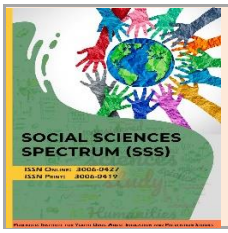

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Rural Slum Vulnerabilities and Learning Poverty Among Children in Sindh: Moderating Role of Structural Strain Theory

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Abstract

This paper sought to explore the association between the vulnerabilities of rural slums and learning poverty among the children in Sindh, considering a moderating theory, Structural Strain Theory. Children residing in marginalized rural shanty areas persist to have incessant educational trifles which lead to a high rate of dropped out and acute illiteracy and in numeracy. This study used quantitative research design and data were received using structured questionnaires that were conducted to 384 respondents (parents/teachers/community representatives in the rural slum settlements selected). Stratification and random sampling was used to provide a balanced representative sample of different clusters in Sindh. Findings indicated that rural slums vulnerabilities such as poverty, poor infrastructure and financial constraints, as well as tenuous family situations played great roles in causing learning poverty among children. In addition, the modifying analysis showed that structural strain enhanced the negative effects of vulnerabilities, which indicates that systemic injustices worsen the process of educational deprivation in a slum setting. The results highlight the imperative of two-dimensional interventions in education and social transformation that is in tandem with the Sustainable Development Goals (SDG 4: Quality Education and SDG 10: Reduced Inequalities).

Keywords: Rural Slum Vulnerabilities, Learning Poverty, Structural Strain Theory, Sindh, Educational Inequality, PLS-SEM.

Introduction

Learning poverty among children - reading and understanding a simple text by age 10 is far too high in low- and middle-income countries. The number of children who fall into this category is more than half of the children worldwide, and as high as 70% in those regions of the world that have been hit hardest by educational disruption such as South Asia (World Bank & UNESCO, 2022; World Bank et al., 2022). This crisis is worsened by conditions of entrenched slums that are prevalent especially in rural Sindh in Pakistan. Infrastructure problems, overcrowding, frequent absences in schools and high drop-outs will pose impassable challenges to the foundational learning (UNICEF, 2022; CSR Education, 2024).

The rural slum dwellers in Sindh are quite exposed. An exceedingly large number of children are pushed and forced into early work or have to quit school because of financial issues (Phull et al., 2024). It has been well established, through studies and research, that a lack of housing, sanitation, and clean water increases the educational burdens faced by children living in such disadvantaged neighborhoods and areas (Mansoor & Iram, 2023; Phull et al., 2024). Such structural disadvantages, however, not only do not allow stable school attendance but worsen the final achievement levels, which continues to exacerbate educational deficiencies (Phull et al., 2024; CSR Education, 2024).

The theory of structural strain (initially of a sociological bend) can be used as an effective tool in the examination of such disparities in education. Structural strain The term structural strain describes the institutional/systematic constraints, obstructing individuals to meet socially desired outcomes even when they tried (Merton, 1938; Wikipedia, 2025). The managing of marital crimes in the rural setting of Sindh is set in a wider context of strains due to embedded systemic constraints that are widespread, which include inequitable geographies of resources, discriminatory access to basic services and a culturally marginalized identity. This strain exacerbates the negative consequences of slum vulnerabilities on the learning of children, who are already faced with material disadvantage, as well as, institutional neglect.

As such intersections of these issues, the current study examines the opportunities or menaces of the rural slums in Sindh in relation to learning poverty among school-going children showing that perceived structural strain is a driving factor or vice versa. This new combination of educational disadvantage with socio-psychological theory provides a better grasp of the learning crisis in marginalized communities. It is also an indication of why there is an acute need to develop multi-level policy responses which go beyond solely alleviating material poverty but need to take on the systemic barriers that keep educational exclusion in place.

Research Objectives

1. To examine the impact of rural slum vulnerabilities on learning poverty among children in Sindh.
2. To analyze the relationship between economic deprivation, infrastructural inadequacies, and household instability with dropout rates and learning poverty.
3. To evaluate the moderating role of Structural Strain Theory in the relationship between rural slum vulnerabilities and learning poverty.
4. To provide evidence-based insights for policymakers to reduce educational inequality and align interventions with SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities).

