International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

To cite this article: Mohanakumari. D.M and Dr. Neelakanta N T (2026). THE REVENUE AND EXPENDITURE NEXUS IN INDIA'S RURAL LOCAL GOVERNMENTS: A PANEL DATA ANALYSIS, International Journal of Research in Commerce and Management Studies (IJRCMS) 8 (4): 883-899 Article No. 857 Sub Id 1419

THE REVENUE AND EXPENDITURE NEXUS IN INDIA'S RURAL LOCAL GOVERNMENTS: A PANEL DATA ANALYSIS

Mohanakumari. D.M and Dr. Neelakanta N T

Associate Professor
Department of Studies and Research in Economics,
Tumkur University, Tumkur.

DOI: https://doi.org/10.38193/IJRCMS.2026.8459

ABSTRACT

This article examines the fiscal relationship between receipts and payments (expenditure) of Gram Panchayats India's village-tier local self-governments across states and union territories over the period FY 2020-21 to FY 2025-26, using panel data compiled from the eGramSwaraj portal of the Ministry of Panchayat Raj. Employing pooled ordinary least squares, one-way and two-way fixed-effects estimators, and sigma- and beta-convergence tests, the study estimates the elasticity of village-level public expenditure with respect to receipts and evaluates whether fiscal capacity is converging or diverging across Indian states. The pooled log-log regression yields an expenditure-receipt elasticity of approximately 0.75, rising to approximately 0.87–0.88 once unobserved, time-invariant state heterogeneity is netted out through the within (fixed-effects) estimator, indicating that a large share of the pooled elasticity understates the true within-state responsiveness of spending to resource inflows once cross-state composition effects are removed. The fiscal absorption (utilization) ratio payments as a share of receipts averages only 28 to 32 per cent across the panel, pointing to substantial unspent balances at the village tier, consistent with earlier evidence on the weak own-revenue base and slow fund utilization of Panchayat Raj Institutions (PRIs) documented by the Reserve Bank of India and academic researchers. Sigma-convergence tests show that the cross-state dispersion of log receipts has risen rather than fallen over the study period, while beta-convergence regressions find no statistically significant convergence in receipts, but strong and significant convergence in payments ($\beta \approx -0.157$, $p < 0.001$). These results are interpreted against the theoretical literature on fiscal federalism and decentralization (Tiebout, 1956; Oates, 1972, 2005) and the empirical literature on Indian sub-national and local government finance. The article closes with a discussion of data limitations most importantly, an identified data-duplication artefact across three reporting years in the source file and draws policy implications for the design of the next generation of State and Central Finance Commission transfers to the third tier of government.

KEYWORDS: fiscal federalism, fiscal decentralization, Panchayat Raj Institutions, Gram Panchayat, panel data, fixed effects, sigma-convergence, beta-convergence, local government finance, India

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

1. INTRODUCTION

The 73rd Constitutional Amendment Act, 1992, reconstituted Panchayat Raj Institutions (PRIs) as the third, constitutionally mandated tier of government in rural India, vesting Gram Panchayats village or village cluster councils with responsibility for local public goods ranging from sanitation and drinking water to rural roads and primary welfare delivery. More than three decades after this reform, the fiscal empowerment of Gram Panchayats remains uneven: state legislatures retain wide discretion over the taxes, functions, and functionaries actually devolved under Articles 243-G and 243-H, and own-revenue collection at the village tier remains a small fraction of total resources, the balance arriving as grants-in-aid, statutory transfers, and scheme-tied Central and State funds.

This article uses a purpose-built panel dataset state-wise, year-wise receipts and payments (expenditure) of Gram Panchayats reported on the eGramSwaraj digital accounting platform for FY 2020-21 through FY 2025-26 to ask three linked econometric questions. First, what is the elasticity of village-level expenditure with respect to receipts, and does this elasticity change once persistent, unobserved differences across states (institutional capacity, administrative depth, degree of devolution) are removed via panel fixed effects? Second, how efficiently are receipts being absorbed into expenditure, and has this fiscal-absorption ratio improved or deteriorated over the six-year window spanning the COVID-19 recovery period? Third, is fiscal capacity across Indian states converging toward a common level, as classical convergence theory in regional economics would predict under sufficient inter-jurisdictional resource mobility and policy harmonization, or is it diverging?

These questions matter for at least three reasons. First, the elasticity of expenditure to receipts is a standard diagnostic in public finance for capital and administrative absorptive capacity: an elasticity well below unity signals that panchayats are unable, for administrative, capacity, or procedural reasons, to translate incremental resources into spending, while an elasticity at or above unity signals that panchayats spend essentially in step with, or even ahead of, receipts. Second, convergence or divergence in panchayat fiscal capacity speaks directly to the horizontal equity objectives that motivate the devolution formulae used by Finance Commissions, since divergence would imply that decentralization, rather than narrowing inter-state disparities in local public goods provision, is amplifying them. Third, empirically documenting the extent and structure of missing and duplicated data in an administrative portal such as eGramSwaraj is itself a contribution: much of the applied literature on Indian sub-national finance relies on exactly this class of administrative panel, and transparent treatment of its limitations is a precondition for credible inference.

The remainder of the article is organized as follows. Section 2 reviews the theoretical and empirical

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

literature on fiscal federalism, fiscal decentralization, and the finances of Panchayat Raj Institutions in India. Section 3 sets out the institutional background of Gram Panchayat finance. Section 4 describes the data and the econometric methodology, including the treatment of a data-duplication artefact identified in the source file. Section 5 presents descriptive statistics. Section 6 reports the pooled and fixed-effects regression results. Section 7 presents sigma- and beta-convergence tests. Section 8 discusses the findings in relation to the literature and to policy and Section 8 concludes.

