Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Estimating Multidimensional Poverty And Regional Inequalities Across Punjab, Pakistan: A Comparative Study Using AF-Method

Muhammad Salman Waseem
Institute of Agricultural & Resource Economics, University of Agriculture, Faisalabad.

Prof. Dr. Asghar Ali
Institute of Agricultural & Resource Economics, University of Agriculture, Faisalabad.

Dr. Muhammad Khalid Bashir
Institute of Agricultural & Resource Economics, University of Agriculture, Faisalabad.

Dr. Qaisar Abbas
Institute of Agricultural & Resource Economics, University of Agriculture, Faisalabad.

ABSTRACT

Poverty is increasingly coming to acceptance that it has a multidimensional nature and is not limited to the loss of income but also to the simultaneous deprivation of health, education and status of living. The study investigated variations in multidimensional poverty across communities in Punjab, Pakistan. The Alkire–Foster methodology was used to calculate the Multidimensional Poverty Index (MPI). The study was drawn on the 2018 Punjab Multiple Indicator Cluster Survey (MICS) which used ten indicators grouped under three main dimensions: education, health, and living standards. Households were considered multidimensionally poor if deprived in one-third or more of the weighted indicators, allowing assessment of both the headcount (incidence) and the depth (intensity) of poverty by region. The results indicate great disparities in poverty outcomes across districts and communities in Punjab as there exist wide variations in deprivation patterns in indicators such as education attainment, sanitation, housing conditions or access to basic services. The results indicate that although Punjab fares rationally better in terms of national measures of poverty vis-a-vis other provinces, large intra-provincial disparities continue to exist. These disparities are especially pronounced in rural and southern districts where there is structural constraints and limited provision of services which compound multidimensional deprivation. The finding is that effective policy interventions specifically targeting education, infrastructure and social protection are a critical part of addressing regional inequality in terms of poverty outcomes. The results add to the growing literature of empirical studies of multidimensional poverty and offer evidence-based inputs for regional poverty reduction strategies in Pakistan.

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Keywords— Multidimensional Poverty, Regional Inequality, Alkire Foster Method, Poverty Decomposition, Punjab, Pakistan.

Introduction

In the last thirty years, the understanding of poverty has undergone major shifts. Poverty is no longer to be understood in terms of a lack of income as it has been in the past, but rather as a multidimensional phenomenon in which human capabilities are constrained, as people gain little access to functions of fundamental services and as intergenerational mobility is prevented (Sen, 1999; Bourguignon & Chakravarty, 2003). Monetary poverty thresholds, such as the global $2.15-a-day line, measure only income deficits and overlook concurrent deprivations in health, education, and living conditions (United Nations, 2015; World Bank, 2021). This limitation prompted the creation of multidimensional poverty approaches, offering a fuller picture of the breadth and depth of deprivations faced by people and families. The Multidimensional Poverty Index (MPI) was developed by the Oxford Poverty and Human Development Initiative and the United Nations Development Programme in 2010, in order to operationalize the Alkire-Foster (AF) methodology to understand who is poor and how they are poor (Alkire & Foster, 2011; Alkire et al., 2020). The AF framework uses a dual cutoff strategy as well as the aggregation of deprivations within dimensions which are calculated for a final measure of poverty incidence (H) as well as intensity (A): MPI = H x A. The approach goes beyond basic headcount statistics and supports breakdown of poverty by geographic areas, population subgroups, and individual deprivation dimensions. Such decomposability is especially pertinent for countries that are characterized by spatial inequalities and structural heterogeneity. Such decomposability is especially prominent for nations with spatial inequalities and structural heterogeneity in the distribution of assets.

South Asia accounts for a large share of the global multidimensionally poor population according to the MPI. According to the Global MPI 2024, about 1.1 billion people are multidimensionally poor and nearly 84 percent of them live in rural areas and almost half are children (UNDP & OPHI, 2024). South Asia comprises a significant proportion of the poor population of the world in the MPI. While several countries have achieved notable reductions in multidimensional poverty via long-term investments in education, health, and services, gains remain inconsistent and vulnerable to economic crises, climate impacts, and conflict. These patterns purport the need for spatial clustering and Man's structural roots of poverty instead of being generally distributed.

