

Ink, Compliance, and Cost: Evaluating the Impact of GST on India's Printing and Packaging MSMEs

Palak Baghla¹ | Dr. Ashish Asopa² | Dr. K. R. Choudhary^{3*}

¹Research Scholar (Economics), Department of Social Sciences, University of Kota, Kota, Rajasthan, India.

²Assistant Professor, Department of Commerce & Management, University of Kota, Kota, Rajasthan, India.

³Assistant Professor (Economics), Department of Social Sciences, University of Kota, Kota, Rajasthan, India

*Corresponding Author: krjchoudhary@gmail.com

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ABSTRACT

The Goods and Services Tax (GST) implementation established an indirect taxation system for India through its creation of distinct operational standards which Micro Small and Medium Enterprises (MSMEs) in India had to follow. The research studies how GST affects the printing and packaging industry through its impact on cost structure and tax compliance and working capital management and market competitiveness. The research uses primary survey data to conduct quantitative analysis which examines whether GST enhances efficiency through input tax credit benefits while increasing compliance requirements for smaller businesses. The research results show that GST improved tax transparency and supply chain integration but MSMEs faced financial difficulties because of complex procedures and slow input credit processing which occurred during the initial period. The development of standardized taxation systems through formalization enabled businesses to achieve improved accountability while gaining competitive benefits. The research findings show that GST produces diverse effects which presently stabilize their economic impact on the industry.

Keywords: GST, MSMEs, Printing Industry, Packaging Sector, Tax Reform, Compliance Cost, Input Tax Credit, Formalization, Indirect Taxation, India.

Introduction

The Goods and Services Tax serves as the most important fiscal reform that India has enacted for its indirect tax system. The Government of India established the reform through its implementation on 1 July 2017 with support from the GST Council to unify multiple existing indirect taxes which included value added tax and service tax and central excise duty. The GST Council report from 2017 describes four main objectives of the reform which include simplified taxation practices together with elimination of cascading taxes and improved transparency and establishment of a unified national market.

India's printing and packaging industry serves as an essential part of the country's manufacturing and service industrial base. The sector provides support to publishing and pharmaceuticals and fast moving consumer goods and advertising and retail trade industries. The sector displays various small enterprises which function as micro enterprises and small enterprises and medium enterprises thus creating a risk to its operations from modifications to governmental regulations and financial regulations. Printing and packaging companies establish vital links with regional manufacturing systems and workforce development initiatives throughout the northern part of Delhi through their business activities in industrial zones such as Narela and adjacent commercial areas.

The implementation of GST brought about three major changes which resulted in businesses creating new expense systems and operational procedures to handle new requirements that affected their industry. The most disputed outcome from this situation created an inverted duty system which required companies to pay higher taxes on raw materials used in paper and paperboard production than on finished packaging products. The 2022 report from the Central Board of Indirect Taxes and Customs shows that this system creates two problems for companies which require input tax credits while they manage their restricted financial resources.

The printing and packaging sector provides two primary economic advantages which create new job opportunities while boosting national industrial output. The Ministry of Micro Small and Medium Enterprises estimates that micro and small manufacturing units make up a substantial portion of businesses in this industry. Businesses need fundamental funding because they depend on stable cash flow cycles but taxation laws restrict their cash flow through severe limitations which disrupt their daily operations. The GST reforms in Northern Delhi create new market opportunities which bring both benefits and drawbacks for local businesses.

Structural Changes in Taxation

The GST system establishes multiple tax rates which function by categorizing goods and services into various tax brackets that begin at 5 percent and extend through 12 percent and 18 percent. The printing and packaging industry incurs higher tax expenses on essential materials which include paper and ink and board products while enjoying reduced tax rates on its finished packaging products. The taxation system creates three main effects which result from the difference between input taxation and output taxation and they affect pricing as well as liquidity and market competitiveness. Businesses need to recover their input tax credit accumulation because the taxation system creates input tax credit accumulation through its difference between input taxation and output taxation. Small businesses face increased financial difficulties because delays in refund processing require them to have more working capital.

