Manuscript ID:
IJEBAMPSR-2026-030507

Volume: 3

Issue: 5

Month: October

Year: 2026

E-ISSN: 3065-9140

Submitted: 07 Sept 2026
Revised: 12 Sept 2026
Accepted: 10 Oct. 2026
Published: 31 Oct. 2026

Address for correspondence:
Mahesh Raghunath Hiwale
Research Student,R.B. Narayanrao Borawake College Shrirampur, Ahilyanagar
Savitribai Phule Pune University Pune
Email:
maheshhiwaleofficial@gmail.com

DOI: 10.5281/zenodo.23796890

DOI Link:
https://doi.org/10.5281/zenodo.23796890

Creative Commons (CC BY-NC-SA 4.0):
This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations ae licensed under the identical terms.

Multidisciplinary Research Approaches to Rural and Tribal Economic Development: A Methodological Framework in Alignment with NEP 2020

Mahesh Raghunath Hiwale
Research Student,R.B. Narayanrao Borawake College Shrirampur, Ahilyanagar
Savitribai Phule Pune University Pune

Abstract

The National Education Policy (NEP) 2020 advocates a paradigm shift in Indian higher education by dismantling artificial disciplinary silos and placing community-engaged, multidisciplinary research at the centre of undergraduate and postgraduate curricula. In developing economies like India, rural and tribal regions face multidimensional socio-economic challenges, ranging from agrarian distress and shifting labour patterns to informal debt traps and natural resource degradation. Conventional economic analysis, which relies heavily on standard neoclassical equilibrium models and top-down macro indicators, often fails to capture these nuanced institutional and ecological realities.

This paper develops an applied, multidisciplinary research methodology framework tailored for regional and tribal economic investigations under the mandate of NEP 2020. Using authentic secondary data from the Census of India, the Periodic Labour Force Survey (PLFS), the National Family Health Survey (NFHS-5), and the Reserve Bank of India's credit deployment metrics, this study demonstrates how economics can be integrated with environmental accounting, rural sociology, spatial geography, and computational data analytics. The paper outlines the structural challenges facing non-urban colleges, particularly infrastructure shortages and deficits in faculty development. It sets out a concrete semester-by-semester field research protocol for higher education institutions.

Keywords: *National Education Policy 2020, Rural Economy, Tribal Development, Multidisciplinary Research, Field Methodology, Applied Economics.*

Introduction

Higher education in India has spent decades operating within strictly segmented intellectual domains. Students pursuing the social sciences have rarely encountered natural science methodologies, while those in technical and statistical streams have had minimal exposure to structural social questions. In economics, this institutional compartmentalisation has produced a noticeable divide: academic coursework typically emphasises deductive mathematical models, abstract macro aggregates, and idealised equilibrium theorems, while the practical socio-economic landscape outside the classroom remains informal, agrarian, and culturally layered.
This disconnect is most pronounced when examining rural and tribal economies. Standard textbook models assume complete markets, rational information symmetry, and high factor mobility. In contrast, economic transactions across rural and scheduled tribal regions are deeply intertwined with local ecological systems, customary land tenure, historical credit dependency, and community governance institutions. The National Education Policy (NEP) 2020 identifies this pedagogical shortfall and clearly mandates bridging it. By introducing a flexible Four-Year Undergraduate Programme (FYUP), establishing credit-bearing research projects, and requiring community engagement, the policy creates space to reimagine how students research regional economies.

Rural and tribal development cannot be understood through isolated balance sheets or pure econometric equations alone. It requires an analytical framework that joins economic concepts with ecological resource mapping, public health metrics, sociological field observation, and local administrative governance. This paper constructs an operational multidisciplinary methodology framework designed for college and university economics departments to examine rural and indigenous economic systems under the NEP 2020 curriculum.

How to Cite this Article:
Hiwale, M. R. (2026). Multidisciplinary Research Approaches to Rural and Tribal Economic Development: A Methodological Framework in Alignment with NEP 2020. International Journal of Economics, Business, Accounting, Agriculture and Management Towards Paradigm Shift in Research (, 3(5), 42–46. https://doi.org/10.5281/zenodo.23796890

Policy Mandates and the Need for a New Pedagogy

From rote academic reproduction toward active, exploratory inquiry. Key policy provisions directly relevant to social science research include:

- **Breaking Disciplinary Boundaries:** The policy encourages combinations across humanities, commerce, sciences, and vocational training, recognising that complex modern problems do not fit within traditional academic departments.
- **Undergraduate Research and Internships:** Under the University Grants Commission's (UGC) *Curricular Framework and Credit System for Four-Year Undergraduate Programmes*, research is no longer held back until postgraduate or doctoral study. It is woven into the undergraduate degree through Value-Added Courses (VAC), Skill Enhancement Courses (SEC), and a dedicated 12-credit dissertation track in the final year.
- **Institutional Engagement with Local Communities:** NEP 2020 explicitly requires higher education institutions to act as regional knowledge hubs. Rather than viewing research as an insular campus exercise, colleges are urged to direct student projects toward immediate village clusters, regional micro-enterprises, and marginalised social groups.