2. REVIEW OF LITERATURE

The theoretical starting point for the economics of multi-tier government is Tiebout's (1956) model of local public finance, in which mobile households sort themselves across jurisdictions offering different bundles of local taxes and public services, revealing their preferences through locational choice rather than through voting alone. Musgrave's (1959) assignment framework and, most influentially, Oates's (1972) Fiscal Federalism formalized the case for decentralized provision of local public goods in the well-known Decentralization Theorem: in the absence of scale economies in centralized provision and of significant inter-jurisdictional spill overs, welfare is at least as high, and typically higher, when local governments are permitted to tailor Pareto-efficient levels of a local public good to local preferences than when a single uniform level is imposed nationally. This first-generation theory provides the normative benchmark against which the empowerment of Gram Panchayats as autonomous providers of local public goods is conventionally judged.

A second generation of fiscal federalism theory, associated with Oates (2005) and related contributions, relaxed the benevolent-planner assumptions of the first generation and incorporated political-economy and information frictions: local officials may be captured by narrow interests, soft budget constraints may induce local governments to over-borrow or under-collect in anticipation of bailouts, and asymmetric information between tiers of government complicates the design of intergovernmental transfers. This literature is directly relevant to the present analysis because it predicts that the responsiveness of local expenditure to local receipts need not be one-for-one: administrative capacity constraints, procurement rules, and the tied nature of much intergovernmental grant finance can all produce expenditure elasticities below unity, particularly for the lowest, least capacitated tier of government.

Rao and Singh's (2005) analysis of the political economy of federalism in India situates Panchayat Raj within a longer history of asymmetric, politically negotiated decentralization between the Union, the states, and local bodies, arguing that the constitutional recognition of PRIs in 1993 did not automatically translate into functional or financial devolution, both of which remained subject to state-level legislative discretion. Empirically, Kalirajan and Otsuka (2012), using a state-wise panel for India, examine the relationship between fiscal decentralization proxied in part by the ratio of rural (Panchayat Raj) to urban local body per-capita expenditure and social-infrastructure and development

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

outcomes; they find that decentralization to the rural third tier has been comparatively weak and has not produced significant, uniform development gains across states, in contrast to the more substantial and more equitably distributed effects of Centre-state decentralization on health and education spending.

Ganaie, Bhat, Kamaiah and Khan (2018) apply panel cointegration and dynamic OLS techniques to state-level Indian data over 1981-2014 and find that expenditure decentralization is positively and significantly associated with state output, while revenue decentralization is negatively associated with it a result the authors interpret as evidence favouring a divergence, rather than a convergence, hypothesis relative to the classical Oates (1972) framework. This finding is echoed, at the more granular Gram-Panchayat level and over a much shorter and more recent window, by the divergence result obtained in Section 7 of the present article, lending some continuity to the broader claim that Indian fiscal decentralization has, empirically, not been associated with a narrowing of inter-jurisdictional fiscal gaps.

Rajaraman and Sinha (2007), in an early and influential NIPFP working paper, track the functional devolution of subjects to panchayats across states and document wide inter-state variation in the extent to which the 29 subjects listed in the Eleventh Schedule were actually transferred to panchayat control, together with the funds and functionaries needed to exercise them the celebrated "3F" (funds, functions, functionaries) devolution triad. Their finding that formal constitutional recognition diverged sharply from functional devolution on the ground anticipates the wide cross-state dispersion in receipts and payments documented in this article's descriptive statistics.

A recurring finding in the applied literature on PRI finance is the very small size of the own-revenue base relative to total panchayat resources. Devendra Babu's (2023) Institute for Social and Economic Change working paper reports that own revenue constitutes only around six per cent of total panchayat revenues on average, with panchayats displaying a high degree of dependency on state and central transfers; the paper attributes this pattern to weak devolution of taxation powers, limited administrative capacity to assess and collect local taxes such as property and profession tax, and the political reluctance of elected panchayat representatives to levy unpopular local taxes on their own electorate.

More recent evidence from the Reserve Bank of India's periodic review of Panchayat Raj finances, summarized in Drishti IAS (2024) and Plutus IAS (2024), corroborates this picture at an aggregate level: panchayats nationally recorded roughly Rest 35,354 core of total revenue in FY 2022-23, of which own-tax revenue amounted to only about Rest 737 core, and revenue receipts of panchayats constitute a fraction of one per cent to a few per cent of the corresponding state's own revenue in most states, the highest being Uttar Pradesh at roughly 2.5 per cent. The RBI review also documents wide inter-state variation in average revenue per panchayat, with Kerala and West Bengal recording the

highest averages, and recommends greater transparency in budgeting, improved fiscal discipline, and capacity-building of panchayat staff and elected functionaries as means of improving resource utilization precisely the low utilization-ratio phenomenon quantified in Section 5 of this article.

A related and growing strand of the literature studies own-revenue growth and its association with expenditure behaviour. Recent work drawing on the Ministry of Panchayat Raj Devolution Index Study Report finds that own revenue continues to constitute only about six to eight per cent of total panchayat revenue and expenditure nationally, with substantial inter-state heterogeneity. The ratio of own revenue to total expenditure ranging from roughly 20 to 24 per cent in relatively fiscally empowered states such as Uttar Pradesh and Maharashtra down to single digits in several other major states. This body of work situates the aggregate elasticity and convergence results of the present article within a well-established stylized fact: Indian PRI finance is characterized by large, persistent, and largely un-converging inter-state disparities in fiscal capacity.

