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Geospatial Analysis of Urban Poverty in Loralai District of Pakistan

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ABSTRACT

This research aims to the socioeconomic factors contributing to urban poverty within 25 wards of Loralai District. The primary objective of the study is to assess the challenges faced by urban residents related to poverty and to map these poverty levels spatially using Geographic Information Systems (GIS). The primary data were collected through questionnaires. Variables including household income, loan amount received from banks, availability and type of automobile vehicle were used to assess the poverty level. These indicators were crucial in determining the overall poverty status of each ward. The findings revealed significant inequalities in poverty levels among the 25 urban wards of Loralai District (Annexure B). Wards 2,19, 20, 21, 22, 23, 24, and 25 were categorized as "very poor," with residents in these areas experiencing the most severe deprivation in terms of income and access to essential services. Wards 3,4,6, 7,11,12,16,17,18,19 and 18 were identified as "medium". In contrast, wards 1, 5, 6, 8, 9, 10, 13, 14 and 15 were classified as "rich" in comparison, showing better socioeconomic conditions, higher household incomes, and better access to services. The visual maps created through GIS allowed for the clear identification of patterns in urban poverty, making it easier to discern which wards are in need of targeted interventions. The spatial analysis of urban poverty provided by this research is crucial for policymakers, government officials, and development organizations to understand the area in need of resources and planning to alleviate poverty.

Introduction

Eradicating poverty in all its forms remains one of the greatest challenges facing humanity. For this reason, it was the primary sustainable development goal set by the United Nations Development Programme. While the number of people living in extreme poverty dropped by more than half between 1990 and 2015 and too many are still struggling to meet the most basic human needs, and in particular 10 percent of the world's population lives in extreme poverty (UNDP, 2016). One person in every ten is extremely poor (World Bank, 2021). As of 2015, about 736 million people still lived on less than US $1.90 a day; many lack food, clean drinking water, and proper sanitation (World Bank, 2018). Rapid growth in countries such as China and India has lifted millions out of poverty, but progress has been uneven. Women are more likely to be poor than men as they have less paid work and education and own less property. Consequently, child poverty also is significant (UNDP, 2016). Almost half of all people living in poverty are under eighteen (UNICEF, 2019). In fact, child poverty is one of the most important concerns and priorities for national and international organizations. Progress has also been limited in other regions, such as South Asia and sub-Saharan Africa, which account for 80 percent of those living in extreme poverty (United Nation, 2020). New threats brought on by climate change, conflict, and food insecurity mean that even more work is needed to lift people out of poverty. The Sustainable Development Goals (SDGs) are a bold commitment to finish what we have started and end poverty in all its forms and dimensions by 2030 (Orum, 2019).

Persistent urban poverty is a major barrier to attaining sustainable development and equitable progress in many nations across the world. Poverty is becoming increasingly interwoven with urban landscapes as a result of rising urbanization and the concentration of economic options in urban centers. Therefore, many people in positions of power have put in a lot of effort to learn about and employ methods shown to reduce urban poverty and boost community well-being (Kisiala & Rącka, 2021; Ameer et al., 2024; Sheikh et al., 2020; Shah et al., 2021). Global poverty has been declining in recent decades, but the progress is uneven and varies by region. According to the World Bank, the global extreme poverty rate has decreased significantly, with the percentage of people living on less than $1.90 per day falling from 36% in 1990 to about 9.2% in 2020 (World Bank, 2022). This trend is largely driven by rapid economic growth in countries like China and India, where hundreds of millions have been lifted out of poverty (World Bank, 2020). However, poverty remains a significant challenge in sub-Saharan Africa, where economic growth has been slower, and COVID-19 pandemic has aggravated the position (United Nations, 2021). Additionally, while the extreme poverty rate has decreased, multi-dimensional poverty, which includes factors like education, health, and living standards, persists and has worsened in some areas, underscoring that poverty reduction is not solely about income levels but about broader development issues (Alkire et al, 2020). Among 1990 and 2010, Asia got rid of 786 million people living in extreme poverty (World Bank, 2013). This lowered the poverty rate from 55.2% to 20.8% (World Bank, 2016). Asia had a big share of the world's poor in 1990, making up 81.0% of the poor. By 2010, Asia had 62.4% of the world's deprived (developing countries), which was about the same as its share of the people (World Bank, 2012). Even with this great performance, poverty in Asia is still a big problem in the area. It is reported that 758 million Asians live on less than $1.25 a day (Asian Development Bank, 2010). Statistics show that a relatively large number of the world's poor live in Asia. Three quarters of the poor people in the world live in Sub-Saharan Africa (World Bank, 2013). In comparison, less than 4% live in Latin America and the Caribbean as a whole, and less than 2% live in the Middle East and North Africa (World Bank, 2016).

