



International Journal of Financial Management and Economics

P-ISSN: 2617-9210
E-ISSN: 2617-9229
IJFME 2018; 1(1): 87-93
Received: 03-07-2018
Accepted: 10-08-2018

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Role of reforms in agricultural marketing through agricultural value chains in India

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DOI: <https://doi.org/10.33545/26179210.2018.v1.i1.272>

Abstract

Indian agriculture is acquiring the status of agribusiness focusing on the value chain from the drawing of raw materials and marketing it to the final consumers. Now there is a necessity to deliver value to both the farmers and also to the consumers. The Government of India has taken the measures to upgrade the agriculture marketing system from time to time. The present study is a time travel of the reforms that are initiated by the Government of India in bringing about the reforms in agricultural marketing through agricultural value chains in India.

Keywords: Value addition, goods, agribusiness

1. Introduction

In recent times, Indian agriculture is witnessing a paradigm shift into technology driven, innovation guided and business oriented "industry" that culminating into agrarian production, agriscience, and agribusiness. It is having a national and worldwide reach. Today farming is upgraded to a agribusiness. In the changing times, the agribusiness offers many opportunities for growth particularly for the value driven chains. Simply put, a value chain is a sequence that involves production, processing and marketing activities, where products undertake various activities of the chain in a particular order and, with each of activity, the product gains value. A typical agricultural value chain covers all the actors along the chain and involves the whole range of activities that are required to transform a product from the initial input-supply stage, traversing through various phases of production, reaching markets and finally delivering goods to consumers.

Such value chains cannot work in isolation and requires support not only from vertical players but also horizontal actors. With changing times, these chains have also seen a large number of changes at various levels and there is a need for adaptations and upgradation of existing chains and emergence of newer value chains.

Agriculture marketing reforms in India: Fixing a broken system

- The link between economic growth and reforms has always been clear. In 1991, when we reformed parts of our economy, the transformational effects were clear for all to see.
- Yet, the farmers, a crucial sector of the Indian economy saw income grow at a slower rate than the rest of India and remained burdened by price controls and other regulations that prevented them from going for the best price for their produce. While the rest of India connected to global markets, our farmers could only sell their produce in their local markets – the traditional mand is.
- There was a need for a new policy paradigm
- India's agriculture policy was outdated – it had taken shape when India was a food deficit nation - and regulation had been necessary to incentivise production and protect the farm sector.

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Previous Reforms

2001	Expert Committee Report, Ministry of Agriculture
2002	Report of the Inter-Ministerial Taskforce on Agricultural Marketing Reforms
2003	Model Agriculture Produce Marketing Committee Act, 2003 circulated to States
2004-2006	National Commission on Farmers
2007	Model APMC Rules, 2007 published
2013	Report of Committee of State Ministers, In-charge of Agriculture Marketing to promote reforms
2015	eNAM launched
2016	NITI Aayog Taskforce on Agriculture Development
2017	Doubling Farmers Income Committee Report, Model APLM Act, 2017

A new approach was needed

- As India moved from a food deficit nation to the food surplus one, a policy shift was necessary - from deficit to surplus management.
- Previous attempts at reform requiring States to institute legislative changes to APMC Acts had not borne fruit. Agriculture remained a State subject though Inter-State Commerce and Trade was a Union subject.
- The potential of electronic national market for agriculture (eNAM) was thus hindered by local rules.

Need for agriculture value chain in India

India, with its population of more than 1.2 billion is considered to be one of the most emerging economies in the world. India is expected to beat China in terms of total population by 2030 and feeding such a big population would be a big challenge. India is one of youngest nation in the world with nearly half of the population lying in the working age group, which is a big demographic dividend advantage.

India has some great advantages for agriculture. India has more than 20 agro-climate regions, where sunlight hours and day length are suited for round the year cultivation. Nearly, every type of climatic conditions, from Snow Mountains in Himalayas to sand deserts in Rajasthan, exists in India. The soil fertility of India is considered to be very good for the agriculture, which is one of the biggest advantages for agriculture in India.

