

Sectoral Analysis: Growth Potential in Agriculture, Manufacturing, and Services under the GST Regime in India

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Abstract

The introduction of the Goods and Services Tax (GST) in 2017 brought a major change to India's indirect tax system by replacing multiple taxes with a single, unified structure. One of the key objectives of GST was to promote economic growth by creating a common national market and improving the efficiency of business operations. While several studies have examined the overall impact of GST, its influence on the growth potential of different sectors of the economy continues to be an important area of research. This paper analyses the impact of GST on the agriculture, manufacturing, and services sectors, which together form the backbone of the Indian economy.

The study is based on secondary data collected from the Economic Survey of India, GST Council reports, RBI publications, Ministry of Finance documents, NITI Aayog reports, and published research articles. A comparative and descriptive approach has been adopted to understand the performance of these sectors before and after the implementation of GST.

The findings suggest that the manufacturing and services sectors have benefited significantly from the introduction of GST through reduced tax cascading, better availability of input tax credit, simplified logistics, and greater transparency in tax compliance. These changes have improved business efficiency and encouraged formalization. In contrast, the agriculture sector has experienced only limited direct benefits because many agricultural products remain outside the GST framework. However, improved transportation, warehousing, and supply chain management have indirectly supported agricultural marketing and rural trade. The study also highlights challenges such as compliance costs for small enterprises, technological barriers, and sector-specific tax issues that need further policy attention.

The paper concludes that GST has strengthened India's economic framework by enhancing the competitiveness of manufacturing and services while creating opportunities for long-term agricultural development. Continuous policy reforms, simplified compliance procedures, and targeted support for sector-specific needs are essential to ensure balanced and inclusive economic growth.

The agriculture sector presents a different picture. Although most primary agricultural products remain outside the GST framework, the sector has experienced indirect benefits through improved transportation networks, warehousing facilities, food processing activities, and better market connectivity. At the same time, concerns related to taxation of agricultural inputs, uneven awareness

among farmers, and the limited integration of rural enterprises into the formal tax system continue to affect the sector's overall growth potential.

The paper concludes that GST has contributed positively to India's economic transformation by strengthening manufacturing and services while creating indirect opportunities for agricultural development. Nevertheless, achieving balanced sectoral growth requires continuous policy reforms, simplified compliance procedures, stronger digital infrastructure, and targeted support for farmers, MSMEs, and rural enterprises. A more inclusive and responsive GST framework will not only improve sectoral competitiveness but also contribute to sustainable economic growth and the vision of a self-reliant and developed India.

Keywords: Goods and Services Tax, Agriculture, Manufacturing, Services Sector, Economic Growth, Sectoral Development, India.

1. Introduction

India is a developing economy with a diverse production structure in which agriculture, manufacturing and services play important and interconnected roles. These three sectors contribute to national income, employment generation, investment and overall economic development, although their relative contribution to the Indian economy has changed considerably over time. Agriculture continues to provide livelihoods to a large section of the population, manufacturing remains important for industrial development and employment opportunities, while the services sector has emerged as a major contributor to India's economic growth. Understanding the growth potential of these sectors is therefore essential for assessing the changing structure and future direction of the Indian economy.

The introduction of the Goods and Services Tax (GST) in July 2017 was one of the most significant tax reforms undertaken in India. GST replaced a number of indirect taxes imposed by the Central and State Governments with a more integrated tax system based on the principle of destination-based taxation. Taxes such as excise duty, service tax, value added tax (VAT), central sales tax and several other indirect levies were brought under a common framework. The reform was intended to simplify the indirect tax system, reduce the cascading effect of taxes, create a common national market and improve the efficiency of the movement of goods and services across states. As a result, GST has become an important institutional factor influencing the business environment and sectoral performance in India.

The impact of GST, however, has not been uniform across different sectors of the economy. Agriculture, manufacturing and services have distinct production processes, market structures, tax requirements and levels of formalisation. Agriculture has a relatively different relationship with the tax system because many agricultural products and basic food items are either exempt from GST or subject to lower tax rates, while inputs such as machinery, fertilisers, packaging and certain services may have GST implications. Therefore, the effect of GST on agriculture needs to be examined not only through direct taxation but also through its influence on input costs, supply chains, storage, transportation and market access.

Manufacturing, on the other hand, has been closely associated with the objectives of GST because the earlier indirect tax structure often involved multiple taxes and complicated inter-state transactions. The

introduction of input tax credit under GST was expected to reduce the cascading of taxes and improve efficiency throughout the production and distribution process. A more unified market can potentially allow manufacturers to reorganise warehouses, transportation networks and supply chains according to economic considerations rather than differences in state-level tax structures. At the same time, the compliance requirements associated with GST, particularly for smaller enterprises, may create additional administrative and technological challenges. Thus, the actual growth potential of the manufacturing sector under GST requires a balanced assessment of both its benefits and limitations.

The services sector represents another important dimension of the GST regime. With the rapid expansion of information technology, financial services, telecommunications, tourism, transport, professional services and other service activities, the sector has become a major source of India's economic growth. GST brought a large number of services under a common indirect tax framework and altered the way businesses manage taxation across different states. The expansion of digital compliance and online tax administration has also contributed to the formalisation of economic activities. However, the effect of GST may vary considerably among different types of service providers depending on their scale, geographical coverage, input structure and ability to manage compliance requirements.

One of the important issues in analysing GST is therefore the distinction between tax reform and sectoral growth. A reduction in tax complexity does not automatically translate into higher economic growth. The benefits of a tax reform depend on several factors, including production costs, consumer demand, investment, access to credit, infrastructure, technological adoption, market competition and the ability of businesses to comply with the new system. Consequently, examining the growth potential of agriculture, manufacturing and services requires consideration of a broader set of economic indicators rather than relying only on changes in tax revenue.

GST has also contributed to the increasing formalisation of the Indian economy. The expansion of registered businesses and the growing use of digital transactions and electronic tax records have improved the availability of information about economic activities. This formalisation can potentially improve tax compliance, widen the tax base and create better opportunities for businesses to participate in organised markets. For small and medium enterprises, however, the transition to a technology-based compliance system has sometimes involved additional costs and adjustment difficulties. The extent to which formalisation translates into sustainable sectoral growth is therefore an important area for empirical investigation.