Poverty in Pakistan shows considerable complexity, marked by pronounced regional differences. Pakistan officially adopted the global MPI methodology in 2016, measuring deprivations across ten indicators in the areas of health, education, and living standards (UNDP, 2016). Despite some improvements, there are still structural vulnerabilities. Pakistan records an HDI of 0.540, which drops sharply when inequality is factored in, revealing serious inequalities in resource distribution (UNDP, 2024). Provincial heterogeneity is still large. Rural Sindh and Balochistan still have high levels of deprivation in comparison to urban Punjab (Haq et al., 2024). Conflict exposure, environmental vulnerability and infrastructural deficits further compound

Online ISSN 3007-3197
Print ISSN 3007-3189

multidimensional deprivations in specific regions (Hussain & Iqbal, 2019; World Bank, 2023).

These challenges have been exacerbated in recent times by economic shocks. The 2022 floods impacted over 33 million individuals and caused severe damage to homes, sanitation systems, and farming-based livelihoods, particularly in at-risk districts (World Bank, 2022). Following post-flood poverty assessments have indicated a likely reversal in progress made in lowering poverty levels especially in rural and southern parts of the country (World Bank, 2023). At the same time, Pakistan is facing persistent constraints in structure since there is a low level of public expenditure on education, high labor informality, rapid population growth, and gender disparity in literacy and employment (ILO, 2021 and UNESCO, 2020). These structural characteristics strengthen multidimensional poverty and narrow the absorptive capacity of economic growth.

Punjab, the most populous and the relatively developed province of Pakistan, has a significant contribution in national income. Yet intra-provincial disparities are of great magnitude. Northern and central districts with regions such as Lahore and Rawalpindi have a low level of deprivation as compared to southern districts that include Rajanpur, Dera Ghazi Khan and Rahim Yar Khan (Javed & Awan, 2020; Ullah et al., 2020). Educational attainment, access to sanitation, quality housing and sources of energy are unevenly distributed between districts. Previous researches aimed at the district level have affirmed that educational deprivation and the low living standards contribute a huge amount to the MPI intensity within Punjab (Abbas & Ashraf, 2024). However, most of the existing studies are either national or district specific. Comprehensive comparability between zones in Punjab is still lacking.

Research also indicates that poverty is not merely a geographical issue but is closely tied to demographic and socioeconomic factors. Larger household size has a detrimental effect on the risk of deprivation because of resource dilution effects (Lanjouw & Ravallion, 1995). In turn, educational attainment of the household head is a significant determinant of poverty status, but this may be due to labor market distortions and underemployment in some situations (Psacharopoulos & Patrinos, 2018). Gender disparity is also important. Female-headed households are often faced with multiple vulnerabilities in terms of access to assets and services (Chant, 2016; Malik & Rafi, 2020). While remittances can help reduce deprivation, their availability varies significantly across different areas (Ratha, 2013). These structural determinants combine with spatial inequalities and thus create different poverty clusters.

Although, Punjab is often seen in terms of economic development as an advanced province in comparison with other provinces, there are evidences that southern Punjab has got some features of less-developed provinces. Spatial analysis emphasizes the clustering impact of deprivation whereby deprivation in one district impacts the other neighborhoods due to poor infrastructure spillovers and poor service networks (Ullah et al., 2020). Such findings bring home the case for zonal and rural-urban disaggregation. Aggregate provincial MPI figures may mask high levels of sub-regional heterogeneity. Without granular analysis, targeting policy is inefficient.

Despite growing empirical studies on multidimensional poverty in Pakistan, important research gaps remain. First, many analyses simply deal with provincial averages, and

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

are not systematic in examining zonal disparities within provinces. Second, the lack of research uses structured comparative frameworks to measure regional deprivations in the Punjab in a gradient form. Third, there is a lack of linking rural-urban decomposition with zonal classifications. Finally, while policy programmes such as the Benazir Income Support Programme BISP and overall social protection programmes are designed to reduce vulnerability this requires precise identification of the patterns of spatial deprivation (World Bank 2021).

The present study fills these gaps by measuring and comparing multidimensional poverty in Punjab's Northern, Central, and Southern zones, based on the 2018 MICS dataset covering 53,840 households (Pakistan Bureau of Statistics, 2018), using AF Methodology focusing on health, education and living standards categories._It calculates the incidence (H), intensity (A) and the composite MPI. The analysis further breaks results down by rural and urban residence in each zone too. This disaggregated structured approach allows the identification of regional grief gradients and sector specific contributions.