The agriculture value chain is much crucial for the food security of the country, especially for the people living in urban areas. The urban population of the country has increased many-folds from 79 million in 1961 to 377.1 million in 2011. This huge rise in the total urban households and total population of the country is putting an increasing pressure on the agriculture sector to produce more. However, more than the productivity increment, the development of effective food supply chain is of utmost important to satisfy the hunger of the growing population. The agriculture value chain is of central substance to all the farmers, processors, logistics partners, wholesalers and retailers.

The main reason behind the rising food inflation in the recent periods are inefficiencies in the agriculture value chain especially of high value items like fruits and vegetables, meat and the like. The supply-side constraints are influencing the food prices largely both at local, national and global level. Market imperfections, like lack of proper infrastructure in rural areas, shortage of storage and transportation facilities further add to food inflation

(Ministry of Agriculture, 2012) ^[1]. All of these points converge to the point, that there is urgent need to deal with the inefficiencies in the whole agriculture value chain.

Traditional agriculture value chain in India

In 1950's, the agriculture marketing in India was highly regulated and badly organized. The overburdened agriculture marketing mechanism leads to ineffective farm-market linkages, leading to low income to farmers, high post-harvest losses and high marketing costs. Many regulations and acts were in place, which controlled the storage, transportation, exports, imports and direct marketing of agriculture produce. The government has enacted APMC act (Agriculture Produce and Marketing Committee) to regulate the agriculture produce market in 1963. Many researchers and academicians argue that this act over the past several years have led to ineffectiveness and inefficiencies in the agriculture markets. The Act prohibited directly selling of agriculture produce to consumers by mandating the selling to agriculture produce through regulated government mandis. The APMC act gives more power to the bureaucrats for the management of APMCs and market fee is charged for each transaction which contributes to the government revenues.

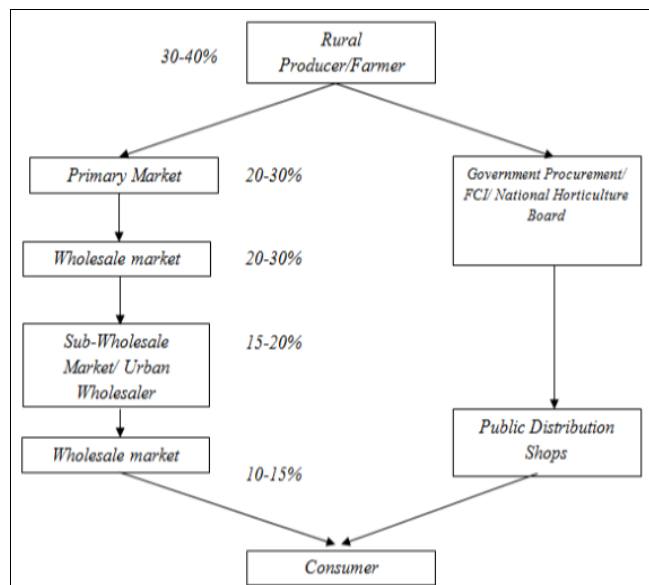
Agriculture marketing in a particular state is regulated by the APMC Act of the state with variations existing among states. An Agriculture Produce Marketing Committee is responsible for a particular market area, if implemented. These committees have local farmers as their members are often administrated by bureaucrats with no regular elections (Acharya, 2004) ^[2]. The committee is responsible and empowered to establish markets, manage the issue and admission of traders, levy market fees and manage the local operations. The APMC collect significant amount of revenues for the government, but in turn the investments for the development of wholesale markets and facilities is very low. APMC Act was enacted to protect the farmers from market shocks and help them to get the justified price for their produce. Unfortunately, over the years due to traders monopoly and government over-regulation required innovations and development of new markets is missing in the present agriculture marketing system.

