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Research Paper

Impact of Demonetization in India: A Comparative Study of Agriculture, Real Estate, and Manufacturing Sector

Siddharajsinh V. Rana

Assistant Professor, TMES, Institute of Business Management & Computer Studies, Gujarat Technological University, Ahmedabad, Gujarat, India

Abstract

This paper conducts a comparative empirical analysis of the short-term sectoral impact of the Central government's demonetization of ₹500 and ₹1000 currency notes on November 8, 2016, specifically focusing on the Agriculture, Real Estate, and Manufacturing sectors. Utilising high-frequency secondary data from November 2016 to June 2017 (RBI reports, APMC data, PMI indices), the study finds a significant, yet differential, transient adverse shock across the sectors. The Agriculture sector, due to its heavy reliance on cash for inputs and transactions, experienced an acute initial shock (Nov-Dec 2016) reflected in decreased mandis arrivals and price volatility, followed by a swift recovery post-remonetisation. The Real Estate sector faced a more structural and persistent slump in the resale and luxury segments, driven by the crackdown on unaccounted wealth and cash transactions. Manufacturing, particularly the unorganised segment, saw a sharp contraction in the Purchasing Managers' Index (PMI) and industrial output due to sudden demand and liquidity shocks, which largely dissipated by Q4 FY 2016-17. The paper concludes that the policy's primary short-term effect was a temporary liquidity-driven slowdown that accelerated the formalisation of the economy, but disproportionately harmed the unorganised and cash-intensive segments of these key sectors.

Key word – *Demonetization, Sectoral Impact, Agriculture, Real Estate, Manufacturing, Cash Economy, Liquidity Shock*

1. Introduction

The demonetization of 86% of the currency in circulation by value on November 8, 2016, was one of India's most radical economic experiments. Aimed at reducing black money, counterfeit currency, and terror funding, while encouraging a digital economy, the policy immediately caused a severe liquidity crunch.

The primary hypothesis of this paper is that the impact of this currency shock was heterogeneous across different sectors of the Indian economy, based on their degree of cash dependence and level of formalisation. This study isolates the short-term impact on three core sectors—Agriculture, Real Estate, and Manufacturing—during the critical period of November 2016 to June 2017.

1.1 Objectives of the Study

1. To document and analyse the short-term impact of demonetization (Nov 2016–Jun 2017) on the **Agriculture** sector, focusing on input markets and *mandi* (market) transactions.
2. To assess the immediate effects on the **Real Estate** sector, specifically transactional volume and price trends in the primary and secondary markets.
3. To examine the immediate response of the **Manufacturing** sector using high-frequency indices and industrial output data.
4. To conduct a **comparative analysis** explaining the differential shock and recovery trajectory across the three selected sectors.
5. To identify key challenges faced and policy implications for each sector.

2. Literature Review

Existing literature provides a strong foundation by identifying the channels through which demonetization affected the economy.

Several researchers have analysed demonetization's multifaceted effects:

- **Reddy (2017)** highlighted that demonetization caused a temporary slowdown but improved digital financial inclusion.
- **Ghosh (2017)** examined rural distress caused by liquidity crunches, especially in agriculture.
- **Kumar & Narayan (2018)** identified the real estate sector as one of the worst hit due to its cash-heavy transactions.
- **RBI (2017) Annual Report observed a decline in cash transactions but also an increase in mobile and UPI payments.**
- **NITI Aayog (2017)** emphasised long-term gains through formalisation and increased tax compliance.
- **Cash Dependence and the Informal Sector**: Several studies (e.g., Basu, 2018) highlight the severe impact on the large informal sector, which relies almost entirely on cash for transactions. The sudden removal of high-denomination notes acted as a tax on this sector's wealth and working capital.
- **Agriculture:** Papers focusing on agriculture (e.g., Aggarwal & Narayanan, 2018) observed an immediate, sharp decline in arrivals and prices in APMC mandis due to the cash crunch that limited traders' ability to purchase produce and farmers' capacity to pay for Rabi season inputs.
- **Real Estate:** The consensus is that the sector, a traditional haven for **black money**, experienced a significant reduction in secondary market transactions and a notable slowdown in new project launches.[2] However, the organised/primary segment was relatively less affected (e.g., NIPFP, 2016).
- **Manufacturing:** The shock is transmitted through both supply-side (liquidity crunch for SMEs) and demand-side (slump in consumer spending) channels. High-frequency indicators like the PMI showed a temporary contraction in recent months.

The current paper builds upon this by systematically comparing the magnitude and duration of the shock across the three chosen sectors, using the tightly defined Nov 2016 to Jun 2017 data period to capture the full short-term shock-and-recovery cycle.

3. Research Methodology and Data Collection

3.1 Research Design

The study adopts an **ex-post facto comparative research design & descriptive comparative research design**. Since demonetization was a sudden, one-time policy shock, the analysis focuses on comparing key economic indicators *before* (baseline: Oct 2016/Oct-Dec 2015) and *after* the event (treatment period: Nov 2016–Jun 2017) across the three sectors.

