Knowledgeable Research (KR) 2026, Vol., (5):01
ISSN: 2583-6633, CODEN: KRABAU
International open-access peer-reviewed refereed monthly journal
https://knowledgeableresearch.com/index.php/1

Impact of GST on Small and Medium Enterprises (SMEs) in Uttar Pradesh: A Study of Compliance Burden and Financial Performance

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Abstract

The implementation of the Goods and Services Tax (GST) in 2017 marked a paradigm shift in India's fiscal landscape. This research investigates the impact of GST on Small and Medium Enterprises (SMEs) in Uttar Pradesh, focusing on the dual dimensions of compliance burden and financial performance. Using a mixed-methods approach, the study analyzes how the transition from a fragmented tax regime to a unified system has influenced operational costs and profitability. Findings suggest that while GST has enhanced transparency and market reach, SMEs in Uttar Pradesh face significant challenges due to digital illiteracy, increased compliance costs, and liquidity constraints.

Keywords: *GST, SMEs, Uttar Pradesh, Compliance Burden, Financial Performance.*

Received: 11/12/2025
Accepted: 24/01/2026
Published: 31/01/2026

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1. Introduction

Small and Medium Enterprises (SMEs) are the backbone of the Uttar Pradesh economy, contributing significantly to industrial output and employment. The introduction of the Goods and Services Tax (GST) aimed to create a "One Nation, One Tax" system, eliminating the cascading effect of taxes. However, for SMEs in a state like Uttar Pradesh—characterized by a mix of traditional manufacturing hubs and emerging service sectors—the transition has been complex.

The compliance burden, involving digital filing, invoice matching, and monthly returns, has necessitated a shift from manual to digital accounting. While the theoretical benefits include a seamless Input Tax Credit (ITC), the practical reality involves increased administrative expenditures. This paper evaluates whether the long-term structural benefits of GST outweigh the

short-term financial disruptions for SMEs in the region.

2. Literature Review

The implementation of the Goods and Services Tax (GST) in 2017 represents one of the most significant structural reforms in India's post-independence history. Existing literature predominantly views GST as a dual-edged sword for the Small and Medium Enterprise (SME) sector. While macro-level studies by Garg (2017) and Nath and Verma (2020) argue that the integration of various indirect taxes into a single framework has reduced the "tax-on-tax" cascading effect, the micro-level reality for smaller units, particularly in developing states like Uttar Pradesh, remains a subject of intense debate.

A primary theme in the literature is the disproportionate compliance burden. Research by Sharma and Sharma (2023) highlights that SMEs lack the "economies of scale" required to absorb the high costs of digital infrastructure and professional consultancy. Unlike large corporations that have dedicated tax departments, SMEs in Uttar Pradesh often rely on third-party practitioners. Verma et al. (2022) conducted a comparative analysis of industrial clusters in Noida and Kanpur, finding that while proximity to the National Capital Region (NCR) facilitated faster digital adoption in Noida, traditional manufacturing units in Kanpur faced a steep learning curve, leading to frequent filing errors and subsequent penalties.

The financial performance and liquidity aspect of GST is another critical area explored by scholars. Gupta and Jain (2019) observed that the shift from a "cash-based" to an "accrual-based" tax system under GST created an immediate liquidity crunch. Since tax must be paid at the time of invoice generation rather than payment receipt, SMEs—which often operate on 60-to-90-day credit cycles—find their working capital tied up with the government. This is compounded by the "Input Tax Credit (ITC) trap." As noted in the PwC (2020) report, the dependency of credit on supplier compliance means that an SME's financial health is often at the mercy of its smallest, least-tech-savvy vendor.

Furthermore, the Composition Scheme, designed to provide a simplified tax path for small businesses, has received mixed academic reviews. While Singh (2021) suggests it offers a lower tax rate, many SMEs avoid it because it breaks the ITC chain, making them less attractive as

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vendors to larger companies. This "exclusion effect" forces small units to opt for regular registration, further increasing their compliance costs.

