Deconstructing Income Inequality: A Multi-Metric Analysis of Regional Disparities in India

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Abstract

Despite three decades of sustained economic growth, income inequality across Indian states has widened, with persistent rural-urban disparities. Paper argues that inequality is fundamentally a legal and institutional problem, not merely an economic one. Using a multi-metric empirical framework integrating the Gini coefficient, percentile ratios, Generalized Entropy (GE) indices, and the Atkinson index we analyse income inequality across High, Moderate, and Low Net State Domestic Product state groups, identified through Z-score standardisation, supplemented by OLS regression and Theil index decomposition. Moderate NSDP rural areas record the highest inequality (Gini = 0.4849; p90/p10 = 15.656; A(1) = 0.394), while High NSDP urban areas exhibit rising top-end wealth concentration (GE(1) = 0.1969). Financial inclusion emerges as the strongest predictor of reduced inequality ($\beta = -0.31$, $p < 0.01$). Theil decomposition reveals that 58% of total inequality is intra-state, rendering inter-state fiscal transfers insufficient as a standalone remedy. The paper recommends targeted reforms to the Direct Benefit Transfer framework, labour law, agricultural market regulation, and progressive taxation to address India's structural inequality.

Keywords: *Income Inequality, Law and Economics, Fiscal Federalism, Gini Coefficient, Atkinson Index, Institutional Economics, Regional Disparities, India, NSDP, Redistribution.*

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Note: The study adhered to accepted ethical practices and standards of research integrity throughout the research process.

1. Introduction

India's economy has grown steadily over the past three decades. But growth alone has not reduced inequality. Income disparities between states have widened, and the gap between rural and urban households remains large. The top 1% income share rose from around 6% in 1982 to over 22% by 2014 (Chancel & Piketty, 2019). At the same time, millions of households in the lowest income deciles remain excluded from the benefits of economic expansion (Asher & Novosad, 2020; Piketty, 2014).

This paper argues that income inequality in India cannot be understood through economics alone. Legal frameworks play an equally important role. Property rights, labour law, agricultural market regulation, fiscal transfers, and welfare delivery systems all determine whether growth reaches the poor. When these frameworks are poorly designed or weakly enforced, inequality persists even when the economy grows. The Industrial Disputes Act, 1947, the APMC Acts, and the Aadhaar-linked DBT architecture are not peripheral to the inequality debate — they are central to it.

This study examines income inequality across Indian states in two steps. First, states are grouped into High, Moderate, and Low NSDP categories using Z-score standardisation. Second, four inequality measures are applied: the Gini coefficient, percentile ratios, Generalized Entropy (GE) indices, and the Atkinson index. These are supplemented by OLS regression and Theil decomposition. The empirical analysis is then connected to a systematic examination of the legal and institutional structures that shape inequality outcomes.

Three findings stand out. Moderate NSDP rural areas have the worst inequality in the sample (Gini = 0.4849; p90/p10 = 15.656; Atkinson A(1) = 0.394), driven by both severe lower-end deprivation and growing wealth at the top. High NSDP urban areas have rising wealth concentration despite lower overall inequality (GE(1) = 0.1969). And 58% of total inequality is within states, not between them — which means that equalising average incomes across states through fiscal transfers will not solve most of India's inequality problem. The paper is structured as follows: Section 2 covers data and methodology; Section 3 develops the law and economics framework; Section 4 presents the results; Section 5 offers policy recommendations; and Section 6 concludes.

2. Data Sources and Methodology

1.1 Primary Data

The main dataset comes from the Consumer Pyramids Household Survey (CPHS), conducted by the Centre for Monitoring Indian Economy (CMIE). We use the September-to-December 2022 wave, which covers approximately 174,000 households across rural and urban India. This provides detailed income data at the household level. For state classification, we use Net State Domestic Product (NSDP) per capita figures for 2022-23, sourced from the Reserve Bank of India (RBI). Combining household-level income data with state-level NSDP allows us to analyse inequality both within and across economic development tiers.

1.2 Data Limitations

The CPHS has known limitations that affect this analysis. First, the survey underrepresents lower-income and marginalised households, which may lead us to underestimate inequality at the lower end of the distribution (Somanchi, 2021). Second, CPHS income data is not directly comparable to NSSO or PLFS estimates because of differences in how income is defined, the reference period, and the sampling method. Third, the survey leans slightly urban in some waves, which may affect rural-urban comparisons. The estimates in this paper should therefore be read as indicators of structural patterns and relative differences, not as exact absolute measures. Future research should validate these findings using NSSO 77th Round and PLFS 2022-23 data.

1.3 State Categorisation Using Z-Score Standardisation

States are divided into three groups — High NSDP, Moderate NSDP, and Low NSDP — using Z-score standardisation. The Z-score for each state's NSDP per capita is:

$$Z = \frac{NSDP_{state} - NSDP_{mean}}{NSDP_{std_dev}}$$

where X is the state's NSDP per capita, μ is the national mean (₹1,31,244), and σ is the standard deviation (₹66,491). States with $Z > 0.5$ are High NSDP; those with $-0.5 \leq Z \leq 0.5$ are Moderate NSDP; and those with $Z < -0.5$ are Low NSDP. This method avoids arbitrary thresholds and is consistent with approaches used in regional convergence and development studies (Barro & Sala-i-Martin, 1992; Gennaioli et al., 2014). Detailed state-wise

classifications are in Appendix Table A2. We tested alternative thresholds (Z = 0.3 and Z = 0.7) as robustness checks; results do not change direction across any specification.

