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Goods and Services Tax: What it holds for Agricultural Sector?

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The recent indirect tax policy reform in the form of Goods and Services Tax (GST) is a welcome step by the government of India as it is expected to eliminate the evils of excise and Value Added Tax (VAT) system of taxation. The idea of GST has led to two major ideologies viz. supporters (*Kelkar, 2013; Gulati and Husain, 2017; Gandhi, 2016*) and critics (*Valadkhani and Layton, 2004, Venkadasalam, 2014*). However, none is against it. Implementation of GST has also led to prognosis of its effect on different sectors. However, there is no study on the implications of GST on the agricultural sector and its effect on farm business operation in India. In order to understand the implications of GST on agricultural sector (more specifically the agricultural production system) of the economy, it is necessary to have a comparison with the tax rates on different agricultural inputs and services of agricultural sector pre-and post-GST implementation.

1. Agricultural Inputs

Seeds for crop production

The seeds of crops exclusively for the purpose of sowing maintain status quo in current indirect tax regime and as in the previous tax regime (i.e. excise duty and VAT). However, the emergence of lemon market (Akerlof, 1970) for agri-inputs; led to illegitimate taxation @ five per cent for some inputs, especially the branded seeds after GST implementation. Assuming the seed replacement rates for self-pollinated crops, cross-pollinated crops and hybrid as 25, 35 and 100 per cent, respectively, the use of hybrid seeds would negatively affected unless the problem of information asymmetry will not be addressed.

Fertilizers

Fertilizers industry in pre-GST period rejoiced the exemptions/concessions that led to 5-10 per cent tax on the value of finished fertilizer products (Chander, 2015). Assuming the average rate of tax @ 7 per cent on fertilizers in excise and VAT regime, the overall tax on fertilizers would decrease by 2 per cent post-GST implementation which led to reduction in fertilizers prices. Price of major fertilizers like Urea, Diammonium Phosphate (DAP) and Muriate of Potash (MOP) are expected to witness the reduction in their prices by Indian Rupees 6, 25 and 16 per bag, respectively. As a result of a marginal reduction in the price of fertilizers, their usage is expected to increase and consequently the crop production.

Plant protection chemicals & growth promoters

The plant protection chemicals and plant growth regulators are widely used in modern crop husbandry practices all across the country. Placement of these agro-chemicals under

18 per cent tax slab (Table 1) would negatively affect the aspirations of the farming community in the regions where their usage is limited but would encourage their judicious application in regions of excess usage in GST regime.

2. Farm Mechanization

Effect on use of land preparation machinery

Implementation of GST will normalize the equipment price and eliminate the existing asymmetry in their price across the country. However, with GST, some of the exempted land-preparation machineries; equipments and their accessories have brought under tax jurisdiction. Taxing these equipments @ 12 per cent rate would be inhospitable to opt for farm mechanization in the short-run. On the other hand, in states with scarce farm labour, the cost of mechanization may follow upward trend due to additional tax burden, which would push the cost of cultivation on upward direction. In this case, if increase in cost of cultivation is not consistent with the increase in the net returns from the crops, the farmers may have to incur losses and which would be one of the barriers to the goal of doubling farmer's income in the short-run.

Effect on use of water lifting equipment

Depending upon the brand and specifications of the pump, the price of water lifting devises like electrical pumps or oil-operated centrifugal pumps or submersible pumps is expected to go down by Indian Rupee 25 to 85 per horsepower with GST implementation which will encourage the farmers to bring additional area under irrigation if *cetris peribus* prevail. The farmers of states like Uttar Pradesh and Punjab will be less benefited due to GST as compared to the farmers of Madhya Pradesh, Maharashtra, Karnataka etc. as the tax rate on the centrifugal as well as mono-block pumps in these states were higher in the past tax regime (Table 1).