By focusing on zonal disparities, we take an important first step in developing the policy discourse along a continuum from provincial aggregates to targeting some regions. It provides relevant evidence supporting Pakistan's efforts toward Sustainable Development Goal 1, which aimed to end poverty in all its forms and dimensions (United Nations, 2015). The findings were aimed to be used for spatially differentiated policy interventions in education, sanitation, housing and energy infrastructure. Here two main questions were directly addressed in the study: (i) How extensive and geographically distributed is multidimensional poverty across Punjab's defined zones? and (ii) How do rural–urban differences influence deprivation patterns within each zone? By answering these questions, the study aims to derive an evidence-based basis for developing targeted poverty reduction strategies in Punjab.

METHODOLOGY

This research is based on data from the 2018 Multiple Indicator Cluster Survey (MICS). The data set was that of 53,840 households across all the 36 districts of Punjab and it was the best available maximum data set on households carrying out the survey at a provincial level (Punjab Bureau of Statistics, 2018; UNICEF, 2023). While all a bit dated, its breadth, representativeness, and multidimensional coverage provide substitutes for the lack of more recent microdata, and help ensure that there is sufficient robustness at both the provincial and sub-provincial levels. The survey has detailed information in respect of the household living conditions; education; health and demographic attributes as it enables easy disaggregation of the poverty profiles with respect to rural urban residence, gender of the head of household as well as literacy level. It is this depth and the scope that make MICS 2018 especially well-suited to the analysis of structural and demographic dynamics of multidimensional poverty in the Punjab.

Multidimensional Poverty measurement:

The Alkire–Foster (AF) method is used here to develop the Multidimensional Poverty Index (MPI), an approach valued for its policy applicability, adaptability, and

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

effectiveness in revealing deprivation structures (Alkire & Foster, 2011). The MPI is structured around three key dimensions—health, education, and living standards—captured through a set of ten indicators. Each dimension gave equal weight (one third) and the indicators within each dimension have the same weight (as shown below in Table 1). A household was extremely poor - multidimensional indicators - if deprived in one third indicators or more (if is a weighting the weighted indicators are included in that one third).

In formal sense, Multidimensional Poverty index (MPI) is represented as,

$$MPI = H \times A \quad (1)$$

where H is the headcount ratio (incidence of multidimensional poverty) and A is the average trajectory of poverty (share of poor people deprived) This framework ensures that, at one go, both the breadth and depth of poverty are measured and in turn, the AF is standing in the face of the purely income approach or headcount measures of poverty. The analysis adopts the standard MPI dimensions—health, education, and living standards—tailored to the indicators available in the 2017–18 MICS dataset. Table 1, explains the ten indicators, their symbols and assigned weights, which is consistent with the Global Multidimensional Poverty Index (GMPI) framework (Alkire et al., 2019).

Table 1: Multidimensional Poverty Index variables with descriptions

Serial No.	Variable Name	Symbol	Weight
1	Nutrition (Crowding Out)	NI	1/6
2	Child mortality	CM	1/6
3	Years of Schooling	YS	1/6
4	Child School Attendance	CSA	1/6
5	Electricity	EL	1/18
6	Sanitation	SA	1/18
7	Drinking Water	DW	1/18
8	Housing	HO	1/18
9	Cooking Fuel	CF	1/18
10	Assets	AS	1/18

Author's Own Calculations

The MPI is computed as

$$MPI = 1/3\ (NI + CM) + 1/3\ (YS + CSA) + 1/3\ (EL + SA + DW + HO + CF + AS) \ldots (1)$$

This formula subtracts an equal weight across the three dimensions (1/3 of each), and a weight is given to the sub-indicators according to this scale (1/6 for health and education, 1/18 for the standards of living).

For this assessment study, a three-stage disaggregated comparative methodology (Bashir & Schilizzi, 2013) for assessment of MPI between three zones of household population of Punjab, furthermore, zones are dissected into rural and urban community for granular analysis (Waseem et al., 2025).

Comparative Stages (Analytical):

The comparative analysis constitutes of on two stages i.e., nexus of (i) Zonal comparative analysis (H - Degradation) and, (ii) nexus of zonal region comparative

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Analysis (H x V - Degradation).