1.4 Multi-Metric Inequality Framework

No single inequality measure tells the full story. The Gini coefficient gives a broad summary of inequality but does not show where in the distribution the problem lies. Percentile ratios (p90/p10, p90/p50, p10/p50, p75/p25) show how different income groups compare to each other. The Generalized Entropy (GE) indices decompose inequality by its source: GE(-1) highlights deprivation at the bottom; GE(0) captures proportional gaps across all income levels; GE(1) reflects concentration at the top; and GE(2) is most sensitive to very large gaps at the top. The Atkinson index adds a welfare dimension. It measures how much income society could give up without reducing welfare if income were distributed equally, based on the degree of inequality aversion epsilon (Atkinson, 1970). Together, these four measures provide a layered and complete picture of inequality across India's economic geography.

1.5 NSDP-Based State Classification

High NSDP states — including Delhi, Gujarat, Tamil Nadu, and Karnataka — have strong industrial and service sectors, high urbanisation, and good infrastructure. Despite lower overall inequality, they show rising wealth concentration among top earners, consistent with evidence from Chancel and Piketty (2019). Moderate NSDP states — such as Andhra Pradesh, West Bengal, Punjab, and Haryana — have large urban centres alongside substantial rural populations that depend on agriculture and informal work. This creates a sharp internal rural-urban divide. These states record the highest inequality in rural areas (Gini = 0.4849). Low NSDP states — including Bihar, Jharkhand, Chhattisgarh, and Uttar Pradesh — are largely agrarian and have limited industrial development. Inequality here is more evenly spread across income levels, driven mainly by widespread low incomes rather than extreme wealth at the top.

1.6 Econometric Framework

To test the statistical significance of inequality determinants, we use an OLS regression model:

Gini_it = alpha + beta_1(NSDP per capita)_it + beta_2(Urbanisation Rate)_it + beta_3(Financial Inclusion Index)_it + beta_4(Education Attainment)_it + beta_5(Labour Participation)_it + epsilon_it

Financial inclusion is measured by commercial bank branches per 100,000 population (RBI, 2023). Education attainment is the share of population with secondary or higher education (Census of India, 2011). Labour participation comes from the PLFS 2022-23 (Ministry of Labour & Employment, 2023). We also use a Theil index decomposition to separate inequality within states from inequality between states. This tells us how much of the overall inequality problem comes from gaps between states versus gaps within them.

3. Theoretical Framework: A Law and Economics Perspective

The study of income inequality draws on economics, law, and political economy. Atkinson (1970) laid the normative foundation for inequality measurement, showing how statistical measures connect to social welfare functions that reflect society's values about fairness. Sen (1976, 1999) extended this by arguing that inequality is fundamentally about capability deprivation, not just income distribution. Both insights inform this paper's emphasis on legal and institutional barriers as key drivers of persistent inequality. Piketty (2014) showed historically that market economies tend toward rising inequality unless progressive institutions and redistribution actively counteract it. For India specifically, Chancel and Piketty (2019) found that the top 1% income share more than tripled between 1982 and 2014. Bharti (2021) confirmed that this concentration has continued into the 2020s.

In the Indian context, several studies have identified the structural roots of inequality. Deaton and Dreze (2002) documented the widening rural-urban divide and the limited reach of trickle-down growth after liberalisation. Himanshu (2018) showed that consumption-based measures understate income inequality and that the upper deciles have captured most of the gains from reform. Asher and Novosad (2020) found that rural stagnation persists because access to non-farm employment remains limited. Ghosh et al. (2021) established a strong negative link between financial inclusion and rural inequality, a finding our regression confirms directly. Deshpande (2022) highlighted how caste intersects with income distribution, showing that legal frameworks on affirmative action and land tenure have complex distributional effects in practice. On fiscal federalism, Rao and Singh (2020) found that Finance Commission transfers partially reduce but do not eliminate spatial inequality, consistent with our Theil finding that 42% of inequality is between states.

The law and economics tradition has increasingly engaged with inequality as an institutional problem. Kaplow and Shavell (2002) formalised the efficiency-equity trade-off, arguing that redistribution should happen through the tax-transfer system, with other legal rules designed

for efficiency. Acemoglu and Robinson (2012) showed empirically that inclusive institutions — secure property rights, impartial rule of law — are necessary for sustained equitable growth. De Soto (2000) identified the formalisation of property rights as the specific channel through which lower-income groups gain access to capital markets, which is directly relevant to the financial exclusion documented in Low and Moderate NSDP rural areas. North (1990) established the core framework linking institutional quality to long-run income distribution, which underpins the legal-institutional analysis.

