact area relative to the prime hazard, e.g., river, coastline, landslide zone [<i>for example, household located within the 10-year floodplain</i>] Lower the score by 1 for every level of decreased impact likelihood between household location and high impact likelihood area [<i>for example, subtract 1 for each 10-year floodplain delineation</i>] Lower the score by 1 for or each instance of hazard mitigation [<i>for example, building of a house on higher plinth for floods, low cost construction, which could be rebuilt with local resources</i>] <p>Categorization of Hazard High - No Score (0) Moderate - Lower score by 3 Very Low - Lower score by 6</p>		-1 -1
B Institutional Vulnerability	49	
5 Social Networks: start value	10	
<ul style="list-style-type: none"> Start value represents no household membership in ethnic, caste, professional or religious organization Lower vulnerability score by 1 for every instance of past assistance by an NGO in adversity. [<i>help from NGOs and INGOs are considered</i>] Lower score by 1 for each self help organization a household member belongs to [<i>membership entirely self help Organization-local NGOs and / or INGOs are not considered</i>] 		-1 -1
6 Extra-local kinship ties: start value	5	
<ul style="list-style-type: none"> Start value represents no extra-local kinship or other ties which could be source of shelter and assistance during adversity Lower the score by 2 for every immediate family member living extra-locally Lower the score by 1 for every non-immediate family member living extra-locally 		-2 -1

Particular / Indicator	Vul.	Cap.
7 Infrastructure: start value	20	
<ul style="list-style-type: none"> Start value represents lack of clean water, telecommunications, electricity, good roads and healthcare. Lower score by 5 if primary access roads are all-weather OR Lower score by 2 if the primary access road is seasonal. Lower score by 2 if 75 % of households have access to clean water <i>[If distance is more than 3 Kilometer, then no score]</i> Lower score by 2 if 75% of households have electricity Lower score by 5 if household has robust telecommunications (including mobile coverage) Lower score by 5 if household has access to medical facility 		-5 -2 -3 -2 -5 -5
8 Social Assistance Received / Social Program Coverage: start value	4	
<p>Start value represents no social program coverage</p> <ul style="list-style-type: none"> Lower Score by 4 if the respondent is receiving assistance under social program and satisfied, if not satisfied lower score by 2, else no score [0] 		-4
9 Earning members in a household: start value	5	
<p>Start value represents a household consisting only one earning member.</p> <ul style="list-style-type: none"> Add 5 to score if single-parent headed household Lower the number by 1 for every additional earning member 	5	-1 per
10 Membership of disadvantaged lower caste religious or ethnic minority	5	
C Attitudinal Vulnerability		
11 Sense of Empowerment: start value	10	
<ul style="list-style-type: none"> Start value represents no participation in or access to leadership structure at any level Lower score by 5 if household is self-declared community leader and / or has declared active participation in community decision making Lower score by 5 if household has declared access to regional or national leadership structure 		-5 -5
12 Knowledge about Social Protection Programs: start value	10	
<ul style="list-style-type: none"> Start value represents lack of knowledge about social protection program Lower score by 5, if the respondent is aware of any social protection program 		-5
Total Possible Vulnerability Score	---	
Total Possible Capacity Score		----
Highest possible vulnerability and capacity score	100	