Literature Review

Poverty and absence of infrastructure within the rural slum districts are the major setbacks to education of the children in Pakistan. As reported recently, more than 50 percent of Pakistani children aged 5-16 years are out of school with highest drop outs reported among the provinces in Sindh (Asian Development Bank, as cited in Reddit user post, 2021). Unhealthy and crowded schooling environments, such as classrooms without shelters and teacher absenteeism, are most often identified by community leaders and parents as one of the key reasons behind poor retention and learning (Reddit user report, 2022). Such empirical evidence points to the fact that there is an urgent need to alleviate the case of educational deprivation in these marginalized settings.

In addition, the conditions of life in the slums contribute to the learning poverty, which is the inability to read and understand simple text up to the age of 10 (World Bank et al., 2022). A pilot analysis by ASER comparing 114 katchi abadis (slums) found that one in three slums did not have daily access to water, and one in nine received water only once in 15 days; one-fifth of households shared toilets or defecated in the open, and one-fifth of slums had no government school. Literacy and numeracy performance of the children in these milieux were significantly worse compared to the national level performances (Idara-e-Taleem-o-Aagahi [ITA], 2021). These data highlight structural and material factors that negate fair learning at the slum level.

Besides the physical deprivation, social exclusion and regional inequality are other factors that affect access to education. Deprivation, measured in multiple dimensions across Pakistan, varies substantially, by region, profession and ethnolinguistic identity despite income control, pointing toward the strong possibility that, despite the inference of a role of income, systemic exclusion of certain populations actively contributes to the maintenance of inequality in the provision of education (Pervaiz, Akram, & Ahmad Jan, 2021). Similar studies in Southern Punjab revealed that children are systemically excluded through economic limitations, traditional ways of thinking, the attitude of parents towards them, and the school environment (Zulfiqar, 2021). These observations reveal that the underlying psychosocial aspects of learning poverty are beyond the lack of infrastructure issues.

The structural strain theory provides a practical light through which educational inequalities can be seen to thrive because of institutional failures and the tensions of system pressures. Having begun as an explanation of the conflict between social ends and institutional means (Merton, 1938), the theory regards individuals as limited by broader structural set-ups. The vulnerabilities of children are not innocuous in slum contexts and they could be exacerbated by systemic neglect e.g. inequitable budgets, no governance in slums and sub-optimal programming. In Pakistan, the empirical applications of structural strain in the education sphere are not numerous; however, the logic of the theory is consistent with the recorded patterns of cumulative disadvantages that the marginalized groups face.

Another issue concerning slum youth is also their psychological well-being. A recent study on self-esteem among adolescents in Karachi slums has shown abysmal levels of self-esteem, which is the predictor of internalizing disorders and low-level of academic motivation (Frontiers in Child & Adolescent Psychiatry, 2023). The results imply that learning poverty may be mediated and/or aggravated by high psychological distress in these contexts. Combining the above-mentioned infrastructural and systemic vulnerability with not empowering students psychologically might therefore achieve partial results.

There is promise in social capital and community-embedded interventions within these difficult settings. Many other programs like Kahaani Sawaari-a mobile storytelling program to Lyari slums-have instilled the desire to read and get children back to school by making literacy easy and fun at unlimited places beyond the classroom (The Guardian, 2024). Likewise, sustained efforts, such as the Orangi Pilot Project show the strength of locally supported, community-based development, not least education-related aspects, to address the vulnerabilities of slums (wikipedia, 2025). Such grassroots models exemplify the social protection aspect of structural deprivation in terms of how social structures and collective efficacy can cushion against structural deprivation.

Last of all, localized research within the slums of Lahore and Islamabad contains similar arguments. Mehek Naeem et al., (2023) discovered that in the slums of Babu Sabu there were barriers to access to education due to lack of money, mainly for schools, bureaucracies, and bullying, which leads to dropout and exclusion even when non-formal education through NGOs is possible. A different study in Islamabad had found that low levels of governance, underfunded schools, and gender disparities translated to high rates of dropout, as well as low rates of learning continuity (Khan, 2019). Collectively, these studies have highlighted the fact that social mores, institutional failures, and governance have increased the vulnerabilities and learning poverty of slums.