  Traditional economic pedagogy has historically struggled to meet these mandates. Standard microeconomics lectures explain consumer utility through smooth indifference curves. Still, they rarely ask students to measure how a tribal household balances seasonal income shocks against informal debt from local traders. Macroeconomics classes teach central banking monetary transmission mechanisms, yet students often remain unfamiliar with how primary agricultural credit societies (PACS) operate in their own talukas. Bridging these structural blind spots requires combining economic inquiry with tools borrowed from allied disciplines.

Socio-Economic Realities of Rural and Tribal India: Authentic Evidence

To build a functional research design, students and researchers must first understand the structural baseline of India's rural and tribal economy using authentic public data:

National Socio-Economic Baseline

├── Rural Population: 68.8% of total (Census of India)

├── Tribal Demographics: 8.6% of population / 104.3 million persons (Census of India)

├── Agricultural Workforce Share: 45.8% of total national labour (PLFS 2022–23)

├── Rural Landholdings: 86.2% small & marginal (< 2 hectares) (Agricultural Census)

└── Financial Inclusion Gap: 20- 30% average informal credit dependency (AIDIS / RBI)

According to the Census of India, approximately 68.8% of the country's population resides in rural areas, with Scheduled Tribes (ST) accounting for 8.6% of the total population (over 104 million individuals). These communities are heavily concentrated across specific geographical belts, such as the central Indian forested plateau and the Western Ghats corridors (including districts like Palghar, Gadchiroli, and Nandurbar in Maharashtra).

Data from the Periodic Labour Force Survey (PLFS 2022–23) shows that agriculture and allied activities continue to employ 45.8% of the country's total workforce, with this proportion exceeding 70% in predominantly tribal rural tracts. Furthermore, the Agriculture Census confirms that small and marginal landholdings (under 2 hectares) make up 86.2% of all operational agricultural landholdings in the country. These small plots face severe weather risks, price instability, and limited access to formal collateralised bank loans.

Health and living conditions follow a similar pattern. The National Family Health Survey (NFHS-5, 2019–21) reports that stunting among tribal children under five years of age remains elevated at 40.9%, compared to the national average of 35.5%. Female literacy in several remote tribal blocks still falls well below 55%, which directly impairs labour bargaining power, household nutrition management, and participation in formal microfinance initiatives.

On the financial front, the All India Debt and Investment Survey (AIDIS), supported by Reserve Bank of India (RBI) supervisory reports, highlights that despite decades of priority sector lending directives, non-institutional credit sources (informal moneylenders, shopkeepers, and labour contractors) still account for between 20% and 30% of total rural household debt. In tribal tracts, this reliance is often compounded by seasonal outward migration to brick kilns, sugarcane fields, or urban construction sites.

Methodological Framework: Integrating Allied Disciplines

To study rural and tribal economic systems accurately, economics departments must build an integrated methodological framework combining five complementary fields:

Environmental Sciences and Common Property Resources (CPR)

In tribal economic systems, household welfare is tied directly to forested surroundings and common grazing lands. Forest products—such as Mahua flowers, tendu leaves, wild medicinal plants, bamboo, and firewood—provide a vital source of seasonal non-farm income and support food security.

Economic methodology must borrow natural resource accounting techniques from the environmental sciences:

- Students should be taught to quantify Common Property Resource (CPR) reliance through household resource tracking.
- Curricula should incorporate methods to calculate environmental degradation, soil erosion, and changing groundwater levels, helping students see how ecological decline translates into household economic losses.

Sociology and Social Anthropology

Quantitative questionnaires often yield misleading or guarded answers when researchers arrive in tight-knit, historically marginalised communities. Rural households may underreport debt out of social caution or misstate income because informal daily wages are irregular.