Research Objectives

1. To determine the socioeconomic factors of urban poverty in Loralai District.
2. To prepare a map for determining the poverty levels in Loralai District using GIS.

Research Questions

This study revolves around the Specific questions include,

1. Which factors contributing to urban poverty in Loralai District?
2. Do urban areas of Loralai District have different poverty levels?

Literature Review

Poverty is multifaceted and has cross cutting effects including on individuals, community, and societies. Especially in urban contexts, poverty's effects are biased in ways that depend on the spatial dimension: the spatial dimensions of poverty can influence health, education, and economic opportunities. This paper reviews the urban poverty analysis, particularly as it relates to its spatial implications in the urban environment. By reviewing the existing research, the review retraces the ways in which poverty affects various dimensions of urban life and highlights the relevance of spatial analysis to understand and respond to the impacts of poverty.

Poverty and Disparities in a Globalized World

According to the Interim Report of the Millennium Development Goals (MDGs) Task Force, which aims to improve the lives of people living in urban slums, rephrasing the line would help clarify that exclusion, rather than distance from infrastructure and services, is a major source of urban poverty. They are excluded from the attributes of urban life that remain a monopoly of a privileged minority political voice, secure good-quality housing, safety and the rule of law, good education, health services, decent transport, adequate incomes, access to goods and services, credit in short, the attributes of full citizenship (Garau & Sclar, 2004). Although the problem of urban poverty is not new, it is sometimes limited to the idea that economic policies and interventions are the most effective way to alleviate it. Today's urban poverty, which is fueled by globalization and unchecked urbanization, must be acknowledged as a social, political, and cultural phenomenon that has a significant influence on public health. Dissatisfaction and political instability are exacerbated when the urban poor are denied access to the advantages of city living. Rapid urbanization of poverty and illness has been seen as a new challenge to human security in the larger framework of health and human development. The interplay of local and global pressures leads to rapid unchecked urbanization. The way that trade, business, industry, tourism, international travel, information technology, and media have connected cities (Marmot et al, 2013; Munir et al., 2022; Sibt-e-Ali et al., 2018). By addressing urban poverty as a pressing public health concern, policymakers may create more equitable and healthy cities and more equitable health possibilities.

The World as an Emergent City

For the first time ever, half of the world's population now resides in urban areas. By 2030, there will be almost two billion more people living in cities, according to UN predictions, while the number of people living in rural areas would decrease by roughly 20 million. The development of urban poverty, which is reflected in the expansion of informal settlements, is the most compelling of the several health concerns associated with fast urbanization. In the industrialized world, urban poverty is on the rise, but in emerging nations, the tendency is more noticeable. According to Un-

Habitat, the number of people living in urban slums worldwide is predicted to double by 2030, from an estimated one billion in 2002 to over two billion, or 32% to 41% of the world's urban population (Un-Habitat, 2005). Women lead one-third of homes among the one billion people who currently reside in informal settlements. In urban regions, hundreds of millions of children and young people live and work in substandard conditions. The most recent Global Report on Human Settlements states that 43% of urban dwellers in emerging nations reside in slums. 78% of people live in slums in the least developed nations (Un-Habitat, 2020). This phenomenon is a crisis of unparalleled proportions, and its scope and pace provide significant and compelling threats and challenges to overall health. When the World Health Organization's regions are broken down, the Western Pacific Region has the highest concentration of impoverished individuals living in substandard conditions in metropolitan areas (around 233 million), followed by the (Marmot et al, 2013). In today's globalized world, living in an urban area increases exposure to diseases like HIV/AIDS, tobacco and other narcotics, violence and accidents, climate change, and unhealthful settings. The urban poor are more at risk if they lack access to resources, proper housing, and medical treatment. The triple burden of illness, injuries, infectious diseases, and non-communicable diseases will disproportionately affect most urban residents in the years to come due to present demographic trends (Kisiala & Rącka, 2021).