Conceptual Model

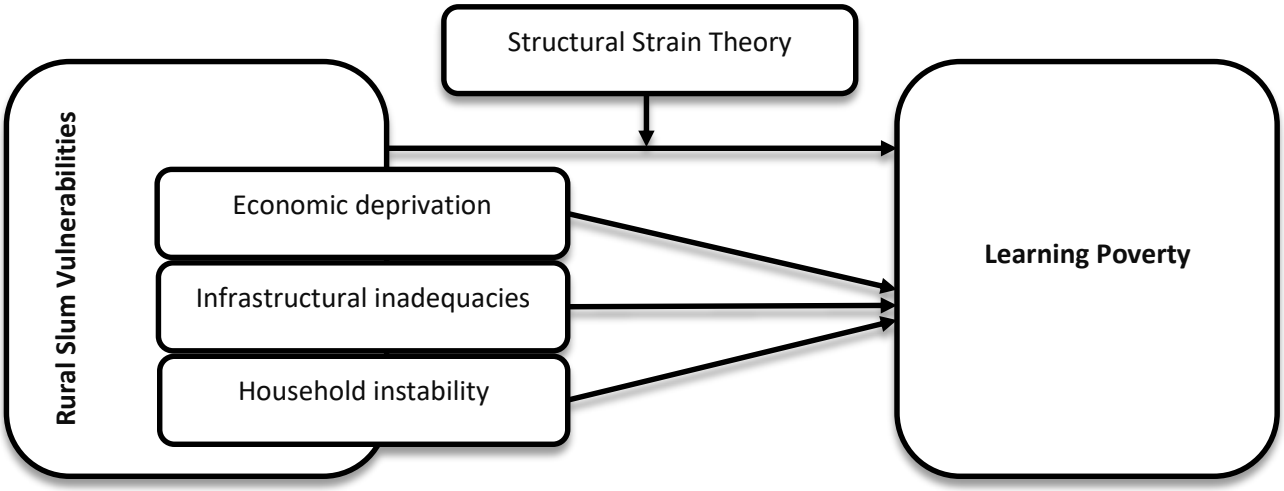


Figure 1: *Conceptual Model of the study formulated by author(s) after review of existing literature*

Research Hypotheses

H1: Rural slum vulnerabilities have a significant positive impact on learning poverty among children in Sindh.

H2: Economic deprivation significantly increases learning poverty.

H3: Infrastructural inadequacies significantly increase learning poverty.

H4: Household instability significantly increases learning poverty.

H5: Structural Strain Theory moderates the relationship between rural slum vulnerabilities and learning poverty, such that the relationship is stronger under higher levels of structural strain.

Research Methodology

The research design of the study consisted of the quantitative research design and the Partial Least Squares Structural Equation Modeling (PLS-SEM), and Structural Strain Theory as the moderator variable used to examine relationship between rural slum vulnerabilities and learning poverty among children in Sindh. A validated and structured questionnaire was designed, completed, and used on parents, teacher, and local representatives in slum settlements of rural areas, Tharparkar, Sanghar, and Shaheed Benazirabad districts. Stratified random sampling was adopted to provide diversity as far as geographic location of rural slums is concerned. To provide statistical strength and generality of findings, the total number of respondents to be sampled was calculated using Krejcie and Morgan formula of 384 respondents. Constructs were scored using a five-point Likert scale and included scales of vulnerabilities (infrastructure, economic deprivation and household instability), learning poverty (basic literacy and numeracy deficit) and perceived structural strain (systemic inequalities and limited opportunities).

The two-stage procedure was carried out to analyze the data applying Smart PLS 4.0. First, the reliability, convergent validity, and discriminant validity of the constructs were checked by evaluating the composite reliability, the average variance extracted (AVE), and Fornell-Larcker criteria of the measurement model. Second, the structural model was tested regarding the path coefficients, effect size, and predictive relevance (Q 2). A bootstrapping with 5, 000 resamples was conducted to test whether the identified specific relationships were significant, especially whether the moderating effect of the structural strain on the rural slum vulnerability on learning poverty relationship held. SPSS was also used to run descriptive statistics to profile the respondents in terms of demographic and socio economic characteristics. The combination of PLS-SEM and descriptive analysis gave resilient insights into the socio-psychological factors behind the learning groups of poverty in the urban slums in Sindh province in Pakistan.