Another important consideration is the interdependence among the three sectors. Agriculture supplies raw materials to several manufacturing industries, while manufacturing provides agricultural machinery, equipment, processing facilities and other inputs. Both agriculture and manufacturing depend increasingly on services such as transportation, banking, insurance, communication, logistics and information technology. Changes in taxation affecting one sector can therefore have indirect consequences for the others. A sectoral analysis of GST should consequently examine not only the individual performance of agriculture, manufacturing and services but also the linkages among them.

The period following the introduction of GST is particularly significant for understanding its economic effects. The Indian economy experienced several structural and external challenges during this period,

including the COVID-19 pandemic and subsequent disruptions to production and supply chains. These events make it difficult to attribute changes in sectoral growth entirely to GST. Nevertheless, examining trends in sectoral output, investment, employment, productivity, tax collections and formalisation before and after GST can provide useful insights into the changing growth potential of the three major sectors.

Against this background, the present study focuses on the sectoral analysis of growth potential in agriculture, manufacturing and services under the GST regime in India. The study seeks to understand how GST has influenced the functioning and growth prospects of these sectors and whether its effects differ across them. It also aims to examine changes in important economic indicators and identify the factors that may strengthen or constrain sectoral growth under the present tax framework.

A comparative analysis of the three sectors is particularly relevant because India's future economic growth cannot depend on a single sector. Sustainable development requires a productive agricultural sector, a competitive manufacturing base and a dynamic services sector. The effectiveness of GST should therefore be assessed in terms of how far it contributes to improving efficiency, reducing tax-related distortions, encouraging formalisation, supporting investment and strengthening linkages between different parts of the economy. Such an analysis can provide a clearer understanding of the opportunities and challenges created by GST and may also contribute to policy discussions concerning India's long-term sectoral development.

The study, therefore, attempts to examine the relationship between GST and sectoral growth from a broader economic perspective. By comparing agriculture, manufacturing and services, it seeks to identify differences in their growth performance and potential under the GST regime and to assess whether the tax reform has created a more favourable environment for balanced and sustainable economic development in India.

2. Literature Review

2.1 Concept and Importance of Literature Review

A literature review is an essential component of any systematic research study because it provides the intellectual foundation on which the present investigation is developed. It involves a critical examination of existing books, research articles, reports, policy documents, working papers and other scholarly sources related to the research problem. In the context of the present study, the literature review focuses on the relationship between taxation and economic growth, the structure of the Indian economy, sectoral growth in agriculture, manufacturing and services, and the implications of the Goods and Services Tax (GST) for different sectors.

The introduction of GST in India in July 2017 represented a major change in the country's indirect tax system. Consequently, a considerable body of literature has emerged examining its implications for tax administration, revenue mobilisation, compliance, formalisation, business activity and economic growth. However, the existing literature does not provide a uniform conclusion regarding the impact of GST on all sectors. This is largely because agriculture, manufacturing and services operate under different economic conditions and respond differently to changes in taxation and compliance requirements.

The review of literature is particularly important for the present study because GST cannot be examined merely as a tax policy. It is also an economic reform that can influence production costs, prices, investment decisions, supply-chain management, market integration and formalisation. Therefore, studies examining GST from different perspectives are relevant to understanding its broader economic consequences. Literature relating to taxation and growth helps establish the theoretical relationship between fiscal policy and economic performance, while sector-specific studies provide insights into the ways in which taxation affects individual sectors.

Existing studies on GST have largely concentrated on issues such as revenue collection, tax compliance, input tax credit, business formalisation and the functioning of small and medium enterprises. Several studies have also examined the effect of GST on specific industries and business activities. However, relatively fewer studies have undertaken a comprehensive comparison of agriculture, manufacturing and services within a common analytical framework. The present study attempts to address this limitation by considering the three major sectors together and examining their growth potential under the GST regime. The literature review also helps in identifying appropriate variables and analytical approaches for the present research. Indicators such as Gross Value Added (GVA), sectoral growth rate, employment, investment, productivity, tax revenue, exports, input costs and formalisation can be considered while assessing sectoral performance. A review of previous empirical studies also helps determine suitable statistical and econometric techniques for analysing relationships between GST and sectoral growth.

Thus, the purpose of the literature review is not simply to summarise previous studies. It is to understand the development of knowledge in the field, identify areas of agreement and disagreement, evaluate the methodologies used by earlier researchers and establish the specific research problem that remains insufficiently explored. In this sense, the literature review provides the foundation for developing the research framework and justifying the need for the present study.

2.2 Evolution of Research as a Scientific Process

Research on taxation and economic growth has developed gradually from theoretical discussions of public finance to increasingly empirical and data-driven investigations. Early economic thinking generally viewed taxation as an important source of government revenue and a mechanism through which resources could be mobilised for public expenditure. Over time, economists began examining the wider effects of taxation on production, investment, consumption, employment and economic efficiency. This transition established taxation as not merely a fiscal issue but also an important determinant of economic behaviour.

The relationship between taxation and economic growth has subsequently been examined through several theoretical perspectives. Classical and neoclassical approaches emphasised the influence of taxation on incentives, savings and investment, while later endogenous growth theories highlighted the role of taxation and public expenditure in influencing human capital, technological development and long-term productivity. These theoretical developments created a basis for empirical research investigating whether changes in tax structures encourage or restrict economic growth.

In India, research on indirect taxation initially focused on the complex structure of central and state-level taxes. Before GST, businesses often faced multiple indirect taxes administered by different authorities.

The coexistence of central excise duty, service tax, state VAT, central sales tax and other levies created difficulties in tax compliance and inter-state transactions. Researchers therefore increasingly examined the need for tax harmonisation and a common national market.

The introduction of GST created a new phase in Indian tax research. Early studies primarily examined the rationale for GST, its structure, expected benefits and possible implementation challenges. Researchers discussed the potential of GST to eliminate cascading taxation, simplify indirect taxation, improve compliance and create greater integration of domestic markets. At this stage, much of the literature was conceptual and policy-oriented because sufficient post-GST data were not yet available for comprehensive empirical analysis.

Following the implementation of GST, research gradually shifted towards empirical assessment. Researchers began examining GST collections, registration of taxpayers, compliance behaviour, input tax credit, e-way bills, digitalisation and changes in business activity. Studies also started analysing the impact of GST on different categories of enterprises and industries. This represented an important methodological shift from predicting the potential effects of GST to evaluating its observed outcomes.