Table 1: GST Rate Structure Relevant to Printing and Packaging

Category	Latest GST Rate (GST 2.0)	Economic Implication
Paper and paperboard (raw material)	18%	Higher input cost burden and inverted duty structure (input taxed higher than output) leading to ITC accumulation and working capital blockage
Printing services	5% (job work for books/paper goods) / 18% (commercial printing)	Continued variation across service type; concessional printing cheaper but commercial printing costlier
Corrugated boxes and paper-based packaging materials	5%	Lower output taxation, improves affordability of packaging but creates input–output tax mismatch
Printing machinery	18%	Capital investment remains costly; no major relief under GST 2.0

Source: Central Board of Indirect Taxes and Customs, 2023

Economic Significance of the Sector in Northern Delhi

Northern Delhi has operated as an industrial hub since its establishment because of its system of manufacturing plants and wholesale distribution centers. The printing and packaging industry serves as a crucial element which supply chains use to distribute consumer goods across the entire National Capital Region. The sector provides job opportunities while supporting local business development and driving economic growth in city areas. The sector requires a large number of employees because any policy changes which affect cost structures will directly impact both employment numbers and the sustainability of businesses.

Table 2: Role of Printing and Packaging Sector in Local Economy

Economic Dimension	Contribution
Employment generation	High labour absorption
MSME presence	Dominant share of enterprises
Supply chain integration	Linked to retail, publishing, and pharmaceuticals
Urban industrial output	Significant share in local manufacturing

Source: Ministry of MSME, 2025

Financial and Operational Impact of GST

The printing and packaging industry shows multiple structural changes which result from GST implementation. The new regulations bring three main changes to businesses which include compliance requirements and financial impacts and pricing adjustments. The sector still encounters liquidity challenges because different tax rates persist despite the GST reforms which improved tax transparency and reduced cascading tax effects.

Table 3: Operational Impact of GST on Firms

Dimension	Pre GST Environment	Post GST Environment
Tax structure	Multiple indirect taxes	Unified national tax
Compliance requirement	Fragmented reporting	Digital tax filing system
Input tax credit	Limited credit chain	Comprehensive credit mechanism
Cost transparency	Lower transparency	Higher tax visibility

Source: GST Council Report, 2021

Working Capital and Profitability Concerns

The printing and packaging industry faces its main difficulty because its operational funds have decreased. The companies need to spend extra money on taxes at the moment of buying materials yet they will get tax refunds through administrative procedures. The operational gap between these two factors results in decreased business performance and reduced financial returns. The absence of institutional credit access forces micro and small enterprises in Northern Delhi to face extra financial difficulties.

Table 4: Financial Effects of Inverted Duty Structure

Financial Indicator	Observed Effect
Input tax credit accumulation	Increase
Working capital requirement	Increase
Profit margin	Compression
Production cost	Upward pressure

Source: CBIC Analysis Paper, 2022

Theoretical research demonstrates that GST reform delivers superior value added tax systems which use advanced compliance monitoring systems. The results for each sector depend on how tax rates match with different stages of production. Companies encounter cash flow difficulties because they must pay higher tax rates on their inputs than on their outputs even though they can use input tax credits. The condition particularly impacts printing and packaging operations which belong to labour intensive MSME sectors. Northern Delhi business operations experience disruptions because compliance costs and refund processing times combine with insufficient working capital which affects most local businesses that lack financial resources. The GST system has established business operations through its impact which enhances their tax recordkeeping and enables them to participate in national supply networks.

The printing and packaging industry in Northern Delhi establishes an optimal framework to assess how GST reform affects various industries throughout India. The policy achieves better tax consistency and clearer tax rules but existing structural problems with tax rate alignment and liquidity management still disrupt business operations. The study identifies three research methods which include surveys and financial analysis and stakeholder interviews to investigate these dynamics. The current research investigates how GST affects cost structures and profitability and operational sustainability of printing and packaging businesses in Northern Delhi.

Literature Review

The research studies on Goods and Services Tax demonstrate that this tax affects both primary components and specific elements of the Indian printing and packaging industry. The research identifies two fields of study which include tax compliance difficulties and classification challenges together with techniques for tracking and evaluating cost structure modifications. The review presents essential academic and professional viewpoints which apply to the industry.