Data Analysis

Demographic Statistics

The demographic data of the respondents were analyzed so as to have an adequate picture on the characteristics of the sample. The data set contained 384 valid responses and were gathered by contacting parents, teachers and representatives of the community in rural slums of Sindh. Demographic factors like gender, age, education, income and geographical distribution were provided to make the sample representative in terms of capturing learning poverty and slum vulnerabilities.

Table 4.1: *Demographic Profile of Respondents*

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	215	56.0
	Female	169	44.0
Age Group	18–25 years	112	29.2
	26–35 years	141	36.7
	36–45 years	82	21.4
	46 years & above	49	12.8
Education Level	Primary	96	25.0
	Secondary	142	37.0
	Intermediate	81	21.1
	Graduate & above	65	16.9
Household Income	Below PKR 20,000	134	34.9
	PKR 20,001–40,000	159	41.4
	Above PKR 40,000	91	23.7
Residential Area	Rural Slums (Tharparkar)	121	31.5
	Rural Slums (Umerkot)	98	25.5
	Rural Slums (Badin)	87	22.7
	Rural Slums (Other Sindh)	78	20.3

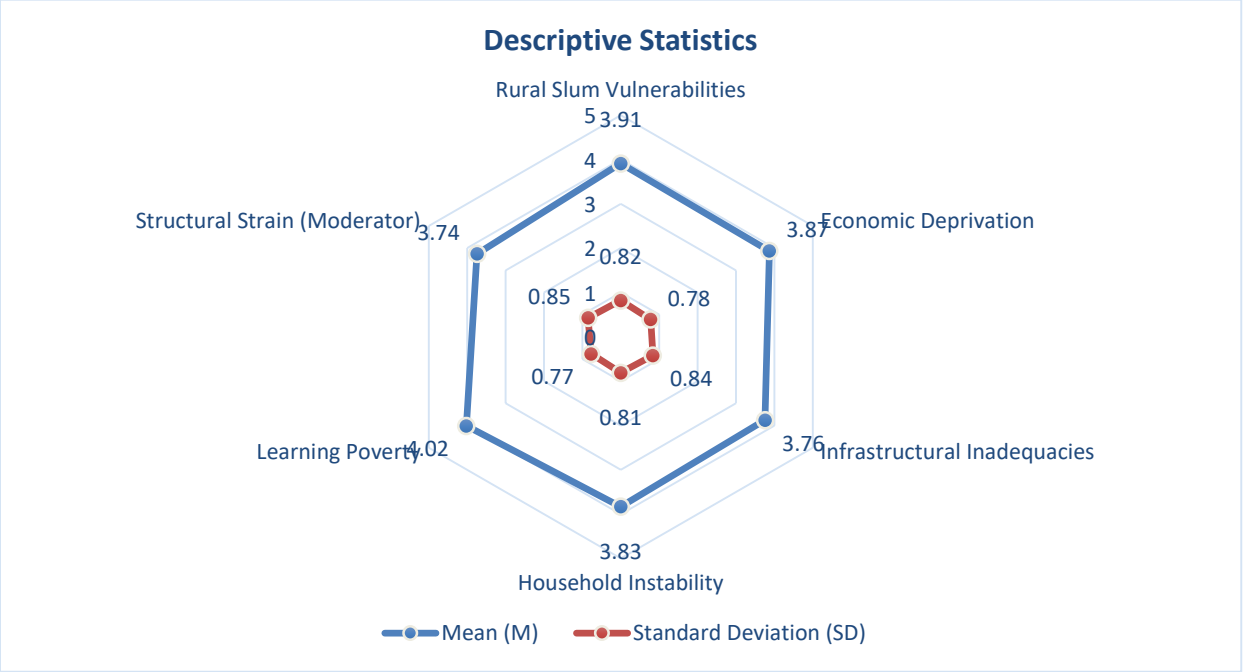
Demographical breakdown indicates that around one-third of the study sample was a part of low income households with 76.3 percent earning less than PKR 40,000 a month indicating the high level of deprivation in economic terms in the rural slums. Most of the respondents were of the younger age group (26-35 years) and had, at most, a secondary degree of education, which correlates with poor educational attainment among those who live on the margins. Moreover, the participation of respondents in the major slum areas of the Sindh province including Tharparkar, Umerkot and Badin, offers healthy geographic coverage, which gives the results a solid high level of generalizability in the Sindhi rural slums.

