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### Digital Transformation and Competitive Efficiency of Agro-Based MSMEs in India

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#### Abstract

The implementation of the Goods and Services Tax (GST) established a unified indirect tax system in India. This reform reshaped the operating environment of Micro, Small and Medium Enterprises, especially agro-based MSMEs that drive rural industrialization, generate employment, and add value to agricultural output. This study analyses the entrepreneurial impact of GST on technology adoption and competitive performance in agro-based MSMEs. It follows a conceptual and analytical approach using secondary data, government publications, and academic studies.

The analysis shows that GST compliance pushes enterprises toward digital practices such as electronic invoicing, digital accounting, and technology-based management systems. These shifts improve transparency, streamline operations, and expand access to formal markets. The results indicate mixed effects. GST supports formalization and encourages technology adoption, which strengthens competitiveness. However, small enterprises face challenges such as compliance complexity, limited digital skills, and higher administrative costs.

The study concludes that GST can enhance entrepreneurial performance when backed by digital capacity building, financial support, and strong institutional mechanisms. It adds to existing research by connecting tax reform with entrepreneurial development and technological advancement in agro-based MSMEs.

**Keywords:** GST, Agro-Based MSMEs, Entrepreneurship, Technology Adoption, Competitiveness, Digital Systems, Tax Reform



## **Introduction**

Micro, Small and Medium Enterprises play a vital role in the Indian economy. The sector contributes about 30 percent to the national Gross Domestic Product and nearly 45 percent to total exports. Agro based MSMEs form an important segment within this sector because they create value addition to agricultural products and generate employment in rural areas.

Before the introduction of GST in 2017, the indirect tax structure in India included multiple taxes such as excise duty, service tax, value added tax, and entry tax. The existence of multiple taxes created compliance difficulties and increased operational costs for enterprises. The Goods and Services Tax replaced these taxes with a unified tax system and created a common national market.

GST introduced digital tax filing, electronic invoicing, and online compliance procedures. These reforms encouraged enterprises to adopt technology driven systems for financial management and taxation. For agro based MSMEs, GST created opportunities for integration with formal supply chains and national markets. At the same time many micro enterprises faced challenges such as limited digital skills, lack of technological infrastructure, and increased compliance requirements. These changes influenced entrepreneurial behavior, technology adoption, and competitiveness of agro based enterprises.

This study examines how GST reforms influence technological modernization and competitive performance of agro based MSMEs in India.

### **2. Objectives of the Study**

- Examine the impact of GST reforms on agro based MSMEs
- Analyse the role of GST in promoting technology adoption among entrepreneurs
- Evaluate the influence of GST on competitiveness of agro based MSMEs
- Identify challenges faced by agro based enterprises in the GST regime

### **3. Research Methodology**

The study follows a conceptual analytical research design. The analysis is based on secondary data collected from government reports, research journals, policy papers, and institutional publications.

#### **Sources of data include**

The study relies on secondary data collected from multiple institutional and academic sources. Major sources include reports published by the Ministry of MSME, publications of the GST Council, reports of the Reserve Bank of India, and data from National Sample Survey studies. In addition, relevant academic research articles and policy studies related to GST, MSMEs, and technology adoption were examined. The



collected information was systematically analysed using descriptive and analytical methods in order to examine the entrepreneurial impact of GST reforms on technology adoption and the competitive performance of agro based MSMEs.

#### **4. Review of Literature**

Rao and Kumar (2022) studied tax reforms in India and found that GST improved tax efficiency and increased transparency in the business environment. Kaur, Sharma, and Singh (2023) examined the economic impact of GST and observed improvement in tax compliance and formalization of businesses. Sahoo and Dash (2021) highlighted that GST strengthened economic integration by creating a unified market across states and reducing tax barriers. Singh and Verma (2022) analysed the impact of GST on MSMEs and reported that digital compliance requirements encouraged adoption of accounting software and electronic tax systems. Sharma and Patel (2023) studied technological transformation in MSMEs and found that digital taxation systems accelerate financial transparency and operational efficiency.

The existing literature focuses on tax reform and economic outcomes. Limited studies examine the entrepreneurial and technological implications of GST in agro based MSMEs. This study addresses this gap.

#### **5. Conceptual Framework**

GST reforms influence entrepreneurial transformation in agro based MSMEs through interconnected channels linked with compliance, technology adoption, and competitive performance. The introduction of GST created mandatory compliance requirements such as digital tax filing, electronic invoicing, and documentation for input tax credit claims. These requirements encourage enterprises to adopt accounting software and digital record management systems. As a result, entrepreneurs increasingly introduce digital accounting platforms, enterprise management tools, and automated billing systems to manage financial transactions and tax obligations efficiently. The adoption of these technologies improves operational efficiency, increases transparency in financial and market transactions, and strengthens integration within formal supply chains. These improvements enhance productivity and market participation, which ultimately strengthen the entrepreneurial competitiveness of agro based MSMEs. Thus, GST reforms lead to technology adoption, and technology adoption contributes to improved entrepreneurial competitiveness in the sector.

#### **6. Impact of GST on Agro Based MSMEs**

GST introduced major structural changes in the business environment of agro based MSMEs. One key change is market integration. GST removed interstate tax barriers



and created a unified national market, which allows agro based enterprises to sell products across states without complex tax procedures. Another important benefit is the input tax credit mechanism. Enterprises receive tax credit on inputs such as raw materials, packaging materials, logistics services, and processing costs. This reduces overall production cost and improves profitability. GST also promotes formalization of business operations. Registration under GST requires enterprises to maintain proper financial records and follow standardized accounting practices. This increases transparency and strengthens participation in the formal economic system. In addition, GST improves supply chain transparency by ensuring proper documentation and tax compliance at each stage of production and distribution among producers, processors, wholesalers, and retailers.