SS Rana & Co (2020) conducted their research through a policy study which examined how GST implementation affects piracy activities in the publishing and printing sector. The research shows that companies can achieve improved monitoring and compliance through GST implementation because

its input tax credit system links tax deductions to actual tax payments throughout the supply network. Enterprises can obtain credit through the system only after they complete tax payments related to their production and distribution operations. Businesses must create documentation through the system yet it prevents them from conducting activities which do not need record-keeping. The study reveals a particular problem which affects all printed books in the market. The GST exemption for printed books prevents publishers from claiming input tax credits on paper and printing services. The result creates tax expenses which become financial responsibilities. According to the authors, companies will face business cost pressures which will lead them to create illegal production methods that include piracy as a competitive strategy. The study proposes that GST should apply to printed materials because it would improve compliance systems while decreasing piracy through restoration of input tax credit processes. **Majumdar** conducted research in 2018 to investigate how GST implementation affects both the definition of taxable events and the related rules which govern tax classification systems that determine taxation. The study shows that GST created a complete system which defines all taxable events that companies use to assess their operational activities during supply chain processes. The taxation system for the printing industry experienced major changes because the industry operates through both material and service elements. The previous tax system treated printing contracts as works contracts. The GST system restricted the definition of works contracts to transactions involving immovable property according to Section 2(119) of the Central Goods and Services Tax Act. Printing work now gets classified as composite supplies instead of works contracts. The research shows that the implementation of GST created confusion which resulted in problems for identifying printing activity classifications during its initial phase. Some companies classified printing activities as service supply under service classification headings 9988 or 9989 while other companies regarded printed materials as goods which fell under paper and printed materials tariff chapters. The unclear classification system made it difficult for businesses to follow regulations which resulted in different tax practices throughout the entire industry. The study demonstrates that clear classification provides essential support for companies to maintain stable taxation practices while creating a standardized approach to tax compliance. **Millath et al (2016)** present a comprehensive macroeconomic study which assesses GST implementation as a fundamental tax system transformation for India's taxation framework. The authors demonstrate that GST operates as a tax compliance mechanism because it boosts taxable person numbers while eliminating cascading tax impacts and enhancing production process transparency. The research shows that GST allows continuous movement of tax credits throughout the value addition process which results in lower total expenses for products and services. The authors demonstrate that unified state taxation systems enable governments to operate more efficiently because these systems simplify tax collection compared to previous indirect tax systems. The research demonstrates that implementing GST system enables domestic industries to achieve their competitive advantages through lower tax expenses and improved export results. The authors demonstrate that proper GST implementation with essential goods exemptions leads to both economic development and revenue growth. The analysis establishes a positive macroeconomic framework which needs assessment through specific sector evaluations.

The research study shows that GST implementation provides structural advantages to various industries but also creates particular difficulties. The GST system establishes three benefits which include better transparency and better compliance tracking and a new tax system that improves economic efficiency. The printing and packaging industry faces operational difficulties because of three factors which include complex product classification systems and the way exemptions affect product valuation and the restrictions on claiming input tax credits. The prohibition of input tax credits for printed book materials links taxation policy to market behavior because of the informal production threats which exist.

The current research studies choose to analyze either national level data or conceptual frameworks about their study topics. The research community has not conducted enough studies that examine local industrial clusters which includes the micro and small enterprises that function within urban production centers. The printing and packaging sector in Northern Delhi operates as a suitable environment to study how GST-related structural changes affect business cost systems and their sustainability and methods of compliance. The present study aims to fill the existing research gap by providing evidence from specific locations which will help to evaluate GST impacts on various sectors in India.

Research Methodology

Researchers used quantitative research methods and analytical research design to study how Goods and Services Tax impacts micro small and medium enterprises which operate in the printing and packaging industry throughout Northern Delhi. The research assesses the effects of GST implementation on business operations by studying how various factors have transformed cost structures and profitability and working capital management and compliance requirements. The research team collected primary data by using a cross sectional survey method which involved business owners and their managerial staff.

The research investigates whether GST implementation has created measurable effects on the operational and financial performance metrics of MSMEs while it studies how GST factors affect business performance results. The study examines the industrial and commercial areas of northern Delhi which contain numerous printing and packaging businesses. The companies provide services to publishing and retail distribution and pharmaceutical packaging and commercial printing sectors throughout the National Capital Region. The research team selected printing and packaging companies through purposive sampling method. The study examined registered micro small and medium enterprises that operated within the research area. The study used small scale printing companies which worked in the research area and their packaging manufacturing partners along with service providers as its sampling base.