The committee allots the shops in the wholesale market yard to various brokers and traders based on the eligibility

¹ "Agriculture Prices and Markets", Chapter 5 State of Indian Agriculture 2011-12, Department of Agriculture and cooperation, Ministry of Agriculture, Government of India, 2012.

² Acharya, S.s 2004. Agricultural marketing in India. Vol. 17 of Millennium study of Indian farmers. New Delhi: Government of India, Academic Foundation

criteria upon the payment of the license fees. Normally, the number of license holders exceeds the total number of shops available in the market yard which causes mess many a times due to lack of space. The licenses given to the brokers are renewable every year which can be done easily and passes from one generation to other (Minten, 2009) ^[3]. The figure below shows the traditional agriculture value chain which still dominates the agriculture marketing in India. The numeric percentage figures in the figure shows the distribution of the final price paid by the consumer among different components of the value chain.



Anshul Pachouri. (2012) ^[1]. Economic Inefficiencies in Farm-Market Linkages in Agriculture Value Chain in India: Problems and Solutions. ISAS Working Paper.

Fig 1: Traditional Agriculture Value Chain in India

Current status of marketing of agricultural produce

Establishment of regulated markets for orderly marketing of agricultural produce is the major intervention made by most of the state governments in India. An expert committee on agricultural marketing constituted by the Government of India (GoI) in the year 2001, suggested various market reforms. The finalized rules were circulated to all state governments in the year 2003, which then transformed as the Agriculture Model Act to be implemented by the states. Several states have amended their APMC Acts as per the provisions of the Model Act while others have partially implemented it.

Reforming agriculture markets

Reforming agricultural markets is essential for enabling the provision of competitive choices of marketing to farmers, simplifying transactions, reducing intermediation, cost and wastage, improving quality and encouraging private investment for the development of market infrastructure and alternative marketing channels. In the new (NAM) framework, all the registered market participants such as farmers and traders will have direct access to grading and storage facilities and will be able to access financing options. With this upcoming initiative, some of the

following key action areas have emerged in recent years:

- Farmer Producer Organizations (FPOs) and Producer Companies (PCs) have been established to create online platforms for National Agriculture Marketing;
- Integration of the APMC regulated market yards across the states into the online platforms to create a unified NAM;
- Enabling buyers / sellers situated even outside the state to participate in trading at the local level;
- Reducing transaction costs on moving produce from one market area to another within the same state;
- Unified licensing system and establishing a quality management system for quality assurance and grading.

Review of Literature

Anshul Pachouri (2012) ^[1] focuses mainly on the horticultural commodities like fruits and vegetables value chain and studies the different inefficiencies in the agriculture value-chain of India focusing on farm-market linkages. Indian Agriculture sector is the backbone of Indian Economy which employs more than 50% of the total workforce. The percentage contribution of Agriculture sector in India's GDP is around 14%, which is growing by just merely 2.8% for the period of 2011-12. The growth of Agriculture sector is extremely important for India to ensure food availability and sustaining rural livelihood. The agriculture value chain of India is suffering from many bottlenecks which lead to low income to farmers and high inflation in food-prices.

Sazzad Parwez (2014) ^[9] attempt to example the problems faced by Indian agriculture for food security in terms of inadequate infrastructure and highly inefficient supply chain in context Information Technology. Due to lack of efficient infrastructure and food processing industry about 30-35 per cent of all foods produced in India are wasted. The author examines the critical issues that each sub-system of agriculture supply chain, starting from the input to the consumer with a view to integrating them in efficient and effective manner. Investment in cold chain infrastructure, applied research in post- harvest technologies. Installation of free processing plants in various sectors and development of food retailing sector are mandatory for achieving gains in this sectors.

