

Infrastructure Gaps, Warehousing Inefficiencies, and Governance Malpractices in Agricultural Regulated Markets

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Abstract

While agricultural market regulation in India was enacted to create transparent trading environments, physical infrastructure deficits and institutional governance gaps frequently compromise market efficiency. This paper provides a critical evaluation of the physical infrastructure, transaction integrity, and governance models within the Agricultural Produce Market Committees (APMCs) of Shivamogga district, Karnataka. Based on primary evaluations from 120 farmers, 40 traders, and 20 commission agents across four primary yards, the study maps out infrastructural access asymmetries and documents prevalent market malpractices. The data reveals institutional capture: 80% of traders successfully utilize specialized market godowns compared to only 35% of farmers. Furthermore, a significant majority of farmers report being subjected to unauthorized handling deductions (80.83%) and arbitrary quality cuts (72.50%). Combined with a demographic and tenure stagnation within the elected market committees, these factors result in a 51.66% infrastructural dissatisfaction rate among smallholders. The paper outlines immediate institutional reforms to democratize market governance.

Keywords: APMC, Market Infrastructure, Warehousing Inefficiency, Institutional Capture, Governance Malpractices

1. Introduction

The efficiency of an agricultural marketing system depends heavily on its physical and institutional infrastructure. When the state government regulates an agricultural market under an APMC Act, it commits to providing more than just a legal trading framework. It assumes the responsibility of building and maintaining physical market yards equipped with auction platforms, storage godowns, scientific grading facilities, accurate weighing systems, and transparent governance bodies. Without these physical resources, marketing regulations remain ineffective on paper, failing to improve actual trading conditions.

In practice, however, public investments in market infrastructure often lag behind growing production volumes, or worse, become monopolized by powerful local trading networks. When infrastructure is insufficient or unequally distributed, smallholder farmers face significant challenges. A lack of access to cold storage or dry warehouses forces producers to accept low prices immediately after harvest, while

missing or poorly maintained grading facilities leave them vulnerable to arbitrary quality deductions by buyers.

This institutional critique focuses on the APMC infrastructure in Shivamogga district, Karnataka. By analyzing storage distribution, transaction transparency, and the composition of market committees, this paper examines how infrastructure shortages and governance challenges interact to reduce market efficiency for smallholders.

2. Review of Literature

Empirical research across India has continuously highlighted how infrastructure limits the effectiveness of regulated agricultural markets.

- **Harris (1984)**, in her extensive work on agricultural markets in South India, argued that the physical layout of regulated yards often reflects broader imbalances in rural power structures. Even when state-subsidized facilities are constructed, larger traders and well-capitalized commission agents frequently secure primary access to godowns, turning public infrastructure into a private competitive advantage.
- **Banerjee (2011)** evaluated the operational efficiency of agricultural wholesale markets and observed a strong correlation between infrastructural deficiencies and trade malpractices. When auction platforms are crowded or missing entirely, transactions are pushed into informal spaces, increasing the prevalence of unrecorded handling deductions and uncalibrated weighing practices.
- **Chand (2012)** emphasized that the transition to modern, high-value agricultural marketing requires accurate, automated grading systems. Relying on visual inspection for grading allows buyers to under-grade produce arbitrarily, creating significant information disadvantages for smallholder farmers.
- **Mattoo et al. (2020)** examined governance models in public market yards and concluded that long-standing board members often develop close ties with licensed traders. This institutional stagnation can weaken regulatory enforcement, leading to poor maintenance of public amenities and lower overall farmer satisfaction with the market yard.

The Focus of This Study

Building on these structural critiques, this study evaluates the specific infrastructure and governance conditions within the APMC yards in Shivamogga district of Karnataka

3. Methodology

3.1 Data Sources and Scope

The study utilizes primary survey data collected from four primary APMC yards in Shivamogga district: Shivamogga, Bhadravathi, Sagara, and Thirthahalli. The respondent base consists of 120 farmers, 40 traders, and 20 commission agents.

3.2 Methodological Approach

Infrastructural efficiency was measured by tracking stakeholder access to core market utilities, specifically storage godowns. Systemic transaction issues were categorized using percentage frequency metrics based on direct farmer experiences on the market floor. To analyze governance structures, the demographic profiles and tenure lengths of the elected Market Committee members were evaluated to identify potential institutional consolidation.

4. Empirical Findings and Discussion

4.1 Warehousing Asymmetry and Market Capture

A major indicator of institutional equity within a regulated market is whether public storage facilities are accessible to all stakeholders. The survey data reveals a significant imbalance in warehouse utilization across the district's yards:

While **80.00% of surveyed traders** successfully access and utilize the market godowns to store bulk commodities and manage market timing, only **35.00% of farmers** are able to secure storage space. This leaves **65.00% of farmers** without any access to public storage, forcing them to sell their crops immediately regardless of prevailing price trends.