Methodologically, the literature reviewed above draws on a mix of descriptive panel analysis (Rajaraman & Sinha, 2007; Devendra Babu, 2023), fixed-effects and instrumental-variable panel regressions on Indian state-level data (Kalirajan & Otsuka, 2012), and panel cointegration/DOLS techniques designed for long macro-panels with persistent, trending series (Ganaie et al., 2018). Convergence testing in the regional-economics tradition sigma-convergence, measuring whether the cross-sectional dispersion of an indicator narrows over time, and beta-convergence, testing whether initially lagging units grow systematically faster than initially leading units has been applied extensively to state-level per-capita income and fiscal capacity in India, but has been used comparatively rarely at the sub-state, panchayat-aggregate level, largely because consistent, digitized panchayat-level or state-aggregated-panchayat panel data have only become available with the roll-out of the eGramSwaraj portal from around 2020 onward.

This creates the specific research gap that the present article addresses: existing empirical work on PRI finance is either purely descriptive (documenting revenue shares and dependency ratios in a single cross-section or short time series) or is conducted at the state-government tier rather than the panchayat tier. Few, if any, published studies apply formal panel fixed-effects and convergence-testing econometrics to a multi-year, state-aggregated Gram Panchayat receipts-and-payments panel of the kind newly available through eGramSwaraj. The present article contributes such an analysis, while explicitly documenting and correcting for a data-quality artefact repeated, non-updated values across three consecutive reporting years that is a realistic and under-discussed hazard of working with live administrative-portal data of this kind.

Gram Panchayats sit at the base of India's three-tier Panchayat Raj system, below the intermediate (Block/Taluk/Mandal Panchayat) and district (Zilla Parishad) tiers. Following the 73rd Amendment, states are constitutionally required to hold periodic panchayat elections and to constitute State Finance

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

Commissions (SFCs) every five years to recommend the sharing of state revenues and the assignment of taxes, tolls, and fees to panchayats; in parallel, the Central Finance Commission recommends a formula-based grant-in-aid to local bodies as a share of the divisible pool of Union taxes. The result is a three-stranded resource structure for a typical Gram Panchayat: own revenue from local taxes and non-tax sources (such as property tax, market fees, and rents); statutory devolution and grants recommended by the SFC; and Central Finance Commission and scheme-tied grants (including funds under Members of Parliament and Members of the Legislative Assembly local area development schemes and centrally sponsored rural development programmes).

The eGramSwaraj platform, launched by the Ministry of Panchayat Raj, was rolled out nationally as the standard online accounting and planning interface for panchayats from 2020 onward, replacing a patchwork of state-specific and largely offline accounting systems, and is now the primary administrative data source for monitoring panchayat receipts and expenditure in near real time. The dataset analysed in this article is drawn from a State-Wise Grama Panchayat Expenditure Report generated from this platform, covering all major states and several union territories over FY 2020-21 to FY 2025-26, and reporting two headline aggregates for each state-year: total receipts and total payments (both denominated in rupees) recorded by Gram Panchayats within that state during the financial year.

Because the underlying reporting infrastructure is comparatively young having scaled up nationally only from 2020 and because states vary considerably in how completely and promptly their panchayats migrate financial records onto the portal, the eGramSwaraj-derived panel used here should be understood as an evolving administrative census rather than a fully harmonized statistical series of the kind produced by, for example, the Central Statistics Office. This has direct implications for the econometric treatment adopted in Section 4.

4. DATA AND METHODOLOGY

4.1 Data Source and Construction of the Panel

The raw source file, "State Wise Expenditure Report of Grama Panchayats Across India," reports receipts and payments in rupees for up to 30 states and union territories across six nominal financial years (2020-21, 2021-22, 2022-23, 2023-24, 2024-25, and 2025-26). These figures were converted to rupees core (1 core = 10 million rupees) for readability, reshaped from wide to long (state-year) format, and merged into a single panel with 180 nominal state-year observations. State-year cells recorded as exactly zero were treated as not-reported (missing) rather than as true zero expenditure, since a genuine zero would imply a functioning Gram Panchayat tier that recorded and disbursed no funds whatsoever in an entire financial year, which is implausible for all but a small number of newly constituted union territories (Ladakh) or special-category states with minimal panchayat activity (Nagaland, where panchayat raj is not constitutionally extended under Article 243-M).

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

4.2 A Data-Quality Artefact: Duplicated Reporting Years

A systematic check of the source workbook revealed that the individual worksheets for FY 2022-23, FY 2023-24, and FY 2024-25 contain numerically identical state-wise receipts and payments figures, down to the last rupee, for every state. This is not a coincidence of rounding; the three years share exactly the same title metadata (each sheet's header reads “Financial Year: -2022-2023”) and exactly the same cell values throughout. The most plausible explanation is that the underlying report extraction was re-run for FY 2023-24 and FY 2024-25 before those years' panchayat accounts had been fully updated on the portal, so the extraction returned the last-available (FY 2022-23) cumulative figures rather than genuinely new year-specific data.