Dinesh Jain (2016) ^[3] examines the evolving environment for agri commodity businesses, identifies issues and challenges, and explores various institutional arrangements that have emerged over the years to address the above challenges. In the twenty first century, Indian agriculture has moved beyond self-sufficiency and it is globally oriented "industry" with inter sectoral linkages. In spite of modern technologies and policy support, the agricultural value chains are experiencing various bottle necks, namely, lack of sufficient quantity and acceptable quality of raw material, adoption of the appropriate technology and practices, meeting working capital requirements for processing and operations, delivering strong marketing efforts, sharing benefits across the chain and sustainability issues. These bottle necks are primarily because of lack of efficient value chains that minimise and address the issues of information asymmetry and high transaction costs.

Ashish Bahuguna (2014) ^[2] contends that our country has made remarkable progress in terms of increased agriculture production. However, we continue to come across instances of distress sales by farmers even though consumers are having to pay abnormally high prices for agri-commodities.

³ Minten, B., Reardon, T. & Vandeplas (2009), "Linking Urban consumers to rural farmers in India: A comparison of Traditional and modern supply chain", IFPRI Discussion paper 00883, IFPRI Publications

The root cause of this problem is the asymmetry in demand and supply which can be addressed by setting up agri-marketing sector in order. The subject of marketing of agriculture produce primarily lies in the domain of the State Governments. Central Government has been supporting the initiatives of the State Governments through a multi-pronged strategy. State Governments have been advised to align the provisions in their regulations that govern marketing of agriculture produce with the changed market scenario. Central Government has also been promoting creation and improvement of marketing infrastructure, capacity building and generating access to market information.

Issues and bottlenecks for value chain assistance

- The Government placed high priority on promoting horticulture. It has provided a broad range of assistance schemes for horticulture. However in order to cover the broad areas, the assistance tends to be fragmented in nature. Consequently there are opinions that the assistance is not delivered to those needed and not effective.
- Department of Agriculture in state government is going through structural changes from traditional grain-based system to more cash crop oriented structure by increasing the number of horticulture officers. As the reform is still on-going, the number of horticulture officers is not sufficient. Besides they are made busy with coordinating for those government schemes as they have targets to achieve.
- Although there are many dedicated officers on the ground, it is not realistic to deliver their services to all the needed farmers.
- Department of Agriculture in the state government is in charge of tasks related to AVC from production to post-harvest. Marketing of agricultural produce is not covered by Department except the management of APMC market. There is no linkage of work with Department of Industries for food processing. Thus there is a mismatch of policy that Department promotes processing varieties where no processing unit exist or farmers are not interested in post-harvest processing as there is no market for their produce consumers directly such as farmer's market. However, most of the cases encounter a difficulty in finding interested buyers. Besides the conditions of selling produce at these occasions may not be attractive for farmers either. Although there are successful cases of farmer's market, they are limited in scale.
- There is a successful example where the motivated farmers explore the sales channel for their produce by themselves. However, information asymmetry of market price and lack of marketing skill are considered as major bottlenecks for farmers to benefit from Value Chain.
- It is difficult for processing units to procure their raw material in a sustainable manner. As the food processing industry is not fully developed, there is no stable demand from processing industries.
- Besides the farmers are not organized and sales of individual farmer tends to be ad hoc. These issues squeeze farmers' earnings and makes stable supply of raw materials very difficult for food processing industries.
- It is considered difficult to convince farmers who want to have immediate cash to take extra time for post-harvest or processing unless there are assured buyers.
- The private companies targeting export of fresh fruits or vegetable mostly source their raw material from big farmers for the concerns of traceability and stable supply.
- Labor shortage and high labor cost have been a serious issue in production side. In many places, farmers depend on migrant labors for their production works especially during weeding and harvesting. This limits the possibility and willingness of farmers for doing processing at farm level.