The COVID-19 pandemic further complicated the empirical assessment of the GST regime. The pandemic disrupted production, employment, consumption and supply chains across the economy. Agriculture, manufacturing and services were affected differently, making sectoral comparison increasingly important. Studies conducted during and after this period therefore need to distinguish between the effects associated with GST and those arising from broader economic shocks.

Recent research has increasingly incorporated quantitative methods such as descriptive analysis, correlation, regression, time-series analysis, panel-data techniques and comparative pre- and post-GST analysis. The availability of government datasets and digital tax information has also created opportunities for more detailed empirical investigation. However, methodological challenges remain because GST was implemented at the national level, making a simple comparison of treated and untreated sectors or regions difficult.

The evolution of research demonstrates that the study of GST has moved from theoretical justification to empirical evaluation. Nevertheless, there remains a need for research that integrates fiscal, sectoral and structural dimensions of the reform. The present study builds on this evolution by examining agriculture, manufacturing and services within a comparative framework and by focusing specifically on their growth potential under the GST regime.

2.3 Research Gap

The review of existing literature indicates that substantial research has been undertaken on GST and its implications for the Indian economy. However, several gaps remain that provide justification for the present study.

First, a significant portion of the existing literature examines GST from the perspective of tax revenue and tax administration. These studies are useful in understanding changes in revenue mobilisation, taxpayer registration and compliance. However, higher tax collection or an increase in registered

taxpayers does not necessarily indicate higher productive capacity or sustainable economic growth. There is therefore a need to examine GST in relation to broader indicators of sectoral performance.

Second, many studies focus on the overall impact of GST on the Indian economy rather than examining differences among major sectors. Agriculture, manufacturing and services have fundamentally different production structures, input requirements, employment patterns and market conditions. A uniform assessment of GST may therefore hide important sector-specific effects. Comparative sectoral research can provide a more meaningful understanding of how the reform has affected different parts of the economy.

Third, the literature on agriculture and GST remains relatively limited compared with research on manufacturing and services. Although many agricultural products are outside the scope of GST or are subject to relatively low rates, agricultural producers and related businesses may be indirectly affected through taxation of inputs, transportation, storage, processing, packaging and marketing. The indirect effects of GST on agricultural supply chains require greater empirical attention.

Fourth, considerable research has examined GST and manufacturing, particularly in relation to input tax credit, logistics, supply chains and compliance. However, relatively less attention has been given to whether these improvements have translated into sustained improvements in manufacturing growth, productivity, investment and employment. The distinction between immediate operational benefits and long-term growth potential therefore needs further investigation.

Fifth, studies relating to the services sector often focus on taxation, compliance and individual service industries. The services sector, however, is highly diverse, ranging from information technology and financial services to transportation, tourism, professional services and communication. A broader sector-level analysis is necessary to understand how GST interacts with the growth dynamics of the services economy.

Sixth, much of the existing literature evaluates GST using short-term indicators. Since structural transformation is a gradual process, analysing a longer period is important for identifying whether changes following GST represent temporary adjustments or more persistent trends. A comparison of the pre-GST and post-GST periods can therefore provide a stronger basis for understanding changes in sectoral performance.

Seventh, there is limited integration of sectoral growth and inter-sectoral linkages in the existing literature. Agriculture, manufacturing and services do not function independently. Agricultural production supplies raw materials to manufacturing, manufacturing provides inputs and technology to agriculture, and both sectors depend heavily on services such as banking, transportation, insurance, logistics and communication. The effects of GST may therefore move through supply chains from one sector to another.

Finally, methodological variation among previous studies makes direct comparison of their findings difficult. Some studies are conceptual, while others use descriptive statistics, survey-based methods or econometric techniques. Differences in study periods, variables and methodologies can produce different

conclusions regarding the effects of GST. There is therefore a need for a systematic comparative framework using clearly defined indicators of sectoral growth and appropriate quantitative methods.

The present research seeks to address these gaps by conducting a comparative sectoral analysis of agriculture, manufacturing and services under the GST regime. It focuses not merely on tax collection but on broader dimensions of growth potential, including sectoral output, productivity, investment, employment, formalisation and other relevant economic indicators. The study thus attempts to move beyond a general assessment of GST and examine its differentiated implications for India's major productive sectors.

2.4 Review of Selected Literature

The existing literature on taxation and sectoral development can broadly be classified into five interconnected areas: theoretical studies on taxation and growth, studies on indirect tax reforms in India, research on the implementation of GST, sector-specific studies and empirical research examining GST and economic performance.

The theoretical literature generally establishes that taxation can influence economic activity through its effects on incentives, consumption, investment and resource allocation. An efficient tax system can reduce distortions and improve the allocation of resources, whereas excessive complexity and cascading taxation can increase transaction costs. These arguments provide an important theoretical foundation for evaluating GST as a structural tax reform.

The literature on India's pre-GST tax system highlighted the problems associated with multiple indirect taxes and differences between central and state taxation systems. Researchers argued that a fragmented indirect tax structure could create cascading effects and increase the cost of conducting inter-state business. The proposed GST was consequently viewed as an instrument for creating a more integrated domestic market.

Studies undertaken around the implementation of GST generally emphasised its potential benefits. These included simplification of indirect taxation, reduction in tax cascading, improved input tax credit mechanisms, greater transparency and increased formalisation. At the same time, researchers pointed to challenges related to technological readiness, compliance costs, frequent changes in procedures and the adjustment difficulties faced by smaller businesses.

Post-implementation research has increasingly attempted to evaluate the actual outcomes of GST. Several studies have reported improvements in tax-base expansion and digitalisation, while others have highlighted compliance difficulties and adjustment costs, particularly for small enterprises. The mixed findings suggest that the effects of GST cannot be understood through a single indicator.

Research on manufacturing generally identifies supply-chain efficiency and input tax credit as two major channels through which GST can affect sectoral performance. A unified tax system can reduce the importance of tax-related differences between states and allow firms to make logistics decisions based more on economic efficiency. However, the extent to which these benefits are realised may depend on firm size, access to technology, working capital and compliance capacity.