This artefact has a direct econometric consequence: naively treating all six nominal years as six independent time periods would triple-count the FY 2022-23 cross-sections, understating genuine within-state time variation and overstating the effective sample size and precision of any panel estimator. The present analysis addresses this in two ways. First, wherever a regression specification is sensitive to the number of time periods the fixed-effects and convergence models in Sections 6 and 7 the panel is collapsed to four genuinely distinct periods: FY 2020-21, FY 2021-22, a single FY 2022-23/2023-24/2024-25 composite period (using the shared reported values), and FY 2025-26. Second, all reported degrees of freedom, standard errors, and state or year counts are computed on this de-duplicated basis, and cluster-robust standard errors (clustered by state) are used throughout the fixed-effects specifications to guard against any residual serial dependence the duplication may induce.

4.3 Variable Definitions

- Receipts (R_{it}): total funds received by all Gram Panchayats in state i during financial year t, as recorded on eGramSwaraj, in Rest core.
- Payments (P_{it}): total funds disbursed (expenditure) by all Gram Panchayats in state i during financial year t, in Rest core.
- Utilization ratio ($U_{it} = P_{it} / R_{it}$): the share of receipts actually spent within the same financial year, a proxy for fiscal absorption capacity.
- ln(R), ln(P): natural logarithms of receipts and payments, used throughout the regression analysis to reduce the influence of extreme values (e.g. Uttar Pradesh and Rajasthan, whose receipts are several orders of magnitude larger than those of Goa, Sikkim, or Ladakh) and to allow coefficients to be interpreted as elasticities.

4.4 Specification of the Model

Three families of models are estimated.

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

(i) Pooled log-log OLS. The baseline specification is:

$$\ln(P_{it}) = \alpha + \beta \cdot \ln(R_{it}) + \varepsilon_{it}$$

estimated by ordinary least squares on the pooled (state, year) sample, with heteroskedasticity-robust (White) standard errors. β is interpreted as the elasticity of Gram Panchayat expenditure with respect to receipts: a one per cent increase in receipts is associated with a β per cent increase in payments.

(ii) One-way and two-way fixed effects. To net out unobserved, time-invariant state characteristics (administrative capacity, historical devolution depth, state-specific accounting conventions) that could otherwise bias β, the model is re-estimated using the within (state fixed-effects) transformation:

$$\ln(P_{it}) - \ln(\bar{P}_i) = \beta \cdot [\ln(R_{it}) - \ln(\bar{R}_i)] + (\varepsilon_{it} - \bar{\varepsilon}_i)$$

on the de-duplicated four-period panel, with standard errors clustered by state. A two-way fixed-effects variant additionally removes period-specific shocks common to all states (e.g. a nationwide funding-cycle effect) by further demeaning across periods.

(iii) Convergence tests. Sigma-convergence is assessed by tracking the cross-sectional standard deviation of $\ln(R_{it})$ across the four distinct periods: a declining standard deviation indicates that states' fiscal scale is converging, while a rising standard deviation indicates divergence. Beta-convergence is assessed by regressing each state's annualized log growth rate of receipts (and, separately, of payments) between FY 2020-21 and FY 2025-26 on its initial (FY 2020-21) log level:

$$[\ln(X_i,2025) - \ln(X_i,2020)] / 5 = a + b \cdot \ln(X_i,2020) + u_i$$

for $X \in \{R, P\}$. A negative and statistically significant b is the standard signature of beta-convergence states with initially lower receipts or payments growing systematically faster than initially higher-level states, while an insignificant or positive b indicates the absence of convergence.

5. RESULTS AND DISCUSSION

Table 1 reports year-wise descriptive statistics for state-aggregated Gram Panchayat receipts and payments across the panel. National aggregate receipts fell from roughly Rest 12.96 lakh core in FY 2020-21 to about Rest 10.24 lakh core across the (duplicated) FY 2022-23 to FY 2024-25 window before rising sharply to about Rest 20.78 lakh core in FY 2025-26; aggregate payments show a broadly similar pattern, falling from about Rest 73,883 core in FY 2020-21 to roughly Rest 51,820–57,647 core over the following years before rising to about Rest 2,78,220 core in FY 2025-26. The very large jump between the FY 2022-25 window and FY 2025-26 is driven disproportionately by a small number of large states most notably Andhra Pradesh, Karnataka, and Himachal Pradesh and should be interpreted cautiously in light of the reporting-currency and portal-migration issues discussed in Section 4.2 and revisited in Section 8.

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

5.1 Descriptive Statistics

Table 1: Gram Panchayat Receipts by year, all states/UTs (₹ core). *2022-23, 2023-24 and 2024-25 share identical source values (see Section 4.2).

Year	N (Receipts)	Mean (₹ cr)	Median (₹ cr)	SD (₹ cr)	Total (₹ cr)
2020-21	26	49,844	5,411	1,07,498	12,95,946
2021-22	28	39,174	3,913	92,296	10,96,863
2022-23*	28	36,576	3,895	70,215	10,24,118
2023-24*	28	36,576	3,895	70,215	10,24,118
2024-25*	28	36,576	3,895	70,215	10,24,118
2025-26	28	74,231	8,486	1,34,406	20,78,462

Table 2: Gram Panchayat Payments (expenditure) by year, all states/UTs (₹ core).