Urbanizing World

In order to distill the body of knowledge regarding social determinants, health, and health inequities in urban settings, the Knowledge Network on Urban Settings has spent the last 12 months collaborating with researchers, local communities, academia, development organizations, donors, and practitioners from local, national, regional, and international organizations. The results are especially pertinent to public health, even if KNUS research is still under progress. The impoverished in cities don't wait for groups or governments to take action on their behalf. Despite living in abject poverty, they are motivated and resourceful enough to discover ways to upgrade their shelters, get running water, grow food, set up daycare, educate themselves and their kids, and defend one another (Marmot et al, 2013). Even while violence has a significant negative impact on impoverished communities, it's crucial to acknowledge the abundance of untapped social potential found in informal settlements. According to one case study from Brazil's favelas, there are social networks, trust, solidarity, and mutual assistance, as well as celebrations, cultural life, local enterprises, and unofficial political, religious, recreational, and educational activities, among many other things (Becker et al, 2007). Rapid urbanization that is out of control and the disintegration of the conventional social fabric exacerbate inequality and give rise to alternative forms of government like paramilitary groups and gangs, which prey on young people living in poverty (Marmot et al, 2013). Residents of informal communities are more likely to experience violence and crime. Since 2000, the urban regions with the highest rates of informal settlement growth have also been the fastest growing in the world. Public health strategies to control no communicable diseases (obesity, diabetes, cancer, chronic heart disease, stroke, hypertension), communicable diseases (HIV-AIDS, TB, H5N1 virus, dengue, and other vector-borne diseases), mental health, and conditions related to urban life (road traffic injuries, urban violence, obesity, and unsafe settlements) are all significantly impacted by this. The problem of urban poverty has been limited to economic development. policies, programs, measurements, evaluations, and strategies, as well as the players and stakeholders, until a more comprehensive development approach is applied. The social, cultural, environmental, and health aspects of urbanization and urban poverty will not be adequately addressed by those who are supposed to act. A new policy space for connecting development to health and vice versa has been created by improving local urban governance as a strategy for reducing urban poverty, as demonstrated by Un-Habitat's work. However, in most

cities, the public health sector has not effectively used this space to shape healthier public policy. It is sometimes believed that city people have greater access to services, such as health care, because of the significant concentration of national resources in urban areas. For the urban poor, who actually face numerous and crippling obstacles, such as the inability to pay for goods and services, the absence of social support networks, hazardous and unhealthy living and working conditions, exposure to crime and violence, and a limited selection of food options, this is where the issue of equity becomes vital (Dixon et al, 2007). Inevitably, urban poverty is tied to efforts for economic empowerment. These methods include developing entrepreneurship and support for sustainable livelihoods. The projects are geared toward breaking the cycle of poverty by giving people marketable skills, giving them more access to credit and money, and helping encourage new jobs. Alongside reducing urban poverty, in this case, it means bolstering social safety nets. Targeted cash transfer programmes, food subsidies, healthcare provisions, and other social protection are a safety net for the most vulnerable members of society. In the short run, the implementation of these measures has the potential to attenuate the severity of economic shocks and crises, and to improve the quality of life of people (Zhoujie, 2003).

Although many solutions have been put into place around the world, it is crucial to evaluate them for their efficacy, sustainability, and potential limitations. Political will, governance capacity, financial channels, cultural concerns, and the distinctive features of each metropolitan area can considerably affect the success or failure of poverty reduction initiatives (Education, 2014).

The ability of Geographic Information Systems (GIS) to analyze and address urban poverty has led to GIS becoming a valuable tool. Researchers can use GIS to map and visually explain spatial patterns of poverty, showing disparities in access to services such as healthcare, education and infrastructure in cities (Li et al, 2018). The use of GIS to spatially analyses can inform policymakers as to where areas of concentrated poverty exist, so that appropriate targeted interventions and strate gies of resource allocation can be applied (Thongdara et al, 2012). In addition, socio-economic factors can be integrated with environmental information in a GIS in order to discover how problems related to housing quality, pollution and distance to services affect the poorer population (Najafi et al, 2024). This technology helps improve decisions by giving a panoramic angle on to urban poverty dynamics, which form the groundwork for urban development and poverty reduction strategies (Bolay et al, 2020). Together, GIS is an important tool in helping to understand the spatial dimensions of poverty and, more generally, is a central component of urban planning and social policy.