Research relating to agriculture indicates that the direct GST burden on many agricultural commodities is relatively limited, but the sector may experience indirect effects through the taxation of inputs and associated activities. The effects can therefore vary between farmers, traders, processors, wholesalers and retailers. This suggests that agriculture should be studied as part of a broader value chain rather than only at the level of primary production.

In the services sector, GST has brought a large number of activities within a common tax framework and has strengthened the role of digital compliance. The literature suggests that the effects differ substantially across service industries because their input structures and geographical patterns are different. Technology-oriented and organised service providers may have greater capacity to adapt to digital compliance, while smaller service providers may face relatively higher adjustment costs.

Overall, the reviewed literature demonstrates that GST has generated both opportunities and challenges. The evidence concerning its contribution to economic growth is not completely uniform, indicating the need for further sector-specific and comparative research.

2.5 Critical Synthesis of Literature

A critical synthesis of the literature reveals that GST should not be viewed simply as a change in tax rates or a mechanism for increasing government revenue. It represents a structural reform that has the potential to influence the organisation of production, distribution, business formalisation and market integration. However, the magnitude and direction of its effects depend on the characteristics of individual sectors.

The literature broadly agrees that GST has reduced some of the complexities associated with the earlier indirect tax system and has encouraged greater digitalisation of tax administration. The availability of input tax credit and the movement towards a common domestic market are particularly important features that may improve economic efficiency. Nevertheless, these potential advantages need to be evaluated against the compliance burden and adjustment costs faced by businesses, especially smaller enterprises.

A major weakness in the existing literature is the tendency to treat the Indian economy as a single homogeneous unit. Such an approach may be inadequate because the structure and functioning of agriculture, manufacturing and services are substantially different. Agriculture is closely connected with rural livelihoods and primary production; manufacturing depends on capital, raw materials, technology and supply chains; and services are increasingly knowledge- and technology-intensive. The same tax reform can therefore produce different outcomes in each sector.

The literature also indicates that the effect of GST may operate through several channels. These include production costs, input tax credit, logistics, market integration, compliance, formalisation, investment and consumer demand. Therefore, sectoral growth should be evaluated through a combination of indicators rather than a single measure such as GDP or tax revenue.

Another important observation is that the available evidence is strongly influenced by the period under consideration. The initial years following GST implementation were characterised by adjustment and

procedural changes, while subsequent years were affected by the COVID-19 pandemic and global economic disruptions. Consequently, post-GST changes in sectoral performance cannot automatically be interpreted as being caused by GST alone. A careful empirical study needs to account for these broader economic circumstances.

The critical review also suggests that there is a difference between observed performance and growth potential. A sector may experience temporary fluctuations in output while still possessing strong long-term growth prospects. Similarly, an improvement in tax compliance may not immediately result in higher productivity or employment. Growth potential must therefore be examined using a broader set of economic and structural indicators.

Based on the synthesis of the literature, the present study adopts a comparative perspective towards agriculture, manufacturing and services. Rather than asking only whether GST has been beneficial or harmful, the study seeks to understand how, to what extent and through which channels GST may have influenced the growth potential of the three sectors. This approach allows the research to recognise both positive outcomes and limitations of the reform.

The literature review ultimately establishes that there is sufficient evidence to recognise GST as an important structural change in India's economic environment, but there remains a need for a comprehensive sectoral comparison. The present study seeks to fill this gap by analysing the growth performance and potential of agriculture, manufacturing and services under the GST regime and by examining the differences in their responses to the reform. The findings are expected to contribute to a more nuanced understanding of GST and its implications for balanced sectoral development in India.

3. Research Methodology

The present study, titled “Sectoral Analysis of Growth Potential in Agriculture, Manufacturing and Services under the GST Regime in India,” adopts a quantitative, descriptive and analytical research approach. The main purpose of the study is to examine the growth performance and potential of the three major sectors of the Indian economy in the context of the Goods and Services Tax (GST) introduced in July 2017. The study focuses on understanding whether the GST regime has been associated with changes in sectoral growth, output, investment, employment, productivity, formalisation and other relevant economic indicators. A comparative approach is adopted by examining the performance of the selected sectors before and after the introduction of GST. The study recognises that sectoral growth is influenced by several economic factors, and therefore GST is examined as one of the important factors within the wider economic environment.

The study primarily relies on secondary data collected from reliable and recognised sources such as the Ministry of Statistics and Programme Implementation (MoSPI), National Statistical Office (NSO), Reserve Bank of India (RBI), Ministry of Finance, Goods and Services Tax Council, Central Board of Indirect Taxes and Customs (CBIC), Economic Survey of India, Ministry of Agriculture and Farmers Welfare, Annual Survey of Industries and other relevant government publications. Research articles, books, reports and previous empirical studies are also reviewed to provide the theoretical and empirical foundation for the study. The proposed study period may cover 2011–12 to 2024–25, subject to the availability and consistency of data. The period will broadly be divided into the pre-GST period (2011–

12 to 2016–17), the transition year 2017–18 and the post-GST period (2018–19 onwards). Particular attention will be given to maintaining consistency in sectoral classifications, base years and measurement methods while compiling the data.

For the purpose of the analysis, agriculture, manufacturing and services are treated as the three major sectors of the study. Sectoral Gross Value Added (GVA), growth rate, employment, investment, productivity, formalisation and selected GST-related indicators will be considered as important variables. GST revenue, GST registrations and other available indicators may be used as explanatory variables, while sectoral growth and GVA will primarily represent the dependent variables. The study will initially use descriptive statistics, annual growth rates and Compound Annual Growth Rate (CAGR) to identify trends in the three sectors. A comparison of average sectoral performance during the pre-GST and post-GST periods will be undertaken to identify broad changes following the implementation of GST. Where appropriate, primary information from selected stakeholders such as farmers, traders, manufacturers and service providers may be used to supplement the secondary data and understand practical experiences relating to GST compliance, input tax credit and business operations.

To examine the relationship between GST and sectoral performance more systematically, the study will employ appropriate statistical and econometric techniques. Correlation analysis will be used to understand the direction and strength of relationships between GST-related variables and sectoral indicators. Regression analysis may be applied to estimate the relationship between GST-related variables and sectoral growth while controlling for other relevant factors such as investment, inflation, credit availability and exports. The coefficient of determination (R^2), significance levels and diagnostic tests will be considered while interpreting the regression results. ANOVA or other suitable statistical tests may be used to examine whether significant differences exist in the performance of agriculture, manufacturing and services across the selected periods. Where time-series data are used, stationarity and other relevant properties of the data will be examined before applying econometric models.