3.2 Data Collection and Sources (Nov 2016 to Jun 2017)

The study relies exclusively on **secondary data** for the period of analysis:

Sector	Data Source	Specific Indicators
Agriculture	Agmarknet reports from the National Bank for Agriculture and Rural Development (NABARD).	APMC *Mandi* Arrivals (Volume in tonnes), Wholesale Price Index (WPI) for primary food articles, and Rabi Season Sowing Area statistics (Nov 2016 - Jan 2017).
Real Estate	Reserve Bank of India (RBI), National Housing Bank (NHB) Residex, CRISIL/ICRA reports.	Housing Price Index (HPI) data, Registration of Deeds/Properties (proxy for transactions), and Credit Growth to the sector.
Manufacturing	RBI, Central Statistics Office (CSO), Markit.	Index of Industrial Production (IIP) for Manufacturing (Month-on-Month, YoY), Purchasing Managers' Index (PMI) for Manufacturing (monthly Nov 2016 - Jun 2017).

Data was collected from credible government and institutional sources:

- Reserve Bank of India (RBI)
- Ministry of Agriculture & Farmers Welfare
- Ministry of Housing and Urban Affairs

- Ministry of Commerce and Industry
- Centre for Monitoring Indian Economy (CMIE)
- National Sample Survey Office (NSSO)
- Various journal articles and reports (2016–2018)

Data Collection and Overview (Nov 2016 – June 2017)

Sector	Key Indicator	Pre-Demonetization (Q2 FY17)	Post-Demonetization (Q3–Q4 FY17)	Change
Agriculture	Food grain output (million tonnes)	275	270	-1.80%
Real Estate	Housing sales (Top 8 cities)	78,000 units	53,000 units	-32%
Manufacturing	IIP Manufacturing Index	114.6	110.3	-3.80%

Source: RBI, CMIE, Economic Survey 2016–17, NITI Aayog Reports

Tools of Analysis

Comparative and trend analysis techniques are used, supported by percentage changes, growth indices, and sectoral output indicators.

4. Data Analysis and Interpretation

Agriculture Sector

Agriculture is highly cash-dependent, especially for transactions involving seeds, fertilisers, and wages. Post-demonetization, rural credit availability contracted sharply, causing delayed sowing and lower productivity. Agricultural mandis reported reduced trading volumes by over 30% in December 2016. However, by April 2017, improved liquidity and rural banking helped the partial recovery.

Initial Shock (Nov-Dec 2016): Data revealed a sharp drop in daily APMC arrivals (e.g., by over 12% in the first two weeks) and a corresponding fall in wholesale prices for perishable goods (fruits and vegetables). This was due to the inability of cash-dependent traders and commission agents to transact.

WPI Interpretation: The WPI for primary food articles initially softened, reflecting the cash-induced demand-side compression and distress sales by farmers.

Recovery (Jan-Jun 2017): As remonetisation gained pace and the government introduced exemptions for certain farm-related payments, the sector showed remarkable resilience. The Rabi sowing area for 2016-17 ultimately surpassed the previous year's level, demonstrating the transient nature of the liquidity shock and the sector's quick adaptation.

Real Estate Sector

The Real Estate sector, long associated with unaccounted cash transactions, witnessed one of the steepest declines. Sales dropped by nearly one-third in Q3 FY17, and new project launches slowed drastically. Small developers faced liquidity shortages, while primary markets shifted towards transparency post-RERA implementation in 2017. The sector's restructuring continued beyond June 2017.

Market Contraction (Nov 2016-Jun 2017): The sector saw the most protracted negative impact. Property registration volumes (a proxy for transactions) witnessed a sharp decline in many major cities.

Price Dynamics: While the NHB Residex (official HPI) showed a moderate decline for primary housing, anecdotal evidence and reports focused on the secondary/resale market indicated an immediate and significant price correction (estimated 20-30% in cash-intensive segments) as the black money component was eliminated.

Construction: The cash crunch severely impacted construction activity, delaying projects and causing temporary labour displacement, as daily wages are typically cash-based.[3]

Manufacturing Sector

Manufacturing output experienced moderate disruption due to reduced consumer demand and supply chain cash shortages. Small and medium enterprises (SMEs) were hit hardest. However, large industries with digital payment systems and organised distribution networks managed better. The Index of Industrial Production (IIP) fell by around 4% in Q3 FY17 but recovered by mid-2017 as cash supply normalised.

PMI Contraction (Dec 2016): The **Manufacturing PMI** dropped sharply into contraction territory (below 50) in December 2016—a clear indicator of falling production and new orders.

IIP Deceleration: The **IIP for Manufacturing** showed a noticeable deceleration in growth during Q3 (Oct-Dec) 2016-17, primarily due to depressed consumer demand.

Differential Impact: The shock was most severe for **SMEs and unorganized units** that lacked access to formal credit and banking channels. Organised manufacturing, especially those dealing in digital B2B transactions, was less affected.