Poverty at a World Level

Decades on of efforts to alleviate poverty have done little to nothing to bring an end to this disease as a global phenomenon. According to the World Bank (2021), in 2020 more than 9.2 per cent of the world's population were on less than $1.90 per day, an unenviable persistence of extreme poverty worldwide. Poverty is strongly skewed from globally, especially in Sub-Saharan Africa and South Asia due to economic instability, poor governance and absence of access to education and healthcare (United Nations, 2022). However, urbanization has made poverty dynamics even more complicated, especially in developing countries where such rapid growth in urban areas often outpaces expansion in infrastructure and other services and slums and informal settlements arise (Karn & Harada, 2003). Spatial analysis has become a central technique in the study of urban poverty. This enables researchers to understand where the poverty is spread out across local areas as well as visualize spatial inequalities (Chambers, R, 2007). Not all studies have shown that urban poverty is uniformly distributed, but rather concentrated in specific places often characterized by

poor housing, lack of access to services and environmental hazards (Liu, Y, 2006). The fact that there is this spatial concentration of poverty, poses unique challenges to urban planning and policy making, which demand targeted interventions for the impoverishment of the poor (Satterthwaite et al, 2005). As with climate change, urban populations, particularly in poverty, are particularly vulnerable to the impacts of extreme weather events and environmental degradation (Moser et al, 2006). However, despite advances in knowledge of urban poverty through spatial analysis, important gaps in data availability and quality for rapidly urbanizing Global South regions remain (Marmot et al, 2013).

Material and Methods

This research therefore uses both quantitative and qualitative research to establish the level of poverty within the urban area of Loralai District. Exploratory analysis of spatial dimensions, distribution, and scores of poverty are conducted through Geographical Information System, questionnaires, and descriptive statistics. The usage of the aforementioned methods offers a broad understanding regarding the socio-economic status of the state that causes and affects poverty. The research principally employs a correlational-descriptive research approach. Descriptive analysis is a major feature of this study, accompanied by quantitative data to provide meaning to the results. They insisted on the kinds of data and information, regarding field surveys and questionnaires as the most appropriate primary data with secondary data as a backup. Basically, field surveys and structured questionnaires are used in data gathering through socio-economic firsthand information. Statistical Products and Service Solutions (SPSS) and Microsoft Excel for statistical analysis, and Geographic Information System (ArcGIS) for generating spatial maps of poverty in the study wards. The selected study area is Loralai District, an historically important region located in northeastern Balochistan. The district occupies an area of 8,018 square kilometers with the aspect of topography which is partly plain and partly hilly, climate which is semi-arid and the involvement in agricultural activities. Loralai is surrounded by districts Zhob, Killa Saifullah, Ziarat, Musakhail, Barkhan, Dukki and Sibi. The study equally avoids a systematic sampling technique and instead relies on the random procedure so as to afford socio-economic groups an equal chance of being selected. With Arkin and Colton's formula, a sample size of 382 respondents is established with a confidence margin of 95%.

These were gathered based on structured questionnaires focused on urban-based households. Data provided includes sources of income, employment, and housing as well as availability of services. Surveys conducted in the field are appropriately complete and impartial in light of the fact that they are led by enumerations. It assists areas that have internet connection in the online surveys. Consists of maps, official documents, census and statistical data collected from the Bureau of Statistics and other districts administrative departments.

Qualitative variables cadenced by frequency tables percentages are employed to evaluate poverty characteristics while the GIS based tools are used to investigate spatial characteristics of poverty. Indicators and Poverty Level Research involving the analysis of socio-economic indicators embraces correlational analysis. The study concentrates on wards in the urban center of Loralai to have a localized perspective on poverty change that will guide the policy approach. Use of ward level data show disparities and for spatial comparisons to reveal areas of high poverty density. Independent Variables: Amply, education, employment, the number of people in the household, and ownership of land among others. Dependent Variable: Income level.