Integrating sociological and anthropological field tools helps resolve these errors:

- **Participatory Rural Appraisal (PRA):** Techniques like seasonal calendar mapping, resource flow diagrams, and community problem rankings help researchers gather reliable qualitative context alongside quantitative numbers.
- **Focus Group Discussions (FGDs):** Group conversations with women's Self-Help Groups (SHGs) or forest-gathering cooperatives help uncover subtle patterns of price exploitation, wage gaps, and informal credit terms that closed-ended surveys routinely miss.

Spatial Geography and Remote Sensing Tools

Geography often drives socio-economic vulnerability. Remote habitations located far from metalled roads, rail links, regulated wholesale markets (APMCs), and government fair price shops face structural transport markups and limited economic options.

By introducing basic open-source Geographic Information Systems (QGIS, Google Earth Engine) into economic methodology courses, students can map:

- Distance to the nearest primary health centre, bank branch, or weekly market (*haat*);
- Land-use patterns, watershed boundaries, and forest cover changes across different administrative blocks;
- The direct spatial relationship between infrastructure isolation and localised poverty rates.

Computational Data Analytics and Public Datasets

Field research must always be grounded in broader secondary data. Modern economic research training requires students to learn how to verify local field samples against large-scale state and national databases.

Using open-source software such as R, Python, or Gretl, students can be taught to:

- Clean, filter, and extract district-level and sub-sample data from large public datasets like the PLFS, NFHS, and agricultural censuses;
- Run basic cross-tabulations, ordinary least squares regressions, and probit models to understand what factors drive rural labour decisions and crop yields;
- Develop simple, reproducible data cleaning steps, teaching them to handle missing observations and survey weights correctly.

Designing a Four-Year Field Research Sequence

To integrate these methods systematically without overloading students in their final year, departments should organise research training across a four-year undergraduate timeline:

First Year (Semesters 1 and 2): Observation and Foundational Skills

The initial year focuses on building fundamental quantitative literacy alongside basic field exposure. Alongside standard microeconomic and macroeconomic theory, students complete skill courses in digital spreadsheets, data entry, and descriptive statistics.

For their initial multidisciplinary elective, students conduct basic, non-intrusive field observations. For instance, an economics class can visit a local weekly market (*haat*) or agricultural produce market committee (APMC) yard. Instead of running complex econometric tests, students observe price changes over the day, identify key intermediaries, note how goods are measured, and document whether transactions use cash or digital UPI payments. This simple exercise helps students connect foundational concepts like price discovery and liquidity directly to tangible local activity.

Second Year (Semesters 3 and 4): Tool Competency and Survey Basics

In the second year, the focus turns to intermediate economic theory, public finance, and formal research tools. In computational lab courses, students learn to clean and examine secondary microdata from the PLFS, NFHS, or rural banking summaries using open-source tools.

At the same time, students learn how to construct balanced, ethical research surveys. They study how to write clear, unbiased questions, design randomised household sampling strategies, and navigate ethical requirements such as informed consent and respondent anonymity. Field assignments at this stage can focus on evaluating village-level implementation of government programs, such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) or the Public Distribution System (PDS).

Third Year (Semesters 5 and 6): Applied Analysis and Structured Internships

In the third year, coursework covers applied agricultural economics, developmental

economics, and basic econometrics (multiple regression, dummy variables, and multicollinearity).

Students then complete a mandatory summer internship with a local institution—such as a primary agricultural credit society (PACS), a rural bank branch, a forest rights committee, a gram panchayat office, or a grassroots non-governmental organisation (NGO). These placements allow students to observe institutional challenges directly, such as loan recovery bottlenecks, incomplete land records, or logistical delays in rural public works.

Fourth Year (Semesters 7 and 8): Independent Field Research and Dissertation

The final year of the Four-Year Undergraduate Programme centres on the 12-credit research dissertation. Working closely with an assigned faculty advisor, each student formulates a specific, practical research question focused on regional economic dynamics.

A typical project at this level might investigate questions such as:

- *Evaluating the Economic Returns of Minor Forest Produce Procurement Under Minimum Support Price Schemes in Selected Tribal Gram Panchayats;*
- *Assessing the Impact of Solar-Powered Micro-Irrigation Systems on Crop Diversification and Smallholder Incomes;*
- *An Empirical Study of Informal Debt Obligations and Seasonal Migration Patterns Among Landless Tribal Labour Households.*

Students design their survey tools, select a stratified sample of rural households, conduct primary field interviews, cross-reference their findings with official government records, and process the resulting data using appropriate statistical tools. The research concludes with a structured academic thesis and a formal oral defence before an evaluation panel.

