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FACTORS SHAPINGANDDE-SHAPINGTHE DEVELOPMENT OFFOOD PROCESSING INDUSTRY IN INDIA

Richa Matta

Research Scholar at SPIESR(Ahmedabad)
Address: 20 Hasubhai Park, Nr. Jodhpur Village, Satellite Road, Ahmedabad, India: 380015
Email: richa22273@gmail.com

ABSTRACT

All over the world processed food is well accepted among the people. It is more popular in developed countries as compared to the developing and the underdeveloped countries. There are various factors that supports the huge potential of setting up of the food processing industries in India like, the lifestyle and the eating habits of the people, the range of products that are available in the market, income level of the people, availability of organised retail markets and branded food, increase in the demand at the international level, avilability of technology, acceptance of processed food among the people. But there are other factors also that hinders into the growth or development of the food processing industry in India. They are like, shortage of availability of raw material, credit facility, problems of labour, majority of the people are working in unorgnised sector, shortage of infrastructure, cold storage, elongated supply chain, fragmented supply chain, absence of farmers knowledge and awareness, shortage of R & D etc.This paper is purely based on the data and information available from the secondary sources. It is expected that the information would help in reinforcing the need for the development of the food processing industry. There is a need to work on the obstructions coming on its way of development.

Keywords: Food-processing industry, fruits, vegetables, demanded, difficulties

INTRODUCTION

Processed food is gaining popularity all over the world in view of their inherent health benefits. Today consumers are more health conscious and very choosy in their food habits. Consumers are generally looking for a type of food that supplements not only the balanced nutrition but also adds on to their health and well-being. This is one of the reason for the increase in the consumption of fruits and vegetables. Due to this trading of fresh fruits and vegetables at the international market is growing up (Diop & Jaffee, 2005). But as we know that the shelf life of the fresh food is short and to improve the shelf life of food it should be processed. There is huge market for the processed food in the developed as well as in the developing countries. But while trading India, Thailand and other developing countries are experiencing problems in exporting their processed food products to the developed countries. The problem is mainly of Sanitary and Phytosanitary (SPS) Agreement set by WTO. For example in 1999-2000, 860 Indian shipments filled with fisheries, fruits and vegetable products were rejected by US and 684 cases of products from Thailand were rejected. Developing countries face problems in maintaining these standards (Wilkinson & Rocha, 2006). This demand is not only there in the developed nations, is also there in the developing nations too. Still there are factors shaping up for the expansion of the processing industries in

the domestic as well as in the international market. And there are many factors that are obstructing into the shaping of the demand for the same.

FACTORS SHAPING UP THE DEMAND FOR FOOD PROCESSING INDUSTRY IN INDIA

The concetration of the growth in population in the world is seen in the developing countries. The growth rate of GDP is also higher in the developing nations as compared to the developed nations. Hence the income levels are also rising in the developing nations.Hence the scope of demand for all types of processed food is increasing in these areas. There is also a growing interest of the consumers due to an increase in the availability of the varieties of the processed food all the year round. Increase in production, improvement in the post-harvesting management, processing and logistical technologies have played a facilitating role in promoting the industry. There are various factors that factors responsible for the increase in the demand for setting up the industry. We will discuss them in detail.

1) Changing lifestyle and habits of the consumer

With development in the emmerging economies the number of people staying in urban areas increase, the number of nuclear families will also increase. There would be increase in the number of working women, less time is being spent on the household work, were some of the reasons fuelling the demand for processed food. With development the working style, thinking pattern, eating habits of the people also change(ONICRA, 2014). Along with it the mix of the consumption basket of the people is also changing. With an upswing in the income levels of the people, the percentage of expenditure on cereals, pulses, edible oil, sugar, salt, spices declines, whereas the consumption of milk, milk products, meat, egg, fish, vegetables, fruits, packed food and beverages increases.

The villages located near the cities, also get converted into small towns. Here the agricultural land has been taken for urban uses. The lifestyle of the bigger cities influence these towns and hence the pattern of their demand is on the lines of urban characteristic (this population also demand processed food). Here (small town that are converted from the rural areas) the general lifestyle is changing not because of the increase in the income, due to the influence of the urban areas. In spite of all this the demand and the production of packed food are yet to pick up speed. The process of transformation is very slow.