Result and Discussion

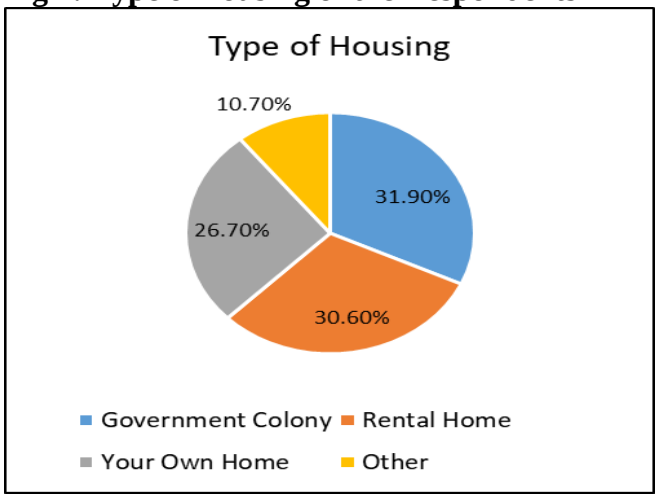
This chapter describes and analyzes urban poverty spatially in Loralai district using field survey data, maps, and statistics collected from the field surveys, maps, official statistics, and available literature. This chapter presents on the spatial distribution, the propensity for, and the social and economic drivers to poverty that exist in the urban parts of Loralai, Pakistan. This primary source of data stands as the empirical support of the research to depict trends, patterns, and relationships, which captures the core of the research dilemma. Monthly household income is shown below in Table 1. A substantial portion, 37.2%, reported earning less than 16,000 PKR (less than $57) per month, making this the largest income group. Households earning between 30,001 and 40,000 PKR ($111 to $143) constitute 27.0%, while 21.2% of respondents reported an income of more than 40,000 PKR (more than $143). The smallest group, 14.7%, falls within the 16,001 to 30,000 PKR ($58 to $110) range. This distribution reveals that the majority of households are on the lower end of the income spectrum, with over half (51.9%) earning less than 30,000 PKR per month.

Table 1: Monthly income of the Respondents

	Frequency	Percent
Less than 16,000 PKR (Less than $57)	142	37.2
16,001 to 30,000 PKR ($58-$110)	56	14.7
30,001 to 40,000 PKR ($111-$143)	103	27.0
More than 40,000 PKR (More than $143)	81	21.2
Total	382	100.0

Meanwhile, a smaller portion (21.2%) of households has higher incomes, exceeding 40,000 PKR monthly, reflecting income disparity within the sample. The Fig No.1 presents the distribution of respondents based on the type of housing they currently live in. The largest group, 31.9%, resides in Government Colony housing, while Rental Home dwellers account for 30.6% of the sample. A notable portion, 26.7%, live in their own homes, and the remaining 10.7% reported living in other types of housing. This distribution suggests that a significant number of respondents rely on government-provided or rented housing, with fewer individuals owning their homes. The presence of various housing types reflects the diversity of living arrangements in the population, with a nearly equal split between government, rental, and owned housing.

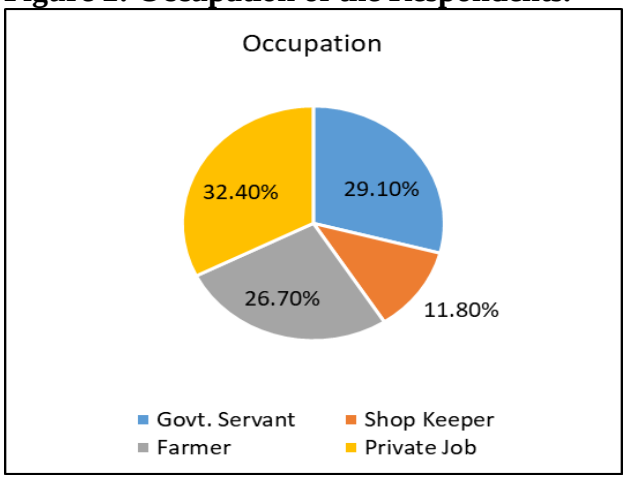
Fig 1: Type of housing of the Respondents



Source: Author Field Survey (2024)

Fig 2 presents the respondents' levels of anxiety when speaking in English, specifically in situations where anxiety causes them to forget what they know. The table shows a range of responses, with 26% of respondents strongly agreeing and 24% agreeing, indicating that 50% of the participant's experience significant anxiety in this context. Meanwhile, 21% disagreed and 19% strongly disagreed, suggesting that 40% of the respondents do not feel such anxiety. A smaller group, 10%, was unsure of their feelings. The mean score of 2.83 and a standard deviation of 1.498 reflect a fairly balanced distribution, with responses spread across the spectrum of agreement and disagreement. This suggests that while a considerable number of respondents struggle with anxiety when speaking in English, others remain confident or unaffected in such situations.

Figure 2: Occupation of the Respondents.