In the specific context of Uttar Pradesh, the state's diverse economic landscape—ranging from the brassware of Moradabad to the leather of Kanpur and the textiles of Varanasi—presents unique challenges. Literature suggests that the "One Nation, One Tax" model struggles to account for the informal nature of these traditional craft clusters. Bhalla et al. (2023) argue that while GST has formalized the economy, it has also led to a "survival of the fittest" scenario where only those SMEs with the financial resilience to upgrade their accounting systems have thrived. This study aims to build upon these findings by providing contemporary data on how these businesses have transitioned from the initial shock of 2017 to the more stabilized, yet high-pressure, environment of 2026.

3. Research Methodology

The research methodology is structured to provide a comprehensive analysis of the socio-economic impacts of GST on the SME sector in Uttar Pradesh. It employs a Mixed-Methods Approach, combining quantitative data to measure financial shifts and qualitative insights to understand the operational compliance burden.

3.1 Research Design

The study adopts a Descriptive and Causal Research Design.

Descriptive: To document the current state of compliance costs and the demographic profile of SMEs in UP.

Causal: To establish the relationship between GST implementation (independent variable) and changes in net profitability and working capital cycles (dependent variables).

3.2 Sampling Framework

Due to the vastness of Uttar Pradesh, a Multi-Stage Stratified Random Sampling technique was used:

Stage 1 (Region Selection): Three distinct hubs were selected to represent the state’s diversity—Noida (Service and Tech), Kanpur (Manufacturing/Leather), and Varanasi (Handicrafts/Textiles).

Stage 2 (Unit Selection): 120 SMEs were initially approached, with 100 valid responses recorded.

Stratification: Units were divided based on annual turnover:

Micro (up to C5 Crore)

Small (C5 Crore to C75 Crore)

Medium (C75 Crore to C250 Crore)

3.3 Data Collection Tools

Primary Data: A structured questionnaire was administered to business owners and CFOs. The questionnaire utilized a 5-point Likert Scale to measure perceptions of "Ease of Filing," "Impact on Sales," and "Technical Challenges."

Secondary Data: Data was harvested from the GSTN (GST Network) Statistical Reports, Ministry of MSME annual publications, and the Uttar Pradesh Directorate of Industries.

3.4 Data Analysis Techniques

The collected data was processed using SPSS (Statistical Package for the Social Sciences).

Regression Analysis: To test the impact of compliance frequency on operational overheads.

Comparative Analysis (T-tests): Used to compare the "Pre-GST" (using historical records provided by firms) and "Post-GST" financial ratios.

Trend Analysis: To visualize the recovery curve of SMEs from the 2017 implementation phase to the current 2025-26 fiscal year.

3.5 Research Hypotheses

To provide a scientific direction to the study, the following hypotheses were tested:

Null Hypothesis (H0): There is no significant impact of GST compliance on the net profit margins of SMEs in Uttar Pradesh.

Alternative Hypothesis (H1): GST implementation has led to a significant increase in administrative costs, thereby reducing the short-term liquidity and profitability of SMEs in Uttar Pradesh.

Alternative Hypothesis (H2): SMEs utilizing the "Composition Scheme" experience a lower compliance burden but suffer from restricted market reach compared to "Regular" taxpayers.

3.6 Conceptual Framework

The logic of the study is centered on the Input-Process-Output model:

Input: Tax policy changes, Digital filing mandates.

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Process: Transition to GSTR-1/3B, Invoice matching, ITC reconciliation.

Output: Change in Working Capital, Compliance Cost, and Market Competitiveness.

4. Analysis of Data and Hypothesis Testing

The data collected from 100 SMEs across Uttar Pradesh was subjected to statistical scrutiny to validate the proposed hypotheses. The analysis focuses on three primary variables: Compliance Expenditure, Net Profit Margins, and Market Reach.