The study will also recognise certain methodological limitations while interpreting the findings. Since GST was introduced across India at the national level, it is difficult to completely separate its effects from other economic developments such as the COVID-19 pandemic, changes in monetary and fiscal policy, global economic conditions, technological developments and sector-specific factors. Therefore, the study will avoid interpreting simple post-GST changes as evidence of direct causation. The findings will instead be assessed through multiple indicators and analytical techniques to obtain a balanced understanding of the relationship between GST and sectoral growth. The overall methodology is intended to provide a systematic comparison of agriculture, manufacturing and services and to identify the extent to which the GST regime may have contributed to their growth potential, efficiency, formalisation and structural development in India.

The study will also incorporate a comparative sectoral framework to assess the differences in the response of agriculture, manufacturing and services to the GST regime. Since the three sectors differ considerably in their production structure, employment patterns, input requirements and degree of formalisation, their response to GST is not expected to be identical. Agriculture will be examined with particular attention to agricultural inputs, supply chains, market access and allied activities, while manufacturing will be analysed in relation to input tax credit, production costs, investment, logistics and

supply-chain efficiency. In the services sector, emphasis will be placed on formalisation, digital compliance, investment and the expansion of service activities. This comparative approach will help identify which sectors have experienced relatively stronger growth and which areas continue to face structural or tax-related challenges. The findings from the three sectors will subsequently be brought together to understand their contribution to India's broader process of economic transformation.

The study will maintain objectivity, reliability and academic integrity throughout the research process. Data obtained from different sources will be carefully examined and, wherever possible, cross-checked to ensure consistency and accuracy. Appropriate statistical procedures will be selected according to the nature and characteristics of the data rather than to obtain a predetermined result. The hypotheses formulated for the study will be tested using suitable levels of statistical significance, and the results will be interpreted from both statistical and economic perspectives. Any limitations arising from data availability, changes in statistical methodology or external economic factors will be clearly acknowledged. The overall research methodology is therefore designed to provide a balanced and evidence-based assessment of the growth potential of agriculture, manufacturing and services under the GST regime and to generate meaningful conclusions and policy suggestions for strengthening India's sectoral development.

4. Analysis

4.1 Analysis of Research Concepts and Research Classifications

The present study analyses the growth potential of agriculture, manufacturing and services in India under the Goods and Services Tax (GST) regime. For the purpose of the study, the central research concept is sectoral growth, which refers to changes in the economic performance and contribution of the three major sectors over a period of time. Sectoral growth is examined through indicators such as Gross Value Added (GVA), growth rate, employment, investment, productivity and other relevant economic measures. GST is considered an important policy factor that may influence these indicators through changes in taxation, input tax credit, compliance, supply-chain efficiency and formalisation. The analysis therefore does not consider GST only as a source of government revenue but examines it as a structural economic reform that may affect the functioning and growth prospects of different sectors.

The research is classified as descriptive, analytical and comparative in nature. The descriptive aspect helps identify the changing contribution and growth pattern of agriculture, manufacturing and services over the selected study period. The analytical aspect examines the possible relationship between GST-related indicators and sectoral economic performance. The comparative dimension is particularly important because the study compares the pre-GST and post-GST periods to understand whether there have been noticeable changes following the introduction of GST in 2017. Such classification is appropriate because the objective is not simply to describe the tax reform but to examine its broader economic implications. The analysis also recognises that the three sectors have different characteristics and therefore may not respond to GST in the same manner.

From the sectoral perspective, agriculture requires a slightly different interpretation of the GST effect because many primary agricultural products are exempt or subject to relatively low rates, while several

inputs and activities connected with agriculture may have GST implications. Therefore, the analysis of agriculture considers indirect effects through inputs, transportation, storage, processing and marketing. Manufacturing is analysed more directly in terms of input tax credit, production costs, logistics, inter-state movement of goods, investment and supply-chain efficiency. The services sector is examined in relation to taxation, digital compliance, formalisation, investment and the expansion of service activities. This classification makes it possible to understand why the same tax reform may produce different outcomes across sectors.

The analysis also distinguishes between sectoral performance and sectoral growth potential. A rise or decline in GVA during a particular year does not necessarily indicate the long-term potential of a sector. Growth potential is influenced by productivity, investment, employment opportunities, technological development, market demand, infrastructure and the ability of businesses to adapt to policy changes. Therefore, the present study considers multiple indicators rather than depending on a single measure. This broader classification provides a more realistic basis for understanding whether GST has created favourable conditions for sustained sectoral development or whether its effects have been limited to taxation and compliance-related changes.

4.2 Analysis of Sampling Techniques and Their Methodological Implications

The major analysis of the present study is based on secondary data; therefore, conventional sampling of the entire population is not required for the macroeconomic component. Instead, the study uses a purposive selection of sectors and economic indicators based on their relevance to the research objectives. Agriculture, manufacturing and services have been selected because they represent the major components of India's economic structure and together provide a broad picture of the country's production and economic transformation. The selection of indicators such as GVA, growth rate, employment, investment, productivity and GST-related variables is also purposive because these indicators directly contribute to assessing sectoral growth and potential.

If primary data are incorporated to supplement the secondary analysis, a purposive and stratified sampling approach may be adopted. Respondents can be selected from the three sectors, including farmers and agricultural traders, manufacturing enterprises, small and medium-sized businesses, service providers and other stakeholders with direct experience of GST. Stratification would ensure that the selected respondents represent the three sectors rather than allowing one sector to dominate the sample. Purposive selection is useful because the study requires respondents who have actual knowledge or experience of GST registration, compliance, input tax credit, digital filing and changes in business operations. However, the findings from such a sample would need to be interpreted carefully because purposive sampling may limit the extent to which the results can be generalised to the entire population. The methodological implications of sampling are important for interpreting the findings. A carefully selected sample can provide useful information about how GST is experienced at the business or stakeholder level, while secondary macroeconomic data provide a broader picture of sectoral performance. Combining the two sources can therefore strengthen the analysis by connecting economy-wide trends with the practical experiences of economic participants. At the same time, the study will recognise possible sampling limitations, including differences in business size, location, sectoral composition and level of GST awareness. The sampling method will therefore be clearly documented,

and conclusions will be drawn within the limits of the data and sample selected.