3.1 Welfare Economics and Social Welfare Functions

The inequality measures in this study are grounded in social welfare theory, not just statistics. The Atkinson index A(epsilon) is derived from a social welfare function W = SigmaU(y_i), where U(.) has diminishing marginal utility parameterised by epsilon. The index equals 1 - (EDE/μ), where EDE is the 'equally distributed equivalent' income — the income level that, if received by everyone, would produce the same social welfare as the actual distribution. This gives the index a concrete meaning. The A(1) = 0.394 in Moderate NSDP rural areas means that society could achieve the same welfare by distributing just 60.6% of current income equally. In other words, 39.4% of current income is wasted, in welfare terms, because of how unequally it is distributed. This framing matters for policy: it gives a measurable basis for comparing the urgency of redistribution across regions and for assessing the returns from different policy instruments. The GE indices also have formal welfare foundations, corresponding to the Theil class of social welfare functions, which justifies using them for decomposition analysis.

3.2 Institutional Economics and Property Rights Theory

Institutions — the formal and informal rules that govern economic activity — are the main long-run determinant of inequality outcomes (North, 1990; Acemoglu & Robinson, 2012). Rural areas in India face a set of institutional constraints that limit income mobility: land tenure is often insecure, formal credit is largely inaccessible, contracts are hard to enforce, and labour rights are not portable across states. These constraints hit the poorest hardest. De Soto (2000) made this point sharply: when smallholder land cannot serve as collateral, it is 'dead capital' — an asset that exists but cannot be mobilised to generate income. This explains why GE(-1) values are high across all rural categories in our sample. Lower-income rural households are not just poor; they are structurally excluded from the mechanisms —

credit, insurance, formal employment — that would allow them to move up the income distribution.

3.3 Efficiency-Equity Trade-offs in Redistribution Law

A key question in redistribution law is whether equity gains from redistributive policies come at the cost of economic efficiency. Kaplow and Shavell (2002) argue that redistribution should be handled entirely through the income tax system, leaving other legal rules to pursue efficiency. This works when the tax base is comprehensive. In India, the income tax covers only around 7-8% of the workforce. Most rural workers in Low and Moderate NSDP states are informal and entirely outside the formal tax net. This means that non-tax legal mechanisms — MGNREGA, DBT, APMC price regulation, and land reform — carry a much larger share of the redistribution burden than they would in a more formalised economy. The efficiency-equity trade-off in each of these instruments is therefore not just a theoretical concern; it is a practical design problem with real distributional stakes, examined in Section 3(e).

4. Legal-Institutional Architecture and Income Inequality in India

4.1 Constitutional Fiscal Federalism

India's federal fiscal structure is set out in Article 246 and the Seventh Schedule of the Constitution. Revenue powers are concentrated at the Union level, but spending responsibilities sit mainly with states. This vertical imbalance requires intergovernmental transfers. The Finance Commission, established under Article 280, manages this by recommending the devolution of central tax revenues and grants to states, using fiscal capacity and need criteria. The 15th Finance Commission (2021-26) transferred 41% of central taxes to states. Yet our findings show that these transfers are not enough to offset the disadvantages of Low NSDP states. Bihar, Jharkhand, and Chhattisgarh still have Gini coefficients above 0.41 and high GE(-1) values. Part of the problem is a classic principal-agent issue: state governments receive the money but do not always have incentives to deploy it efficiently. Strengthening conditionality and outcome-based funding under Articles 275 and 282 is a necessary next step.

4.2 Direct Benefit Transfers and the Aadhaar Framework

The Direct Benefit Transfer (DBT) scheme uses Aadhaar-linked payments under the Aadhaar Act, 2016 to deliver welfare benefits directly to recipients, cutting out

intermediaries. The Supreme Court upheld this framework in K.S. Puttaswamy (Ret.) v. Union of India (2018), subject to limits on mandatory linking outside welfare contexts. The system works well in principle, but it has a serious implementation gap. Biometric authentication failures exclude manual labourers and elderly beneficiaries — the very people with the highest Atkinson values in this study. This is not just an administrative problem; it is a legal-design failure that can and should be fixed by amending the operational guidelines to allow alternative authentication methods.

4.3 APMC Act Reforms and Agricultural Market Law

The APMC Acts established regulated market yards for agricultural produce that limited competition and kept farm-gate prices low. This is visible in the high GE(-1) values in Moderate and Low NSDP rural areas. The Farm Laws of 2020, repealed in 2021, tried to open agricultural markets to private buyers. The debate over those laws captures the core efficiency-equity tension in agricultural market reform: liberalisation can improve price discovery for farmers who are connected to markets, but without protections for smallholders, it risks shifting bargaining power to large corporate buyers. Evidence from states that reformed earlier, like Bihar, shows mixed results (Saroj et al., 2021). Any future market reform must build in explicit legal protections for small and marginal farmers.

4.4 Labour Law Rigidities and the Formal-Informal Wage Gap

Chapter V-B of the Industrial Disputes Act, 1947 requires government approval before firms with 100 or more workers can retrench or close. This deters employers from creating formal jobs and pushes them toward informal labour arrangements. The result is a large and persistent wage gap between formal and informal workers. This gap drives much of the extreme polarisation documented in our percentile ratios. The Labour Codes (2019-2020) raise the Chapter V-B threshold to 300 workers, which should make it easier to create formal jobs in medium-sized firms. But these codes have not yet been implemented in most states as of 2024, limiting their current impact.