Table 1: Summary of problems, activities, and related government ministry for major stakeholders in the value chain for dairy products

Stakeholders	Major activities	Problems/issues	Related government Organization
Farmers	Produce milk	<ul style="list-style-type: none"> ▪ Lack of access to market in rural areas ▪ Lack of chiller facility ▪ Lack of fodder ▪ Low productivity 	Department of Animal Husbandry
Cooperative	Collect, pasteurize, process, pack, distribute and sell dairy products	<ul style="list-style-type: none"> ▪ Milk collecting center ▪ No electricity (no chiller facility) at collecting center, low penetration rate of chiller facility at milk collecting center ▪ High price of machinery to check quality Factory ▪ Seasonal fluctuation of milk production ▪ Tractability of milk ▪ Old facilities 	NDDDB, Department of Animal Husbandry
Private company	Collect, pasteurize, process, pack, distribute and sell dairy products	<ul style="list-style-type: none"> ▪ Seasonal fluctuation of milk production 	
Middleman	Collect milk and transport to shops or consumers	<ul style="list-style-type: none"> ▪ Unclear mechanism to determine price ▪ Unhygienic conditions/adulteration ▪ No chilling facility 	
Milk shop/bakery	Process and sell dairy products	<ul style="list-style-type: none"> ▪ Sometimes unhygienic conditions 	

	▪ No chilling facility	
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Final Report for Data collection and Confirmation Study for agricultural Value Chains in the Republic of India. (August 2015) ^[5]. Japan International Cooperation Agency, pp 1-325.

Table 2: Case Studies based on main agriculture value chains decision-making challenges

Author	agriculture value chains decision-making challenges	Main aspect to support
Mittal S.C ^[4] .	India horticulture industry has ineffective information communication between producers and end-customers. The government introduced a physical wholesale market terminal to allow producer and end-customers to meet and share information	Vertical Integration
Dolan <i>et al.</i> (2000) ^[5] .	Both wholesalers and retailers need to know producers and production information	Vertical Integration
Gummagolmath ^[6] .	Most farmers use wire phone or cellular phone to seek information. The internet is not popular method as lack of infrastructure, the cost of using the internet and literacy rate of farmers.	Information Sharing
Awuor <i>et al.</i> (2013) ^[7] .	Farmers need a wide range of information to make a good decision. Information for farmers is very fragmented and unreliable. It is suggested to use a database that store information all together to facilitate farmers' decision making	Information Sharing
Rao ^[8] .	The common way for India farmers to get reliable information is to go to external organisations. External organisations are usually far from farmers. Farmers need to drive there and it is very costly and time-consuming. The access to information is restricted or prohibited. Access to digital information is a bottleneck for HVC performance improvement in India,	Information Sharing
Challinor <i>et al.</i> (2007) ^[9] .	Choosing the right are for growing vegetable is a major issue. In special under climate change, hence it is suggested to use information communication between nation, regional and local-level management	Climate change
Jones <i>et al.</i> (2000) ^[10] .	Under a Value Chain Approach, environmental parameters, such as temperature, affects the product cycle time, in this case the example of grape was studied, where it was realized the agriculture value chain, due to high temperatures was required now to deal with faster ripening process time	Climate change
Webb <i>et al.</i> (2007) ^[11] .	Weather tracking database predicts the weather and makes planning arrangement, which successfully improves the effectiveness of producing quality grape	Climate change
Thomas <i>et al.</i> (2009) ^[12] .	The quality of vegetable will be indirectly affected by climate change due to the change of pest species. A model shows the relationship between the temperature and the species of pests helps predict and control pest in agriculture.	Climate change

Jorge E. Hernandez, Janusz Kacprzyk, Hervé Panetto, Alejandro Fernandez, Shaofeng Liu, Angel Ortiz and Marco De-Angelis. (2017) ^[6]. Challenges and Solutions for Enhancing Agriculture Value Chain Decision-Making. A Short Review. IFIP International Federation for Information Processing, pp. 761–774.