Source: Author Field Survey (2024)

Urban Poverty Levels in 25 Wards of Loralai

Shaping files and geographic co-ordinates were not available when analyzing spatial distribution of poverty in Loralai urban hence the use of discerning eye. Although this approach did not give geo-referenced maps specific to wards it divided poverty across them giving more insight information.

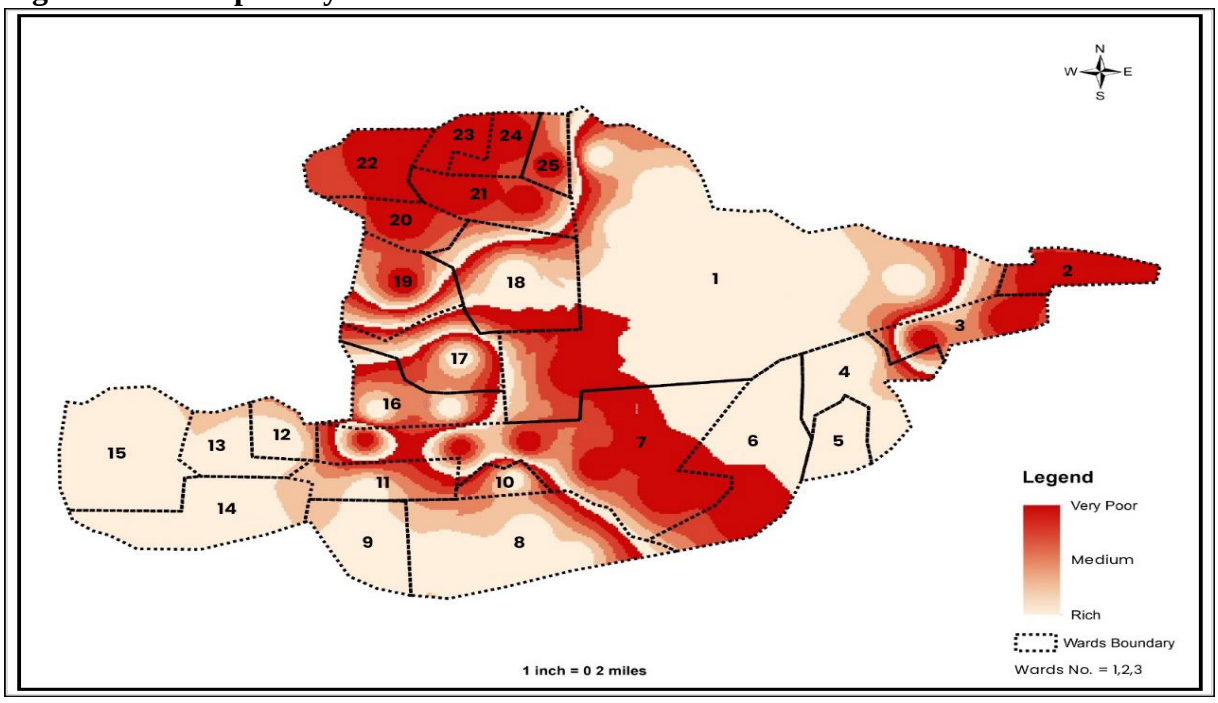
The Divisional Level Assets Index Poverty Estimate map presented visually in a thematic map (Figure 3) divides Loralai into three poverty classes: Poor (orange colored), Medium (Dark Brown colored), and Rich (Light yellow colored). The least developed wards endure modest socio-economic problems, whereas extremely deprived wards have very limited service provisions. Civilized wards are endowed with better facilities/ward infrastructures and higher per ward income. By showing wards differences, the map helps to identify areas of poverty most in need of intervention by policymakers and urban planners, as well as subsequent distribution of resources.

Conclusion

These primary findings are discussed in the context of 'Spatial Analysis of Urban Poverty in Loralai District', which also compares poverty rates between the districts' different urbanized wards to illustrate the degree of socio-economic inequality. In addition to that, through field surveys and GIS the study identifies and maps the most bereaved poor wards that lack crucial infrastructural and service essentials like income, proper roads, water and electricity and then maps these with relatively affluent wards with adequate infrastructure. The fact that resources are

distributed unequally leads to the conclusion that governance, infrastructure plays an important role in poverty. Research priorities highlighted policy reforms, development of infrastructure, employment, fair provision of resources and the public. So the measures for future work involve revamping urban planning, strengthening local government, bettering GIS information acquisition, and encouraging more research on the topic. These developments recommend that poverty alleviation in Loralai needs a comprehensive and sustainable urban agenda, engaging people's participation, and sustainable economic development strategies.