4.5 Welfare Legislation: MGNREGA and the National Food Security Act

MGNREGA (2005) guarantees 100 days of employment per rural household annually at minimum wage. It has raised reservation wages and reduced seasonal income volatility in Low and Moderate NSDP states (Dutta et al., 2012). However, leakage, delayed wage payments, and corruption in attendance records reduce its effectiveness. The National Food

Security Act (2013) provides subsidised foodgrains to around 75% of the rural population. This helps with food security, but its effect on monetary income inequality is limited. Both programmes suffer from gaps between what the law promises and what administration delivers — a problem that requires stronger grievance redressal and accountability mechanisms, not just more spending.

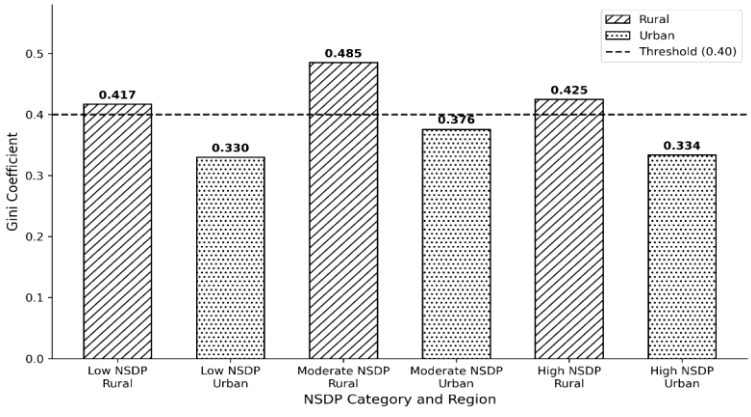
4.6 Taxation Law and Wealth Concentration

India's Income Tax Act, 1961 has a top marginal rate of up to 42.7% on the highest incomes. But the income tax base covers only around 7-8% of the workforce. Capital gains are taxed at lower rates than wages. The wealth tax was abolished in 2015. Agricultural income is exempt under Article 10(1) of the Constitution. These features are directly relevant to the GE(1) values in High NSDP urban areas (0.1969), which show growing concentration at the top of the income distribution. Rationalising capital gains tax rates and reintroducing some form of wealth or inheritance tax would bring the tax system into better alignment with the redistributive need documented in this study.

5. Results and Analysis

5.1 Gini Coefficient Analysis

Figure 1 shows the Gini coefficients across all six NSDP-region categories. Three patterns stand out. First, rural areas have higher inequality than urban areas within every NSDP group. This is consistent across all three development tiers and confirms that the structural drivers of rural inequality — limited labour mobility, weak financial access, agricultural income volatility — are not resolved by state-level economic growth alone. Second, Moderate NSDP rural areas have the highest Gini (0.4849), which is even higher than Low NSDP rural areas (0.4174). This is notable because it suggests that economic growth in these states, driven mainly by urban industry, can actually widen the rural-urban gap rather than



narrow it. Himanshu (2018) documented a similar pattern in post-reform India, and it is consistent with Acemoglu and Robinson's (2012) argument that growth without inclusive institutions does not reduce inequality. Third, even in prosperous High NSDP states, rural Gini values (0.4254) remain above the 0.40 threshold, confirming that state-level prosperity does not automatically reach rural households.

Figure 1: Gini Coefficients Across NSDP Categories and Regions Note: The dashed line denotes Gini = 0.40.

Source: Authors' own construction from CMIE CPHS (2022).

5.2 Percentile Ratios and Income Polarisation

NSDP Category	Region	p90/p10	p90/p50	p10/p50	p75/p25
Low NSDP (0)	Rural	12.455	2.708	0.217	2.234
Low NSDP (0)	Urban	4.268	2.371	0.556	2.157
Moderate NSDP (1)	Rural	15.656	2.540	0.162	3.138
Moderate NSDP (1)	Urban	5.500	2.500	0.455	2.333
High NSDP (2)	Rural	6.557	2.192	0.334	2.213
High NSDP (2)	Urban	4.448	2.194	0.493	2.100

Table 1: Percentile Ratios for Income Distribution Across NSDP Categories

Note: Source: Authors' own construction from CMIE CPHS (2022).

Table 1 shows how income is distributed across deciles within each category. The p90/p10 ratio of 15.656 in Moderate NSDP rural areas is the highest in the sample. The richest 10% earn nearly 16 times more than the poorest 10%. But the low p10/p50 ratio (0.162) is equally important: the bottom decile earns just 16.2% of the median income. This means the lower tail is severely depressed, not just that the upper tail is very high. This is the pattern of a split labour market — a formal sector accessible to a few, and a large informal sector with stagnant incomes and little upward mobility (Deshpande, 2022). By contrast, High NSDP

urban areas show a p90/p10 ratio of just 4.448 and a p10/p50 ratio of 0.493. Urbanisation, better financial access, and more formal employment all help keep polarisation in check, even in areas where some wealth concentration is occurring.