Year	N (Payments)	Mean (₹ cr)	Median (₹ cr)	SD (₹ cr)	Total (₹ cr)
2020-21	26	2,842	1,411	3,506	73,883
2021-22	27	1,919	1,282	2,431	51,820
2022-23*	28	2,059	777	3,168	57,647
2023-24*	28	2,059	777	3,168	57,647
2024-25*	28	2,059	777	3,168	57,647
2025-26	26	10,701	1,958	36,372	2,78,220

5.2 Fiscal Absorption (Utilization) Ratio in India

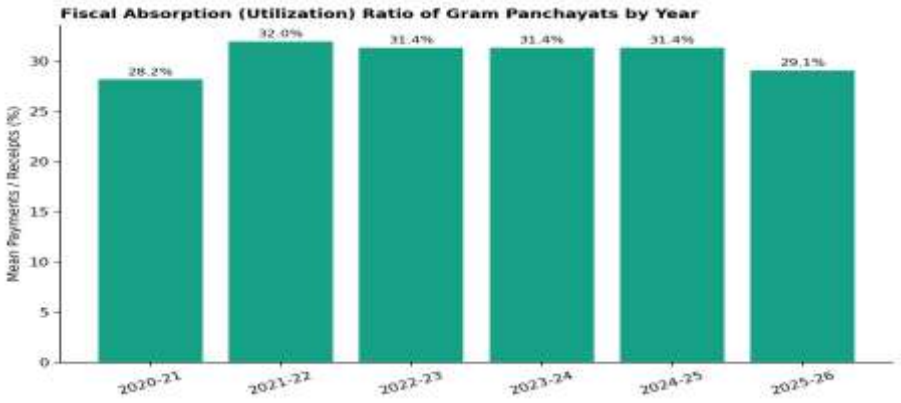
The utilization ratio means payments as a share of receipts within the same reporting year provides a direct measure of how effectively resources reaching Gram Panchayats are converted into actual spending in-year. Across the full panel, the mean utilization ratio ranges narrowly between about 28 and 32 per cent (Figure 3), implying that, on average, roughly two-thirds to three-quarters of funds received by Gram Panchayats in a given year remain unspent as of the close of that year consistent with the RBI's (2024) observation that delayed fund release and weak monitoring and evaluation capacity constrain in-year spending at the panchayat tier. The ratio shows no clear improving trend over FY 2020-21 to FY 2025-26, suggesting that whatever capacity-building and digitization efforts have accompanied the eGramSwaraj roll-out have not yet visibly improved in-year spending efficiency at the aggregate, all-India level, though this masks considerable heterogeneity across individual states.

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

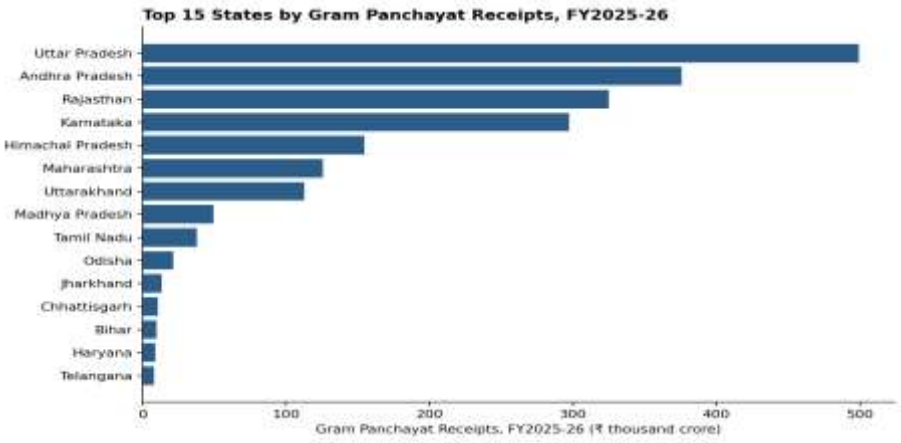
Figure 1: Mean Gram Panchayat utilization ratio (payments ÷ receipts) by year, all-India.



5.3 Cross-State Distribution of Receipts

The cross-state distribution of receipts is highly right-skewed: a small number of large, populous states Uttar Pradesh, Rajasthan, Karnataka, Maharashtra, and Chhattisgarh among them account for a disproportionate share of total national Gram Panchayat receipts in most years, while smaller states and union territories (Goa, Sikkim, Ladakh, Mizoram) report receipts several orders of magnitude smaller. This scale heterogeneity is the primary motivation for using log transformations throughout the regression analysis in Section 6, since untransformed OLS would otherwise be dominated by the handful of very large states.

Figure 2: Top 15 states by Gram Panchayat receipts, FY 2025-26 (₹ thousand core).



International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

5.4 Pooled OLS: The Expenditure-Receipt Elasticity

Table 3 reports the pooled log-log regression of Gram Panchayat payments on receipts, estimated over the de-duplicated four-period panel (N = 107 usable state-period observations, 29 states/UTs with at least one valid observation). The estimated elasticity is 0.748 (robust SE = 0.081, t = 9.24, $p < 0.001$), meaning that, pooling across all states and periods, a one per cent increase in receipts is associated with a 0.75 per cent increase in payments. The intercept is small and statistically indistinguishable from zero. The model explains a substantial share of the cross-sectional and time variation in log payments ($R^2 = 0.624$, adjusted $R^2 = 0.621$), which is unsurprising given that receipts and payments are both scaled by the same underlying panchayat administrative capacity within a state, but the elasticity of 0.75 reliably below unity is itself informative: it indicates that, on average across the pooled sample, expenditure grows less than proportionately with receipts, consistent with binding administrative absorption constraints of the kind emphasized in the RBI (2024) and Devendra Babu (2023) literature reviewed in Section 2.3.