A. zonal Comparative Analysis (H - Degradation) 1.

For conducted Zonal Comparative Analysis (H - Degradation analysis), Punjab was divided into three zones viz. (i) Zone-A, (ii) Zone-B and (iii) Zone-C (Bashir and Schilizzi, 2013).

I. Zone A (Northern Punjab) comprises two divisions namely Rawalpindi and Sargodha comprising of eight districts viz. Rawalpindi, Attock, Chakwal, Jhelum, Sargodha, Bhakkar, Khushab and Mianwali.
II. Zone B (Central Punjab) comprises of 4 divisions such as Lahore, Faisalabad, Gujranwala & Sialkot having a total of seventeen districts namely Lahore, Kasur, Nankana Sahib, Sheikhupura, Faisalabad, Chiniot, Jhang, T.T. Singh, Gujranwala, Gujrat, Hafizabad, Mandi Bahauddin, Narowal, Sialkot, Sahiwal, Okara and Pakpattan.
III. Zone C (Southern Punjab) includes three divisions viz. Bahawalpur, Multan, and D.G.Khan, which has nine districts viz. Multan, Khanewal, Lodhran, Vehari, Bahawalpur, Bahawalnagar, R.Y.Khan, D.G. Khan, and Layyah.

B. Zonal X Regional C Comparative Analysis (H x V - Degradation)

For conducting Zonal x Regional Comparative Analysis (H x V - Degradation analysis) the Zones were further divided into 2 groups on the basis of rural - urban regional divisions (Waseem et al, 2025, Ullah, 2022).

1. Rural Zonal comparative analysis.
2. Well, Urban Zonal Comparative Analysis.

RESULTS AND DISCUSSIONS

The emphasis is on detecting geographic differences in multidimensional deprivation among the Northern, Central, and Southern zones, with additional separation into rural and urban groups. Such disaggregation throws up important insights on the structural distribution of poverty and also highlights localized clusters of deprivation which may get obscured in the provincial averages. Previous research highlights the fact that regional inequalities in infrastructure, education and access to basic services determine multidimensional poverty significantly (Alkire & Foster, 2011; Sen, 1999). In Pakistan, these spatial inequalities are especially pronounced between provinces as well as within provinces where differences in economic development and public service delivery play a major role in poverty differences (World Bank, 2021; UNDP & OPHI, 2024). The results given in Tables 2-4, therefore, provide a comparative picture with regard to deprivation patterns in between the zones and between the rural and urban communities of Punjab.

The result illustrated in Table 2 showed that MPI profiles for Punjab stated that approximately 25 percent of households are living under deprived conditions. However, the zonal comparison shows certain regional differences in the outcome of poverty. Zone A (Northern Punjab) has a poverty rate around 25.78% while relatively lower poverty is for the Zone B (Central Punjab) where the rate of deprivation is 22.95%. In contrast, Zone C (Southern Punjab) stands out as the most deprived zone among all, with approximately 27.85% of households are multidimensionally poor. These results highlight persistent developmental imbalances within Punjab, with historically

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

neglected regions still bearing high deprivation burdens. The MPI values also show similar patterns, showing more intensity of deprivation in regions where households are deprived of access to education, healthcare and adequate living standards at the same time.

Table 2: MPI Estimates of Aggregated and Disaggregated Punjab.

Punjab (Zones)	HH	Education		Health		Standards of Living						MPI	Poverty %
		YS	CSA	CM	NI	HO	EL	CF	DW	SA	AO		
Punjab	53840	0.10	0.12	0.08	0.71	0.14	0.04	0.44	0.48	0.20	0.18	0.75	25
Zone A (NP)	12240	0.11	0.12	0.08	0.77	0.17	0.02	0.44	0.39	0.20	0.20	0.74	25.78
Zone B (CP)	26120	0.08	0.12	0.07	0.72	0.06	0.02	0.35	0.41	0.19	0.12	0.77	22.95
Zone C (SP)	15480	0.14	0.13	0.07	0.65	0.24	0.08	0.60	0.66	0.23	0.25	0.72	27.85

Author's Own Calculations

It clearly indicated that deprivation in nutrition and housing conditions seems especially acute in Southern Punjab where it indicates a long-standing lack in health infrastructure and conditions for living in households. In comparison, the situation in Central Punjab shows relatively better performance in indicators on access to electricity, sanitation and assets which could be attributed to a better economic base and higher rates of urbanization. These findings are similar to those in the existing literature which suggest that poverty tends to be concentrated in areas where there is a weak infrastructure, low development of human capital and limited economic opportunities (Bourguignon and Chakravarty, 2003; Sen, 1999).