2) Wider range of product in the market

The market for food is huge in India. There are companies providing a wide range of products. But there are very few large-scale processors in the country. Many companies are working through the contract farming. New entrants are entering the market, with new products, new flavours, local tastes of the international products etc. Eating food in the restaurants is also a growing practice in the urban areas, where ready to eat food is a well-accepted practice, which is an alternative to cooking food at home (Viswanadham, 2007). In these restaurants processed form of food is used to prepare the final food that is ready to be served. A wide range of international food chains have also come up in India that are providing good quality and ready to eat food. Nevertheless there is a need for this good quality food at an affordable price. The large-scale companies in India that are providing variety of processed food products also face the problem of manual handling and therefore their food hygiene and quality is questioned (Viswanadham, 2007). Most of the food processing units in India are MSME, hence most of the time there is lack of certification procedure that adversely affects the market of the processed products within India and out side India. And further, the productivity of the small-scale units is less leading to an upward push in the cost of production, further affects the demand for processed food(Sidhu, 2014).

3) Fluctuations in the price level

Fluctuations in the price level adversely affect the middle and the low-income group people. It is because their expenditure plan fails. It is even more difficult for them to manage when the fluctuations are seen in the goods that are of their daily needs. 72 percent of the middle and low-income group people found it difficult to cope with the increase in their household budget as the prices of basic necessary goods fluctuates in India. A survey was conducted in major cities namely Delhi, Mumbai, Kolkata, Chennai, Hyderabad and Ahmedabad. The demand for tomato puree, ketchup, ginger-garlic paste etc. has gone up by 20-25 percent due to the fluctuations in the prices of raw tomatoes, onions etc. at market level(CCI, 2012). Local grocery shop owners have also said that their sales of tomato puree, ginger garlic paste etc. have gone up in this period. This has happened because the price of the sauces and ready pastes remains more or less constant during the fluctuation of prices of the fresh fruits and vegetables. Along with this the prices of vegetables have also gone up. The difficulty further intensifies for the middle income and low-income class people to survive as they don't consume pulses on daily basis because of their high prices(CCI, 2012).

4) Income level of the People

The changing trends in the per capita income of the people during 80s and 90s happened due to the economic growth in the country. For around 30 years, till 80s the annual growth of the per capita income has remained stagnant to 1.3 percent (Mohan, 2006). There was a distinctive down fall in the growth rate of population during 90s. with an improvement in GDP and a fall in the population growth rate, the impact on the increase in the percapita income was obvious (Mohan, 2006). When the growth of per capita income is around 3.5 percent per annum, it leads to a change in the consumption pattern of the people. There are evidences availble that proves that during the period from 70s till 90s, there was a substantial reduction in the poverty levels in India (Mohan, 2006). Hence when the income level or the per capita income of the people increases to a substantial level the consumption pattern of the people changes. (Mohan, 2006).It was seen that the proportion of money spent on the staple food (mainly cereals, grams and pulses) is decreasing steadily. The proportion of income spent on food in the rural area is 44 percent, as compared to 32 percent in the urban area (CCI, 2012). There is a steady but slow increase in the income level of the people. This in turn will support the argument of increase in the demand for the packed food or the ready-to-eat food, with the increase in the income. The change in the consumption pattern has been seen in the richer class of people as well as in the lower income bracket (ADB& IFPRI, 2009; Singh P.et.al, 2012).

5) Organized retailing & Branded food

In the current scenario the local Indian companies like Dabur, MTR, Godrej, Amul etc. are competent enough in the modern value chain. Many multinational companies too have entered the Indian market. And many international restaurant chains like, McDonalds, Café Coffee Day, Dominos etc.have also entered the local market, but the pace at which all these are growing is slow (Viswanadham, 2007). The participation of the organised food retail at national and international level is also increasing in this area (Wilkinson & Rocha, 2006). With an increasing liberalization policy in India and growth of organized retail, have made Indian market more attractive for foreign investors. Due to globalization of trade and fast logistics, retailors of food in the developed countries and the developing countries are able to supply fruits and vegetables throughout the year now (Viswanadham, 2007). As we have discussed earlier due to increase in the income levels, the spending habits of the people increase in the number of employed women and also the increase in the population level, the organized retailing is expected to grow and hence the demand for the food. But the biggest hiccup in the existing situation is the high cost and the supremacy of small-scale producers (Sidhu, 2014).