Effect on use of harvesting machinery

The harvesting machinery like Reaper, Mover, Harvester, etc. were non-taxable prior to GST implementation but are taxable @ 12 per cent in

Table 1 : Tax rate on important agricultural inputs, equipments and machineries

Agricultural inputs		**Pre-GST Rates (%)**						**GST Rates (%)**
		UP	**MH**	**Karnataka**	**MP**	**Punjab**	**Centre**	
Organic manure	*Unbranded*	Exempted	Exempted	-	0	0	Nil	0
	Branded	Not defined	Not defined	-	-	-	Not defined	5
Chemical fertilizers	*NPK*	Exempted	6	5.5	5	0	12.5	5
	Bio-fertilizers	4	6	5.5	0	0	Not defined	Not defined
	Micronutrient	4	6	5.5	5	0	Not defined	12
Plant protection chemicals		4	6	5.5	5	0	12.5	18
Plant growth regulators		4	6	5.5	5	0	12.5	18
Agricultural equipments and machinery								
Centrifugal, mono block and submersible pumps		4	6	5.5	5	4	12.5	12
Land preparation equipments	*Manually operated/ Animal driven*	Exempted	6	0	0	0	Nil	12
	Power-driven	Exempted	6	5.5	5	0	Nil	12
Plant protection equipments		Exempted	-	-	0	0	-	12
Harvesting and threshing equipment		4	6	5.5	0	0	Nil	12
Tractor & power tiller		4	6	5.5	5	4	12.5	12

Source: Authors' compilation from state VAT schedules and central excise schedule.

GST regime. On the other hand, GST has led to uniformity in their price across the country which may led to ease in purchasing these equipmemts from the same state unlike prior to GST. However, the effect of an increase in their prices would vary based on the previous tax rates in the states.

Effect on use of plant protection equipment

The plant protection equipments like sprayers, dusters (whether power-operated or manual), and sprayer-cum-rotavator have been exempted from any tax either by centre or state prior to GST implementation. However, taxing @ 12 per cent on this equipment under GST would increase the fixed cost of the farmers across the country.

Effect on use of renewable energy devices

The solar cells (whether assembled in module/panel) were taxed @ 12.5 per cent prior to GST implementation and were exemptible from tax on approval of renewable energy projects by Ministry of New and Renewable Energy (MNRE). However, taxing the solar cells @ 5 per cent (without any exemption and concession) under GST will negatively affect the sentiments of users of solar operated devices unless the provision of assistance on purchasing costs is given to bolster the use of renewable energy.

3. Agricultural Services

Generally the agricultural services can be categorized under farm-related services (which are directly or indirectly related to agriculture or agricultural produce) and agricultural research services. These services were included in the negative list of the services in the excise and VAT regime. However, in the new policy framework, some of the agricultural services also attract services tax.

Effect on farm-related services

Prior to GST implementation, agricultural operations directly related to production of any agricultural produce which do not alter essential characteristics of agricultural produce but make it marketable for the primary market; renting of agro machinery or vacant land with or without a structure incidental to its use; secondary marketing functions; agricultural extension services; services provided by any Agricultural Produce Marketing Committee or Board or services provided by a commission agent for sale or purchase of agricultural produce, etc. were included in the negative list of service tax and maintain status quo in the new policy framework. Other related services like credit and insurance are also non-taxable in GST. Hence, these services remain unaffected in the new tax policy framework and will not affect the stakeholders engaged in these operations.

Effect on R&D services in agriculture

The placement of the agricultural research and development services under 18 per cent standard tax slabs would increase the cost of research and development in agricultural sciences. Consequently, the cost of development of agricultural technologies in the research institutions will be inflated. Similarly, the private sector which has a monopoly in many of the agricultural technologies, transfer the burden of tax to its user by charging higher prices of agricultural technologies.

Effect on warehousing and cold storage

Taxation on storage and warehousing of agricultural produce maintain status quo and is free from taxes under GST regime. However, the cost of constructing new warehouse may increase because the input for construction of warehouses are subjected to GST without any corresponding opportunity to claim input tax credits as most of the agri-warehouses are private and are likely to remain unregistered supplier of service. On the other hand, prior to GST implementation, imports of equipment to modernize agri-warehouses which were specifically exempted from countervailing duty and special additional duty (SAD) now attract 18 per cent integrated GST (IGST) coupled with the existing 5 per cent basic custom duty. This will result in a surge in the cost of imported machinery, which in-turn increase the cost of construction of modern agri-infrastructure.