Structural Constraints in College Implementation

While the NEP 2020 framework provides a sensible structural blueprint, college departments face clear logistical challenges when putting these practices into place, particularly in non-metropolitan regions:

- **Faculty Workload and Mono-Disciplinary Training:** Most college faculty members carry heavy weekly teaching loads (frequently 16 to 20 direct classroom hours) across crowded lecture schedules. Furthermore, many instructors completed their own education within traditional, theory-centred departments and have had limited opportunities to work with modern statistical software, GIS mapping tools, or mixed-methods field designs.
- **Infrastructural and Computational Deficits:** Meaningful empirical research requires reliable hardware and software: dedicated computer labs, consistent electricity, high-speed internet connectivity, and working statistical programs. In many rural-affiliated institutions, computer labs are either under-equipped or reserved exclusively for computer science departments, leaving social science students without regular access to analytical tools.
- **Funding Constraints for Fieldwork:** Conducting rigorous field surveys requires modest financial support to cover student travel, survey printing, respondent engagement, and data verification. Most state-affiliated colleges operate with tight budgets and lack dedicated internal grants for undergraduate research activities.
- **Language and Translation Bottlenecks:** While national datasets, modern analytical software, and top academic reference materials are published primarily in English, students in rural colleges often complete their coursework and examinations in regional languages (such as Marathi, Hindi, or Telugu). Accurately translating technical economic concepts and survey questionnaires into everyday local dialects requires careful attention that standard curricula rarely provide.

Conclusion

The National Education Policy 2020 offers a timely opportunity to modernise economic pedagogy across India's higher education institutions. The longstanding habit of teaching economics solely through theoretical models, chalkboard proofs, and passive rote learning has left graduates underprepared to evaluate complex real-world economic problems.

By linking economic instruction directly with environmental science, sociology, spatial mapping, and open-source data analytics, colleges can transform economics into an active, practical discipline. When undergraduate and postgraduate students are guided through structured field research—investigating rural credit flows, tribal forest livelihoods, agricultural marketing bottlenecks, and local wage dynamics—they gain valuable analytical skills while generating useful, community-level insights. Addressing the everyday resource constraints faced by non-metropolitan colleges will be critical to ensuring that this research-centred vision becomes a reality across all institutions.

Acknowledgement

The author expresses sincere gratitude to all those who have provided valuable guidance, encouragement, and support in completing this research paper entitled "Multidisciplinary Research Approaches to Rural and Tribal Economic Development: A Methodological Framework in Alignment with NEP 2020." The author acknowledges the contributions of researchers,

academicians, and policymakers whose insights have helped in understanding rural and tribal development through multidisciplinary perspectives. Special appreciation is extended to the principles and objectives of the National Education Policy (NEP) 2020, which emphasize interdisciplinary learning, inclusive education, and holistic development. Finally, the author thanks colleagues, family members, and well-wishers for their constant encouragement and support throughout this academic endeavour**.**

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper**.**

References

1. All India Survey on Higher Education (AISHE). (2023). *All India Survey on Higher Education 2021–22 Report*. Department of Higher Education, Ministry of Education, Government of India, New Delhi.
2. Census of India. (2011). *Primary Census Abstract for Scheduled Castes and Scheduled Tribes*. Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India, New Delhi.
3. Chambers, R. (1994). "The Origins and Practice of Participatory Rural Appraisal." *World Development*, 22(7), 953–969.
4. Government of India. (2020). *National Education Policy 2020*. Ministry of Human Resource Development, New Delhi.
5. International Institute for Population Sciences (IIPS) and ICF. (2021). *National Family Health Survey (NFHS-5), India, 2019–21*. Mumbai: IIPS.
6. Jodha, N. S. (1986). "Common Property Resources and Rural Poor in Dry Regions of India." *Economic and Political Weekly*, 21(27), 1169–1181.
7. Ministry of Agriculture & Farmers Welfare. (2020). *All India Report on Agriculture Census 2015–16*. Agriculture Census Division, Government of India, New Delhi.
8. Ministry of Statistics and Programme Implementation (MoSPI). (2023). *Periodic Labour Force Survey (PLFS) Annual Report (July 2022 – June 2023)*. Government of India, New Delhi.
9. Reserve Bank of India (RBI). (2022). *Report on Trend and Progress of Banking in India 2021–22*. Mumbai: Reserve Bank of India.