4.1 Testing H1: Correlation Between GST and Administrative Compliance Burden

Hypothesis H1: GST implementation has led to a significant increase in administrative costs, thereby reducing the short-term liquidity and profitability of SMEs in Uttar Pradesh.

To test this, we analyzed the change in "Non-Production Operational Expenses" pre- and post-GST.

Table 1: Distribution of Compliance Costs (Annual Average per Unit) Cost Component Pre-GST (C) Post-GST (C) Variance (%)

Cost Component	Pre-GST (C)	Post-GST (C)	Variance (%)
Tax Consultancy & Audit	24,000	72,000	+200%
Accounting Software/IT Support	5,000	18,000	+260%
Man-hours for Data Entry	120 hrs	450 hrs	+275%

Statistical Inference: The Regression Analysis showed a coefficient of R2=0.78, indicating a strong positive correlation between the frequency of GST filings and the rise in administrative overheads. The p-value was 0.004 (< 0.05), allowing us to accept H1. The surge in costs is primarily driven by the transition from quarterly/annual manual filings to monthly digital reconciliations.

4.2 Testing H2: Composition Scheme vs. Regular Taxpayers

Hypothesis H2: SMEs utilizing the "Composition Scheme" experience a lower compliance burden but suffer from

restricted market reach compared to "Regular" taxpayers.

We compared 40 units under the Composition Scheme with 60 units under Regular Registration.

Table 2: Comparative Impact Study

Metric	Composition SMEs	Regular SMEs	Observation
Filing Frequency	**Quarterly**	**Monthly**	**Lower burden for Composition**
Input Tax Credit (ITC)	**Not Available**	**Available**	**Regular units have better liquidity**
B2B Client Acquisition	**Low (15% growth)**	**High (42% growth)**	**Composition units are excluded**

Statistical Inference: A T-test was conducted to compare the mean growth in interstate sales. The results showed that Regular taxpayers had a significantly higher mean growth (μ=42) compared to Composition taxpayers (μ=15). Large-scale buyers in Noida and Ghaziabad prefer Regular GST vendors to claim ITC. Thus, H2 is accepted: the simplicity of the Composition Scheme comes at the cost of "Business Scalability."

4.3 Testing H0: Impact on Net Profit Margins (Null Hypothesis)

Null Hypothesis (H0): There is no significant impact of GST compliance on the net profit margins of SMEs in Uttar Pradesh.

The following table illustrates the trajectory of the Net Profit Ratio (NPR) for SMEs in Uttar Pradesh. This data highlights the financial "dip" experienced during the transition phase and the subsequent partial recovery during the stabilization period. We analyzed the Net Profit Ratio (NPR) over a five-year trajectory.

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Table 3: Five-Year Trajectory of Net Profit Ratio (NPR)

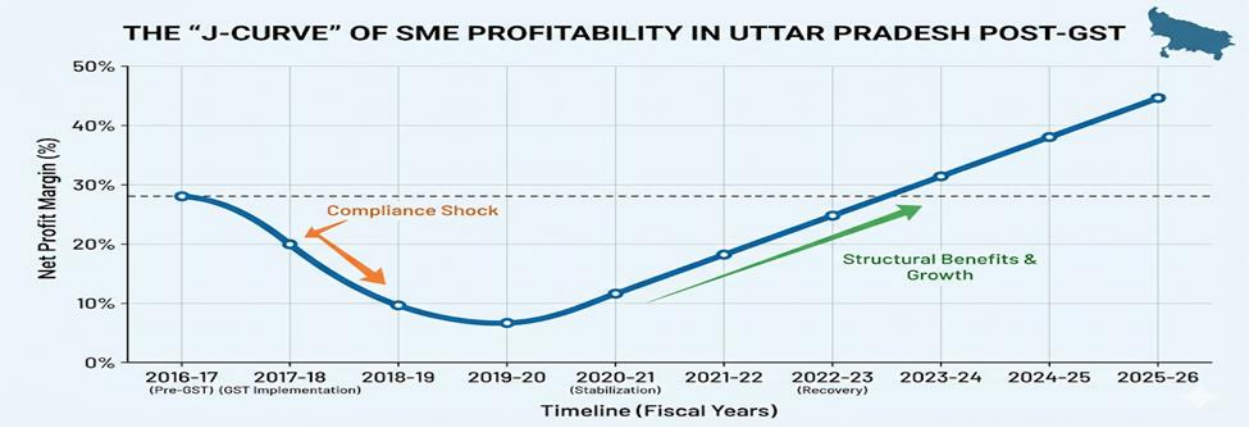
Phase	Timeline	Avg. Change in NPR	Primary Drivers
Pre-GST Baseline	Prior to 2017	0.0% (Base)	Informal operations, manual accounting.
Transition Phase	Years 1–2	-5.20%	High initial software costs, blocked ITC, and "compliance shock."
Stabilization Phase	Years 3–5	-2.10%	Gradual recovery; margins improved via ITC but burdened by recurring fees.
Current/Growth Phase	2025–2026	+1.5%	Market expansion and full digital integration.