Reforms in agriculture marketing

The government has initiated some fundamental reforms to remove the inefficiencies in the traditional agriculture value chain and to benefit the farmers. Agriculture is a state subject and hence, state governments are more concerned and influential in implementing these agriculture marketing reforms. In order to increase the income of farmers and promote the role of private sector in the agriculture marketing, a model APMC Act was introduced by Ministry of Agriculture in 2003. The model Act aims to remove all the barriers and monopoly of brokers in the present agriculture marketing system. Some of the key features of model APMC act are:

- Allow establishment of private market yards and purchase of agriculture produce directly from farmers.
- Permission to establish and operate National Integrated Produce Market (Terminal Market) to sell horticulture crops.
- Allow contract farming under written agreement recorded within the market committee and enable e-trading.
- Permission to sell the agriculture produce to in market yards, private yards and other places to license holders, without actually bringing the produce to save the transportation cost and handling losses.
- It is mandatory for the seller to pay the buyer on the

⁴ Mittal, S.C.: Role of Information Technology in Agriculture and its Scope in India

⁵ Dolan, C., Humphrey, J.: Governance and trade in fresh vegetables: the impact of uk supermarkets on the african horticulture industry. *J. Dev. Stud.* 37, 147–176 (2000)

⁶ Gummagolmath, K., Sharma, P.: User centric ICT model for supply chain of horticultural crops in india. *Agric. Econ. Res. Rev.* 26, 91-100

⁷ Awuor, F., Kimeli, K., Rabah, K., Rambim, D.: ICT Solution Architecture for Agriculture. In: Conference Proceedings 978–1 (2013)

⁸ Rao, N.H.: A framework for implementing information and communication technologies in agricultural development in India

⁹ Challinor, A., Wheeler, T., Garforth, C., Craufurd, P., Kassam, A.: Assessing the vulnerability of food crop systems in Africa to climate change. *Clim. Change* 83, 381–399 (2007)

¹⁰ Jones, G., Davis, R.: Climate influences on grapevine phenology, grape composition, and wine production and quality for Bordeaux, France. *Am. J. Enol.* (2000)

¹¹ Webb, L., Whetton, P., Barlow, E.W.R.: Modelled impact of future climate change on phenology of wine grapes in Australia. *Aust. J. Grape Wine Res.* 13, 165–175 (2007)

¹² Thomson, L.J., Macfadyen, S., Hoffmann, A.A.: Predicting the effects of climate change on natural enemies of agricultural pests (2009)

same day else the penalty of 1% per day will be levied for next five days. If the payment is not been made even after 5 days, it would lead to cancellation of the license of the holder.

- Allows market committees to fix the market fee from 1-2% of the price of the agriculture produce which can only be charged once as compared to paid in each market yard earlier.
- The market fees should be paid by buyers and not the seller or farmers.

The model APMC act

Since the State Acts created fragment markets for agricultural commodities and curtailed the freedom of farmers to sell their produce other than through the commission agents and other functionaries licensed by the APMCs, the Ministry of Agriculture developed a model APMC Act, 2003 and has been pursuing the state governments for over a decade to modify their respective

Acts along the lines of the Model APMC Act, 2003.

The Model APMC Act

- a) provides for direct sale of farm produce to contract farming sponsors;
- b) provides for setting up “Special markets” for “specified agricultural commodities” – mostly perishables;
- c) permits private persons, farmers and consumers to establish new markets for agricultural produce in any area;
- d) requires a single levy of market fee on the sale of notified agricultural commodities in any market area;
- e) replaces licensing with registrations of market functionaries which would allow them to operate in one or more different market areas;
- f) provides for the establishment of consumers’ and farmers’ markets to facilitate direct sale of agricultural produce to consumers; and
- g) provides for the creation of marketing infrastructure from the revenue earned by the APMC