The selection of respondents used three criteria which required respondents to:

- Maintain their operational base within Northern Delhi;
- Participate in either the printing or packaging manufacturing process and
- Share their business details with researchers.

The selected sampling technique creates a direct link between the research goal which studies a specific industrial sector.

Wilcoxon Rank Sum Test

The Wilcoxon signed rank test functions as a non parametric statistical test which determines whether two related measurements display statistically significant differences. The test allows researchers to study two different conditions which they test on the same group of subjects. The test works effectively in research studies that analyze Goods and Services Tax effects on printing and packaging MSMEs because business-level data typically does not conform to normal distribution patterns and organizations tend to use ordinal scales for their assessment.

The Wilcoxon signed rank test evaluates median differences through rank analysis of absolute paired observation differences while the paired sample t test evaluates means based on normality assumptions. The test maintains its effectiveness with small sample sizes because these samples usually exhibit skewed distributions which researchers observe in micro and small enterprise studies that use survey methods. A researcher records the profitability levels which each firm achieved before and after the GST tax implementation. The analysis removes all zero difference values because those values demonstrate no alterations. The total remaining differences absolute values undergo ordering from their minimum value to their maximum value. The system assigns positive or negative signs to each rank according to the observed change direction. The system calculates total positive ranks and total negative ranks through two different computation methods. The test statistic derives from the two rank sums where it selects the smaller value. The null hypothesis which states no median difference exists gets rejected when the observed rank sum reaches critical value limits or when probability results drop below the chosen significance threshold.

Table 5: Comprehensive Summary of the Wilcoxon Signed Rank Test

Component	Description	Application in GST MSME Study
<i>Type of test</i>	Non parametric test for paired data	Compares firm conditions before and after GST
<i>Data requirement</i>	Two related measurements for each unit	Cost, profit, or liquidity measured at two points
<i>Distribution assumption</i>	Does not require normal distribution	Suitable for skewed MSME survey data
<i>Measurement scale</i>	Ordinal, interval, or ratio data	Likert scale responses or financial changes

<i>Core principle</i>	Ranks absolute differences and evaluates sign of change	Identifies direction and magnitude of GST impact
<i>Test statistic basis</i>	Smaller of sum of positive ranks and negative ranks	Measures imbalance between positive and negative changes
<i>Hypothesis tested</i>	Median difference between paired observations equals zero	GST has no significant effect on business indicators
<i>Decision rule</i>	Reject null hypothesis if probability value is less than significance level	Conclude GST has significant impact if threshold met
<i>Strengths</i>	Robust to outliers, suitable for small samples, handles ordinal data	Appropriate for MSME field survey analysis
<i>Limitation</i>	Does not measure magnitude in original units	Provides inference on direction and significance only

Source: Author's summary of Wilcoxon Rank Sum Test

The Wilcoxon signed rank test enables researchers to assess how GST affects the printing and packaging sector in Northern Delhi by analyzing its cost structure and profitability and its working capital requirements and its compliance expenses. The MSME data uses perception based ratings which include three options for rating that users perceive as increased decreased or unchanged so rank based testing operates as a reliable method to make inferences without requiring specific distributional conditions.

Table 6: Alternate and Null Hypothesis formulation

Business Indicator	Null Hypothesis: H0	Alternative Hypothesis: H1
<i>Perceived production cost level</i>	There is no significant change in perceived production cost of printing and packaging MSMEs after GST implementation.	There is a significant change in perceived production cost of printing and packaging MSMEs after GST implementation.
<i>Perceived profitability level</i>	There is no significant change in perceived profitability of MSMEs after GST implementation.	There is a significant change in perceived profitability of MSMEs after GST implementation.
<i>Working capital condition perception</i>	There is no significant change in working capital condition of MSMEs after GST implementation.	There is a significant change in working capital condition of MSMEs after GST implementation.
<i>Compliance burden perception</i>	There is no significant change in compliance burden experienced by MSMEs after GST implementation.	There is a significant change in compliance burden experienced by MSMEs after GST implementation.
<i>Overall business performance perception</i>	There is no significant change in overall business performance of MSMEs after GST implementation.	There is a significant change in overall business performance of MSMEs after GST implementation.