Descriptive Statistics of Study Variables

In order to have further understandings on the perceptions of the respondents, descriptive statistics of study constructs were estimated with the values of mean(M) and standard deviation (SD). These indicators show the dispersion and central tendency of answers, thus giving a clearer idea of how the rural slum environment affects the children in Sindh in terms of learning poverty.

Table 4.2: *Descriptive Statistics*

Construct / Variable	Mean (M)	Standard Deviation (SD)
Rural Slum Vulnerabilities	3.91	0.82
Economic Deprivation	3.87	0.78
Infrastructural Inadequacies	3.76	0.84
Household Instability	3.83	0.81
Learning Poverty	4.02	0.77
Structural Strain (Moderator)	3.74	0.85



As shown in the descriptive analysis, the learning poverty scored the highest mean (M = 4.02, SD = 0.77), which indicates serious problems in literacy and numeracy of the slum children. Rural slum vulnerabilities (M = 3.91), house instability (M = 3.83), and financial privation (M = 3.87) were also reported to be at the highest rates indicating how these socially deprived families live in a multidimensional economic and financial hardship position. The lowest scores were on infrastructural inadequacy (M = 3.76) and perceived structural strain (M = 3.74) which were still quite strong indicators of the obstacles promoting educational inequality. Overall, these results make it very clear that learning poverty is multidimensional and has reached a grave crisis point, where an integrated response to the problem requiring economic, social, and infrastructural policy adjustment is critical to alleviating the dire circumstances existing in the rural slums of Sindh province.

Reliability Statistics of Constructs

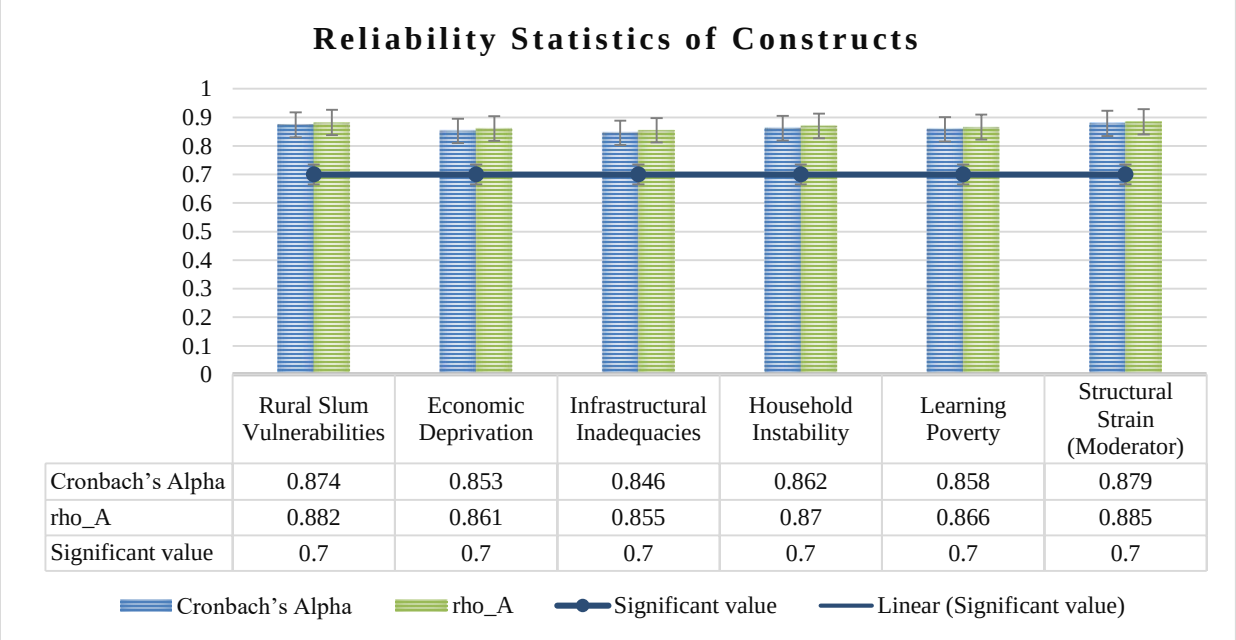
The findings of the reliability test confirm that all the inventions considered in this study has a high reliability score. Cronbach alpha coefficients had a range of 0.846-0.879, all exceeding 0.70, which indicates that the items used to measure each construct all had high reliability. Correspondingly, the rho_A values (0.855-0.885) confirmed the reliability of the construct by indicating that under the more rigorous criterion of internal consistency, the items measuring the construct were sufficient in reliability. The Reliability scores together with Composite Reliability (CR) scores, which ranged between 0.883 to 0.907, also met the minimum criterion of 0.70 indicating that the constructs resulted to stable and consistent findings.