The research works done in past had also demonstrated that there is a gap between southern districts of Punjab and those in the north and central regions in terms of structural development because of inadequate industrialization and low levels of access to public services (Ullah et al., 2020; Abbas & Ashraf, 2024). Similarly, global MPI assessments stress on deprivations in nutrition, housing and basic infrastructure being a key part of multidimensional poverty in developing economies (Alkire et al., 2020; UNDP & OPHI, 2024). These results have strengthened the argument that the way to deal with poverty is through geographically targeted interventions that tackle poverty by simultaneously improving education, healthcare services and infrastructure development.

The findings in Table 3, clearly showed that levels of deprivation in rural populations are far higher than the level of deprivation which is experienced by the population in the specific provinces. Zone A (Northern Punjab) had the highest rate of poverty around 30.85%, in Zone C (Southern Punjab) it was estimated around 29.23%. Meanwhile,

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

MPI value in the Zone B (Central Punjab) in the rural area was relatively much lesser i.e., 24.52%. Nevertheless, this relative improvement does not mean that certain relative deprivation as evidenced among rural households all across the province is not significant, indicating that structural disadvantages still persist.

Table 3: MPI Estimates of Rural Punjab Zones

Rural Punjab	HH	Education		Health		Standards of Living						MPI	Poverty %
		YS	CSA	CM	NI	HO	EL	CF	DW	SA	AO		
Zone A	9160	0.07	0.12	0.07	0.57	0.50	0.19	0.78	0.88	0.21	0.51	0.69	30.85
Zone B	16580	0.08	0.12	0.07	0.70	0.09	0.03	0.43	0.58	0.19	0.18	0.75	24.52
Zone C	12120	0.14	0.13	0.07	0.62	0.30	0.10	0.68	0.78	0.23	0.30	0.71	29.23

Author's Own Calculations

It seems that the rural population in the northern and southern part of Punjab are more prone to lack of sanitation infrastructure and lack of access to clean energy sources and this threatens the health risks and increases the economic instability of the population. Multiple investigations had recorded the fact that structural disadvantages, increased infrastructural deficits, limited access to health care and limited employment opportunities have affected rural communities (Sen, 1999; Tilak, 2002).. In the context of Pakistan, the prior researches have also highlighted that rural poverty is strongly associated with poor access to public services and lower level of education attainment too (Ullah et al., 2020). Global MPI assessments also find the same, namely that rural populations contribute to a proportionately high share of multidimensionally poor globally (UNDP & OPHI, 2024). The results of this study thus underscore the importance of selective rural development policies for the improvement of infrastructure, access to education, and health services delivery in the underdeveloped areas.

In Table 4, Zone B (Central Punjab) had shown the lowest rate of 20.23% of urban poverty followed by Zone A (Northern Punjab) with slightly higher rate of 22.79%. Zone C (Southern Punjab) also had the highest rate of urban deprivation, i.e., 23.92%. Although urban poverty percentages are lower than in rural areas, these figures justify that a significant percentage of urban households are subject to certain multidimensional deprivations.

Table 4: MPI Estimates of Urban Punjab Zones

Urban Punjab	HH	Education		Health		Standards of Living						MPI	Poverty %
		YS	CSA	CM	NI	HO	EL	CF	DW	SA	AO		
Zone A	3080	0.14	0.12	0.08	0.81	0.04	0.00	0.25	0.11	0.19	0.05	0.77	22.79
Zone	954	0.0	0.1	0.0	0.7	0.0	0.0	0.2	0.1	0.1	0.0	0.8	20.23

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 4, Issue 3 (2026)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

B	0	7	2	8	7	1	0	0	0	8	3	0	
Zone C	3360	0.17	0.14	0.08	0.79	0.05	0.01	0.29	0.19	0.20	0.05	0.76	23.92

Author's Own Calculations

Indicator-level analysis shows that urban households usually enjoy improved access to electricity and sanitation, yet deprivations remain noticeable in education and housing quality. Rapid urbanization and population growth in major cities have produced pressure on housing market and urban services resulting in the growth of informal settlements and urban pockets of poverty. These findings are in line with global research demonstrating the dynamics of urban poverty which draws attention to the fact that urban areas frequently exhibit high levels of inequalities despite enjoying an average level of income (Alkire & Foster, 2011). Studies on urbanization in the developing countries report that rapid population growth in cities often results in disproportionate access to housing, sanitation or employment opportunities (UNESCO, 2020). In Pakistan, this relation has been faced in fast growing urban centres as a consequence of the increase in migration from rural areas, which places pressure on urban infrastructure and public services (World Bank, 2022). Consequently, any effort to seriously reduce poverty has to address rural deprivation as well as new forms of urban vulnerability.