6) Demand at international level

In USA there is a slowdown in the food-processing sector. The overall growth rate in USA is as low as 2% because it has already reached to its maturity level (Wilkinson J. , 2003). From 1970-1994 the share of processed food as a proportion of the world non-manufacturing export has increased from 23% to 38%, in comparison to 28% to 36% in the developed countries (Deloitte, 2009). Five developing countries namely Argentina, Brazil, Malaysia, Thailand and Taiwan took a lead in wrapping 40% of the total processed food exports under the category of developing countries, and there are evidences that other developing nations are also contributing in such exports (Wilkinson J. , 2003). Hence we can say that there is a larger scope to grow in the area of food processing industries in the developing nations as compared to the developed nations. The growth rate of the market in the developed nations is slow and is mainly of tertiary level of processed food. This is because their main focus is toward developing new products, i.e. their focus is on designing new food products, new packings etc. to provide variety to the consumers and attract more number of people (Deloitte, 2009). The high demand for the secondary level of the processed food in the developed nation from the developing countries is also because of rapid urbanization, their life style and higher income levels. Higher income countries like the European countries have reached to a level where they demand good quality of processed food, prepared in proper hygienic condition. Further if we discuss about North America, Japan, Western Europe and Australia, these types of highly developed countries demand diet (low calorie) and organic food. And there is demand for scientifically produced goods (Deloitte, 2009). The income level of the less developed countries is low due to which they are consuming the type of food that includes carbohydrates and are staple. India, China, Latin America are the type of countries where the income levels are increasing and they have become better than the under developed countries. And hence their consumption patterns are changing. They have now reached to a level where their demand for high value food crops and processed food is increasing (Deloitte, 2009; Singh P.S. et.al, 2012).

7) Social Changes

The demographic composition of the population is changing in the developing countries. The trends are of smaller family size, lower birth rate, longer life span, late marriage, increased prosperity. All this permits the younger and the older persons family to maintain households of their own. When the family is smaller in size, the per capita spending on food increases, they consume more of fruits and vegetables, bakery products, cheese, fish and soft drinks. In contrast to a large family consume more of dairy products, cereals and breads, eggs, sugar, sweet, coffee, soups. Women in the work force also change the trends on consumption and so the demand for the type of goods. Due to this the income generating capacity of the family goes in favour of the increased demand for the processed food. It also increases the marginal propensity to consume. And on the other side a full time working wife would prefer to cook at home as compared to eating out side, as eating out require more time as against cooking at home.

- **FACTORS OBSTRUCTING THE PROGRESS OF THE FOOD PROCESSING INDUSTRY IN INDIA**

Uptill now we have seen that India has a competitive egde over other countries in the production of fruits and vegetables. India is one of the top producers of fruits and vegetables; it is a leading exporter of fruits and vegetables. India is blessed with geographic and climatic diversity, hence is capable of producing a wide variety of fruits and vegetables. In spite of all this India has always been facing problems related to food, may it be prices of food or productivity of food production or preservation of food. There are various challenges that

India is facing that are obstructing in the progress of food processing industry. These challenges are as follows:

1) Shortage of Availability and Spoilage of Raw Fruits and Vegetables

The food processing industry is mostly dependent on agricultural and horticulture produce. But, due to various reasons there is shortage in its availability. Though we know there is abundance of production of fruits and vegetables in India, there is shortage of the same at the required time. Hence the availability of raw material at proper time is poor. Processors face the problem of capital to buy raw material on regular basis (Sherawat, 2006). There is also shortage of right kind of processable raw material required for processing and is not available sufficient stock (Sherawat, 2006). Further the quality of raw material is also poor, due to the presence of residues of pesticides in the crop. The seasonality of the availability of the produce forces the processors to maintain large stock of raw material for a longer period of time, making his task more difficult. This increases their investment in maintaining the stock of raw material as well as the investment in the stock holding facility. It blocks a large amount of capital, which is already short with the small and medium scale processors (ONICRA, 2014). Hence in short on one side there is shortage of availability of the raw material that is required and on the other side there is lack of facilities to preserve raw material, makes this area a major area to work on. Due to this post-harvesting loss and increase in the marketing cost of the product, the per capita availability of the same reduces and it leads to loss of resources. On an average every year 15-50 percent of crops goes waste, depending upon their perishability. Mechanism is needed to reduce this loss (Halder and Pati, 2011; Bikram, 2014).

One more reason of shortage of availabilility of raw material when we say that India is one of the largest producers of fruits and vegetables is, a large variation in the production of fruits and vegetables. Due to geographical and climatical variation (difference in altitude, difference in the location of a place from the coast and difference in the latitudinal location from north to south of the country) brings variations in crops (K. Laxminarayan, 2006). There are more than 1000 varieties of mangoes, around 40 varieties of banana, around 200 varieties of grapes and 50 varieties of guava in India. Variation in the production controls the size of the processing unit, like for producing a particular tertiary level of product, like grape juice, a particular variety of grapes is required. Though there are around 200 varieties of grapes available in India due to which there is abundance of grapes of grapes of different varieties but, not all the varieties are useful for preparing that juice because everytime we change the variety of grapes in the preparation of juice, the taste of juice changes. Hence the quantity of that variety of grape which is required for grape juice, if is limited, the scale of production will be limited (K. Laxminarayan, 2006). Another reason for this shortage can be the high cost of production of raw material (low productivity) may also restrict the processor to get the raw material from the faraway areas. An important aspect noted by K. Laxminarayan (2006) is that a good quality of raw material will produce a high qulaity product. In some of the countries the price of the product is determined by the quality of raw material used in it and there are proper systems wherein the whole chain can be traced to check the quality of the product. Better the quality of the raw material, better price can be charged from the customer. Hence in order to earn higher, they need to use better quality of raw materia.

