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Identifying the Determinants of Value in the MSME Industry: A Value Chain Analysis Approach

Amrita Rastogi

Institute for Spatial Planning & Environmental Research, Panchkula
E-mail: ar.rastogi.amrita@gmail.com

Abstract—*Adding value to a product passing through a chain of activates is called Porter's Value chain. Value chain Analysis (VCA) is a tool for analyzing the nature and sources of value within a supply chain and the potential for reducing waste therein, with the focus openly on factors of values within a raw material to manufacturing process rather than the simple measurement of process outputs. This paper reports the result from MSME units: An analysis of FPI (Food Processing Industry) supply chain management and Clusters. The analytical focus is on the nodes in the value chain (Input supply, production, design, marketing, exports), where it is added and who captures that value. Key actors of global chain analysis are like lead firms, supplier firms, intermediary firms, non-chain firms and institutions. The issues which are associated with chain are like where is the value added? Where the chain is profit realized? What kind of jobs is being created there? Where is the new knowledge being generated? The methods I have used during the research study are qualitative and quantitative for secondary data analysis. The paper concludes by identifying the key areas in which further research is required to develop the unique characteristics of the MSME industry.*

Keywords*: Value Chain Analysis, MSME, Industry, Clusters etc.*

1. INTRODUCTION

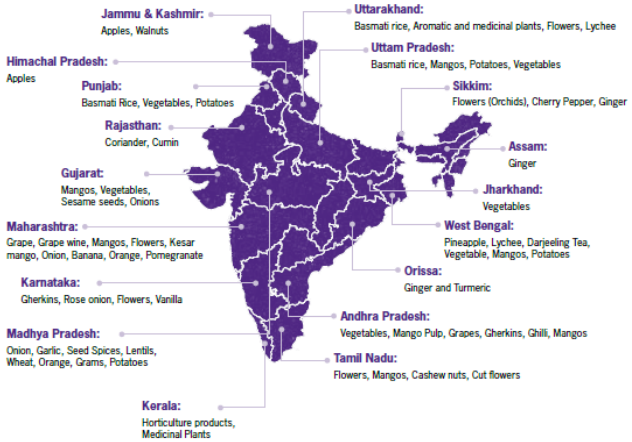
Globalization has resulted in aggravated competition for Indian agriculture in international markets. To remain in the global markets it is essential to build capacities in the system so that it is able to withstand the forces of globalization and compete wherever possible. Through India has a number of policies for agriculture and food processing development. Agro based food processing Clusters has emerged as a potential tool for the growth of this zone. Over the years agricultural production in India has consistently recorded higher output. India ranks in the world in the production of Milk, Ghee, Pulses, Ginger, Bananas, Guavas, Papayas and Mangoes. Further, India ranks no. 2 in the world in Production of Rice, Wheat and several other vegetables & fruits. Abundant Supply of raw materials, increase in demand for food products and incentives offered by the government has impacted food processing sector positively. Below table 01 shows that food processing sector has been on growing at a faster rate than agriculture sector [21, 14, and 15].

Table 1: Contribution of food processing Industries to GDP

Contribution of food processing Industries to GDP at 2011-12 % Growth			
Economic Activity	**2012-13**	**2013-14**	**2014-15**
GDP-All India	4.93	6.64	7.17
GDP-Manufacturing	6.23	5.32	7.13
GDP-Agriculture, Forestry & Fishing	1.19	3.66	0.23
GDP-FPI	-4.66	4.32	7.13

Sources: National Accounts Statistics-2015

According to trade scenario and Strategic geographic location proximity to food-importing nations makes India favorable for the export of processed foods. Below map 01 shows the State wise distribution of Agri export zones in India. The value of processed food exports during 2014-15 was 11.63% of India's total export. The value of exports in the sector has been showing an increasing trend with Average Annual Growth Rate (AAGR) of 20.53% for five years ending 2013-14[10].