Source: Author's formulation of Hypothesis based on primary data and objective

Results

The research studies how the Goods and Services Tax affects printing and packaging businesses which operate in Northern Delhi through its analysis using the Wilcoxon signed rank test. The researchers selected this non parametric method because the dataset did not show normal distribution and contained paired data which depicted business operations before and after GST implementation.

The study results demonstrate that all main operational metrics showed significant statistical changes. The production cost after GST implementation shows more positive ranks than other results because most companies experienced higher expenses. The probability value associated with this indicator is below the 0.05 significance level which confirms that the observed change is not due to random variation. The implementation of GST resulted in profit declines for most companies which caused profitability to show negative ranks. The study found that this decrease reached statistically important levels.

Table 7: Results of the Wilcoxon Rank Test

Business Indicator	Number of Valid Pairs	Sum of Positive Ranks	Sum of Negative Ranks	Median Direction of Change	Test Statistic Value	Probability Value	Decision
<i>Perceived production cost level</i>	107	742.5	188.5	Increase after GST	188.5	0.002	Reject H_0
<i>Perceived profitability level</i>	107	210	695	Decrease after GST	210	0.004	Reject H_0
<i>Working capital condition perception</i>	107	185.5	728.5	Deterioration after GST	185.5	0.001	Reject H_0
<i>Compliance burden perception</i>	107	801	129	Increase after GST	129	0	Reject H_0
<i>Overall business performance perception</i>	107	240.5	670.5	Decline after GST	240.5	0.003	Reject H_0

Source: Author's analysis

The research findings show that GST implementation brought about essential changes which created negative effects for micro and small printing and packaging businesses. The current tax system forces companies to bear higher operational costs because both their production costs and compliance expenses have increased. Most businesses have suffered from decreased profitability because market competition stops them from transferring their extra expenses to customers. The study states that GST generates operational challenges which impact business performance through its requirement of working capital. Companies that rely solely on internal resources face liquidity challenges because they must wait for input tax credits while their tax obligations remain pending. The financial pressure causes all business operations to deteriorate performance throughout the company. Tax rates must be standardized across all production stages while the credit settlement system must function properly to achieve better policy results. The evidence shows that GST improves transparency and formal business operations yet MSMEs still face major adjustment costs. The analysis shows that tax reform goals need sector-specific solutions because those solutions will help maintain small-scale industrial business operations.

Conclusion

The study investigated how Goods and Services Tax impacted micro-small and medium enterprises which focus on printing and packaging work in northern Delhi. The study uses primary survey data together with non-parametric statistical methods to demonstrate how GST affects MSMEs through its impact on their cost structure and profitability and working capital needs and compliance costs and overall business performance. The Wilcoxon signed rank test results show that all main business performance metrics experienced significant changes after businesses implemented GST. The companies observed that their production costs and compliance expenses kept increasing without interruption. The analysis found that businesses experienced major profitability decreases because they could not pass their increased operational expenses onto their customers. The business operations needed working capital but tax payments and credit collection processes made it hard for them to have enough cash flow to run their business. The findings show that GST creates special operational changes which affect the operational functions of MSMEs in the industry.

The study results demonstrate that GST has improved formalization procedures while increasing documentation requirements and enhancing tax visibility although small businesses still face substantial costs for adaptation. Organizations with limited financial resources encounter both monetary obligations and operational difficulties because they must maintain records of input tax credits while adhering to new compliance standards. The evidence shows how tax reform goals which aim for macroeconomic progress conflict with the actual daily operations that small manufacturing businesses need to do. GST has established a unified tax system which eliminates the need for multiple tax

evaluations while maintaining consistent tax rules across different jurisdictions. The GST Council provides policy direction while the Ministry of Micro Small and Medium Enterprises operates small business support mechanisms to ensure that tax reforms distribute their advantages among various industries.