Overall, the classification of the research concepts and the selection of appropriate sampling techniques provide a structured basis for the empirical analysis. The study combines sectoral economic data with, where applicable, primary information to examine the different ways in which agriculture, manufacturing and services have responded to the GST regime. This approach allows the research to move beyond a general assessment of GST and develop a more detailed understanding of its implications for sectoral growth, efficiency, formalisation and future growth potential in India.

5. Description And Key Points

5.1 Understanding Research as a Systematic Process

Research is a systematic process through which a specific problem is studied in a logical and organised manner to develop reliable knowledge and reach meaningful conclusions. In the present study, the research process begins with identifying the need to understand how the Goods and Services Tax (GST) regime has influenced the growth potential of agriculture, manufacturing and services in India. The research problem is then developed through a review of existing literature, which helps in understanding previous findings and identifying areas that require further investigation. Based on this understanding, the objectives, research questions and hypotheses are formulated, followed by the selection of appropriate data, variables and analytical techniques.

The systematic nature of the research is important because sectoral growth is influenced by several interconnected economic factors. GST is only one element within a wider economic environment that includes investment, employment, inflation, credit availability, technological development, government policies and domestic and international demand. Therefore, the study does not assume that every change in sectoral performance after 2017 was caused by GST. Instead, it follows a structured process of collecting relevant information, comparing pre-GST and post-GST trends and applying suitable statistical methods. This systematic approach improves the reliability of the findings and helps the researcher interpret the relationship between GST and sectoral performance in a balanced manner.

5.2 Significance of Types of Research in Academic Investigation

Different types of research serve different purposes, and selecting the appropriate type is important for achieving the objectives of a study. The present research is primarily descriptive, analytical and comparative in nature. The descriptive component helps explain the changing pattern of agriculture, manufacturing and services by examining indicators such as GVA, growth rates, employment and investment. The analytical component goes beyond description and examines the relationship between GST-related variables and sectoral performance. The comparative component allows the researcher to examine differences between the pre-GST and post-GST periods and also compare the responses of the three sectors.

The study also has an empirical dimension because its conclusions are based on observed economic data rather than theoretical assumptions alone. Quantitative analysis makes it possible to identify trends and relationships that may not be visible through general observation. For example, changes in sectoral growth can be examined alongside GST revenue, formalisation, investment and other economic indicators. The use of different types of research within a single study strengthens the analysis because it

allows the research problem to be examined from more than one perspective. It also helps ensure that the conclusions are supported by evidence rather than based only on assumptions about the effectiveness of GST.

5.3 Sampling Techniques and Their Contribution to Research Quality

Sampling is an important methodological consideration when primary data are collected because it is generally not practical to obtain information from every member of a large population. In the present study, the core analysis is based on secondary macroeconomic data; therefore, the three sectors—agriculture, manufacturing and services—are selected purposively because they are directly related to the objectives of the research. If primary data are used to supplement the study, respondents may be selected through purposive and stratified sampling. The respondents can include farmers, traders, manufacturing units, small and medium enterprises, service providers and other stakeholders who have direct experience with GST.

The quality of sampling directly affects the reliability and usefulness of primary findings. A properly structured sample can ensure that different sectors and relevant groups are represented, while reducing the possibility of obtaining information from only one category of respondents. Stratification can be particularly useful in this study because the experiences of GST may differ considerably between agriculture, manufacturing and services. At the same time, purposive sampling may limit the generalisation of findings to the entire population. Therefore, the sampling procedure, selection criteria and limitations will be clearly stated. A transparent approach to sampling will help ensure that the conclusions drawn from primary information are interpreted appropriately and in combination with the broader secondary-data analysis.

5.4 Integration of Research Design and Methodological Decision-Making

Research design provides the overall structure that connects the research problem with data collection, analysis and interpretation. In the present study, the research design integrates descriptive, comparative and analytical methods to examine the growth potential of agriculture, manufacturing and services under the GST regime. The choice of secondary data is appropriate because sectoral GVA, employment, investment, GST collections and other macroeconomic indicators are available through official sources. At the same time, primary information, if collected, can provide additional insight into the practical experiences of businesses and other stakeholders.

Methodological decisions in the study are guided by the nature of the research questions and the characteristics of the available data. Descriptive statistics and growth-rate analysis are used to identify broad trends, while correlation and regression techniques can be applied to examine relationships between GST-related variables and sectoral performance. Pre-GST and post-GST comparisons help identify changes associated with the introduction of GST, while appropriate statistical tests can be used to assess whether observed differences are significant. The study also takes into account external factors such as the COVID-19 pandemic, changes in government policy and global economic conditions while interpreting the results.

The integration of research design and methodological choices is important because no single method can fully explain the complex relationship between taxation and sectoral growth. By combining different

forms of analysis, the study aims to provide a more comprehensive understanding of GST and its implications for India's economic sectors. The overall methodological framework therefore seeks to maintain consistency between the research objectives, data sources, variables, analytical techniques and interpretation of findings. This integrated approach strengthens the academic quality of the study and provides a sound basis for drawing conclusions and developing appropriate policy recommendations.

6. Implications Of The Study

6.1 Improved Understanding of the Research Problem

The present study provides a clearer understanding of how the Goods and Services Tax (GST) may influence the growth potential of agriculture, manufacturing and services in India. GST is a major structural reform, but its impact cannot be understood in the same way across all sectors because each sector has different production processes, input requirements, employment structures and levels of formalisation. The study helps in identifying these sector-specific differences and provides a broader understanding of how changes in taxation, input tax credit, compliance, supply chains and market integration may affect sectoral performance.

The study also helps distinguish between the direct and indirect effects of GST. While manufacturing and services are more directly connected with GST through business transactions and input tax credit, agriculture may experience its effects through inputs, transportation, processing, storage and marketing. This distinction is important because a general conclusion about the success or failure of GST may overlook the different experiences of individual sectors. By comparing the three sectors, the research provides a more balanced understanding of the relationship between tax reform and economic growth.

6.2 Better Decision-Making Through Data Analysis

The analysis of sectoral data can provide useful evidence for policymakers, government institutions and other stakeholders involved in economic planning. By examining changes in GVA, growth rates, employment, investment, productivity and GST-related indicators, the study can help identify sectors that have performed relatively well and areas where further policy support may be required. Rather than relying only on general perceptions about GST, evidence from sectoral data can support more informed decisions regarding taxation, investment, infrastructure and business support.

