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A Study: - "Assessing Impact of Goods and Services Tax on Agriculture"

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Abstract - Agricultural sector has been the root of Indian economy and it contributes to around 18.8 percent in (2021-2022) GDP. About 52 percent of the total rural livelihood depends on this sector as their primary means of livelihood. The GST is being introduced with the unbiased objective of having a unified tax structure for goods and services, this is likely to facilitate and strengthen the Scheme on National Agricultural Market (NAM) aimed at an integrated system of market of agriculture produce at the national level, allowing free flow of agricultural commodities across states. The aim of the study is to identify the impact of GST on the Agriculture sector. The data were collected from 400 farmers of Rajasthan using non probability convenience sampling. The result argues that GST will have both significant positive and negative effect on Agriculture. Future this paper show a behavioral suggestions and bringing out the light on Impact of GST on Agriculture Sector.

Key Words: Agriculture, GST, National Agriculture Market (e-NAM), Cost of Agriculture

1. INTRODUCTION

The agricultural sector plays a crucial role in the Indian economy. A nation's economic growth, rural prosperity, and employment opportunities all stem in major part from the health of its agricultural and related sectors, which also provide a crucial resource foundation for many other businesses and services that rely on the agricultural sector. Changes in the structure of the Indian agricultural sector, as measured by agriculture's declining percentage of GDP from 30 percent in 1990–91 to 18.8 percent in 2021-22 (Annual Report, 2021-22 MoA & FW), point to a transition away from the country's traditional agrarian economy and toward one dominated by services. While agriculture's share of GDP has shrunk, that decline has not been mirrored in the sector's employment share. More than half of India's population relies on agriculture for its livelihood, and the agriculture sector continues to employ over 52% of the country's labour force. Therefore, there is great opportunity for value addition in agriculture to raise people's standards of living as a whole. Taxes on goods and services will have beneficial and negative effects on the agricultural sector. As prices and inflation rates fall, a more business-friendly climate should emerge as a result of the GST. Because it creates a centralised marketplace for all commodities and services on a national scale, the Goods and Services Tax has a simplified tax structure. The effective tax support strategy for a specific product is dependent on the implementation of GST, which brings uniformity across states and the centre.

What is GST: - GST stands for — A "goods and services tax" is a tax levied on all goods and services when they are manufactured, sold, or used. The GST has been called the biggest tax change in the tax structure. The goal is to get rid of taxes on taxes. Some taxes are taken out by the state government, while others are taken out by the central government. GST is added to goods and services at the location where they are actually used. The destination principle is the basis for it. At each step of selling or buying goods and services, GST would be charged and collected.

National Agricultural Market (Nam) The central government has started a plan to promote the National Agricultural Market (NAM). The National Agricultural Market allows all farmers and traders in regulated markets to collaborate on a single e-commerce platform for fair and open agricultural commodity trade. Due to the different VAT and APMC (Agricultural Produce Market Committee) laws in each state, it would be hard to put the NAM scheme into effect. GST is important for paving the way for NAM to be put into place successfully. Most of the indirect taxes that are put on agricultural products would be rolled into the GST. With GST, each trader would be able to get a credit for the tax paid on each value-added item. This will make the supply chain clear and easy to use, which will allow agricultural commodities to move freely across India. Most agricultural products have a short shelf life. Because the GST will improve how the supply chain works, it will take less time to move goods between states. Farmers and retailers would get the benefit of saving time.

Impact of GST on Agriculture Sector

The Goods and Services Tax (GST) is a consumption-based tax that can be passed on to the final consumer by any firm that deals in agricultural products and services and is registered for GST. However, a grower who isn't registered for GST under the GST Act is exempt from the tax. A farmer would still have to pay the GST tax on any purchases of the aforementioned items and services.

Table - 1 GST Rates on Agriculture Sector

Goods	Old Rate	GST	Diff (%)
Seed, Organic compost without brand	0	0	0
Head pump and its parts	12.5	5	-7.5
Tractor	12.5	12	-.5
Chemical fertilizers	12	5	-7
Tractor Tyre & Rim	12.5	18	+5.5
Other tractor parts	12.5	18	+5.5
Harvester, Earth, Grader, Parts	0	12	+12
Insecticides	5.5	18	+11.5

Applicability of GST for Agriculture

As per the GST Act, only an agriculturist, whose supply of produce is out of cultivation of land, is exempted from GST registration requirement. The Act defines an agriculturist as an individual or a Hindu Undivided Family who undertakes cultivation of land:

- By own labour, or
- By the labour of family, or
- By servants whose wages are payable in cash or kind or
- By hired labour under personal supervision or the personal supervision of any member of the family.