For the small portion of farmers (**35.00%**) who do secure warehouse space, financial and storage constraints limit long-term inventory management:

- **Under 6 Months: 38.34%** are forced to liquidate their stored stocks within six months due to urgent cash flow needs and product weight loss from moisture depletion.
- **6 to 12 Months: 45.00%** manage to hold their stock for up to a year.
- **Over 2 Years: 0.00%** of farmers are able to hold inventory beyond two years due to storage quality limitations.

Furthermore, farmers who use public warehouses report significant operational issues. **25.8%** of users experience delayed or irregular pest fumigation, and **17.6%** describe general preservation maintenance as poor, which directly contributes to preventable quality deterioration within the yards.

4.2 Taxonomy of Market Floor Malpractices

The lack of transparent, automated infrastructure directly contributes to the persistence of unfair trade practices. The primary transaction issues reported by the 120 farmer respondents are detailed below:

Prevalent Malpractice	Reported Frequency (n=120)	Share (%)	Impact on Producer Returns
Unfair Specified Charges	97	80.83%	Deductions for unauthorized handling, sweeping, and yard maintenance fees.
Arbitrary Quality Deductions	87	72.50%	Value cuts based on visual heuristics and unverified claims of high moisture content.
Large Sample Extractions	78	65.00%	Commission agents taking large produce samples for "display" without compensation.
Improper Weighment	67	55.83%	Inaccuracies from manual scales and uncalibrated equipment that favor the buyer.
Price	56	46.66%	Different prices paid for identical crop

Prevalent Malpractice	Reported Frequency (n=120)	Share (%)	Impact on Producer Returns
Discrimination			grades within the same transaction window.

Only **11.66%** of farmers report experiencing a clean transaction environment completely free of these issues. Because of these persistent challenges and the poor state of public utilities, **37.50%** of farmers express explicit dissatisfaction with APMC services, and **14.16%** report being highly dissatisfied. Consequently, a combined majority of 51.66% of smallholders view current market infrastructure critically.

4.3 Governance Consolidation Within Market Committees

The persistent lack of infrastructure maintenance and weak enforcement against trade malpractices are closely tied to governance issues within the APMC leadership. Nominally, each committee consists of 11 elected members tasked with protecting stakeholder interests and managing yard operations. However, an analysis of committee demographics suggests structural vulnerabilities:

Governance is heavily concentrated in the older demographics, with **65.9%** of committee members falling into the 36–60 age group and **25.0%** aged 61 or older. Conversely, young leadership (18–35 years) is nearly absent, accounting for just 4 members across all select taluks. In the flagship Shivamogga Taluk APMC, there is zero representation under the age of 35.

This demographic pattern is accompanied by long individual tenures. **72.7%** of committee members have served multiple terms, with a significant portion serving three or more consecutive terms. This long-standing consolidation can foster close, comfortable networks between market regulators, prominent licensed traders, and commission agents. This alignment can dilute regulatory oversight, slow institutional reforms, and contribute to the high off-market leakage rates observed across the district.

5. Targeted Policy Interventions

To resolve these infrastructure gaps and improve market governance in Shivamogga district, the following policy interventions are recommended:

5.1 Restructuring Warehousing Access Policies

APMC warehouse guidelines should be updated to mandate that at least **50%** of public godown capacity be reserved exclusively for small and marginal farmers. Traders should only be permitted to access remaining unallocated space after farmer storage needs are met during peak harvest weeks.

5.2 Modernization of Weighing and Grading Systems

To eliminate arbitrary quality deductions and weighing discrepancies, manual operations should be replaced with digital, automated systems. APMC yards must install electronic weighbridges and standardized moisture-testing meters managed by independent technicians, ensuring objective quality assessments before bidding begins.

5.3 Democratization of Governance and Enforcement

The state marketing department should introduce institutional checks to counter governance capture. Term limits should be established for elected Market Committee members (maximum of two terms) to encourage leadership renewal. Additionally, an independent, digital dispute-redressal cell should be set

up in each yard, allowing farmers to report malpractices like unauthorized deductions or excessive sampling directly to regional regulators.

6. Conclusion

The findings of this study show that the legal regulations governing APMC yards in Shivamogga district are frequently undermined by physical infrastructure deficits and governance challenges. The unequal distribution of storage space—where 80% of traders access godowns compared to just 35% of farmers—limits the ability of smallholders to manage market timing effectively. This vulnerability is compounded by high rates of unauthorized transaction fees and arbitrary quality deductions on the market floor.

Addressing these challenges requires a shift from simple regulatory enforcement to active institutional reform. By modernizing weighing and grading infrastructure, reallocating storage access to favor smallholders, and introducing governance reforms to increase leadership accountability, APMCs can better fulfill their mandate: creating fair, efficient, and transparent marketing ecosystems for all agricultural producers.

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