Figure 3: Urban poverty levels show in various wards of District Loralai.



Scholarly analysis of the "Spatial Analysis of Urban Poverty in Loralai District" specifically compares poverty standards across zones in the district and across various key areas of socio-economic differentiation. In this research question using both surveys and GIS, it is found that some regions are highly impoverished indicated by low income, poor physical infrastructure, and absence of social services while others are more affluent with better amenities. This uneven development leaves tremendous amount of debate on the impact of governance and resources distribution on poverty. The absence of geo-referenced data restricted the analysis at times, but through visual interpretation spatial assessment was possible to denote the most susceptible wards. This paper highlights a role of appropriate policies in developing infrastructure, increasing income and upgrading public services in depressed regions. It is immensely important to note that eradicating urban poverty in Loralai is not simply a task of simply fixing the symptoms, here and now, but also a project that needs long-term, research-based methods that are informed by gathered data to make appropriate interventions.

Recommendations

The recommended strategies for poverty eradication in the Loralai District relate to use of policy, physical infrastructure, economic development and resource distribution. Key suggestions include, Targeted Policy Interventions: The uptake of policies related to the basin's least affluent wards

should be established promoting proper education, health, and sanitation services. Increase infrastructure for poor communities to support economic growth, or the building of roads, water and waste services. Skills development, employment, and income generation schemes as well as micro financing. Ensure that fairness and effectiveness is followed when dispensing government funds in under developed wards. It contributes to locality by incorporating communities in order to identify the necessities for poverty reduction measures in order to suit the actual issues. Promote poverty reduction by including poverty reduction as one of the major goals within the urban planning authority to foster development of balanced facilities in the disadvantaged communities to enhance the delivery of the public facilities. Improve local governments' capability and efficiency through training and better governance for all the purposes of increasing service delivery. The development of GIS databases for policy analysis. Onto Longitudinal Research and Research on Socio-Economic Variables Impacting Poverty Level at Various Times. Mobilize people through advocacy Scrutinize for communal support for partnering with other members of the society in the fight against urban poverty.

References

1. Alkire, S, Roche, J. M, & Vaz, A. (2020). *Multidimensional poverty measurement and analysis*. Oxford University Press.
2. Ameer, N., Bhutta, M. A., Nawaz, D., Asghar, M. M., & Jawad, F. (2024). Navigating the Role of Remittances in Attaining Sustainable Development Goals in Developing Countries: New Insights from Panel ARDL Model. *The Critical Review of Social Sciences Studies*, *2*(2), 384-396.
3. Asian Development Bank. (2010). *The poverty situation in Asia: Progress and challenges*. Asian Development Bank.
4. Asian Development Bank. (2013). *Addressing urban poverty in Asia: Trends and challenges*. Asian Development Bank.
5. Baker, Judy, and Nina Schuler. 2004. "Analyzing Urban Poverty: A Summary of Methods and Approaches." *World Bank Policy Research Working Paper No. 3399* (April):1–66.
6. Bolay, J. C. (2020). *Urban Planning Against Poverty: how to think and do better cities in the global south* (p. 214). Springer Nature.
7. Chambers, R. (2007). Poverty research: Methodologies, mindsets and multidimensionality.
8. Dixon, J. A., Scura, L. F., Carpenter, R. A., & Sherman, P. B. (2007). *Economic analysis of environmental impacts.* Routledge.
9. Education, Community-based. 2014. "E Nvironmental L Iteracy and E Ducation : E Ducating the Public and Tomorrow 'S W Orkforce." *Education* 138–59.
10. Garau, P., & Sclar, E. D. (2004). *A home in the city: UN Millennium Project task force on improving the lives of slum dwellers.* Earthscan
11. Karn, Sunil Kumar, Shigeo Shikura, and Hideki Harada. 2003. "Living Environment and Health of Urban Poor." *Economic and Political Weekly* 3575–86.
12. Kisiala, A., & Rącka, I. (2021). The triple burden of disease in urban environments: Challenges for public health. *Journal of Urban Health*, *98*(3), 467-475.
13. Liu, Y., & Wu, F. (2006). Urban poverty neighbourhoods: Typology and spatial concentration under China's market transition, a case study of Nanjing. *Geoforum*, *37*(4), 610-626.
14. Marmot, Michael. 2015. "The Health Gap: The Challenge of an Unequal World." *The Lancet* 386(10011):2442–44.