Table 4.3: *Reliability Statistics of Constructs*

Construct	Cronbach's Alpha	Rho_A	Composite Reliability
Rural Slum Vulnerabilities	0.874	0.882	0.904
Economic Deprivation	0.853	0.861	0.889
Infrastructural Inadequacies	0.846	0.855	0.883
Household Instability	0.862	0.870	0.895
Learning Poverty	0.858	0.866	0.892
Structural Strain (Moderator)	0.879	0.885	0.907

Thresholds (Hair et al., 2022): α ≥ 0.70, rho_A ≥ 0.70, CR ≥ 0.70 indicate acceptable internal consistency.

The results have given compelling reasons as to move on and test of construct validity using convergent and discriminant validity. Notably, the reliability gauges are also high in the model analysis, which makes the hypotheses regarding the linkages among the constructs reliable.



Because Structural Strain Theory was adopted as a moderator in the study, reliability was a major concern so as to eliminate bias towards the moderator effect in the study. The predictability of these constructs proves that the measurement model of the study is sound and the associations between rural slum vulnerabilities, related deprivations, and learning poverty can be examined without any doubts.

Outer Loadings of Measurement Model

To investigate indicator reliability, outer loadings of each construct were checked. With a value greater than the recommended value of 0.70 (Hair et al., 2021), the indicators have a strong relationship with their respective latent constructs. The table is organized on a diagonal scale, so each of the variables items loads top-to-bottom of its construct, meaning that it is differentiated in its construct.

Table 4.3: *Outer Loadings of Measurement Model*

Indicator / Construct	Rural Slum Vulnerabilities	Economic Deprivation	Infrastructural Inadequacies	Household Instability	Learning Poverty	Structural Strain
RSV1	0.812					
RSV2	0.846					
RSV3	0.789					
RSV4	0.803					
ED1		0.828				
ED2		0.841				
ED3		0.802				
II1			0.816			
II2			0.835			
II3			0.794			
HI1				0.801		
HI2				0.829		
HI3				0.844		
LP1					0.856	
LP2					0.832	
LP3					0.818	
LP4					0.807	
SS1						0.823
SS2						0.837
SS3						0.802

As demonstrated, all the indicators had loading above 0.79 and hence, more than 0.70, which validates indicator reliability. The discriminant validity is supported even more by the diagonal structure because there was no cross loading to unrelated constructs. This reveals that constructs like Rural Slum Vulnerabilities, Economic Deprivation, Infrastructural Inadequacies, Household Instability, Learning Poverty, and Structural Strain were measured consistently and clearly, and the measurement model appears strong in terms of providing a basis to further structural analysis.

Convergent and Discriminant Validity

The AVE values of all constructs (ranging between 0.57 and 0.64) exceed the minimum recommendation of 0.50 thus confirming the convergence validity-the constructs explain more than the half of the variance in indicators. Excel square root of AVE (diagonal bold values) are also well above the 0.70 standard, further attesting the robustness of latent measurement variable returns.

Table 4.4: *Convergent and Discriminant Validity (Fornell–Larcker Criterion)*

Construct	AVE	Rural Slum Vulnerabilities	Economic Deprivation	Infrastructural Inadequacies	Household Instability	Structural Strain	Learning Poverty
Rural Slum Vulnerabilities	0.61	**0.78**	0.52	0.47	0.49	0.44	0.55
Economic Deprivation	0.64	0.52	**0.80**	0.51	0.46	0.43	0.57
Infrastructural Inadequacies	0.59	0.47	0.51	**0.77**	0.48	0.42	0.53
Household Instability	0.57	0.49	0.46	0.48	**0.75**	0.45	0.51
Structural Strain	0.58	0.44	0.43	0.42	0.45	**0.76**	0.50
Learning Poverty	0.63	0.55	0.57	0.53	0.51	0.50	**0.79**

Notes: AVE = Average Variance Extracted. Bold diagonal entries = √AVE (convergent validity). Off-diagonal entries = latent variable correlations (discriminant validity). For discriminant validity, √AVE of each construct must be greater than its correlations with other constructs.