The findings may also be useful for improving the implementation of GST. If the analysis indicates that compliance costs, technological requirements or input-related issues affect particular sectors more strongly, policy measures can be designed accordingly. Similarly, if GST is found to contribute to formalisation, supply-chain efficiency or investment in particular sectors, these positive aspects can be strengthened. The study therefore has practical implications for developing policies that promote a more balanced and efficient growth pattern across agriculture, manufacturing and services.

6.3 Contribution to Future Research and Knowledge Development

The study contributes to the existing body of research by bringing agriculture, manufacturing and services together within a common framework for analysing the implications of GST. Much of the existing discussion on GST has focused on tax revenue, compliance, formalisation or individual industries. A comparative sectoral approach provides a wider perspective by examining how the same tax reform can produce different outcomes in different parts of the economy. The study can therefore

serve as a reference for researchers interested in taxation, economic growth, structural transformation and sectoral development in India.

The research also provides scope for future studies to examine GST at a more detailed level. Future researchers may conduct state-wise comparisons, industry-level studies or firm-level investigations to understand differences that may not be visible in aggregate national data. Further research can also examine the long-term effects of GST on productivity, employment, investment, exports and formalisation as more post-GST data become available. The present study can therefore contribute not only to understanding the existing impact of GST but also to developing a foundation for future empirical research on India's changing economic structure.

Overall, the implications of the study extend beyond measuring the performance of individual sectors. The research highlights the importance of considering taxation as part of a wider process of economic transformation. A better understanding of sector-specific responses can help policymakers design more effective and balanced policies, while the empirical findings can contribute to academic discussions on the relationship between tax reforms and economic growth. In this way, the study provides both practical implications for policy formulation and academic implications for future research on India's sectoral development under the GST regime.

7. Limitations of the study

The present study, titled “Sectoral Analysis of Growth Potential in Agriculture, Manufacturing and Services under the GST Regime in India,” has certain limitations that need to be considered while interpreting the findings. The study mainly depends on secondary data obtained from government reports, official databases, research publications and other reliable sources. Although these sources provide extensive information, differences in data collection methods, classifications, base years and reporting procedures may create difficulties in maintaining complete consistency throughout the study period. Therefore, the findings are dependent to some extent on the availability, accuracy and comparability of the data obtained from these sources.

A major limitation is that GST was introduced at the national level in India, making it difficult to establish a completely separate control group that was not affected by the reform. As a result, changes in the performance of agriculture, manufacturing and services after the introduction of GST cannot be attributed entirely to GST. Sectoral growth is influenced by several other factors, including government expenditure, monetary policy, inflation, interest rates, investment, technological development, international trade and changes in consumer demand. The study therefore attempts to identify associations and trends rather than claiming that every change in sectoral performance was directly caused by GST.

The study period also includes several significant economic developments that may influence the interpretation of the results. In particular, the COVID-19 pandemic caused major disruptions to production, employment, consumption, transportation and supply chains. The effects were not uniform across agriculture, manufacturing and services. While some agricultural activities continued relatively strongly, manufacturing and several service activities experienced considerable disruption. Consequently, changes observed during the post-GST period may reflect a combination of GST-related

developments and the effects of wider economic shocks. Separating these influences completely may not always be possible using aggregate sectoral data.

Another limitation relates to the different nature of the three sectors examined in the study. Agriculture, manufacturing and services differ significantly in terms of production processes, employment patterns, input structures, market organisation and exposure to GST. Agriculture, in particular, may be affected indirectly through agricultural inputs, transportation, storage, processing and marketing, whereas manufacturing and services may experience more direct GST-related effects. Therefore, a common set of indicators may not fully capture the unique impact of GST on each sector. Aggregate sector-level data can also hide differences between individual industries, firms, regions and categories of economic participants.

The availability of detailed GST-related sectoral data is another limitation. Although information on GST collections, registrations and compliance has expanded considerably, it may not always be possible to directly connect GST-specific indicators with changes in sectoral output, productivity or employment. Some effects of GST, such as changes in supply-chain organisation, transaction costs, business formalisation and compliance behaviour, are difficult to measure using aggregate data alone. Consequently, the study relies on a combination of available economic indicators and statistical analysis to assess the broader relationship between GST and sectoral growth.

Finally, the study focuses primarily on sectoral-level growth potential and therefore may not capture the experiences of every individual business, farmer, worker or consumer. Differences in firm size, geographical location, access to technology, financial resources and awareness of GST provisions may result in different experiences within the same sector. The findings should therefore be interpreted as an overall assessment of sectoral trends rather than as a representation of every individual participant. Despite these limitations, the study provides a useful comparative framework for understanding the relationship between GST and the growth potential of agriculture, manufacturing and services in India.

8. Suggestions

8.1 Strengthening Conceptual Clarity Through Practical Learning

A clear understanding of GST and its relationship with sectoral growth is important for conducting meaningful research on India's economic performance. Researchers should not examine GST only from the perspective of tax rates and revenue collection, but should also understand its wider effects on production, investment, employment, supply chains, formalisation and market efficiency. Practical learning through the analysis of actual sectoral data can help researchers understand how the provisions of GST operate in different economic situations. Particular attention should be given to the differences between agriculture, manufacturing and services, as the effect of GST is not uniform across these sectors.

It is also suggested that researchers and students should develop a practical understanding of economic indicators such as Gross Value Added, sectoral growth rates, investment, productivity and employment. Linking these indicators with GST-related developments can provide a clearer picture of the relationship between taxation and economic growth. Case studies of individual industries and businesses can further

strengthen conceptual understanding by showing how GST affects real-world decisions relating to input purchases, pricing, logistics, compliance and investment.

8.2 Encouraging Use of Diverse and Reliable Data Sources

Research on GST and sectoral growth should make greater use of reliable and diverse sources of data. Official sources such as the Ministry of Statistics and Programme Implementation, Reserve Bank of India, Ministry of Finance, GST Council, Central Board of Indirect Taxes and Customs and other government agencies provide valuable information for understanding sectoral and tax-related developments. Researchers should compare information from different sources wherever possible to identify inconsistencies and improve the reliability of the analysis.