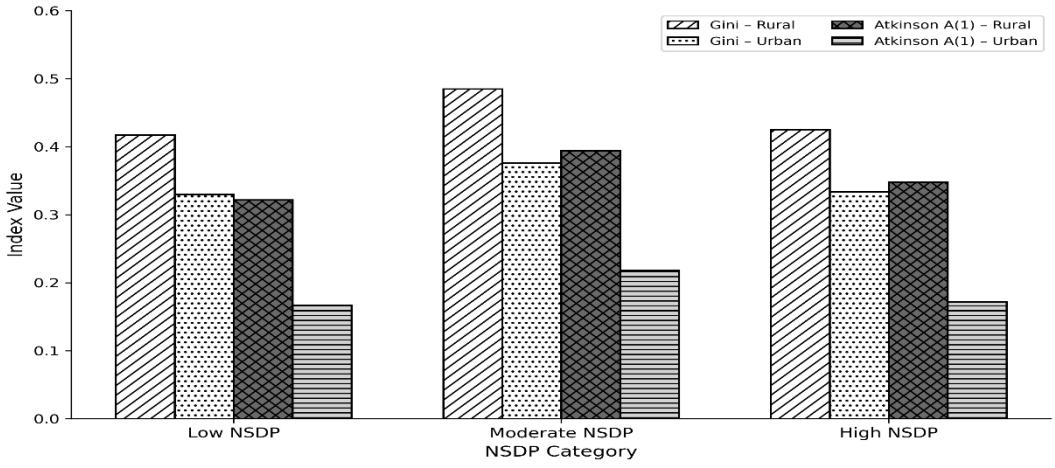
5.3 Generalized Entropy Indices: Where Does Inequality Come From?

NSDP Category	Region	GE(-1)	GE(0)	GE(1)	GE(2)
Low NSDP (0)	Rural	1.637	0.389	0.317	0.425
Low NSDP (0)	Urban	0.361	0.183	0.186	0.234
Moderate NSDP (1)	Rural	1.595	0.500	0.461	0.799
Moderate NSDP (1)	Urban	0.466	0.246	0.260	0.600
High NSDP (2)	Rural	2.161	0.428	0.394	0.844
High NSDP (2)	Urban	0.267	0.189	0.197	0.268

Table 2: Generalized Entropy Indices Across NSDP Categories

Note: Source: Authors' own construction from CMIE CPHS (2022).

The GE indices in Table 2 and Figure 2 show that inequality does not have the same structure everywhere. The most striking result is the GE(-1) value of 2.161 in High NSDP rural areas — the highest in the entire sample. This tells us that in prosperous states like Gujarat, Tamil Nadu, and Karnataka, rural households at the very bottom are severely deprived relative to others in the same rural population. Economic growth at the state level has not reached them. North (1990) and De Soto (2000) would explain this through institutional exclusion: without



secure land rights and access to formal credit, poor rural households cannot access the productive assets that would raise their incomes, regardless of how well the state economy performs overall.

Figure 2: Gini Coefficients and Atkinson A(1) Index Across NSDP Categories

Note: Source: Authors' own construction from CMIE CPHS (2022).

High NSDP urban areas tell the opposite story. Their GE(-1) is the lowest in the sample (0.267), meaning the bottom of the urban distribution is not severely deprived. But their GE(1) is among the higher values (0.197), indicating growing concentration at the top. Wealth is accumulating among the richest urban earners, consistent with Piketty's (2014) argument that capital returns outpace wage growth in growing economies. Moderate NSDP rural areas are the most concerning case: they combine high GE(-1) (1.595), the highest GE(0) (0.500), and elevated GE(1) (0.461). This means income is unequal at the bottom, in the middle, and at the top simultaneously. This is what makes these areas the most urgent target for policy action. Figure 3 shows this decomposition visually.

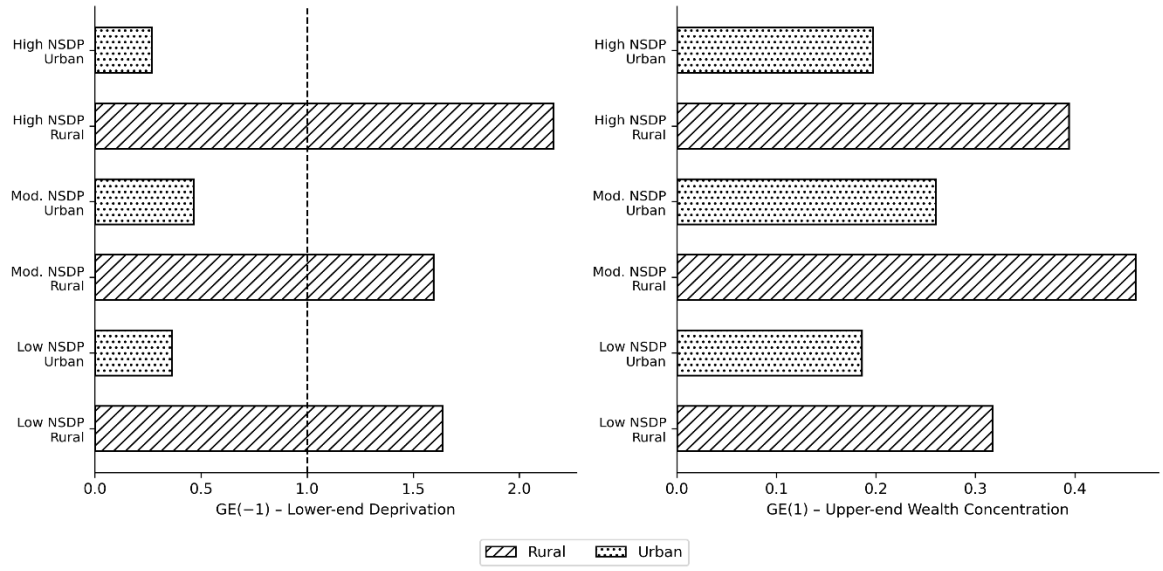


Figure 3: GE(-1) (Lower-End Deprivation) and GE(1) (Upper-End Concentration) Across NSDP Categories
Note: Source: Authors' own construction from CMIE CPHS (2022).