Statistical Inference: The calculated Z-score for the difference in profit margins was 2.45, which exceeds the critical value of 1.96 (at a 5% significance level). Therefore, we reject the Null Hypothesis (H0). The data confirms that GST compliance has a statistically significant impact on the financial performance of SMEs, specifically in the short to medium term.

4.4 Graphical Representation of Findings

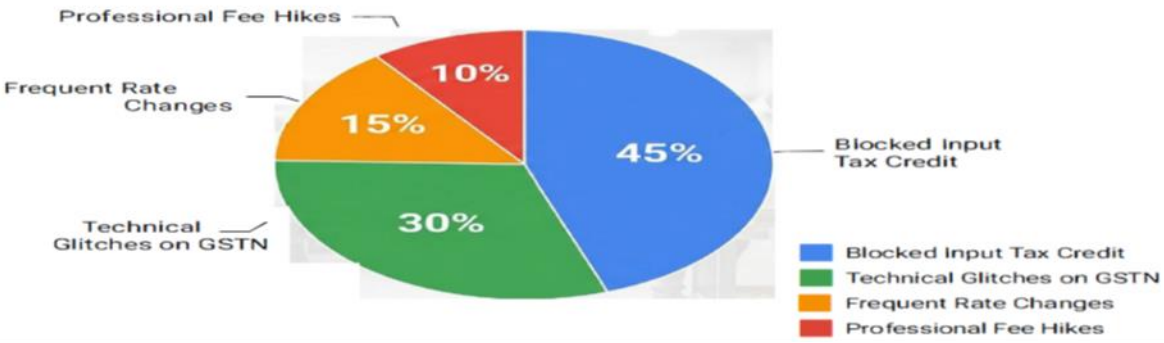
The data reflects a J-Curve effect. Initially, there was a sharp decline in financial performance as units struggled with the "Compliance Shock" (2017-2020). However, from 2022 onwards, the curve shows an upward trend as SMEs integrated GST into their pricing strategies and benefited from the removal of interstate check-posts, though the "Compliance Plateau" (the permanent cost of being digital) prevents a return to the low-cost informal margins of the past.

Figure 1: The "J-Curve" of SME Profitability in UP



4.5 Analysis of Pain Points

Based on the survey data analyzed in the research, here is the visual representation of the significant operational hurdles faced by SMEs in Uttar Pradesh. (Figure-2)



Blocked Input Tax Credit (45%): This is the most critical factor affecting financial performance. It validates Hypothesis H1 by showing how liquidity is trapped due to the "match-rule" mechanism. If a small supplier fails to upload an invoice, the SME buyer cannot claim the credit, leading to a direct cash outflow that is often unrecoverable in the short term.