At the same time, greater use of industry reports, academic studies, business surveys and carefully collected primary data can provide information that may not be available in aggregate government statistics. Combining macroeconomic data with firm-level or stakeholder-level information would help explain why the same GST policy may have different effects on different sectors or categories of businesses. Future research should also make greater use of updated post-GST data so that the longer-term effects of the reform can be assessed more effectively.

8.3 Improving Training in Sampling Techniques and Research Design

Researchers undertaking studies on GST and sectoral development should receive adequate training in sampling techniques and research design. When primary data are collected, the selection of respondents should be carefully planned so that agriculture, manufacturing and services are appropriately represented. Stratified or purposive sampling may be useful depending on the research objectives, while the sample size should be sufficient to produce meaningful findings. Researchers should also be aware of the limitations of non-probability sampling and avoid making conclusions that extend beyond the population represented by the sample.

Research design should be selected according to the nature of the research question and the type of data available. In the present context, combining descriptive, comparative and analytical approaches can provide a stronger understanding of sectoral performance under GST. Researchers should also develop skills in statistical and econometric techniques such as correlation, regression, hypothesis testing and time-series analysis. Proper training in these methods will reduce the possibility of incorrect interpretation and help distinguish statistical association from actual economic causation.

Overall, future research on GST should move towards a more sector-specific, evidence-based and long-term approach. Greater attention should be given to the differences between agriculture, manufacturing and services rather than treating the Indian economy as a single homogeneous unit. Researchers should also consider factors such as technological change, formalisation, supply-chain development, employment and investment alongside traditional measures of tax revenue and GDP. Such an approach can provide more useful evidence for policymakers and contribute to the development of taxation policies that support balanced and sustainable growth across India's major economic sectors.

9. Conclusion

The introduction of the Goods and Services Tax (GST) in India marked an important change in the country's indirect taxation system and represented a significant step towards creating a more integrated and transparent national market. The present study, "Sectoral Analysis of Growth Potential in Agriculture, Manufacturing and Services under the GST Regime in India," has examined the broader implications of this reform by looking beyond tax revenue and focusing on the growth and development of three major sectors of the Indian economy. Agriculture, manufacturing and services have different structures, requirements and challenges, and therefore the influence of GST cannot be expected to be identical across them.

The analysis indicates that GST has created a more unified tax framework and has the potential to improve efficiency through input tax credit, reduced cascading of taxes, digital compliance and smoother movement of goods and services across states. These changes are particularly relevant for manufacturing and services, where inter-state transactions, supply chains and formal business operations play an important role. At the same time, the benefits of GST need to be considered alongside the adjustment and compliance challenges faced by businesses, particularly smaller enterprises. The overall impact of the reform therefore depends not only on the tax structure itself but also on how effectively businesses and institutions are able to adapt to the system.

The implications for agriculture are somewhat different. Since several agricultural commodities are outside the GST framework or attract relatively low rates, the sector's relationship with GST is often indirect. Nevertheless, agriculture can be affected through the taxation of inputs, transportation, storage, processing, packaging and marketing activities. This highlights the importance of examining agriculture through its wider value chain rather than considering only the tax treatment of agricultural products. Strengthening agricultural infrastructure, improving market linkages and reducing transaction-related difficulties can help ensure that the benefits of a more integrated tax system reach the agricultural sector as well.

Manufacturing remains an important sector for India's long-term economic transformation, employment generation and productive capacity. GST has the potential to improve manufacturing efficiency by reducing tax-related distortions, facilitating input tax credit and enabling businesses to organise supply chains more efficiently. However, the extent to which these advantages translate into sustained growth depends on several complementary factors, including infrastructure, access to finance, technology, skilled labour, domestic demand and global competitiveness. Therefore, GST should be viewed as one component of a broader policy environment required to strengthen India's manufacturing base.

The services sector continues to be a major driver of India's economic growth and has benefited from increasing formalisation and digitalisation of economic activities. GST has brought greater uniformity to the taxation of services and has encouraged businesses to operate within a more structured compliance framework. However, the services sector is highly diverse, and the impact of GST can vary considerably between large organised service providers and smaller businesses. Continued simplification of compliance procedures and greater technological support can help ensure that the tax system does not unnecessarily restrict the expansion of service-sector activities.

An important conclusion emerging from the study is that GST should not be evaluated only on the basis of tax collections or changes in GDP. Its broader significance lies in its potential to influence formalisation, productivity, investment, supply-chain efficiency, market integration and the overall business environment. At the same time, sectoral performance is influenced by many factors beyond GST, including monetary and fiscal policies, global economic conditions, technological changes, infrastructure, consumer demand and unexpected events such as the COVID-19 pandemic. Therefore, changes observed after the introduction of GST should be interpreted carefully rather than being attributed entirely to the tax reform.

The comparative perspective adopted in this study demonstrates the importance of treating agriculture, manufacturing and services as interconnected but distinct components of the Indian economy. Agriculture provides raw materials and livelihoods, manufacturing creates productive capacity and employment, while services support both sectors through finance, transportation, communication, logistics and technology. The growth of one sector can therefore generate opportunities for the others. A balanced economic policy should consequently focus on strengthening these inter-sectoral linkages rather than promoting the development of one sector in isolation.

In conclusion, GST represents an important foundation for a more integrated and formalised Indian economy, but its ability to generate sustained sectoral growth depends on the wider economic environment and the effectiveness of its implementation. The future policy focus should be on simplifying compliance, improving access to technology, strengthening infrastructure and logistics, supporting small and medium enterprises, improving agricultural value chains and encouraging investment and innovation in manufacturing and services. A tax reform can create the conditions for growth, but sustained growth ultimately depends on the productive capacity of the economy and the ability of different sectors to benefit from those conditions.

The study therefore concludes that the growth potential of agriculture, manufacturing and services under the GST regime should be understood as a long-term and sector-specific process rather than an immediate outcome of tax reform. Continued evaluation using reliable data and appropriate analytical methods is essential to understand the evolving effects of GST. Such evidence-based assessment can help policymakers refine the tax system and promote a more inclusive, efficient and balanced pattern of economic development in India. Ultimately, the success of GST should be measured not only by how effectively it collects taxes, but also by how far it contributes to creating an environment in which India's major economic sectors can grow productively, competitively and sustainably.

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