Table 3: Market Reforms across various states in India

S. No	Area of Reforms	States adopted the suggested area of market reforms
1	Establishment of private market yards/ private markets managed by a person other than a market committee	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland, Orissa (excluding for paddy / rice), Rajasthan, Sikkim, Telangana, Tripura, Punjab, UT of Chandigarh, Jharkhand, Uttarakhand, West Bengal.
2	Establishment of direct purchase of agricultural produce from agriculturist (Direct Purchasing from producer)	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Haryana (for specified crop through establishment of Collection Centres) Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Rajasthan, Sikkim, Telangana, Tripura, Punjab (only in Rule), UT of Chandigarh (only in Rule), Jharkhand, Uttarakhand and West Bengal.
3	Establishment of farmers/ consumers market managed by a person other than a market committee (Direct sale by the producer)	Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland, Rajasthan, Sikkim, Tripura, Jharkhand, Uttarakhand and West Bengal
4	Contract Farming Sponsor shall register himself with the Marketing Committee or with a prescribed officer in such a manner as may be prescribed.	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Haryana Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Mizoram, Nagaland, Orissa, Punjab (separate Act), Rajasthan, Sikkim, Telangana, Tripura and Uttarakhand.
5	Contract Farming Sponsor shall register himself with the Marketing Committee or with a prescribed officer in such a manner as may be prescribed.	

National Bank for Agriculture and Rural Development. (2018) ^[8]. Status of Marketing Infrastructure under Electronic National Agriculture Markets - A Quick Study. Mumbai: National Bank for Agriculture and Rural Development, Department of Economic Analysis and Research.

Recommendations of the Committee

Government of India set up Several Committees and Expert Groups to suggest the direction of reforms in the field of agricultural marketing. The first was the Expert Group on Agricultural Marketing (Acharya) constituted by the Union Ministry of Rural Development in 1998. Following the constitution of this Expert Group, a major structural change occurred leading to the transfer of agricultural marketing division of Union Government from the Ministry of Rural Development to the Ministry of Agriculture. In December 2000, the Union Ministry of Agriculture constituted another Expert Committee on Strengthening and Developing Agricultural Marketing System in the Country under the chairmanship of Sri Shakti Narayan Guru. This Committee (Guru Committee) reviewed the entire system of agricultural marketing in the country and submitted its specific recommendations to the Government in June 2001. The Expert Committee’s recommendations included various legislative reforms as well as reorientation of policies and programmes (Government of India, 2001). Major recommendations of the Committee are

1. The Government should examine all existing policies, rules and regulations with a view to remove legal provisions inhibiting free marketing system. Private Sector, Corporate and Joint Ventures need to be encouraged to set up markets for free and competitive trade
2. By an amendment in Agricultural Produce Markets Act, the utilization of funds by the Agricultural Produce Market Committee (APMC) and State Agricultural Marketing Board (SAMB) for support services like grading, standardization, storage and pledge finance should be made mandatory.
3. Government should strengthen and institutionalize commodity exchanges and futures markets.
4. Government should remodel the functions of APMCs and SAMBs and these bodies should be headed by professionals.
5. All laws that regulate participation in the market such as licensing, controls on packaging and labeling, commodities under regulation, controls on movement and volumes, traded access to credit and dispute

- resolution should be comprehensively reviewed.
6. Essential Commodities Act, 1955 should be repealed.
 7. Direct marketing by farmers or through SHGs should be promoted by taking it out from the APMC Act. Some common code of conduct and modalities for ownership, and operation should be prescribed.
 8. Consumer organizations should be promoted to directly procure from farmers and distribute to consumers.
 9. The use of IT in agricultural marketing should be promoted.
 10. Substantial investment from private sector should be mobilized for creation and expansion of agricultural marketing infrastructure, which will require complementary public investment and creation of conducive legal environment.
 11. A system of certified warehouses and negotiable warehouse receipts should be introduced to improve credit delivery for marketing functions. Similarly, pledge financing should be encouraged.
 12. Government should design a full-fledged agricultural marketing credit policy.
 13. Alcoholic beverages based on fruits and vegetables should not be clubbed with other alcoholic beverages for the purpose of excise and related laws.
 14. Production of fruits, vegetables, medicinal plants, aromatic plants and spices should be brought under the definition of plantation crops.
 15. NIAM should become a Centre of Excellence for Asian Region to be headed by a Technocrat, Marketing Practitioner or Academician of national/international repute.
 16. A massive programme of marketing extension should be launched. Privatization of extension services with appropriate financial backup from the public sector should be encouraged. An essential requirement for this is a 24-hour TV Kisan Channel on Door Darshan.
 17. SAUs and Centres of ICAR should be given a mandate for applied research in agricultural marketing. Marketing organizations should be asked to set apart some funds for marketing research.
 18. Training facilities in agricultural marketing for all the stakeholders and database for marketing should be strengthened