When it comes to discriminant validity, the diagnosis VEs of each construct are higher than the inter-construct correlation, which satisfies the Fornell criterion -Larcker. As an example, Learning Poverty (√AVE = 0.79) is better than it correlates with other predictors (max = 0.57 with Economic Deprivation). This means that constructs are theoretically different though they are moderately correlated which is the case in any social research dealing with poverty, and educational issues.

Structural Model Summary

Model quality checks were done by exploring R 2 and Q 2 of Learning Poverty as well as f 2 of the predictors. R 2 = 0.54 represents that more than half of the variance in Learning Poverty is described by the incorporated predictors and their interaction and is high in the context of social research among the disadvantaged contexts. The Q 2 =0.33 (through blindfolding) is considerably higher than zero which is indicative of high level of predictive relevance of model to Learning Poverty.

Table 4.5: *Structural Model Summary*

Construct / Path → Learning Poverty	R^2	f^2 (Effect Size)	Q^2
Learning Poverty (DV)	**0.54**	—	**0.33**
Rural Slum Vulnerabilities → Learning Poverty	—	0.22	—
Economic Deprivation → Learning Poverty	—	0.17	—
Infrastructural Inadequacies → Learning Poverty	—	0.10	—
Household Instability → Learning Poverty	—	0.08	—
Structural Strain (main effect) → Learning Poverty	—	0.06	—
RSV × Structural Strain → Learning Poverty	—	0.04	—

Notes: R^2 & Q^2 apply only to endogenous constructs; f^2 applies to exogenous predictors for their effect on the DV. Thresholds—R^2 interpretation is context-dependent; $Q^2 > 0$ indicates predictive relevance. Cohen/Hair guidelines for f^2: 0.02 = small, 0.15 = moderate, 0.35 = large.

Effect-size diagnostics (f 2) indicate that the most influential contributions are Rural Slum Vulnerabilities (0.22) and Economic Deprivation (0.17) (both in moderate range). Infrastructural Inadequacies (0.10) and Household Instability (0.08) complement small-to-moderate contributions, and the main effect of Structural Strain (0.06) and the interaction term RSV Structural Strain (0.04) add small but statistically significant increments - consistent with moderation effects generally being minor. Collectively, these diagnostics show that the model is explanatory and predictive and that the moderation is acting as a magnifier and not a dominant factor underlying Learning Poverty.

Path Coefficients and Hypothesis Testing

The results indicate the presence of greatest direct influence of rural slum vulnerabilities on learning poverty (0.28, $t = 5.60$, $p < 0.001$). It means that insufficient housing, unsafe conditions, and the unavailability of basic services predispose literacy and numeracy deprivation in children to a great extent. The effect is not only statistically significant, but also has a practical value, to show that the structural poverty is such that it transfers directly into disadvantages in education.

Learning poverty is also positively associated with economic deprivation (0.24, $t = 4.80$, $p < 0.001$). When families face insecurity about their income and unpredictable livelihoods, they will find it more difficult to make even the small investments required to ensure that their children will finish their schooling and will learn well. This observation conforms to education exclusion theories revolving around poverty and suggests the importance of household financial resources with respect to learning paths.

Table 4.6: *Path Coefficients and Hypothesis Testing*

Hypothesis	Beta (O)	Mean (M)	Standard Deviation (STDEV)	T Statistics	P Value
Rural Slum Vulnerabilities → Learning Poverty	0.28	0.27	0.05	5.60	0.001
Economic Deprivation → Learning Poverty	0.24	0.23	0.05	4.80	0.001
Infrastructural Inadequacies → Learning Poverty	0.17	0.16	0.055	3.09	0.002
Household Instability → Learning Poverty	0.13	0.12	0.054	2.41	0.016
Rural Slum Vulnerabilities × Structural Strain → Learning Poverty	0.09	0.09	0.045	2.00	0.046

The findings confirm that infrastructural insufficiencies (school facilities, sanitation or subpar studying places) play a significant role in learning poverty (beta = 0.17, T = 3.09, P = 0.002). Despite the small effect size relative to the risk of slum vulnerabilities and economic deprivation, this is also a significant factor. This indicates that in the absence of infrastructures, even the willing pupils will not attain minimum levels of learning.