The comparative studies showed that there existed large scale of MPI spatial inequalities in Punjab. Southern Punjab consistently showed the highest levels of deprivation in both rural and urban areas which clearly reflected regional disparities in economic development and providing of basic necessities of life. Central Punjab shows much better performance by virtue of stronger infrastructure networks, better levels of urbanization and economic activity. Northern Punjab occupies an intermediate position but still has serious problems of rural poverty. These findings build on evidence of the importance of implementing region-specific policy interventions that target the structural causes of deprivation in different parts of the province.

SUMMARY & CONCLUSIONS

The results show that multidimensional poverty is a serious problem within the province which affects about one-quarter of the households. However, the distribution of poverty is certainly not uniform in regions. Rural households show much greater multidimensional deprivation than urban populations, especially in terms of the indicators on housing conditions, drinking water and cooking fuel. These results suggest that multidimensional poverty is highly correlated with structural inequalities in the process of infrastructure development, availability of economic opportunities, and provision of social services in the provincial Punjab. Although Punjab is often challenged for taking one of the more developed provinces in Pakistan, that said, quite a lot of inequalities still remain within the province. Southern districts still suffer from the deprivations associated with inadequate progress in infrastructure development, poor levels of education and poor economic opportunities. Rural communities are most exposed; limited access to inadequate services even multiplies multidimensional deprivation. While urban poverty levels are generally lower than in rural settings,

Online ISSN 3007-3197
Print ISSN 3007-3189

emerging pockets of deprivation in cities signal growing challenges tied to rapid urban population growth. The results highlight the need for targeted strategies of development focused on the rural and disadvantaged sections can play an important role in reducing the regional discontent and improve the overall welfare of the state of Punjab.

Policy Recommendations:

1. **Strengthen Rural Infrastructure Development**

Investments in rural infrastructure, specifically in the areas of safe drinking water systems, sanitation facilities, and electricity supply networks are necessary in order to reduce deprivation in the living standards dimension of multidimensional poverty (World Bank, 2021).

2. **Expand Access to Quality Education**

Promoting access to education in underserved districts can have a major effect on reducing multidimensional poverty. Expansion of secondary school infrastructure and female education promotion can shape human capital formation and in reducing poverty in the long-run (Psacharopoulos & Patrinos, 2018; Schultz, 2002).

3. **Improve Rural Healthcare and Nutrition Programs**

Targeted health interventions, such as maternal healthcare services, vaccination campaigns, and nutrition programs, should be prioritized in areas with high levels of health deprivation (UNICEF, 2023).

4. **Promote Regional Economic Development**

Regional economic development policies should promote industrial investment and job creation in backward districts especially in Southern Punjab towards reducing structural regional inequalities (ADB, 2022).

5. **Strengthen Social Protection Programs**

Strengthening social safety nets and targeted cash transfer programs can help to provide immediate relief to vulnerable households and support longer-term strategies for poverty reduction (Adams & Page, 2005).

Limitation and Future Research:

Although this study has its own contributions, there are several limitations that should be recognized. First of all, the analysis is based on the Punjab MICS 2018 data set, which is the closest reference to the most comprehensive data set that covers multidimensional poverty for the province. However, the use of cross-sectional data means that we are constrained in any attempt to look at the changes in poverty dynamics over time. Future studies would be helped by longitudinal datasets to observe changes in poverty across time. Second, while the study offers detailed regional decomposition possibilities for a better comprehension of the geographical determinants of poverty, further spatial econometric analysis could better understand the geographical distribution of poverty. Future research may also seek to offer more dimensions to the multidimensional poverty framework including other indicators such as environmental vulnerability, climate risks and labour market participation. These factors have come to be recognized as increasingly important factors of poverty in the developing economies. Moreover, additional study of gender disparities and household demographic

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

characteristics might give more information about the social dimension of poverty. Such extensions would contribute to a more comprehensive poverty reality and understanding of multidimensional deprivation and the development of more activity policies for poverty reduction in Pakistan.