Suggestions

The public sector and policy makers can undertake the following policies to improve the institutional environment, thereby facilitating the formation of large number of institutions and organisations. Farmer Producer Organisations may act to enhance small farmers' integration in agri commodity value chains in the following ways:

- Better access to timely and adequate finance
- Utilise scale to procure inputs at lower prices
- Enable market linkages
- Farm mechanisation through integrated production
- Build capacity in production/processing/marketing
- Collate produce and more selling power
- Improve infrastructure and telecom networks
- Stimulate private market information systems
- Promote commodity exchanges
- Integrate marketing and value chain aspects into existing extension systems
- Introduce and enforce standard marketing contracts
- Promoting partnerships between small producers and agro-businesses or commodity wholesalers

- Help small farmers to comply with market standards and supermarket requirements
- Enhancing the management capacities of small farmer associations
- Legal Support and facilitation.

Conclusion

Indian agriculture is now upgraded to "industry" is acquiring elevated status. The reach is now widespread. Agricultural value chain comprises range of activities from drawing raw materials till the final processing and delivery of goods to the consumers. The role of vertical and horizontal actors is but inevitable. India with rich demographic dividend can leverage advantages from agriculture. There is a scope for the value chains in the process. The APMC Act is a step in the direction to protect the farmers to hedge against the market risks and get fair price for their produce. The innovations in the agricultural marketing has helped in both the vertical and horizontal integration. The marketing infrastructure created therefrom has helped the market functionaries to perform better.

References

1. Pachouri A. Economic Inefficiencies in Farm-Market Linkages in Agriculture Value Chain in India: Problems and Solutions. ISAS Working Paper; c2012.
2. Bahuguna A. Integrated Scheme for Agricultural Marketing. Ministry of Agriculture Department of Agriculture and Cooperation; c2014.
3. Jain D. Inclusive Development in Agri-Commodity Value Chain: Role of Institutions and Institutional Models. Amity Journal of Agribusiness. 2016;1(1):34-44.
4. Kakaty G, Borah SD. Impact of Emerging Marketing Channels in Agriculture - Benefit to Producer-Sellers and Marketing Costs and Margins of Orange and Potato in Assam. Assam: Agro-Economic Research Centre for North East India, Assam Agricultural University; c2011.
5. Japan International Cooperation Agency. Final Report for Data Collection and Confirmation Study for Agricultural Value Chains in the Republic of India; c2015 Aug. p. 1-325.
6. Hernandez JE, Kacprzyk J, Panetto H, Fernandez A, Liu S, Ortiz A, *et al.* Challenges and Solutions for Enhancing Agriculture Value Chain Decision-Making: A Short Review. IFIP International Federation for Information Processing; c2017. p. 761-774.
7. Raju KV, Naik G, Ramaseshan R, Pandey T, Joshi P. Transforming Agricultural Marketing in India: Linking Farmers to a National Gateway and E-Markets. Research Report IDC-5; c2016. p. 1-39.
8. National Bank for Agriculture and Rural Development. Status of Marketing Infrastructure under Electronic National Agriculture Markets - A Quick Study. Mumbai: National Bank for Agriculture and Rural Development, Department of Economic Analysis and Research; c2018.
9. Parwez S. Food Supply Chain Management in India Agriculture: Issues, Opportunities and Further Research. African Journal of Business Management. 2014;8(14):572-581.