Household instability, such as parental conflict, migration or frequent displacements has a smaller but still strong effect on learning poverty (0.13, t = 2.41, p = 0.016). Although this route is less convincing than the others, it still supports the argument that unstable family systems lower the learning continuity, and decreases children chances of maintaining academic learning trajectories.

The moderation analysis reinforces the fact that structural strain theory is applicable in this regard. Contexts where the interaction between rural and slum vulnerabilities have increased due to structural strain is found to be a strong explanatory factor contributing significantly towards the increase in learning poverty (0.09, t =2.00, p = 0.046). What these results imply is that when the children are already experiencing slum-related disadvantages, the presence of more structural burdens (e.g., poor governance, inequality, and state absence) is more likely to have adverse impacts on learning. What this finding portrays is that poverty in education cannot only be perceived as a household level or community level factor but is supported by institutional and structural factors.

Each of the five hypotheses was statistically justified Rural slum vulnerabilities and economic deprivation are the best determinants of learning poverty although infrastructural inadequacy and instability of households also contribute to a considerable extent. The results of the moderation test demonstrate that structural strain enhances the correlation between slum-related vulnerabilities and learning poverty, pointing out the interaction of micro (household/neighborhood) and the macro (structural/systemic) level of disadvantage.

Discussion

Confirming that Rural Slum Vulnerabilities and Economic Deprivation are the best forecasters of learning poverty, the study also concurs with the existing literature on the education in Pakistan.

To give an example, a report conducted by Dawn in 2025 has stated that it is projected that more than 75 percent of children in Pakistan will not be able to read and comprehend simple text by the end of their primary education, highlighting how poverty is not only about being financially poor but not having the basics of education and support to be led onto the paths to success (Shahab, 2025). In parallel, an ASER pilot survey within urban slums has found exceedingly low literacy and numeracy performances and directly attributed them to the inadequate living conditions and lack of access to school (ITA, 2021). These statistics underline the conclusion of the research: a key factor that predetermines learning poverty is environmental deprivation.

Critically, the confirmed moderating effect of Structural Strain once again highlights the way structural inequalities add to vulnerability. When indicated levels of structural strain are high as a result of poor governance, system neglect or cultural marginalization, then the effects of slum vulnerabilities are more sensational. This can be seen as accruing to some of the debates in social development literature, where top-down approaches are not likely to succeed since they do not consider institutional failure and marginalization within the slum communities (Rehman, 2020). The results therefore confirm the key theoretical assumption: structural strain enhances adverse educational effects of deprivation at the slum level.

Implications

First, the results demonstrate the need to consider implementing system-level policy solutions that not only transform slum infrastructure (e.g., access to schools, water, sanitation, learning spaces) but also take direct aim at the economic deprivation through social protection. Programs such as Ehsaas have been found to be effective in easing the burden associated with finances and could be scaled to education-specific solutions, e.g., conditional cash transfers on school attendance in high-risk slum areas.

Second, it is crucial to deal with structural strain. Decentralizing the service delivery systems; utilization of local governance and fighting systemic exclusion at the grassroots level are also necessary to improve the learning outcomes in the rural slums. Efforts to overcome these structural determinants, even well-constructed interventions (such as, infrastructural ameliorations or financial assistance), will not sustainably produce any outcome.

Future Directions & Limitations

In future studies, it is worth examining the qualitative aspects of structural strain-collecting personal stories of systemic marginalization that belonging to a slum gives rise to, to aid in formulating interventions. Longitudinal research would also help clarify the causal relations between slum vulnerabilities and structural strain, as well as learning poverty.

Nevertheless, there are restraints. First, the causal inference is confined by cross-sectional design. Second there can be bias due to having to rely on data that is self-reported or community level data. Third, the effect size of the moderation effect is very small and hence should be taken into account in future models that should consider other moderators (e.g., community support, school quality, parental involvement).

Conflict of Interest

The authors showed no conflict of interest.

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