Sources: IBEF Website

Fig. 01: State-wise distribution of agri-export zones

The potential impact the policy would be as follows; like socio-economic and environmental impact, quality, health and safety etc. Top 5 Registered factories in food processing sector state wise are listed below table no. 02:

Table No: 02 State-wise registered FPI Units:

State wise estimated number of Factories in Registered FPI units for 2012-13		
Sr. No.	**Name of the State**	**No. of Registered Units**
1	Andhra Pradesh	5735
2	Tamil Nadu	5156
3	Telangana	3716
4	Maharashtra	3077
5	Punjab	2792

Sources: Annual Survey of Industries, 2012-13

2. CONCEPT OF CLUSTERS

The concept of 'clusters' has obtained due attention of the policymakers in the last two decades. Worldwide clusters have been reflected potential drivers of competitiveness. A nation's economy contains a mix of clusters of industries connected through vertical and horizontal relationships [20]. Cluster initiatives are also considered to be efficient policy instrument in that they allowed for concentration of resources and funding in the targeted areas with high growth and development potential that can spread beyond the target locations.[22] Clusters are geographic concentration of interconnected companies and institutions in a particular field [20]. Cluster approaches recognize that all actors in the agricultural value chain are often more innovative and successful when they interact with supporting institutions and other actors in the supply chain.

In many developing countries, the greatest potential for sustainable growth lies in the agricultural sector. Yet ironically, it is this sector where poverty is most widespread and found in its worst forms. Small scale farmers, and rural communities in which they live, are imprisoned within a 'cycle of equilibrium' of low margins, resulting in low risk-taking ability and low investment, which leads to low productivity, low market orientation and low value addition which, in turn, nets low margins.

3. POTENTIAL DRIVERS OF A CLUSTER

Food Processing Industry in India is increasingly seen as a potential source for driving the rural economy as it brings about synergy between the consumer, industry and agriculture. The need at present is for a comprehensive National Food Processing Policy that would be an effective step to catalyze investments and optimize growth in the sector. Well - developed FPI with higher level of processing helps in the reduction of wastage, improves value addition, promotes crop diversification, ensures better return to farmers, promotes employment as well as increases export earnings.

4. CHARACTERISTICS OF CLUSTERS IN DEVELOPING COUNTRIES

The essential characteristics of enterprises in a cluster are (a) similarity or complementarily in the methods of production, quality control and testing, energy consumption, pollution control, etc (b) similar level of technology and marketing strategies/practices (c) channels for communication among the members of the cluster (d) common challenges and opportunities. Generally smaller firm size clusters from developing countries are dominated by SMEs, whereas in developed countries larger firms predominate. State govt. should focus on promoting commodity based cluster development based on production strength. Govt. should implement a comprehensive value chain development strategy for each food cluster and support mega food parks. This would minimize the risk and improve the profitability of individual units. For cluster upliftment there should be strengthen the agriculture marketing infrastructure, facilitation of allotment of land, subsidy, promote mega projects, develop logistic infrastructure, compliance food safety regulatory requirements, support to business units having established backward integration, setting up primary processing units, labor laws and skilling centers, encourage collaborative firm, incentives and support measures etc.

5. STAGES OF PROCESSING OF FOOD

The ministry of Food Processing Industries does not deal with a few food items such as coffee, tea, oilseeds, sugar, spices and alcohol made from molasses, as these items fall within the purview of other ministries. Food Processing includes (a) Manufactured Processes, (b) Other Value-Added Processes. From an analytical perspective, food processing can be viewed as different levels of processing – Primary, secondary and tertiary. Primary processing relates to conversion of raw agricultural produce, milk, meat and fish into a commodity that is fit for human consumption. It includes steps such as cleaning, grading, sorting, packing etc. FPI (Food Processing Industries) generally deals with higher levels of processing where new or higher value food products are manufactured. The different stages of processing of food, are as depicted in the flow chart below:

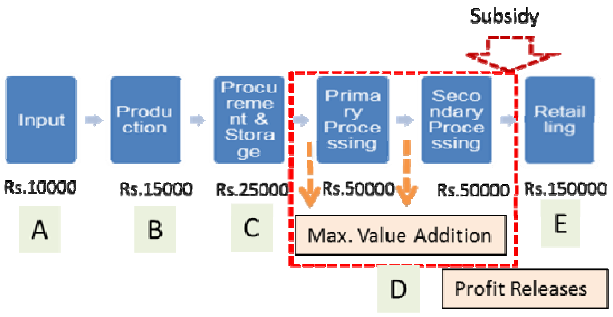


Fig. 02: Flow diagram of Supply Chain

Symbol	Items	
A	Raw material (Cost of seed), Cultivator, Fertilizers	labor charges
B	Harvesting (water supply, power), Pesticides, Polyhouse	
C	Warehouse/cold storage, logistic, Machines (cutting)	
D	Cleaning, Preservator, Logistic	
E	Packaging, Marketing, Logistic	