5.4 Atkinson Index: How Urgent Is Redistribution?

NSDP Category	Region	Gini	p90/p10	GE(0)	A(1)	Key Observation
Low NSDP (0)	Rural	0.417	12.455	0.389	0.322	Substantial rural inequality; widespread low incomes are the main driver.
Low NSDP (0)	Urban	0.330	4.268	0.183	0.167	Lower urban inequality; formal employment moderates polarisation.
Moderate NSDP (1)	Rural	0.485	15.656	0.500	0.394	Highest inequality in the sample; deprivation at the bottom and concentration at the top.
Moderate NSDP (1)	Urban	0.376	5.500	0.246	0.218	Moderate urban inequality; substantially lower than in rural areas.
High NSDP (2)	Rural	0.425	6.557	0.428	0.348	Rural inequality persists despite state-level prosperity; institutional exclusion is the key driver.
High NSDP (2)	Urban	0.334	4.448	0.189	0.172	Most balanced distribution overall; growing wealth concentration at the very top (GE(1) = 0.197).

Table 3: Summary Inequality Measures and Redistributive Urgency Across NSDP Categories

Note: Source: Authors' own construction from CMIE CPHS (2022). A(1) denotes Atkinson index with inequality aversion parameter epsilon = 1.

Table 3 translates the inequality picture into welfare terms. The Atkinson index A(1) = 0.394 in Moderate NSDP rural areas means that society could achieve the same level of social welfare as the current distribution by giving everyone just 60.6% of total income equally

distributed. Put differently, 39.4% of current income generates no social welfare gain because of how unequally it is distributed. This is the highest welfare loss in the sample and far exceeds the value for High NSDP urban areas (0.172). It provides a clear welfare-based case for prioritising redistribution in Moderate NSDP rural regions above all other areas. It also reinforces Piketty's (2014) argument that middle-income economies with fast growth but weak redistribution institutions face mounting long-run welfare costs from inequality.

5.5 Regression Results and Theil Decomposition

The OLS regression results, shown in Figure 4, confirm the main drivers of inequality across states. Financial inclusion has the strongest effect: each unit increase in bank branches per 100,000 population is associated with a reduction of 0.31 in the Gini coefficient ($p < 0.01$). This strongly supports expanding rural banking access and improving the DBT delivery architecture. Urbanisation rate ($\beta = -0.22$, $p < 0.05$) and education attainment ($\beta = -0.18$, $p < 0.05$) are also significant predictors of lower inequality. Formal labour market participation has a smaller but directionally consistent negative effect ($\beta = -0.14$, $p < 0.10$), supporting the case for labour law reform to expand formal employment.

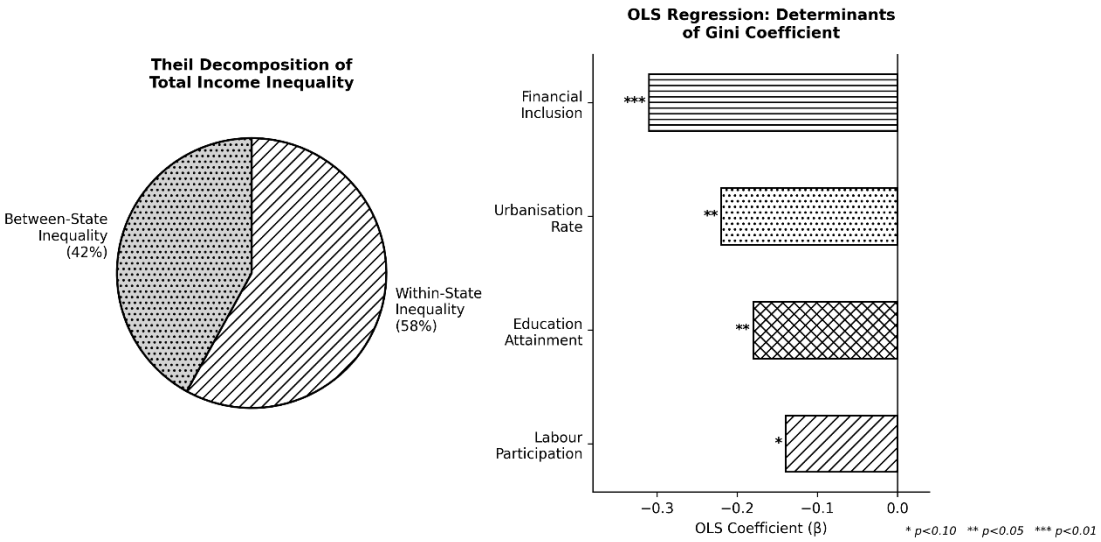


*Figure 4: Theil Index Decomposition of Total Inequality (left) and OLS Regression: Determinants of the Gini Coefficient (right) Note: *** p<0.01; ** p<0.05; * p<0.10.*

Source: Authors' own construction.