Table 3: Regression of ln (Payments) on ln (Receipts): pooled OLS, state fixed effects, and two-way (state + period) fixed effects. Dependent variable: ln (Payments, ₹ core).

Specification	Coefficient (ln Receipts)	Robust/Cluster SE	t-statistic	p-value	R^2 (within/overall)	N
(1) Pooled OLS	0.748	0.081	9.24	<0.001	0.624	107
(2) State fixed effects	0.884	0.139	6.35	<0.001	0.489 (within)	106
(3) Two-way fixed effects	0.874	0.107	8.17	<0.001	0.474 (within)	106

Standard errors for (2) are clustered by state (28 clusters); (1) uses White heteroskedasticity-robust standard errors.

5.5 Fixed-Effects Estimates: Netting Out State Heterogeneity

Once state-specific, time-invariant heterogeneity is removed via the within transformation, the estimated elasticity rises from 0.748 to 0.884 (cluster-robust SE = 0.139, t = 6.35, $p < 0.001$), and remains close to this value (0.874, SE = 0.107) when period fixed effects are additionally included. This pattern a materially larger within-state elasticity than the pooled, between-state elasticity indicates that a meaningful share of the pooled estimate's shortfall from unity reflects cross-state composition (some states, for structural reasons, simply run at a persistently lower payments-to-receipts ratio than others) rather than a within-state failure to convert incremental receipts into spending. Put differently, when a given state's receipts rise, that state's payments rise almost

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

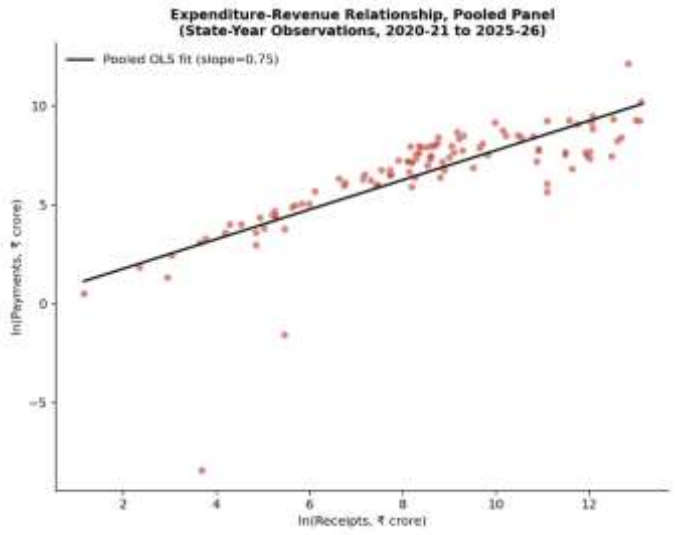
proportionately (elasticity close to 0.88–0.89 with a 95 per cent confidence interval that comfortably excludes 1.0 but sits well above the pooled estimate); it is the fixed, structural gap between historically well-devolved and historically poorly-devolved states that pulls the pooled cross-sectional elasticity down toward 0.75.

This distinction matters for policy: it implies that within-year fluctuations in transfers to a given state's panchayats are absorbed at a relatively high rate (an elasticity approaching 0.88), so short-run supplementary transfers are not, on this evidence, likely to sit idle to any greater degree than existing flows. The binding constraint on aggregate spending efficiency (documented via the utilization ratio in Section 5.2) instead appears to be a level effect persistently low administrative and institutional capacity in a subset of states rather than a marginal, flow-responsiveness problem. This is consistent with the Rajaraman and Sinha (2007) finding that functional devolution (and, by extension, the institutional capacity to execute it) varies far more across states than within a state over a short panel window.

5.6 The Expenditure-Revenue Relationship, Graphically

Figure 3 plots ln(Payments) against ln(Receipts) for all usable state-period observations in the collapsed panel, together with the pooled OLS fit. The relationship is approximately log-linear and reasonably tight across most of the support, with a small number of notable outliers several corresponding to states or periods in which payments were recorded as very small relative to receipts, consistent with the low-utilization tail documented in Section 5.2 and revisited in the outlier discussion of Section 8.

Figure 3: Scatter plot of ln(Payments) against ln(Receipts), pooled state-period panel, with fitted OLS line (slope = 0.75).



International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

6. CONVERGENCE ANALYSIS

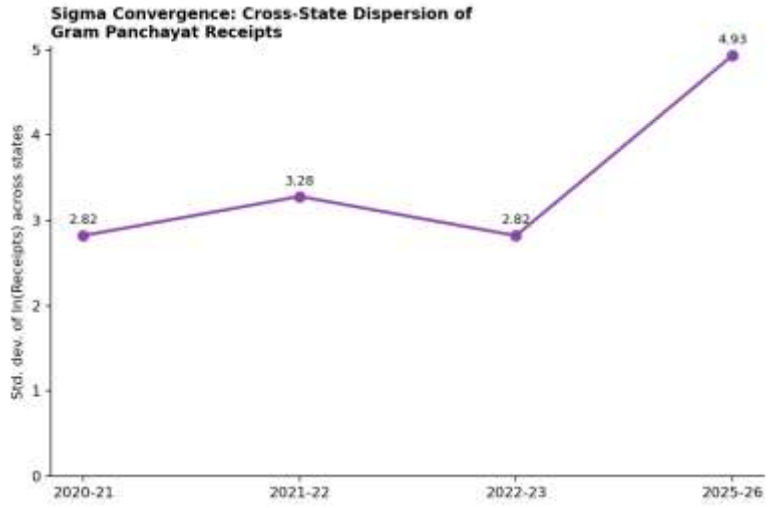
6.1 Sigma-Convergence: Is the Cross-State Dispersion of Receipts Narrowing?