Sources: Author

The above flow diagram 02 shows the suppose values of activites like A is the base input value of 10,000 Rs., B is the production cost of 15,000 added in supply chain, after production process the third stage is C. like procurement and storege includes logistic and labour charges also, after that D like Primary and secoundary processing comprising the cleaning and use of preservators with labour charges, E is the packaging with marketing through labour charges. The whole chain shows that and E is the maximum profit releaseing stages, where the higher value addetion taken place[4]. So the determinants of value addition are functioned parallely in any type of supply chain or activity path of industry.

5.1 Supply Chain Management in FPI

The concept of Supply Chain Management (SCM) was developed in processing management is related to customer service, demand, flow of material, and distribution for making an improvement in production. It is a combination and coordination of business activity that control the flow of material dispatch from supplier to customer. Supply Chain management network deals with analysis of information from every node on the Supply Chain to cut down working cost. In 1776 Adam Smith proposes a development in production methods by specializing working in definite task for supply chain management. In between 1859 to 1915 F.W. Taylor present with new conception of "function Management " which leads to value Engineering technique developed by L.D. Miles in 1950 to resolve storage, allotment, Scheduling processing, control issue and location layout.

Supply chain management work in any food processing industry is define as the Agri-industrial system aims for plantation, cutting, transport and processing form farm to mill and mill to market.[1] All food processing industry supply chain is highly integrated and contains:

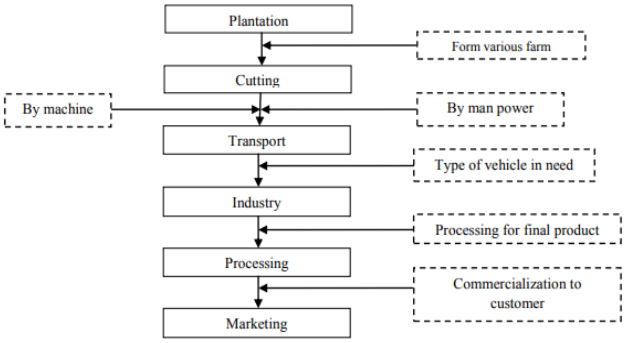
a) Food Plantation

b) Cutting

c) Food Transportation to industry

d) Industry to Processing

e) To Market



Sources: Author

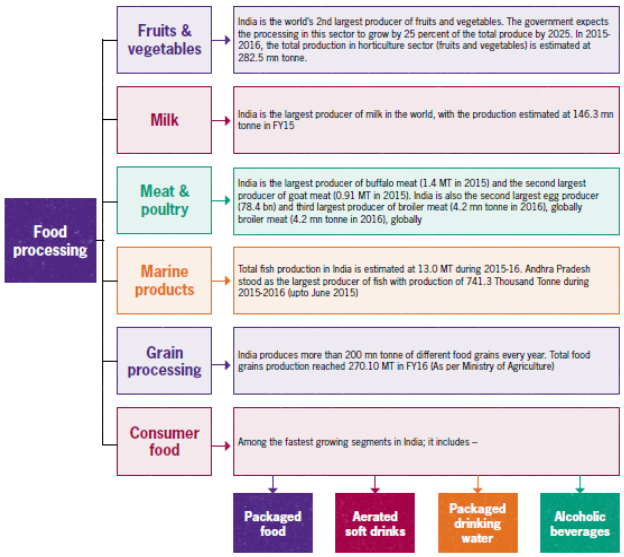
Fig. 02: Flow diagram of FP Supply Chain Management

If we see the above supply chain and trying to understand that engage in higher productivity, more market oriented and higher value added production. Accordingly, Government have discovered that cluster promotion is a valuable tool to support the MSME enterprises and help them to link global value chains in a more efficient and sustainable manner [8]. A network of cluster needs to be supported at a local or domestic level in order to be strong enough to compete and operate in global value chain. Accordingly, clustering has been rediscovered as a local response to globalization, a "Think globally, act locally" approach to increase competitiveness.