### **7. GST and Technology Adoption in MSMEs**

GST accelerated digital transformation in small enterprises. The new tax system requires digital compliance, which encouraged MSMEs to adopt technology driven financial management practices. Many enterprises started using digital accounting systems such as Tally and cloud based bookkeeping software to manage GST records and tax reporting. Electronic invoicing also became common, where digital billing systems improve record management, transparency, and accuracy in financial transactions. GST compliance also requires online tax filing through government portals, which increased the use of digital platforms among entrepreneurs. In addition, several enterprises introduced automation in financial processes such as computerized inventory management and automated billing systems. These technological changes improve operational efficiency and reduce manual errors in financial transactions.

### **8. GST and Competitive Performance**

Technology adoption under the GST system strengthened the competitive performance of agro based MSMEs. Digital systems reduce transaction time and improve financial accuracy, which increases operational efficiency. GST registration also allows enterprises to expand their market reach because formal businesses can supply products to large retailers, exporters, and government procurement agencies. Access to institutional finance also improves because financial institutions prefer enterprises with transparent financial records and tax compliance. Furthermore, GST promotes supply chain integration by linking enterprises with formal distribution networks and organized markets. These factors improve productivity, operational efficiency, and overall competitiveness of agro based MSMEs.

### **9. Challenges Faced by Agro Based MSMEs**



Despite several advantages, agro based MSMEs face several challenges under the GST system. One major issue is the digital skill gap. Many entrepreneurs lack technical knowledge required for digital accounting and online tax filing. Compliance burden also remains a challenge because small enterprises must maintain multiple GST returns and documentation requirements. The cost of technology adoption creates another barrier since accounting software and digital management systems increase operational expenses for small enterprises. In addition, limited awareness about GST procedures and compliance rules exists among many rural entrepreneurs. Addressing these challenges is essential for improving the effectiveness of GST reforms and ensuring that agro based MSMEs benefit from the new tax system.

#### **10. Policy Recommendations**

Several policy measures improve technological readiness and entrepreneurial competitiveness of agro based MSMEs under the GST regime. Government and institutional agencies should provide digital literacy training programs for MSME entrepreneurs so they gain practical skills in digital accounting, online tax filing, and financial management systems. Simplification of GST compliance procedures for micro enterprises reduces administrative burden and encourages greater participation in the formal tax system. Financial support in the form of subsidies or incentives for adoption of digital accounting software helps small enterprises manage compliance requirements effectively. Establishment of rural digital support centers provides technical assistance and guidance related to GST procedures and digital platforms. In addition, stronger institutional support from government agencies, financial institutions, and industry bodies improves the capacity of agro based MSMEs to adopt technology and enhance their competitive performance. These measures increase technological preparedness and strengthen entrepreneurial growth in the sector.

#### **11. Conclusion**

GST represents a major structural reform in India's taxation system. The reform influenced the operational environment of agro based MSMEs by promoting formalization and digital compliance. GST encourages adoption of digital accounting, electronic invoicing, and technology driven management practices. Technology adoption improves transparency, operational efficiency, and market access which strengthens competitiveness of agro based enterprises. However small enterprises face challenges such as digital skill gaps and compliance costs. Effective policy support, digital training programs, and institutional assistance improve the ability of agro based MSMEs to adapt to the GST regime. Strengthening



these support systems helps enterprises benefit from tax reform and contribute to rural industrial development and economic growth.

## References

- Banerjee, S., & Sood, A. (2022). GST and economic formalization in India. *Journal of Public Finance*, 45(3), 210–225.
- Economic Survey of India. (2023). *Ministry of Finance, Government of India*.
- Kaur, H., Sharma, R., & Singh, P. (2023). Impact of GST on economic growth and tax compliance in India. *Indian Journal of Economics and Development*, 19(1), 45–60.
- Kumar, R., & Sharma, P. (2020). Indirect tax reforms and GST in India. *Indian Economic Review*, 55(2), 145–162.
- Mehta, V., & Nair, S. (2024). GST and India's development trajectory. *Economic and Political Weekly*, 59(8), 34–41.
- Ministry of MSME. (2023). *Annual report on MSME sector performance*. Government of India.
- Nijanthan, R. (n.d.). *GST and its impact on buying behavior on FMCG in Tiruchirappalli district*.
- Paramasivan, C. (2021). A study on awareness towards GST implementation in Tiruchirappalli. *SELP Journal of Social Science*, 12(48), April–June.
- Rao, M. G., & Chakraborty, P. (2021). *Cooperative federalism and GST in India* (NIPFP Working Paper Series).
- Rao, P., & Kumar, S. (2022). Fiscal reforms and tax efficiency in India. *Journal of Public Finance Studies*, 14(2), 112–128.
- Reserve Bank of India. (2022). *State finances: A study of budgets*.
- Sahoo, M., & Dash, R. (2021). GST and economic integration in India. *Economic Policy Review*, 16(3), 78–92.
- Sharma, D., & Patel, K. (2023). Technology adoption in small and medium enterprises. *International Journal of Business and Management Research*, 11(1), 34–48.
- Singh, A., & Verma, R. (2022). Digital transformation of MSMEs under GST regime. *Journal of Entrepreneurship and Business Innovation*, 9(2), 55–68.
- GST Council. (2022). *GST impact assessment report*. Government of India.