Table 4 reports the cross-sectional standard deviation of ln(Receipts) across states in each of the four distinct periods. Rather than narrowing over time the signature of sigma-convergence the standard deviation rises from 2.82 in FY 2020-21 to 3.28 in FY 2021-22, falls back to 2.82 in the FY 2022-25 composite periods, and then rises sharply to 4.93 by FY 2025-26. The coefficient of variation of ln(Receipts) follows a similar pattern, ending the panel at nearly double its FY 2020-21 value (0.60 versus 0.34). This is unambiguous evidence of sigma-divergence, not convergence, in Gram Panchayat receipts across Indian states over the study period: the states that already had comparatively large panchayat receipts in FY 2020-21 have, on the whole, pulled further ahead in relative terms by FY 2025-26, rather than the initially smaller states catching up.

Table 3: Sigma-convergence: cross-state dispersion of ln(Gram Panchayat receipts) from 2020-21 to 2025-26

Period	N states	SD of ln(Receipts)	CV of ln(Receipts)
2020-21	26	2.822	0.338
2021-22	28	3.281	0.417
2022-25 (composite)	28	2.821	0.349
2025-26	28	4.934	0.602

Figure 4. Standard deviation of ln(Receipts) across states, by period rising dispersion indicates sigma-divergence.



International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

6.2 Beta-Convergence: Do Initially Smaller States Grow Faster?

Table 5 reports beta-convergence regressions of each state's annualized log growth rate of receipts (respectively, payments) between FY 2020-21 and FY 2025-26 on its initial (FY 2020-21) log level. For receipts, the estimated convergence coefficient is small, negative, and statistically insignificant ($b = -0.036$, $SE = 0.030$, $t = -1.20$, $p = 0.244$; $R^2 = 0.059$, $N = 25$), providing no reliable evidence that states with initially smaller Gram Panchayat receipts grew faster than states with initially larger receipts. This corroborates the sigma-divergence finding of Section 7.1: receipts are not converging across Indian states, whether measured by the dispersion of levels or by the growth-initial level relationship.

For payments, by contrast, the estimated convergence coefficient is negative, large in magnitude, and highly statistically significant ($b = -0.157$, $SE = 0.021$, $t = -7.53$, $p < 0.001$; $R^2 = 0.721$, $N = 24$): states with initially lower FY 2020-21 payments grew their payments substantially faster over the subsequent five years than states with initially higher payments. Because payments are the more policy-proximate variable reflecting actual public spending reaching villages this finding of strong payments-side convergence, set against the absence of convergence (indeed, mild divergence) in receipts, suggests that the mechanism narrowing inter-state gaps in panchayat spending is not a narrowing of the underlying resource envelope, but rather differential improvement in the rate at which initially low-spending states have raised their utilization ratios over the period a hypothesis consistent with the intensified digitization and monitoring push associated with the eGramSwaraj roll-out, though the present panel cannot formally establish this channel and it is offered as a plausible interpretation rather than a proven mechanism (see Section 9).

Table 5. Beta-convergence regressions: annualized growth (FY 2020-21 to FY 2025-26) on initial (FY 2020-21) log level, by state.

Dependent variable	Convergence coefficient (b)	SE	t-statistic	p-value	R^2	N
Annualized growth of ln(Receipts)	-0.036	0.030	-1.20	0.244	0.059	25
Annualized growth of ln(Payments)	-0.157	0.021	-7.53	<0.001	0.721	24

7. FINDINGS OF RESULTS

Three findings stand out from the analysis and merit discussion against the theoretical and empirical literature reviewed in Section 2. First, the gap between the pooled elasticity (0.75) and the within-state fixed-effects elasticity (0.87–0.88) is itself a substantively important result. Under the second-

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

generation fiscal federalism framework of Oates (2005), one would expect administrative and information frictions to depress the responsiveness of local spending to local receipts, and the results here confirm that this depression is real but is concentrated between states rather than within a state over time: once time-invariant differences in institutional capacity, historical devolution depth, and accounting practice are controlled for, panchayats in a given state come close to fully absorbing marginal changes in receipts into payments within the same year. This nuance qualifies the more pessimistic reading of the RBI's (2024) and Devendra Babu's (2023) low-utilization findings: the low aggregate utilization ratio documented in Section 5.2 is better characterized as a persistent-level phenomenon concentrated in a subset of structurally under-capacitated states than as a generalized, marginal spending inefficiency present everywhere.

Second, the sigma- and beta-convergence results in Section 7 together paint a picture that echoes, at the panchayat tier and over a much shorter and more recent window, the state-level divergence hypothesis advanced by Ganaie et al. (2018): fiscal decentralization in India, whether measured by state output in their study or by Gram Panchayat receipts in this one, does not appear to be producing convergence in fiscal capacity across states. This is an important qualification to the normative case for decentralization built on the Oates (1972) Decentralization Theorem, which is silent on inter-jurisdictional equity and focuses purely on allocative efficiency within a jurisdiction: decentralization can simultaneously be allocatively efficient at the margin (as the near-unit within-state elasticity in Section 6.2 suggests) and inequitable in its distributional consequences across jurisdictions (as the sigma-divergence result in Section 7.1 shows).