To support the initiatives for value addition from crop residues and agro waste generated in the Food & Agro processing units that will improve the earning of the earning of the industry units and farmers and help in resolving environment concerns. It is suggested to support use of Bio-energy for generation of electricity. Further, one time capital subsidy to an extent of Y% of the cost of Effluent Treatment Plants (ETPs) subject to a ceiling of Rs. X Lakhs could be provided to incentivize investment for proper waste disposal.

5.1.1 Sources of value addition in Food processing:

Food processing shall include process under which any raw product of agriculture, dairy, animal husbandry, meat, poultry or fishing is transformed through a process (involving employees, power, machines or money) in such a way that its original physical properties undergo a change and if the transformed product has commercial value and is suitable for human and animal consumption.



Sources: Author

Fig. 03: Sub parts of Food Processing

It also includes process of value addition to produce products through methods such as preservation, addition of food additives, drying with a view to preserve food substances in an effective manner, enhance their shelf life, quality and make them functionally.

6. INITIATIVES: (ONE VILLAGE-ONE PRODUCT)

The one village one-product campaign is an initiative that originated firstly in Japan for promoting regional development. Villages or local areas are encouraged to concentrate on one village-added and local products, with product development and marketing assistance being provided. The products are then sold nationally and internationally [3].

A case example of Grape Cluster in Maharashtra is, however, a success story in highlighting how smallholders can overcome constraints. Although traditionally grape production in India has largely been for the domestic market in table grapes, its export sector has been growing rapidly. In 1971, Indian grapes made up only 0.1 percent of global grape exports in terms of both quantity and value. By 2005 it had rapidly increased its contribution, accounting for 1.5 % of the quantity and 1.2 % of the value of global grape exports. Maharashtra plays a key and progressively central role within the Indian grape sector with dominant export market. In 2005, the state's largest grape production area, Nasik, accounted for 80% of Indian grape export. Factors contributing to the success of this cluster are undertaken by Mahagrapes Group; like voluntary standard, changing standards involves high-fixed costs, field demonstration, farmers and grape handlers/sorters are informed about the latest methods.

Another example is traditional turmeric processing unit and honey processing unit are leased from an acre of land from Panchayat under FPO (Farmers Producers Organization). FPO has total 345 members who are located in Hoshiarpur. Objective is to provide facility to process the farm produce for small & marginal farmers. Main area of intervention is to establishment of CFC (Common Facility Center), Input material like seed, fertilizer, pesticide facilitation, Market linkages and compliance competition. Under that FPO other case example is Krishijeewan Agro FPO, Narayangaon that is the vegetable belt, near to market like Pune and Mumbai. It is supported by World Bank assisted MACP of total grants 7.5 lakh and 6 lakh is FPO contribution.

MoFPI at least 10 acres of land is required to be arranged either by purchase or on lease for at least 50 years for setting up of Agro Processing Cluster. To view Indicative list of identified agri-horti production clusters (fruits & vegetables) and visit Geo-SAMPADA on spread & depth of agri-resources. Govt. also provide effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market.

7. CONCLUSION

The reviewed literature propounds that the cluster development can act as an important tool in development of Agriculture and Food Processing. MSME can benefit from participation in agro based clusters are well developed concentration in agri-business. The key areas for unique characteristics of the MSME industries are allow them to achieve scale of economics, share cost related to information sharing and technology application connecting with backward and forward linkages of Unit/Industry/Cluster. Also cluster can contribute to develop national and regional brand identity. Moreover, the above study shows factors of value addition through some Indian case examples of FPO (Farmers Producers Companies), how they upgrading their regional and global market. VCA can be a valuable tool for the identification of a range of salient issues and waste elimination opportunities at the intra and inter-company level. These factors are helping to developing the value addition in MSME industries as well as SHGs who helped the cultivators. Finally, it is planned during the first stage of future value chain projects to obtain a consensus on a benefit sharing protocol. This can provide a solid platform for the gradual and continuous development of trust between participant firms and can result in the formation of a harmonious and mutually beneficiary relationship. In the conclusion of research study we found that some other areas excepting VCA are need to be work out like: CFC (Common facility Center), skilled development training for promotion of technological values in farmers, credit funding for sources of raw material to warehouse, use of pesticides etc. Government Initiatives are also helping them to giving subsidy to farmers, Govt. also started the new scheme Pradhan Mantri Kisan SAMPADA Yojana, Mega Food Park, Cold Chain, Preservation Capacities (Unit Scheme), Creation of backward and forward linkages,

Food Safety & Quality Assurance Infrastructure, Human Resources and Institutions etc[2].