4. Processed Agricultural Products

Processing is an important operation in the value chain of agricultural commodities that adds form utility to the agricultural produce by means of a variety of machines. This machine and equipment can be used for cleaning, sorting or grading the seeds, grains, vegetables, fruits, eggs, processing of cereals etc. Likewise, the players in the commercial poultry use machinery like incubators and brooders to carry out their day-to-day operations. Most of this machinery used in agricultural and poultry were out of the tax net in excise and VAT regime. However, the machinery used in the dairy sectors like milking machines and dairy machines were taxed at 12.5 per cent in the excise and VAT regime. With GST implementation, some of these machines for cleaning, sorting or grading the seeds, grains, vegetables, fruits, eggs and processing of cereals attract five per cent tax while some other attracts 12 per cent tax rate. Marginal reduction in tax in dairy machineries would act as a catalyst for attracting new investments and strengthen the dairy industry in the country. However, the poultry and fruits and vegetables and cereals processing units will attract higher taxes in the current tax regime which may act as a hindrance to food processing in a scenario when only about 2-4 per cent of fruits and vegetables and about seven per cent of cereals are being processed in the country. (Acharya and Agarwal, 1998)

5. Dairy and Fishery

Dairying sector under GST regime

During the pre-GST regime, the grass, hay, straw, concentrates, oil cakes, and feed from the food industries were exempted from the central levies. However, oil cakes and other solid residues are taxable @ five per cent in the GST regime. On the other hand, 1 per cent reduction in tax on veterinary medicines in GST regime may lead to reduced expenditure on veterinary medicines. On the output front, higher taxation on processed dairy product may affect their consumption. In case of higher tax on processed dairy products, the consumer would have a tendency to substitute their demand for the milk product from unorganized sector that may be a set-back for the organized dairy sector. As a result of which the processors can restrict its operation to a few products only to mitigate the problems and consequentially reduce its reach to the milk producer and consumers which may alter the returns to the milk producers.

Fishery sector in GST regime

India, being the third largest producer of fishes employing about 15 million people and contributing significantly to the export revenue of the country. With the implementation of GST, fishery sector may face initial hiccups as the fishing tools as well as some of the aquatic products have subsumed under tax net. Fishing hooks, fishing rods, fishing tackles, and fishing twines which were earlier exempted from taxes are now taxable at 12 per cent and fishing ropes are taxable at 18 per cent. However, the tax on fishing vessels maintains status quo at five per cent. Outboard motors and ice boxes which were taxed at 14.5 per cent in excise and VAT regime, now attract a GST of 28 and 18 per cent, respectively. Since most of the fishermen being unregistered will have to incur additional cost for inputs and would be disdain from availing any input tax credit which would be detrimental to their livelihood. On the output front many of the processed aquatic products like dried / salted / smoked / chilled / frozen fishes; molluscs; crustaceans and aquatic invertebrates which were outside the tax ambit in excise and VAT regime of taxation, are taxable @ five per cent, while the fresh aquatic products maintains status quo and remain outside the tax net after GST implementation. Increased tax burden on processed aquatic products would like to increase the price and render them less competitive in domestic as well international market.

6. Commercial and Plantation Agriculture

Prior to GST implementation, the plantation crops were exempted from the central excise duty, except tea which was charged Rupee one per kilogram (kg). However, the states like Karnataka, Tamil Nadu and Kerala which are the major growers of these plantation crops, used to levy a net tax of 2 per cent taxes on these crops. On the other hand, fresh tea, coffee, cotton and jute are non-taxable under GST. While, the natural rubber attracts five per cent tax and the processed products of natural rubber attract differential tax rates as per their placement in different tax slabs in GST regime.

7. Marketing and Trade

Agricultural commodities are perishable in nature in varying degrees and therefore, their quality is affected by the time required for their transit and hence the trade. In India, trucks waste about 20 per cent of transit time in state check points and 5 per cent time in toll booths before GST implementation. That has led to inefficient agricultural supply chains.