Third, the divergence in receipts alongside convergence in payments is, on its face, a puzzle, but is reconcilable once the utilization-ratio evidence is brought in: if initially low-spending states have disproportionately raised their utilization ratios over FY 2020-21 to FY 2025-26, even without their underlying receipts converging payments-side convergence can emerge mechanically from a rising utilization ratio in the lagging states, without requiring any narrowing of the resource envelope itself. This interpretation is consistent with, though not conclusively proven by, the qualitative narrative in the RBI's (2024) review, which credits recent digitization, capacity-building, and monitoring initiatives (including the eGramSwaraj roll-out itself) with improving fund utilization, particularly among states starting from a lower base.

Taken together, these results suggest a two-track policy problem. On one track, resource equalization across states. the traditional remit of Finance Commission transfer formulae remains as necessary as ever, since receipts show no sign of converging on their own. On the other, capacity-building and monitoring interventions targeted at raising the utilization ratio in lagging states appear to be associated with genuine convergence in actual spending, and merit continuation and, where evidence permits, scaling, independent of the transfer-formula question.

International Journal of Research in Commerce and Management Studies

ISSN 2582-2292

Vol. 8, No. 04 July-August; 2026 Page. No. 883-899

8. CONCLUSION

This article has applied pooled and fixed-effects panel regression together with sigma- and beta-convergence tests to a newly assembled, state-wise panel of Gram Panchayat receipts and payments drawn from the eGramSwaraj administrative platform for FY 2020-21 to FY 2025-26. Three main results emerge. First, the elasticity of village-level expenditure with respect to receipts is well below unity in a pooled cross-section (approximately 0.75) but rises to approximately 0.87–0.88 once persistent, state-specific heterogeneity is removed via panel fixed effects, indicating that the shortfall from full, contemporaneous absorption of receipts into spending is predominantly a between-state, structural-capacity phenomenon rather than a universal within-state marginal-spending failure. Second, the aggregate fiscal-absorption (utilization) ratio of Gram Panchayats has remained low and essentially flat, at roughly 28 to 32 per cent, across the six-year window, corroborating earlier RBI and academic findings on weak fund utilization at the panchayat tier. Third, receipts show no evidence of sigma- or beta-convergence across Indian states over the period if anything, cross-state dispersion in receipts has risen while payments show strong beta-convergence, a combination consistent with differential improvement in utilization ratios among initially lagging states rather than any narrowing of the underlying resource envelope.

These findings speak directly to the design of the next generation of Central and State Finance Commission transfers to Panchayat Raj Institutions. Because receipts are not converging on their own, transfer formulae will likely need to continue playing an explicit equalizing role rather than relying on organic convergence; and because the evidence here associates within-state elasticities close to unity with (unobserved) administrative capacity, targeted capacity-building of the kind already emphasized in the RBI's (2024) recommendations appears to be a productive complementary lever alongside formula-based transfers for raising both the level and the equity of Gram Panchayat spending. Future research, contingent on the availability of a longer and more granular eGramSwaraj-derived panel free of the duplication artefact identified here, could extend this analysis to the block and district panchayat tiers, decompose receipts into own-tax, SFC, and CFC/scheme components, and formally test the utilization-ratio convergence channel proposed in Section 8 using instrumental-variable or difference-in-differences designs around specific state-level capacity-building interventions.

REFERENCES

- Devendra Babu, M. (2023). Fiscal Empowerment of Panchayats in India: Real or Rhetoric? ISEC Working Paper No. 229. Bengaluru: Institute for Social and Economic Change.
- Drishti IAS. (2024). Finances of Panchayat Raj Institutions. Daily News Analysis, Drishti IAS.

- Ganaie, A. A., Bhat, S. A., Kamaiah, B., & Khan, N. A. (2018). Fiscal Decentralization and Economic Growth: Evidence from Indian States. Margin: The Journal of Applied Economic Research, 12(2).
- Kalirajan, K., & Otsuka, K. (2012). Fiscal Decentralization and Development Outcomes in India: An Exploratory Analysis. World Development, 40(8), 1511–1521.
- Ministry of Panchayat Raj, Government of India. (2020–2026). eGramSwaraj Portal: State-Wise Grama Panchayat Receipts and Payments Report, FY 2020-21 to FY 2025-26 [Data source].
- Musgrave, R. A. (1959). The Theory of Public Finance: A Study in Public Economy. New York: McGraw-Hill.
- Oates, W. E. (1972). Fiscal Federalism. New York: Harcourt Brace Jovanovich.
- Oates, W. E. (2005). Toward a Second-Generation Theory of Fiscal Federalism. International Tax and Public Finance, 12(4), 349–373.
- Plutus IAS. (2024). RBI's Report "Finances of Panchayat Raj Institutions." Plutus IAS Daily Current Affairs.
- Rajaraman, I., & Sinha, D. (2007). Tracking Functional Devolution by States to Panchayats. NIPFP Working Paper No. 2007/48. New Delhi: National Institute of Public Finance and Policy.
- Rao, M. G., & Singh, N. (2005). The Political Economy of Federalism in India. New Delhi: Oxford University Press.
- Reserve Bank of India. (2024). Finances of Panchayat Raj Institutions. RBI State Finances Review.
- Tiebout, C. M. (1956). A Pure Theory of Local Expenditures. Journal of Political Economy, 64(5), 416–424.