2) Shortage & inaccessibility of Credit

The shortage and inaccessibility of credit is found at all the stages of the supply chain, like for the farmers, for the traders and for the processors also. Government funding is still at a very premature stage and limited. Hence majority of the farmers and traders depend on the money lenders for their financial needs and gets exploited. Government had been promoting the food processing sector. It has been made the priority sector for getting bank credit in 2006-07. This was done to increase the investment in the installed capacity in the food

processing industry. Government had also liberalised their policy for the import of technology. This has resulted into doubling of the installed capacity from 11,08,000 million tonnes in the year 1993-94 to about 27,74,000 million tonnes in 2006-07 (Gandhi & Jain, 2011). But still a substantial amount of investments are needed for the establishment of the integrated cold chains like cold storages, refrigerated transportation and other transportation facilities mainly to preserve the perishable crops.

Now coming back to our concept of shortage in the availability of credit a new type of risk management and credit assessment system is needed to be designed to generate better links between agriculture diversification and rural industrialisation (Mohan, 2006). In spite of all the steps taken by the government and all the steps suggested by the economists, the sevierity of the problem remains the same in south India. Farmer has to sell the produce to the trader three to four months before the product is harvested to get the credit facility provided by the traders. In such a case usually the pre harvest contractors pay lesser price to the farmer. The traders enter into contract with many farmers, goes for managing the bulk of produce and earn profits due to economies to scale.

The processor also face the problem of arranging loans for the business. Eventhough this sector has become the priority sector, but due to the inherent risk of the small scale processors, the availability of credit for them gets restricted (ONICRA, 2014).The processor on the other hand is of the small scale category, uses poor technology of production, buys the raw material at higher price, and increases the cost of production. Seasonal availability of raw material also affects the credit availability for the processor. The provision of availability of credit to the processor is also less as the investment in the fixed capital is less. Lesser investments on the fixed capital is promoted to keep the employment generating capacities of the processing units more. The farmer and the processor get trapped into the vicious circle of low growth, which is needed to be broken. The ultimate objective will be the large scale operation at all levels. If the farmers are small they can be united in some cooperation to make them a bigger entity, to improve their bargaining power. It will help them to remain consistent in production. This will help the small processing units to keep getting the raw material. Further government taxes on the processed goods are higher since the processed goods are mainly consumed by the richer class of people (Gandhi & Jain, 2011). In spite of the efforts being put up to establish infrastructure near the production centres, the pre harvest contracts still prevails in the market and increases the cost without adding any value to the product (Gandhi & Jain, 2011).

3) Problem of Labour

There is irregularity in the availability of unskilled labourers and shortage of skilled people in the area due to which the competitiveness of the industry gets affected. The impact on the competitiveness is still higher when the industry is dominated by the small scale unorganised sector units. The small and medium scale entrepreneurs spend less money in training people and all together on human resource development and are further left behind in competition. The number of institutions available for getting proper training to be utilised by the industry is also very limited (ONICRA, 2014).

There are many labour related problems seen in the industry like the presence of informal sector, the working conditions and wages for the labourers is poor and undocumented. The earning of women in the sector is poorer than men. The facilities provided to these labourers is also very poor, like no proper toilets, no first aid, no rest rooms etc. (Chandrasekhara & Sukti, 2009). It was found in Andhrapradesh that the average wage in the food processing activities were less than agricultural labour. There are no social security benefits given to the workers. Processors discriminate in emplying the schedule caste labourers, since the industry is a food industry (Chandrasekhara & Sukti, 2009).

4) Technology

The large-scale companies are coming up in India with well integrated supply chain and the latest technologies. They provide good quality of processed products. But they are only hand full of them. India is mainly flooded with the small-scale units and their shortcomings. The food supply chain is intricate, long and disintegrated, and when it deals with the perishable products there is excessive loss of resource. There is no forecasting of demand, i.e. the processors are not aware about the quantity and the type of product that would be demanded in advance. Hence their aim is to sell whatever they have produced. Later when they see that they have produced more, they sell it at a lower priceand vice-versa. Hence there is a mismatch between the type and quality of good produced by the processor and the good demanded by the consumer. Similar mismatch is there between the farmer and the processor too. The farmer does not supply the type of product/raw material demanded by the processor. Hence many times either the farmer's produce goes waste or goes into distress selling. Due to this on one side it becomes a loss of income to the farmer and on the other side shortage of raw material for the processor. This becomes a loss in the scope of income generation for the processor too and the consumer ends up paying more and demand less in market. This is becomes a complete economic loss for the economy (Viswanadham, 2007).