Domestic trade

One of the objectives of GST is to have uniform tax rate for goods and services across the nation. Therefore, GST will strengthen the functioning of National Agricultural Market (NAM) aimed at an integrated system of market of agriculture produce at the national level, allowing a free flow of agricultural commodities across the country. The taxes applicable on agricultural trade in addition to the market fee also varied from state to state prior to GST. The states had different sale tax for same commodities (Table 2). Hence, the degree of market distortions on account of variations in the levy of market taxes/cess was applicable on different commodities in different states (Garg, 2015). However, implementation of GST led to subsuming of state entry tax and octroi duty. Thus, GST is expected to reduce the transit time; curtail wastage of perishable food items by easing the interstate movement of agricultural commodities which would improve marketing efficiency, and reinforce the spirit of the national agricultural market (NAM).

International trade

The agriculture trade constitutes 13.2 per cent of total exports and 7.1 per cent of total imports of India (GoI, 2016). The external and domestic trade of agricultural commodities is interlinked and hence the prices. The import of goods/services is likely to attract GST in the form of integrated goods and services tax (IGST) as it has been considered as interstate commerce. In addition to IGST, the basic custom duties (BCD) would be levied on all the imports to the country. However, the export would be zero-rated that means an exporter can avail the advantage of input tax credit (ITC) facility and need not pay any tax to the government for exports. On the other hand, the importer can avail the ITC facility for IGST and not for BCD. It means, the new policy is export encouraging and import discouraging for the country (Box 1).

Table 2 : Degree of market distortions in different states of India: Pre-GST

States	Sales Tax	Taxes (% of MSP)
Uttar Pradesh	Pulses : 2 % Foodgrains and Oilseeds : 4%	16.71
Punjab	NA	14.5
Haryana	Fruits &Vegetables : Nil Food grains, Pulses & Oilseeds : 4%	11.5
Uttarakhand	NA	7.5
Himachal Pradesh	NA	5.0
Andhra Pradesh	All Commodities (except Maize, Jowar, Ragi, Bajra, Coarse grains) : 4%	NA
Gujarat	Aniseed, Isabgoal, Cumin & Ajwain : 2% Spices : 3%, Cotton : 4%	NA
Karnataka	Food grains: Nil Pulses : 2% Oilseeds : 4%	NA
Madhya Pradesh	NA	9.2
Maharashtra	All agricultural commodities are exempt from sales tax	3.4
West Bengal	NA	2.5

Source: Garg (2015).

Box 1 : Tax structure and input tax credit for agricultural imports and exports in India under GST regime

Scenario	Type of supply	
	Export	Import
Tax Structure	Zero-rated supply	IGST and BCD shall be levied
Input Tax Credit (ITC)	ITC allowed	ITC of IGST is allowed but not for BCD

8. Input Tax Credit (ITC) and Agro Processing Sector

GST is unique of all the previous taxation systems it has inbuilt provision of input tax credit. The utilization of ITC at farmers' level is practically impossible as the agricultural operations have been exempted from GST and thereby the farmers need not register under goods and services tax network (GSTN). An agro-processing firm can gainfully utilize the provisions of ITC if it qualifies for the registration or has voluntarily registered under GST. However, there exists a myriad of technical impediments on the utilization of ITC. These include, the person or firm has to be registered under GSTN; the registered firm or person must have paid the taxes on inputs to the supplier and his supplier must have updated the information on GSTN; claiming of ITC would be impossible if the processor draws his inputs directly from the farmers or unorganized suppliers; cross-utilization of ITC is not possible (i.e. ITC on SGST can't be claimed against IGST and vice versa); literacy of the registered users about the ITC utilization and so on that will affect the effective utilization of the ITC.

9. Conclusion

The GST is a further significant improvement in the next logical step towards a comprehensive indirect tax reform in India. The frameshift changes in the indirect tax policy in India in the form of goods and services tax (GST) are the intrepid move by the Indian government. Although, it is expected that the tax revenue of the government will increase due to expansion of the tax net and subsuming majority of goods and services under a single umbrella, supply from the agriculture sector may experience initial hiccups in short run due to adjustment in prices. The price of almost all the inputs except fertilizers and water lifting devices, machinery for agro-processing and fishing and poultry equipment may witness upward revision after the inception of GST. However, the elimination of cascading of taxation, a multiplicity of taxation and increase in compliance are the important and powerful drivers which are expected to bring out visible positive changes for the sector in future.

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