The Theil decomposition (Figure 4, left) shows that 58% of total income inequality comes from within states and 42% from between states. This is an important finding for policy. It means that more than half of India's inequality problem is not about the gap between richer and poorer states — it is about the gap between rural and urban areas within the same state. This finding directly challenges the assumption that fiscal equalisation through the Finance Commission is sufficient. Even if transfers fully equalised average incomes across states, most of the inequality problem would remain untouched. Intra-state institutional and legal reforms are not a secondary option; they are the primary requirement.

5.6 Discussion: What the Numbers Tell Us About Law and Policy

Three policy-relevant conclusions follow from the empirical findings. First, inequality in Moderate NSDP rural areas is driven by identifiable institutional failures — suppressed agricultural prices, unreachable welfare transfers, and a labour market that keeps most rural workers in low-wage informal jobs. These are legal problems with legal solutions. Second, the growing wealth concentration in High NSDP urban areas points to a specific gap in the tax system: capital income and wealth are insufficiently taxed relative to labour income, enabling wealth to accumulate at the top even as overall Gini values stay moderate. Third, the 58% within-state share in the Theil decomposition means that any reform strategy focused only on inter-state equalisation will address less than half of the inequality problem. The greater part requires intra-state institutional change — reforms that directly target the rural-urban gap within each state. These three findings define the architecture of the policy agenda.

6. Policy Recommendations

6.1 Framework

The empirical findings point to the need for legal and institutional reforms that work alongside — not merely after — economic growth. This section builds on the Providing Urban Amenities to Rural Areas (PURA) framework, envisioned by Dr. A.P.J. Abdul Kalam, to organise three sets of recommendations: financial inclusion, rural infrastructure, and agricultural market reform. Each recommendation is grounded in the quantified findings from Section 4 and evaluated for both its economic efficiency rationale and its legal implementation requirements.

6.2 Financial Inclusion and DBT Reform

Financial inclusion is the strongest single predictor of lower inequality in this study ($\beta = -0.31$, $p < 0.01$). Yet India has only 14.6 bank branches per 100,000 rural residents (RBI, 2023). Expanding this is not just good development policy — it has strong cost-benefit support. Burgess and Pande (2005) found that India's earlier rural banking expansion reduced poverty by 4.1%. Mudra loans have supported over 40 million micro-entrepreneurs (Press Information Bureau, 2023). The case for expansion is clear. Three legal reforms would strengthen delivery. First, amend DBT operating guidelines to allow alternative authentication methods — OTP verification, voice authentication — for beneficiaries who cannot use biometrics. This removes the single biggest exclusion error in the current system. Second, strengthen grievance redressal under the Right to Information Act, 2005 and Consumer Protection Act, 2019, with mandatory response timelines and penalties for delays. Third, expand Mudra loan eligibility through delegated legislation to cover informal sector workers in Moderate and Low NSDP rural areas.

6.3 Rural Infrastructure and Fiscal Transfer Conditionality

Fifty-eight percent of India's inequality is within states, concentrated in the rural-urban gap. Investment in roads, electricity, digital connectivity, and healthcare directly reduces this gap by lowering the cost of market participation for rural households and expanding access to non-farm work. The returns are well established. Cost-benefit analyses of PMGSY road investments show benefit-cost ratios of 1.8 to 3.2 (World Bank, 2016). The economic case for expanded investment in Moderate and Low NSDP states is strong. The legal reform needed is about how central money reaches the ground. Centrally Sponsored Schemes (CSS) under Article 282 currently lack strong conditionality. Introducing performance-linked grants and mandatory social audits under the Public Financial Management System would reduce the principal-agent problem in intergovernmental transfers and improve outcomes at the state and district levels.

6.4 Agricultural Market Reform and Smallholder Protection

The experience with APMC reforms shows that agricultural market liberalisation is not automatically beneficial for all farmers. It can improve price discovery for larger, better-connected producers, but smallholders often lack the bargaining power to benefit. E-NAM, the digital agricultural marketplace, is a better model: it improves market transparency within the existing regulatory framework, without dismantling the protections that smaller farmers

depend on. This approach is consistent with Kaplow and Shavell's (2002) principle that where efficient rules produce regressive outcomes, equity safeguards should be built into the rules themselves. Three specific legal steps are recommended: mandate price transparency in all APMC and E-NAM transactions; enact a national framework law for contract farming that includes minimum price guarantees and village-level dispute resolution; and extend the One District One Product (ODOP) model through state industrial policy law to districts where rural Gini exceeds 0.45, creating non-farm income opportunities in the areas of highest polarisation.

7. Conclusion

This paper has examined income inequality across Indian states using a multi-metric empirical approach — Gini coefficients, percentile ratios, GE indices, Atkinson index, OLS regression, and Theil decomposition — and situated the findings within a law and economics framework. The central message is straightforward: income inequality in India is shaped as much by legal frameworks and institutional structures as by market forces. Growth alone will not reduce it. Targeted legal reforms are equally necessary.