REFERENCES

[1]Badal, H. K. (2016, jun thu). Government to establish 250 agro-processing clusters all over India . *https://economictimes.indiatimes.com/news/economy/agriculture/government-to-establish-250-agro-processing-clusters-all-over-india/articleshow/52553625.cms*. New Delhi, UT, India: The Economic times.

[2]CRIER. (July, 2015). *Report on Evaluation of the Impact of the Scheme for Mega Food Park of the Ministry of Food Processing Industries.* Delhi: Ministry of Food Processing Industries.

[3]D.S.Rawat, K. S. (Feb, 2017). *Food Processing Sector, Challenges and growth enablers* . Delhi: Grant Thronton, Assocham.

[4]David Simons, M. F. (2003). Identifying the determinants of value in the U.K. red meat industry: value chain analysis approach. *Chain and network science* (pp. 109-121). Delhi: ${protocol}://www.wageningenacademic.com/doi/pdf/10.3920/JCNS2003.x034 - Sunday, June 10, 2018 6:09:10 AM - IP Address:117.224.139.233.

[5]DIC. (2014-15). *Annual Survey of Industries.* Delhi: DIC.

[6]ERIKSSON, S. (2009). Clusters: A Survey of Research within Localized Economic Growth. *Media Management and Transformation Centre Jönköping International Business School*, 1-20.

[7]Gálvez-Nogales, E. (2010). Agro-based clusters in developing countries: staying competitive in a globalized economy. *FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS Rome* (pp. 118, ISBN 978-92-5-106558-7). Rome: Rural Infrastructure and Agro-Industries Division.

[8]Haixiong, R. A. (2009). Research for policy development: industrial cluster in south china . In R. A. Haixiong, *INDUSTRIAL CLUSTERS IN SOUTH CHINA* (pp. 40-84). Delhi : International Development Research Centre.

[9]India, W. F. (2017). *Investment Environment & Opportunities in Food Processing* . Tamil Nadu : MoFPI.

[10]Industries, M. o. (2017). *Draft National Food Processing Policy, Sr. No.-P-12027/01/2017-PC (2).* Delhi: Ministry of Food Processing Industries.

[11]Industry, M. o. (2018, june wed). *http://mofpi.nic.in*. Retrieved from Agro Processing Cluster : http://mofpi.nic.in/Schemes/agro-processing-cluster

[12]Minstry of Food Processing Industries, G. (2015-16). *Annual Report 15-16.* New Delhi: MoFPI, Panchsheel Bhawan, August Kranti Marg, .

[13]MoFPI. (16-17). *Outcome Budget of 2016-17.* Delhi: MoFPI.

[14]MoFPI. (2012-13). *Annual Report 2012-13.* Delhi: MoFPI.

[15]MoFPI. (2015). *Annual Report 2014-15.* N.Delhi: MoFPI.

[16]MoFPI. (2016-17). *Annual Report 16-17.* Delhi: MoFPI.

[17]MOFPI. (2018, june wed). *geo-sampada.nic.in*. Retrieved from MOFPI: http://geo-sampada.nic.in/

[18]MoFPI. (March. 2018). *F.No. M-14011/8/2016-MEP Division (Part-1).* Delhi: MoFPI.

[19]Online, U. C.-s. (2018, June Tue). *udyog.gov.in/clusters*. Retrieved from MSME: http://laghu-udyog.gov.in/clusters/index.html

[20]Porter, M.E; Competitive advantage of Nations (1990)

[21]Secretariat, L. S. (May, 2016). *23rd Report of Standing Committee on Agriculture.* N.Delhi : Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha.

[22]Sunil Sharma, A. (2014). Agro-based Clusters: A Tool for Competitiveness of Indian Agriculture in the ERA of Globalisation. *Research India Publications* (pp. ISSN 0975-6477 Volume 6, Number 8, pp. 713-718). Delhi : Global Journal of Finance and Management,http://www.ripublication.com.

[23]Welfare, M. o. (2015-16). *State Of Indian Agriculture 2015-16.* New Delhi: Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics & Statistics.