5) Employment in the Unorganised Sector

Though we have been promoting the idea of employment generating capacities of food processing industries. This sector can help as a foot step to go on to a higher level of development by improving the shelf-life of the produced crops and can help in reducing the economic loss. This sector generates more employment opportunities at comparatively lower capital investment, which becomes an advantage for a developing country (Chandrasekhara & Sukti, 2009). It was evident from the data that elasticity of employment in the unorganised sector in the area of food and beverages during the period from 1994-95 to 2000-01 was higher than the organised sector in the same period (elasticity of employment means the percentage change in employment associated with one percentage point change in the economic growth. Or in other word it is the employment generating capacity of an economy with the percentage increase in economic growth and if the elasticity of employment is high, there would be a lot of fluctuation in the demand and supply of the labourers. These fluctuations will vary the wages of the labourers creating imbalance in the production processes of the processing units. In the organised sector the elasticity of employment was negligible during the same period. Further whatever employment in the organised sector of food processing industry was seen in the year 2003-04, was in the developed states of India. The food processing industry generates opportunities of employment in the non-farm sector will help to reduce poverty, ut the problem of poverty is mainly seen in the underdeveloped states like, Bihar, Chattisgarh, Jharkhand and Madhya Pradesh, where it is needed the most (Chandrasekhara & Sukti, 2009).

Another problem that was highlighted in these areas was that men's are employed on monthly basis in this industry and women are not. The type of work given and the wages given to men and women are also different in this sector (Chandrasekhara & Sukti, 2009). So there should be proper balance of the demand and supply aspect will affect the nature of employment and the type of work force. It is also an area of concern if the food product is prepared using labour-intensive technique. The quality of work, long working hours, the working conditions, wages paid in the sector, will hamper growth when we know the fact that majority of work is done by the unorganised sector. The study shows that the wage level is 33% lower in the food processing sector as compared to the manufacturing sector (Chandrasekhara & Sukti, 2009). Due to a seasonal type of industry its difficult for the workers to make any unions makes them weaker in their bargaining power (Chandrasekhara & Sukti, 2009).

6) Problem of Infrastructure

The major problem seen in the area includes shortage of cold storages (we will discuss this point in detail in the next part), shortage of continuous supply of electricity, shortage of transportation for transfering the raw material to the ptocessing units and further for transfering the processed food from the processing units to the market, shortage of clean water, which is a must for the food processing industry and disposal of waste generated in the processing units. Unlike large processing units (they have their own well developed infrastructure facilities), the small and medium scale processing units who are mainly dominating the food processing industry in India, bank on common infrastructure facilities like customised transportation, warehouse facilities, logistic parks, integrated supply solutions that are readily available or are facilitated by public sector, cold storages etc. These facilities are not available in the required amount, leads to disinetgration of the supply chain (ONICRA, 2014). Normally horticulture crops amd specifically fruits and vegetables require cold storage or controlled atmosphere storage facility and for fresh fruits controlled ripening atmosphere storage is needed. Since the products of this kind are seasonal in nature, ripening storage facility is needed for atleast a period of 3 months after harvesting, this can help the consumer as well as the processors to keep getting the supply for a longer period of time (K. Laxminarayan, 2006).

There is a need for relocation of all the units to a park, where in common infrastructural facilities available for the small and medium scale processing units. This will go in favour of environment protection. Location of the cold storage is also of great importance, mostly cold storages are available in the area where the crop is produced, it should be available in the area where processing units are located (processing units are mostly located near or in the urban areas). Along with this there should also be a continuous inflow and outflow of material from these cold storages to maintain the minimum capacity, to make it viable to construct (K. Laxminarayan, 2006).

7) Shortage of cold storage

There is severe shortage of cold storages in India.there is a gap between the product that is dmanded and the type of product that is supplied. As in the agriculture sector the focus of production has shifted towards the high valued crops which are comparatively more perishable in nature as compared to foodgrains, the need for better and improved storage facilities are required. Currently 30% of the agriculture produce is lost every year out of this more than 20% produce gets lost on the fields due to mismanagement during the post harvesting season and shortage of infrastructure of cold chain. As the estimates says that India has a shortage of capacity of 10 million cold storage (IBEF Report, 2009). In fruits and vegetables category out of the total produce nearly 25% of the gets lost (IBEF Report, 2009). Due to this the price of the produce when it reaches to the consumer or to the producer or when it is exported increases and become less competitive(FICCI, 2010).