So, only small farmers would be exempt from paying GST. If the aggregate turnover criteria or other criteria for GST registration are met and they sell goods that attract GST, anyone who runs a company or any other type of entity for the purpose of doing agriculture would be required to register for GST. GST doesn't define "agriculturist," but people who work in formal agriculture or run agricultural businesses are required to register, collect taxes, and follow the rules.

2. Review of Literature

Khan, Thayyib, &Ahmad (2022) According to his paper, "Goods and Services Tax in a Nutshell: A Practitioner's Perspective," GST is an indirect tax on purchases at the end consumer's destination. India implemented GST on July 1, 2017. Discussed are VAT's key drawbacks. Delivering products and services to receive a GST input tax credit and GST refund are also discussed.

Teotia (2022), the author said in her article how the new Goods and Services Tax (GST) framework simplifies indirect taxes. Exploratory research expands on earlier work in the field. The descriptive study used secondary sources. The study focused on the Indian economy's impact. Full Input Tax Credit coverage reduces supply chain stress by deducting and consolidating numerous levies. A well-executed GST will increase tax compliance and broaden the tax base, benefiting the federal government and states. GST will make India more clean and transparent, but it will face several challenges.

Kumar & Kumar (2021) in their paper, it has explored that The Indian Agricultural Sector accounts for 16% of GDP and employs 52% of the population; therefore, GST will have a major impact. Therefore, a GST conversation on agriculture is crucial. The same supply chain is certainly taxed in various ways. GST refers to the idea of a single indirect tax for federal, state, and customs taxes. If there had been a GST, rice and wheat would have cost less to grow. Growing cotton and sugarcane would have been cheaper. After the GST, harvesting and threshing equipment were taxed at 12%. Tractors now pay 6.5 percent in taxes.

Bansal (2020) has discussed that the GST had a significant impact on agricultural output. GST stands for "one nation, one tax." Indian agriculture is crucial. Thus, even a small shift in agriculture will affect the Indian economy. Descriptive research has used secondary databases to infer present conditions. The most significant tools, machinery, and agricultural inputs have been researched. The effects of the GST on India's agricultural sector are mixed. A detailed analysis found that India's agricultural business benefited from the

GST. Low input costs and nationwide retail availability will help farmers. India's indirect tax regime will assist agriculture. India's agriculture economy will grow.

Dattatraya Puri (2020), aaccording to her research agriculture sector contributes 16% in the India's GDP. The Goods and Services Tax (GST) has significantly reduced agriculture's tax burden in India. The new tax policy lets farmers sell their goods at the best price in India without government interference.

Doifode (2020), the researcher has studied that Indian agriculture is the most important sector. Many sectors of society would be affected by the GST. GST impacts everyone's daily life. The agriculture industry accounts for 20% of India's GDP and 10% of exports. GST will likely improve economic conditions in the medium term. If taxes stopped rising, inflation would fall. With a larger tax net, the government may collect more taxes and keep the budget deficit in check.

Sharma & Saini (2019), the authors has investigated in this paper that the GST is a novel indirect tax reform for India. This study examined small business owners' GST knowledge. The tax structure is fair; however, it may need clarification. This descriptive study interviewed Mandsaur company owners about their preferred services and goods. Most respondents thought the GST would boost the economy, but they also thought it needed more explanation.

Thowseaf, Millath, & Ali (2019), the authors in this paper have stated that while the Goods and Services Tax (GST) is better than the Value-Added Tax (VAT), it might have unforeseen implications for a government that adopts it without sufficient analysis. For 71 products, the tax rate was cut, 21 were unchanged, and 60 were raised. The GST rates in India are 0%, 5%, 12%, 18%, and 28%. In India, most products and services are taxed at 28%, while the average tax rate is 14.8750 percent. This descriptive study identified essential goods and services by consulting industry experts. The GST tax slab for basic commodities and raw materials used by today's middle and lower classes should be reduced.