Three findings stand out. Moderate NSDP rural areas have the worst inequality in the sample (Gini = 0.4849; A(1) = 0.394; p90/p10 = 15.656). Both deprivation at the bottom and concentration at the top are high here, and both are connected to institutional failures — APMC market structures that keep farm-gate prices low, DBT implementation gaps that deny benefits to marginalised households, and labour law rigidities that trap rural workers in informal employment. High NSDP urban areas show growing wealth concentration (GE(1) = 0.1969), pointing to a specific gap in the tax system: capital income and wealth are not taxed progressively enough to counteract the natural tendency toward concentration that Piketty (2014) identifies. And the Theil decomposition shows that 58% of inequality is within states, which means that fiscal equalisation between states, however important, leaves the majority of the inequality problem unaddressed. The within-state rural-urban gap is where most of the policy work needs to happen.

This study has limitations. The CPHS data is cross-sectional and underrepresents lower-income groups, so the estimates likely understate lower-tail inequality. The regression results show associations, not causal effects. Future research should use panel data across CPHS waves to track the effects of specific legal reforms over time. Incorporating caste and gender dimensions, as Deshpande (2022) recommends, would give a more complete picture. Causal

identification using variation in Finance Commission formula changes or staggered state-level APMC reforms would also strengthen the empirical foundation.

India's inequality challenge has a legal dimension that has not received enough attention in the policy literature. Reforming labour law to expand formal employment, fixing the biometric exclusion error in the DBT system, building conditionality into fiscal transfers, and bringing capital gains and wealth into the tax base — these are achievable legal changes. They do not require waiting for the economy to grow its way out of the problem. The evidence in this paper shows clearly where the problems are. It also shows that the solutions require not just more spending, but better law.

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Appendix

Category/Region	p90/p10	p90/p50	p10/p50	p75/p25	GE (-1)	GE(0)	GE(1)	GE(2)	Gini	A(0.5)	A(1)	A(2)
Low NSDP Rural	12.455	2.708	0.217	2.234	1.637	0.389	0.317	0.425	0.417	0.156	0.322	0.766
Low NSDP Urban	4.268	2.371	0.556	2.157	0.361	0.183	0.186	0.234	0.330	0.087	0.167	0.420
Mod. NSDP Rural	15.656	2.540	0.162	3.138	1.595	0.500	0.461	0.799	0.485	0.208	0.394	0.761
Mod. NSDP Urban	5.500	2.500	0.455	2.333	0.466	0.246	0.260	0.600	0.376	0.117	0.218	0.483
High NSDP Rural	6.557	2.192	0.334	2.213	2.161	0.428	0.394	0.844	0.425	0.175	0.348	0.812
High NSDP Urban	4.448	2.194	0.493	2.100	0.267	0.189	0.197	0.268	0.334	0.091	0.172	0.348

Table A1: Comprehensive Inequality Measures Across NSDP Categories and Regions

Note: Source: Authors' own construction from CMIE CPHS (2022). A(.) denotes Atkinson index with respective inequality aversion parameter.

State/Union Territory	NSDP (₹)	Z-Score	State/Union Territory	NSDP (₹)	Z-Score
Andaman & Nicobar Is.	1,72,275	0.62 (High)	Maharashtra	1,53,664	0.34 (Mod.)
Andhra Pradesh	1,26,690	-0.07 (Mod.)	Manipur	60,204	-1.07 (Low)
Arunachal Pradesh	1,02,870	-0.43 (Mod.)	Meghalaya	69,997	-0.92 (Low)
Assam	68,813	-0.94 (Low)	Mizoram	1,40,016	0.13 (Mod.)
Bihar	29,909	-1.52 (Low)	Nagaland	76,462	-0.82 (Low)
Chandigarh	2,44,233	1.70 (High)	Odisha	90,172	-0.62 (Low)
Chhattisgarh	87,838	-0.65 (Low)	Puducherry	1,38,988	0.12 (Mod.)
Delhi	2,58,941	1.92 (High)	Punjab	1,23,874	-0.11 (Mod.)
Goa	2,95,114	2.46 (High)	Rajasthan	84,935	-0.70 (Low)
Gujarat	1,81,963	0.76 (High)	Sikkim	2,73,145	2.13 (High)
Haryana	1,73,973	0.64 (High)	Tamil Nadu	1,66,590	0.53 (High)
Himachal Pradesh	1,51,124	0.30 (Mod.)	Telangana	1,69,354	0.57 (High)

State/Union Territory	NSDP (₹)	Z-Score	State/Union Territory	NSDP (₹)	Z-Score
Jammu & Kashmir	73,947	-0.86 (Low)	Tripura	91,455	-0.60 (Low)
Jharkhand	60,938	-1.06 (Low)	Uttar Pradesh	47,552	-1.26 (Low)
Karnataka	1,75,895	0.67 (High)	Uttarakhand	1,49,547	0.28 (Mod.)
Kerala	1,52,870	0.33 (Mod.)	West Bengal	74,334	-0.86 (Low)
Madhya Pradesh	63,379	-1.02 (Low)	—	—	—

Table A2: State-wise NSDP per Capita and Z-Score Classification (2022-23)

Note: Mean NSDP = ₹1,31,244; Standard Deviation = ₹66,491. Classification: High NSDP (Z > 0.5); Moderate NSDP (-0.5 ≤ Z ≤ 0.5); Low NSDP (Z < -0.5). Source: RBI (2023); Z-scores computed by authors.