Collectively now if we see India has been traped in the various inefficiencies like the food that is lost in the supply chain because of the shortage of infrastructure, lack of awareness of quality and hygiene, lop sided pricing, usage of obsolete technologies, ineficient methods adopted by the unskilled and non-technical labourers, a large number of intermediaries in the supply chain and unscrupulous profiteering among the intermediaries becomes a reason for price escalation etc. All these types of inefficiencies holds back the growth of the processing industry (Singh, Tegegneb, & Ekenemc, 2012). Literature proves that the Indian traditional agriculture market is swarming with intermediaries (change of hands before the produce reaches to the consumer) due to which the synchronization among the players (intermediaries) reduce resulting into weakening of the link between the farmer and the consumer, leading to increased amount of post-harvest losses, leading to increase in the price level and this lowers the level of value addition. This further leads to loss of income for the weak players. Weakest of the player in the chain is usually a farmer who suffers the

most (ADB& IFPRI, 2009). Henceforth huge potential of growing horticulture crops can be seen and exploitation of the same is has yet to be done in a well-planned way. Moreover lack of farsightedness in seeing this potential has resulted into post-harvest losses in huge amount. Hence there is a need of well integrated supply chain.

8) Supply Chain Management

In India, agriculture sector has to take a lead for the balanced development of the economy. But the backward link of the agriculture sector is weak. It is failing to generate capital formation to give a big push to lead in the development against the manufacturing sector. Manufacturing sector has become easy money making for the investors and hence it is leading. Domination of the manufacturing sector aggravates the problem of imbalanced development in the economy (Vogel, 1996)**.**

We have also seen that the demand side is changing due various reasons. There is a need for proper management of the supply side of the food processing industry. That is the supply chain which is getting generated from the farm gate to the processing unit (Saumya & Anirban, 2009). This is the most important area to work in for our country and India is weak in this area. From the view point of the food processing industry too, the supply chain management is the most important ingredient for its success. But first of all we need to understande the meaning of the term "Agriculture Marketing".

Marketing

Marketing is an important link for any of the production processes to work successfully. A developed and a regulated market can be a motivating factor for the producer to produce more without fearing any sort of exploitation done by the market controller. It saves the time, energy and resources and can result into a better utilisation of all the resources in the chain. This is an indicator of economic development (Sing & Panders, 2000).

Agriculture Marketing

Agriculture marketing is made up of two very important words "Agriculture" and "Marketing". The word "Agriculture" has been derived from Latin words "Ager" and "Cultura". Where "Ager" means land or field and Cultura means cultivation. Hence putting them together means "cultivation of land". Where in agriculture means exploiting the nature for human welfare and marketing means the series of activities involved in bringing the material to the consumers (Kiruthiga, Karthi, & Daisy, 2015). Hence here when we talk about agriculture marketing, we mean supply chain management of the agriculture sector. The second concept i.e., "marketing" means the activities that are done to make the product saleable. And the target people here are the customers or the buyers of their product. Now putting both the concepts together i.e. "Agriculture Marketing", means all the activities right from producing the agriculture produce and till this produce reaches to the customer for consumption. Here the activities included are like planning of production, cropping, harvesting, cleaning warehousing, grading, transporting, processing, distribution etc. Saying it differently according to the National Commission on Agriculture (XII Report, 1976), it is a process that gets initiated with the decision to produce a farm commodity for selling. It includes all the features of the market system, both functional and instituitional and involves all the pre- and post-harvesting processes like assembling, grading, storing, transportin, distribution of the produce etc. (Kiruthiga, Karthi, & Daisy, 2015). Agriculture marketing is a link between the farm to the non-farm sector. The basic activities included in it is procurement, sorting, grading, transportation and distributing or selling it to the consumers.

Among these activities there is a need for proper connectivity of all the agencies involved in the channel, their efficiency, their pricing, management of the surplus etc. There is also a need to improve the awareness among the people involved in the marketing channel. In the absence of it the efficiency gets disrupted. It gets affected due to lack of market information,

illiteracy and multiple channels, resulting into channel getting distrupted and disintegrsted and the benefits and the profit is being shared by a number of people that are not the productive part of the channel. Hence agriculture marketing is very important the optimum utilisation of resources, for generating basic employment opportunities, it is a base of industrial development, foreign trade, national revenue, for the creation of environment for investment, hence can help in breaking the vicious circle of poverty (Kiruthiga, Karthi, & Daisy, 2015).