15. Moser, Caroline, Michael Gatehouse, Helen Garcia, and John Little. 1996. "Urban Management and Poverty Reduction Urban Poverty Research Sourcebook Module Ii : Indicators of Urban Poverty."
16. Munir, F., Khan, I. H., Javed, M., Sibt-e-Ali, M., & Zaib, L. (2022). Understanding Social Inequalities in Pakistan: An Intersectionality Perspective on Ethnicity, Income, and Education. *International journal of special education*, *37*(3).
17. Najafi, E., Hosseinali, F., Najafi, M. M., & Sharifi, A. (2024). A GIS-based Evaluation of Urban Livability using Factor Analysis and a Combination of Environmental and Socio-economic Indicators. *Journal of Geovisualization and Spatial Analysis*, *8*(2), 27.
18. Orum, Anthony M. 2019. *The Wiley-Blackwell Encyclopedia of Urban and Regional Studies*. John Wiley & Sons.
19. Shah, S. Z. A., Farooq, F., Chaudhry, I. S., & Asghar, M. M. (2021). The role of internal and external migration on rural poverty alleviation in Pakistan: a case study of Multan district. *Review of Education, Administration & Law*, *4*(2), 495-502.
20. Sheikh, M. R., Akhtar, M. H., Asghar, M. M., & Abbas, A. (2020). Demographic and economic aspects of poverty. *Pakistan Economic and Social Review*, *58*(1), 131-160.
21. Sibt-e-Ali, M. S., Raza, S. M. F., ul Din, N., & Abidin, S. Z. U. (2018). Population, Poverty and Economic Development Nexus: Empirical Study of Some Selected Developing Countries. *Pakistan Journal of Humanities and Social Sciences*, *6*(4), 458-476.
22. Thongdara, R., Samarakoon, L., Shrestha, R. P., & Ranamukhaarachchi, S. L. (2012). Using GIS and spatial statistics to target poverty and improve poverty alleviation programs: A case study in northeast Thailand. *Applied Spatial Analysis and Policy*, *5*, 157-182.
23. UN-HABITAT. 2005. "Innovative Urban Tenure in the Phillipines." 1–117.
24. United Nations Children's Fund (UNICEF). (2019). *Children, poverty, and their futures*. UNICEF.
25. United Nations Development Programme (UNDP). (2021). *Human development report: Addressing inequalities in Pakistan*. UNDP Pakistan.
26. United Nations Development Programme. (2016). *Eradicating poverty: Challenges and progress*. United Nations.
27. United Nations Development Programme. (2016). *Human development report 2016: Human development for everyone*. New York: United Nations Development Programme.
28. United Nations Human Rights Office. (2021). Minorities being left behind with growing inequality, discrimination, and intolerance. *OHCHR*.
29. United Nations. (2010). *The state of Asian cities 2010/2011: Urbanization and development challenges*. United Nations Human Settlements Programme (UN-Habitat).
30. United Nations. (2020). *The state of child poverty: Global trends and challenges*. United Nations.
31. United Nations. (2021). *The impact of COVID-19 on poverty and inequality*. United Nations Development Programme. https://www.undp.org/publications/impact-covid-19-poverty-and-inequality
32. World Bank (2017). Poverty in Pakistan: Issues, Priorities and Policy Options: A Concept Note, Paper Presented at a Seminar. Islamabad: World Bank
33. World Bank. (2013). *Poverty and shared prosperity 2013: Global monitoring report*. World Bank Group.
34. World Bank. (2013). *The East Asia miracle: Economic growth and public policy*. World Bank Group.
35. World Bank. (2014). *Rural poverty report: Rural development and poverty reduction*. World Bank Group.

36. World Bank. (2016). *Poverty and equity database: Global poverty monitoring*. World Bank Group.
37. World Bank. (2016). *Poverty reduction and economic growth: Key trends and data*. World Bank Group.
38. World Bank. (2018). *Poverty and shared prosperity 2018: Piecing together the poverty puzzle*. World Bank Group.
39. World Bank. (2020). *Global economic prospects: Shifts in poverty reduction trends*. World Bank Group.
40. World Bank. (2021). *Poverty and shared prosperity 2021: Reversals of fortune*. World Bank Group.
41. Zhoujie, Lu. (2003). "Measuring Urban Poverty Case Study Wuhan By." (September)