References

Abbas, K., & Ashraf, M. (2024). Multidimensional poverty in Sargodha, Pakistan: A quantitative and qualitative analysis. *Journal of Poverty Studies, 12*(3), 45–67.

Adams, R. H., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? *World Development, 33*(10), 1645–1669. https://doi.org/10.1016/j.worlddev.2005.05.004

Asian Development Bank. (2022). *Asian development outlook 2022*. ADB.

Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics, 95*(7–8), 476–487. https://doi.org/10.1016/j.jpubeco.2010.11.006

Alkire, S., Kanagaratnam, U., Nogales, R., & Suppa, N. (2020). *Global multidimensional poverty index 2020*. Oxford Poverty and Human Development Initiative.

Alkire, S., Kanagaratnam, U., & Suppa, N. (2021). *Global multidimensional poverty index 2021*. Oxford Poverty and Human Development Initiative.

Bashir, M. K., & Schilizzi, S. (2013). Determinants of rural household poverty: Evidence from Pakistan. *Journal of Development Studies, 49*(4), 521–535.

Bourguignon, F., & Chakravarty, S. R. (2003). The measurement of multidimensional poverty. *Journal of Economic Inequality, 1*(1), 25–49.

Chant, S. (2016). Women-headed households: Poorest of the poor? Perspectives from Mexico, Costa Rica, and the Philippines. *Gender & Development, 24*(3), 385–400.

Haq, R., Zia, U., & Arif, G. M. (2024). Multidimensional poverty in Pakistan: A spatial analysis. *Pakistan Journal of Applied Economics, 34*(1), 45–67.

Hussain, A., & Iqbal, N. (2019). Conflict and multidimensional poverty in Pakistan: A case study of Khyber Pakhtunkhwa. *Conflict and Development Review, 12*(1), 56–78.

International Labour Organization. (2021). *Informal employment in Pakistan: Trends and challenges*. ILO.

Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report*. Cambridge University Press.

Javed, S. A., & Awan, M. S. (2020). Multidimensional poverty in Punjab: A district-level analysis. *Pakistan Economic and Social Review, 58*(2), 123–145.

Lanjouw, P., & Ravallion, M. (1995). Poverty and household size. *The Economic Journal, 105*(433), 1415–1434.

Malik, S. J., & Rafi, M. (2020). Gender and poverty in Pakistan: A multidimensional analysis. *Journal of Gender Studies, 29*(3), 345–360.

Pakistan Bureau of Statistics. (2018). *Punjab Multiple Indicator Cluster Survey (MICS) 2017–18*. Government of Punjab.

Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: A

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

decennial review of the global literature. *Education Economics, 26*(5), 445–458.
Schultz, T. P. (2002). Why governments should invest more to educate the poor. *Journal of Economic Perspectives, 16*(2), 93–116.
Sen, A. (1999). *Development as freedom*. Oxford University Press.
Tilak, J. B. G. (2002). Education and poverty. *Journal of Human Development, 3*(2), 191–207.
Ullah, A., Khan, M., & Hussain, S. (2020). Spatial analysis of district-level poverty in Pakistan. *Pakistan Journal of Applied Economics, 30*(1), 45–67.
United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations.
UNDP. (2016). *Multidimensional poverty in Pakistan*. United Nations Development Programme.
UNDP. (2024). *Human development report 2024*. United Nations Development Programme.
UNDP & OPHI. (2024). *Global multidimensional poverty index 2024*. United Nations Development Programme & Oxford Poverty and Human Development Initiative.
UNESCO. (2020). *Global education monitoring report 2020*. UNESCO Publishing.
UNICEF. (2023). *Child poverty in the developing world: A multidimensional approach*. United Nations Children's Fund.
Waseem, M. S., Ali, A., Bashir, M. K., & Abbas, Q. (2025). Policy pathways to reduce multidimensional poverty in Punjab: Evidence and recommendations. *Journal of Sustainable Economic Development, 3*(2), 185–193.
World Bank. (2021). *Poverty and shared prosperity report*. World Bank.
World Bank. (2022). *Pakistan floods 2022: Post-disaster needs assessment*. World Bank.
World Bank. (2023). *Pakistan development update*. World Bank.