9) Elongated Marketing Channel

Fruits and vegetable marketing chains of India are highly fragmented, complex and diverse. It includes a large number of farmers growing huge varieties of vegetables on their small and individual farms. Conventionally they sell their vegetables to the traders, food processors, in the wholesale market, retail shops or to the super markets. The base of their negotiation is the price of the product, quality of the product and the quantity of the product. Looking at the scope of growth, demand for fruits and vegetables has increased. Reallocation of land is needed to be done according to the change in the type of demand for the variety of crops. The super market chains are becoming strong and efficient. They are trying to reach in the far away areas like small cities and in the remote regions too, to increase their sales, as per the need of the consumers (Bahinipati, 2014). India also needs to expand in their marketing channels nationally and internationally. But to make this happen India needs to have a well organised supply chain (Bahinipati, 2014).

Due to the increase in the level of production geographically the markets have extended in search of the new markets. The geographic extension of the market has lead to an elongated marketing channel. But this all came in clubbed with the shortage of infrastructure facilities in the marketing channel. Further in the marketing channel there is lack management in the supply chain. Farm produce at times reaches the wholesale market, but the farmer/trader is unable to sell the produce in the market due to long waiting hours. In such cases the perishability of the produce leaves the farmer with no choice but to abandon the produce or make a distress sale (Acharya, 2007).

In the current marketing channel the direct contact of the farmer is missing with the consumer. The farmers are selling their produce to the middlemen who adds his cost without adding any value to the produce. Hence the small and the marginal farmers do not get their share of income. In other words there are plenty of stakeholders in the elaongated supplychain not adding any value to the produce and simply adding their own cost, hence the price of the product increases without any value addition done on the product (Acharya, 2007). In India broadly when we talk about agribusiness sector it comprises of agriculture inputs, agriculture produce, processing of the produce, marketing and trading of the produce. This generates the scope of value addition and also strengthens the backward and forward linkages.

10) Fragmented Supply Chain

From the literature it has been seen that there are many agents in this chain like, traders, processors, logistics suppliers, retailors etc. that are increasing in numbers. This is because there is an increase in the demand for the processed food. But all the above mentioned players of the supply chain are fragmented i.e. they are not well integrated (Gulati et.al, 2008). Fragmented or disintegrated supply chain as we have already discussed under the concept of "agriculture marketing" has become a major drawback in the growth of a particular sector. In today's highly competitive world with the business cost to be minimum and the profit levels to be high, supply chain management becomes an essential part that is needed to be developed. For the efficient supply chain the smooth and fast movement of the products from the supplier to the customer at a minimum required time is a must. Then, comes the efficiency in transmitting information, wherein conveying the orders and updating the status of delivery is

needed. And then comes the flow of finance, there should be a hassle free movement finance, so that the efficiency of the chain doesn't get affected. It improves the growth and competitiveness of the supply chain. It is also important that the growth and competitiveness should focus on making the finance available to the smallest and weakest player of the chain (Alemberg, 2011). All this will lead to finest results for the farmer, growers, wholesaler and the customers etc. Supply chain management involves all the movement of the material/product, storage of the material, work-in-process record and finished goods from the point of origin till the point of consumption. Efficient supply chain management means efficient synchronisation in all the above said areas to get the best results. Thus there is a need to remove all the bottlenecks in the way for the smooth flow of products, information and finance to a place where it is needed, enabling a reduction in cost and improvement in productivity (Tolani and Hussain, 2013). Because of the mismanagement in the supply chain the farmer who is the main player as he is the supplier of the raw material becomes the weakest player in the chain, in terms of earnings. (Gulati et.al, 2008). Due to this disintegrated supply chain a farmer gets only 35% of the price that is actually paid by the consumer, they are not aware about the prices prevailing in the market, their financial capabilities are weak and they go for a very primary level of cleaning, sorting and grading. Due to all these reasons the farmer has to suffer on the price benefits. And finally the consumer gets a limited choices and has to pay higher prices (Singh, Tegegneb, & Ekenemc, 2012).

There is a need for integrated transportation system also, as longer transit time increases the amount of loss during transportation. Rather the crops should be semi-processed to reduce the weight of the produce which can further save upon the transportation cost and the loss that occur while transporting the product. The transportation system is very poor in our country. To illustrate according to the international standard a truck can cover 600-800 km in a day, but in india a truck can travel only 250-300 km in a day. And so in India it takes 5 days to transfer 5 tons of fruits from Bihar to Hyderabad and the distance travelled by the truck in a day is almost half or even less than that of the international standard (FICCI, 2010).