Vyas (2019), this study has focused on how The GST has replaced several central and state taxes, integrated India's economy, and brought more manufacturers into the tax net. Efficiency boosts GDP and government finances. The GST should benefit agriculture. India's agriculture sector struggles with the interstate transit of products. The model GST statute excludes dairy, poultry, and animal breeding from agriculture but taxes them. Some agricultural items may cost more due to the temporary increase in the inflation index. GST implementation would create a unified national agriculture market.

Baig (2019), the author has discussed about the GST's impact on agriculture. A gross sales tax (GST) is an economy-wide tax on purchases. The GST would enhance economic growth. Researchers explore secondary data. Goals recommend an educational study. Dairy, poultry, and animal reproduction are not "horticulture" under the model GST law. The GST would absorb many government-imposed taxes and fees on agricultural items. GST's retail network strengthening could reduce interstate travel times. The Goods and Services Tax will have beneficial and negative effects on agriculture.

Balamurugan (2019), the researcher discovered that GST will have an impact on agriculture both positively and negatively. GST-lowered prices and inflation should make business easier. The new tax structure will affect put prices, manufacturer and dealer margins, imports and exports, agricultural income, and the economy. This industry supports 50% of rural households.

P Singh, Bisen, Venkatesh, & Aditya (2018), the researchers have studied and concluded that due to its impact on other economic activities, the GST covered agriculture. Agricultural inputs and commodities enjoy reduced taxes, and most agricultural services are GST-exempt. Agriculture supports half of India's population. The global experience with GST is ambiguous. This page is our inadequate attempt to explore the GST's effects on agriculture. Sales tax now applies to dairy products, and the tax rate on dairy apparatus and equipment has decreased. Tax rates will affect input costs, technology adoption, and agricultural product pricing. GST affects farm input pricing.

A Khan, Hasan, & Anwar (2018), the researchers' investigation has revealed the GST's difficulties and prospects for India's agricultural industry. This analysis used secondary sources such as discussion papers, published articles, internet articles, previous research, newspapers, etc. Supply chain transparency, dependability, and punctuality require GST. Manufacturing and operating huge machines is cheaper. Seeds, tools, and organic manure are tax-free. Chemical fertilizers, pesticides, and insecticides have also witnessed tax rate increases from 0% to 5% and 18%, respectively. GST lowers tax evasion, boosts revenue collections, and simplifies tax negotiations. Income tax and other government funding will rise.

3. Research Gap

India is a country of villages where farmers live and rely heavily on agriculture for a living. The studies from literature indicate that most of the researches done on various sectors of the economy very less work have been done on agriculture sector with specific reference to Rajasthan. The present study focuses on the impact of the GST on agriculture.

4. Objectives of the study

1. To study the concept of Goods and Services Tax (GST).
2. To examine the impact of GST implementation on the cost of agriculture.

5. Hypothesis of the study

H_{01}: There is no significant relationship between the cost of agriculture and impact of GST implementation.

H_{A1}: There is significant relationship between the cost of agriculture and impact of GST implementation.

6. Research Methodology

The primary goal of this study is to assess the impact of the goods and services tax on agriculture. Using a well-designed questionnaire, the researcher has successfully gathered information. The respondents of this research were farmers of the Rajasthan. The data was collected between June and December of the year 2022. For this study, the researcher resorted to a non-random sampling technique. About 400 farmers were included in the study. The researcher has employed financial tools and statistical methods to test hypotheses.

