Public Spending and Multidimensional Poverty in Punjab: A District Level Analysis

By Inshira Noor, Pakistan

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Introduction

Punjab holds over half of Pakistan’s population and generates close to 59 percent of the country’s GDP. Even so, poverty inside the province follows no single pattern. Rajanpur and Dera Ghazi Khan report headcount ratios, and poverty scores several times higher than Lahore or Chakwal, despite decades of public spending on education, health, and infrastructure aimed at closing that gap. This paper asks a narrow question: has that spending reduced poverty at the district level, or moved past the districts that need it most?

Most research on this relationship in Pakistan works at the national or provincial scale, which folds Rajanpur’s rural poverty and Lahore’s urban wealth into one average and erases the pattern in between. Ahmad and Bhatti (2024), for instance, model public spending composition and poverty using national time series and find that development expenditure can raise poverty where income inequality is already high, a caution against treating spending as automatically pro-poor, but a national model cannot say which districts within Punjab are driving that result. This study measures the Multidimensional Poverty Index (MPI) separately for each of Punjab’s 36 districts, using household data from the 2018-19 Pakistan Social and Living Standards Measurement (PSLM) survey, and links it to district level public expenditure from the preceding fiscal year, 2017-18.

Methodology

The MPI follows the matrix method across three dimensions, education, health, and living standards, built from thirteen weighted indicators under the Oxford Poverty and Human Development Initiative (OPHI) framework, each dimension carrying an equal weight of one third; a household is classified as multidimensionally poor if its weighted deprivation score exceeds the 33 percent cutoff. This indicator structure and weighting scheme follow OPHI’s published work on Pakistan’s national and provincial MPI (Multidimensional Poverty in Pakistan | OPHI, n.d.), which last reported provincial estimates using the earlier 2014-15 PSLM round; this study applies the same measurement basis to the later 2018-19 round at district level, so its levels are informative about the same underlying concept but are not directly comparable to OPHI’s provincial figures.

Two outcome measures are modeled with OLS: the headcount ratio, the share of the population classified as multidimensionally poor, and the intensity of poverty, the average depth of deprivation among the poor. householdssed on total district public spending, controlling for household head education, number of dependents, number of matriarchs, and digital and financial inclusion, with all variables standardized before estimation.

Results

Public spending shows no significant relationship with either measure. District totals range from under 5 billion rupees in Chiniot to 893 billion in Lahore, but high spending does not reliably track with low poverty: D.G. Khan and Rajanpur draw 28.4 billion and 10.5 billion rupees respectively, sums that are unremarkable next to Lahore's but still exceed several districts with far lower poverty, and yet both report MPI scores near 0.20, more than double the 36-district average of about 0.07. Chakwal and Gujrat, by contrast, keep poverty low on comparatively modest budgets (Table 1). This fits Anderson et al. (2017), whose meta-regression across many countries finds that government spending's link to inequality depends more on institutional quality than on the spending level itself.

Table 1. Spending and MPI in selected districts

District	Public spending (bn PKR, FY2017-18)	MPI (2018-19)
Lahore	893.07	0.022
Chiniot	4.85	0.112
Chakwal	11.59	0.024
Gujrat	18.71	0.023
Rajanpur	10.54	0.203
D.G. Khan	28.36	0.223

Source: author's calculation from PSLM 2018-19; spending from the Planning and Development Board, Punjab.

Household size and inclusion measures predict poverty far better than spending does. Digital inclusion is the strongest predictor in both models, cutting poverty by roughly 6 standard deviations and significant at the 1 percent level. Number of dependents runs a close second in the opposite direction, raising poverty by close to 5.8 standard deviations, also significant at the 1 percent level, which matches the global finding that over half of the 1.1 billion people living in multidimensional poverty worldwide are children (United Nations, 2024). Financial inclusion, measured through how often household members visit a bank, moves poverty intensity up, weakly. That result reads less like inclusion and more like distress: frequent contact with formal banking among low-income households more plausibly reflects overdraft and fee management than access to useful credit (Welburn & Nygaard, 2025).

Discussion

The pattern matches earlier findings on governance and public spending elsewhere. Rajkumar and Swaroop found that public spending improves health and education outcomes mainly where governance is already strong, and Filmer and Pritchett showed that health spending alone explains little of the variation in mortality across countries. Abubakar (2015), using a cross-country panel of pro-poor spending and well-being indicators, reaches a similar conclusion: aid and public spending reduce poverty only where the spending itself is well targeted, not simply where it is large. In Punjab, the money does move roughly toward the larger, wealthier districts already; Lahore and Faisalabad draw the largest allocations. But the correlation between spending and need runs backward often

enough that targeting, not the size of the budget, looks like the real constraint. The digital inclusion result also fits evidence from China linking digital financial access to poverty reduction across income, education, and health dimensions (Xie, 2023; Zhou & Wang, 2021), though the variable used here counts access rather than use and may partly capture household wealth rather than a direct causal channel.

Policy implications

These results do not argue for less public spending. They argue for spending tied to district level need rather than fixed allocation formulas. A monitoring system that flags districts where spending rises while poverty does not fall, D.G. Khan and Rajanpur are the clearest cases, would let funds move within a budget cycle instead of after it. Given how strongly digital inclusion predicts lower poverty in this data, digital access programs deserve a larger share of public budgets than they currently receive. Financial inclusion policy needs a similar adjustment: visiting a bank often is not the same as financial security and treating the two as interchangeable risks funding programs that track debt rather than reduce it.

Limitations

The study uses literacy rate to stand in for school quality, since no direct measure of school quality was available. Literacy is affected by more than just schools, so it is not clear how much of its effect on poverty actually comes from education itself. The study also leaves out healthcare access, because that data did not exist at the district level, even though healthcare is a central part of the poverty picture. Both gaps mean the results show that certain factors move together with poverty, not exactly why. The analysis is also a cross section of 36 districts observed at a single point in time, so with only six regressors and 36 observations the estimates carry wide uncertainty and should be read as association rather than proof of cause. Future work with better healthcare and education data, and with multiple years of district level spending and poverty data, would help settle these questions.

Conclusion

Across Punjab’s 36 districts, public spending shows no significant relationship with either the incidence or the intensity of multidimensional poverty, while household composition and digital access do. This does not mean spending is irrelevant, but that its current distribution, concentrated in the largest and wealthiest districts, does not reach the places where deprivation runs deepest. Tying allocations to district level need, rather than to fixed formulas or historical shares, is the more direct route to reducing poverty than simply increasing the overall budget.

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