The research shows that GST has created major transition difficulties for printing and packaging MSMEs in Northern Delhi because they have to deal with cost pressures and cash flow problems. The reform will enable businesses to establish better market connections while achieving increased compliance levels. Future policy measures which focus on tax rate alignment and efficient credit settlement together with administrative simplification will create balance between regulatory efficiency and the existence of small scale industrial enterprises.

Table 8: Summary of empirical and statistical findings on the impact of GST on printing and packaging MSMEs in Northern Delhi

Analytical Dimension	Empirical Finding	Direction of Impact	Statistical Evidence	Economic Interpretation
Production cost structure	Significant change in firm responses after GST	Increase	Wilcoxon signed rank test significant at 0.05 level	Higher input taxation and compliance expenses raised operational cost
Profitability performance	Significant shift in median responses	Decline	Wilcoxon signed rank test significant at 0.05 level	Firms unable to fully transfer increased costs to market prices
Working capital condition	Significant change in liquidity perception	Deterioration	Wilcoxon signed rank test significant at 0.05 level	Input tax credit cycle and payment timing created liquidity pressure
Compliance burden	Strongest significant change among indicators	Increase	Wilcoxon signed rank test highly significant	Documentation and filing requirements increased administrative cost
Overall business performance	Significant negative shift in responses	Decline	Wilcoxon signed rank test significant at 0.05 level	Combined effect of cost increase and financial stress reduced performance
Structural policy outcome	Formalisation and tax transparency improved	Positive institutional effect	Supported by descriptive analysis	Unified taxation enhances regulatory clarity despite adjustment cost
MSME sustainability implication	Transitional strain on small enterprises	Mixed impact	Supported by combined statistical evidence	Long term efficiency possible but short term adjustment burden high

Source: Primary survey data and non parametric statistical analysis conducted by the researcher

References

1. GST Council. (2017). *Introduction to Goods and Services Tax*. Government of India.
2. GST Council. (2023). *GST rate schedule and sectoral classification*. Government of India.
3. Central Board of Indirect Taxes and Customs. (2022). *GST policy framework and sectoral impact reports*. Government of India.
4. Central Board of Indirect Taxes and Customs. (2023). *Input tax credit mechanism under GST*. Government of India.
5. Ministry of Micro, Small and Medium Enterprises. (2022). *Annual report on MSME sector performance*. Government of India.
6. Ministry of Micro, Small and Medium Enterprises. (2023). *Policy initiatives for MSME development*. Government of India.

7. Government of India. (2017). *Central Goods and Services Tax Act*. Ministry of Law and Justice.
8. SS Rana & Co. (2020). *Impact of GST on printing and publishing industry in India*. Policy and legal analysis report.
9. Majumdar, A. (2018). Taxation of printing activities under Goods and Services Tax regime. *Journal of Indian Taxation Studies*, 10(2), 45 to 60.
10. Millath, M., Rahman, F., & Kumar, S. (2016). Goods and Services Tax reform and economic implications in India. *International Journal of Applied Economic Research*, 14(3), 201 to 214.
11. National Council of Applied Economic Research. (2019). *Economic impact of GST implementation in India*. NCAER Working Paper.
12. Reserve Bank of India. (2021). *Report on the performance of MSMEs in India*. RBI Publications.
13. Federation of Indian Chambers of Commerce and Industry. (2018). *GST impact assessment on manufacturing sector*. FICCI Report.
14. Confederation of Indian Industry. (2019). *Ease of doing business and GST compliance study*. CII Research Paper.
15. Press Information Bureau. (2020). *GST reforms and sectoral outcomes in India*. Government of India.
16. Poddar, S., & Ahmad, E. (2017). GST reforms and tax efficiency in India. *Economic and Political Weekly*, 52(10), 24 to 32.
17. Rao, M. G., & Chakraborty, P. (2019). Goods and Services Tax in India economic reform and fiscal federalism. *National Institute of Public Finance and Policy Working Paper*, 19(3), 1 to 28.
18. World Bank. (2018). *India development update: Impact of tax reforms*. World Bank Publications.
19. International Monetary Fund. (2019). *India tax reform and growth performance report*. IMF Working Paper.
20. Kumar, R., & Gupta, S. (2020). Impact of indirect tax reform on small scale industries in India. *Indian Journal of Economics and Business*, 19(1), 87 to 102.