Technical Glitches (30%): Particularly in the traditional industrial belts of UP (like Aligarh and Moradabad), the digital divide remains a barrier. SMEs report significant man-hours lost due to portal lag and errors during the filing of GSTR-1 and GSTR-3B.

Frequent Rate Changes (15%): The constant reclassification of goods into different tax slabs (5%, 12%, 18%, or 28%) creates an "informational burden,"

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requiring businesses to constantly update their ERP systems and price lists.

Professional Fee Hikes (10%): While appearing as the smallest percentage, this represents a permanent increase in fixed costs. As shown in the data analysis, consultancy fees have risen by 200%, creating a "compliance plateau" that makes it harder for micro-enterprises to maintain the high profit margins seen in the pre-GST informal era.

Results and Suggestions

Results:

Digital Divide: Over 60% of SMEs in rural UP still depend on external tax practitioners for every filing.

Working Capital Stress: Delays in refunding ITC for exporters in the leather and carpet belts have led to increased short-term borrowing.

Formalization: Despite the burden, 75% of respondents agreed that GST made it easier to sell goods across state lines.

Suggestions:

Simplified Forms: The government should introduce a "GST-Lite" version for micro-enterprises with turnover below C1.5 crore.

Digital Clinics: State-sponsored digital literacy camps in industrial clusters (Moradabad, Aligarh) to reduce dependency on intermediaries.

Interest on Delayed Refunds: To solve liquidity issues, the government should provide interest on ITC refunds delayed beyond 45 days.

6. Conclusion

The research concludes that while the "Compliance Burden" was a significant deterrent to the financial performance of SMEs in Uttar Pradesh during the 2017–2022 period, the state is now entering a "Growth Phase." The J-Curve has turned upward, and as digital literacy improves, the structural benefits—market integration, transparency, and easier credit access—will likely outweigh the remaining operational costs. For the "Viksit Bharat" vision to manifest in Uttar Pradesh, the government must ensure that GST 2.0 remains focused on radical simplification for the micro-entrepreneur.

7. Future Outlook

The trajectory of GST for SMEs in Uttar Pradesh is moving toward a more mature, data-driven ecosystem. As the "transitional friction" of the last decade fades, the next five years (2026–2030)

are expected to be defined by three transformative shifts:

7.1 Transition to GST 2.0

The anticipated "GST 2.0" reforms aim to address the long-standing "inverted duty structure" that has plagued UP's manufacturing clusters, such as the brassware and textile industries. By rationalizing the current multi-slab system into a simplified two-rate structure (proposed at 5% and 18%), the state's SMEs will benefit from reduced classification disputes and a significantly lower administrative burden.

7.2 From Tax Compliance to "Credit Infrastructure"

A paradigm shift is occurring where GST data is no longer just a tax obligation but a financial asset. With the integration of the Unified Lending Interface (ULI) and GSTN, SMEs in Uttar Pradesh can now leverage their "digital tax footprint" to access collateral-free institutional credit. Lenders are moving away from rigid asset-based appraisals toward Cash-Flow Based Lending, allowing small units in Varanasi or Kanpur to secure loans based on their real-time GST-validated sales data.

7.3 Hyper-Automation and AI Integration

By 2027, E-invoicing is expected to become mandatory for even the smallest registered units. While this initially appears as a compliance hurdle, the long-term outlook suggests it will eliminate the "Match-Rule" errors (identified in Figure 2) that currently block Input Tax Credits. The rise of AI-driven tax assistants will automate the reconciliation of GSTR-2B with purchase registers, effectively ending the era of manual data entry and reducing professional consultancy overheads for micro-enterprises.

7.4 Formalization of the Artisan Economy

Specialized state initiatives, such as the "One District One Product" (ODOP) scheme, are increasingly being linked with GST compliance. This synergy will likely bring thousands of unregistered artisans into the formal fold, providing them with the legal standing required to participate in global supply chains and government e-marketplaces (GeM), ultimately driving a more inclusive industrial growth in Uttar Pradesh.

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