7. Data Analysis and Interpretation: Data Analysis to determine impact of GST implementation on cost of agriculture.

A. Demographic Profile: - The demographic profile data analysis is using only percentage method.

Table – 2 Demographic Profiles

• **Gender**	**Frequency**	**Frequency in Percentage**
Male	361	90.25
Female	39	9.75
• **Age**		
18 Year- Less than 30 year	58	14.5
30 Year – Less than 45 Year	127	31.75
45 Year - Less than 60 Year	175	43.75
60 Year & above	40	10
• **Education Level**		
Illiterate	96	24
Up to Senior Secondary Level	153	38.25
Graduate	114	28.5
Postgraduate	37	9.25
• **Land Possession**		
Less than 10 Bigha	39	9.75
10 Bigha to Less than 30 Bigha	77	19.25
30 Bigha - less than 50 Bigha	189	47.25
More than 50 Bigha	95	23.75
• **Engaged Time in Farming**		
Less than 5 year	59	14.75
5 year to Less than 10 year	113	25.25
10 year to Less than 15 year	135	33.75
More than 15 year	93	23.25
• **Annual agriculture Income**		
Less than Rupees 2 lakh	84	21
Rupees 2 Lakh - Less than Rupees 5 Lakh	212	53
Rupees 5 Lakh - Less than Rupees 10 Lakh	88	22
Rupees 10 Lakh & above	16	4
• **Machinery Used in Farming**		
Owned	315	78.75
Rented	85	21.25
• **Land Type**		
Owned	374	95.5
Rented	26	6.5

Observation: - This survey was given to a total of 400 farmers. According to the findings, there were a total of 400 respondents, and out of those, 90.25 percent were male and 9.75 percent were female. The age range of responders, ranging from 45 to less than 60 years, was the largest single demographic. Up to senior-level secondary education was attained by around 38.25 percentage points of the total respondents. The vast majority of farmers (47.25 percent) hold areas of land ranging in size from 30 to less than 50 bighas. The majority of the farmers, which accounts for 33.75 percent, have experience in farming ranging from 5 to less than 10 years. 53% of farmers fell into the income bracket of two million to five million rupees or less. The majority of farmers, or 78.75%, own their own farming equipment. The vast majority of farmers, or 95.5% of them, own the land on which they cultivate.

B. To find significant relationship between the cost of agriculture and impact of GST implementation: - This section focuses on the cost of agriculture (CA) factors that describe the impact of the GST. A regression analysis test is used to see the impact of the GST is related to the cost of agriculture.

Table - 3 Model Summary and ANOVA

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896[a]	.802	.799	.39088

a. Predictors: (Constant), Cost of Agriculture

b. Dependent Variable: The overall impact of GST on cost of agriculture.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	184.995	1	184.995	623.938	.000[b]
	Residual	118.005	398	.296		
	Total	303.000	399			

a. Dependent Variable: The overall impact of GST on cost of agriculture.

b. Predictors: (Constant), Cost of Agriculture

Cohen (1988) suggested the following standards for judging the size of the effect of the set of predictors and the DV using R-square: R^2 = .02 (small relationship); R^2 = .13 (medium relationship); R^2 = .26 (large relationship). Multiple R = .14 (small relationship); Multiple R = .36 (medium relationship); Multiple R = .51 (large relationship). (Cohen, 1988)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.052	.155		.335	.037
	Cost of Agriculture	1.008	.040	.781	24.979	.000

a. Dependent Variable: The overall impact of GST on cost of agriculture.

Observation: - A model regression was carried out to investigate cost of agriculture significantly predict the relationship of impact of GST. The result of regression indicate that model explained 80.2% of the variance and that the model significantly the predictor of impact of GST implementation F (1,398) = 623.938, p.005), p=.000. While cost of agriculture contributed significantly to the model (B = .052, P=.037), cost of agriculture show significant relationship with impact of GST on agriculture. It means that GST has impacted the cost of the agriculture inputs. The majority of farmers have indicated positive aspects of GST impact on agriculture.

Impact of GST ($\hat{y}_i$) = .052 (b_0) +1.008($b_1 X_{1i}$) Cost of agriculture

8. Conclusion: -

India is a land of communities inhabited by farmers who rely primarily on agriculture for a living. The Goods and Services Tax is a single, broad-based tax on all consumable goods and services in an economy. The agricultural industry is the foundation of the Indian economy, contributing approximately 17.4 percent to GDP. About 52 percent of the rural population relies on this sector as their principal source of income. Due to the implementation of the GST, the total cost of agriculture has decreased. Agriculture has benefited from the influence of the GST Act. The price of agricultural inputs such as seeds, fertilizer, and pesticides has fallen. A united national agriculture market will benefit farmers in the long run. Farmers, who contribute the most to the GDP, would be able to sell their produce at the best possible price if the GST were implemented. As GST aspires to create a unified tax framework for goods and services, which will eventually include agricultural products, its effective implementation is inextricably tied to the success of NAM. The National Agricultural Market envisions a seamless movement of goods across state lines, resulting in competitive and transparent prices with the possibility of a larger proportion of the value created in agricultural commodities going to farmers.

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