Recovery (Q4 2016-17 onwards): The PMI quickly rebounded in early 2017, and the IIP trend improved by the June 2017 period, indicating that the demand and supply shock was **temporary**.

5. Comparative Analysis and Findings

5.1 Comparative Analysis

The table below summarises the differential impact:

Sector	Nature of Shock	Timeframe of Acute Shock	Long-term Structural Change
Agriculture	**Liquidity/Working Capital Crisis** (Input and Output markets).	**Immediate (Nov - Dec 2016)**, fully recovered by early 2017.	Accelerated shift to formal credit (Kisan Credit Cards) and digital payment pilots.
Real Estate	**Wealth/Transactional Shock** (Crackdown on black money).	**Protracted (Nov 2016 - Jun 2017)** and beyond.	Increased transparency, formalisation of transactions, and reduced cash component in resale/land deals.
Manufacturing	**Dual Shock (Demand & Supply/SME Liquidity)**.	**Short-lived (Dec 2016 - Jan 2017)**, followed by rapid recovery.	Faster adoption of digital payments in supply chains; hit to the informal manufacturing economy.

Indicator	Agriculture	Real Estate	Manufacturing
Cash Dependency	Very High	Very High	Moderate
Immediate Impact	Severe	Severe	Moderate
Recovery Time	3–4 months	6–9 months	2–3 months
Formalization Benefit	Medium	High	High
Long-term Digitalization	Moderate	Significant	Strong

This comparison indicates that **Real Estate suffered the deepest and longest disruption**, whereas **Manufacturing rebounded fastest**. Agriculture's impact was severe but temporary, largely dependent on rural credit flow and crop cycles.

5.2 Key Findings

1. Demonetization disrupted all three sectors due to cash shortages and transaction delays.
2. Agriculture faced rural distress and reduced mandi activity, but recovered partially with digital initiatives.
3. Real Estate saw a structural slowdown, with a shift towards transparency and formal financing.
4. Manufacturing experienced a moderate short-term output contraction but benefited later from digitisation.
5. The severity of impact correlated directly with each sector's cash dependency.
6. By June 2017, liquidity normalisation and improved banking outreach reduced overall distress.

7. Transient Liquidity Shock: The direct negative impact of the cash shortage was most acute but shortest-lived in the Agriculture and Manufacturing sectors, largely dissipating by mid-February 2017.
8. Structural Correction in Real Estate: The impact on Real Estate was deeper and more structural, targeting the illicit cash flow that propped up inflated prices in the secondary market. The sector saw a longer period of contraction in transactional volume.
9. Informal vs. Formal Economy: The study confirms that the demonetization shock was a pro-formalisation policy that disproportionately hit the cash-intensive informal segments within all three sectors, contributing to a short-term deceleration in GDP growth (which bottomed out in Q4 FY 2016-17).

6. Conclusion and Recommendations

6.1 Conclusion

Demonetization had divergent sectoral impacts across the Indian economy. While it succeeded in promoting digital payments and formalisation, the short-term disruptions were significant, especially for unorganised and cash-intensive sectors. Agriculture and Real Estate were more vulnerable due to their dependence on informal credit and cash transactions. Manufacturing, though affected, recovered relatively faster due to stronger institutional linkages. The reform underscored the need for policy synchronisation, ensuring liquidity support and digital infrastructure before implementing such large-scale reforms.

The demonetization exercise of 2016 acted as a powerful, albeit disruptive, catalyst for economic change. While the Agriculture and Manufacturing sectors demonstrated a robust, short-term V-shaped recovery post-remonetisation, the Real Estate sector experienced a more fundamental and lasting change, moving towards greater transparency and lower cash dependence. The Nov 2016 to Jun 2017 data period clearly captures the differentiated intensity and duration of the policy's shock across these vital sectors.

6.2 Recommendations

1. **Strengthen Rural Banking Infrastructure** – Increase availability of ATMs, micro-ATMs, and mobile banking in rural areas.
2. **Promote Digital Literacy** – Conduct awareness programs for farmers and small traders.
3. **Support Formal Financing in Real Estate –** Encourage transparent digital transactions and credit linkages.
4. **Ensure Liquidity Management in Reforms –** Gradual implementation with transitional support mechanisms.
5. **Data-driven Policy Planning** – Real-time monitoring of sectoral performance during major economic transitions.
6. **Agricultural Finance:** Policy should focus on expanding the network of **Cooperative Banks** and promoting **digital literacy** in rural *mandis* to permanently reduce the sector's vulnerability to cash shocks.[4]
7. **Real Estate Regulation:** Strict enforcement of the **Benami Transactions Act** and **RERA** must continue to lock in the transparency gains initiated by demonetization.
8. **SME/Unorganised Support:** Future policies affecting liquidity must include provisions for a smoother transition for **MSMEs** in the Manufacturing sector, potentially through targeted cash support or guaranteed credit lines.

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