11) Farmers Knowledge and Awareness

Demand forecasting is totally absent and when a farmer produces the product, his only target is to send/sell the produce in the market. There is a complete lack of data incorporation, flow of finance for the farmer, coordination between the demand and supply of the produce, whatever is produced should reach the market so that farmer gets the money and he can plan for the next crop, lack of joint forcasting, lack of information sharing etc., leave the farmer in a miserable condition. There should be an efficient flow and storage of goods and services and the related information should be available for a synchronised transportation of the goods. When the supply chain is well organised the scope of tracking and traceablitity in the chain become efficient and effective (K. Laxminarayan, 2006).

12) Need for R & D and innovations. Poor technology, the latest tech is costly

Since India is a developing country and is still following the traditional methods of production in the food processing industry. Due to insufficient funds R & D in the area is not encouraged much. Though there has been changes seen in the industry over the years, but more or less the trends have remained the same. The technologies available are inappropriate and the price of the plants and equipments are not feasable (K. Laxminarayan, 2006). A substantial amount of investments are needed in the area of research and development (R & D). Currently only one percent of the total domestic expenditure of R & D of all the industries, is spent on the food sector. Though there is a huge increase in R & D expenditure on the food sector, but much more is needed to be done as per the reqiurements. There are many public sector research institutes, like Council of Scientific and Industrial research (CSIR), Indian Council of Agriculture Research (ICAR), Indian Institute of Kharagpur (IIT Kolkata), Indian Agriculture Research Institute (IARI) at New delhi, Central Institute of Post Harvest Engineering and

Technology (CIPHET) at Ludhiyana, Indian Institute of Horticulture Research (IIHR) at Bangalore, Indian Institute of Vegetable Research (IIVR) at Varanasi, Defence Food research Laboratory at Mysore, Central Institute of Arid Horticulture (CIAH) at Bikaner, Central Institute of Sub-tropcal Horticulture (CISH) at Lucknow, Khadi and Village Industries Commission (KVIC), Indian Institute of Technology (IIT Mumbai) at Mumbai etc. investing money for R & D in the sector (Shruti, 2007). Central Food Technological Research Institute (CFTRI) is located in Mysore in Karnataka state, is a part of CSIR, is the best of its kind in providing the research services. These research institutions provide homegrown technologies designed as per the needs of our country, they make the technologies available to the processors, they work on technology assesment and technology selection. There are some privately funded research institutes too, that are recognised by Department of Scientific and Industrial Research (DSIR) (K. Laxminarayan, 2006). Though there are so many institutions doing R & D for development of food processing industry, yet a lot is needed to be done in this area.

13) Miscellaneous

Uptill now we were focusing on the major challenges in the development of this industry. Let us now discuss about some minor challenges found in the area. These challenges though are minor in form, but interrupt the free working of the sector. These interruptions many a time discourages the processor and all the related people to work in the industry. These problems are like the availability of poor packing material and the packing material that is of good quality is very costly. This costly packing material raises the price of the product and the product becomes uncompetitive in market. Other difficulties are like official harassment of the processor, when the industry is specifically food industry. Processors face problem due to the rigidity in rules and regulations of food laws, safety laws and also the rule and regulations of waste disposal. Then problems of procedural delays in the government departments like, at the time of issuing of phytosanitary certificate or at the time of getting subsidies etc.

CONCLUSION

We can see that a lot of literature is available in the area of food processing industry and all of them agree that a lot is still needed to be be done in this area. But the review of the literature also shows that most of the studies are focusing on a particular issue and all the studies are disconnected to each other. So here we have tried to cover the holistic view of the industry. Starting from the problems and prospects of the agriculture sector. Further leading our discussion to diversity of crop production towards horticulture. Now further to succeed in the policy of crop diversification is only possible if it is supplemented by the required technological, infrastructural and most importantly financial support for the small scale processors of the locality. And adding more to it, the success of non-farm employment is also possible only if proper marketing network is organised targeting small farmers, who can be engaged in processing, sorting, grading and pakaging in the nearby non-farm sector. In the existing scenario processing is mainly dominated by the small scale units located in the non-farm area(Saumya & Anirban, 2009).

Hence it can be concluded that, there is huge potential for the growth of food processing industry. Horticulture too is highly labour intensive and gives good returns to the farmers. But to achieve better growth in horticulture and processing of horticulture crops a number of mismanaged ends are needed to be managed to reduce losses in the marketing network or supply chain. Hence the success of agro-processing sector is inseparably connected to the overall strength of the agriculture sector and so is the food processing sector to the food crops.

REFERENCES

Acharya, S. S. (2007). Agribusiness in India: Some Facts and Emerging Issues. *Agricultural EconomicsResearch Review*, (pp. 409-424).

ADB (Asian Development Bank) & IFPRI (International Food Policy Research Institute), 2009; High-value crops and marketing: strategic options for development in Uttarakhand. *Publisher: Academic Foundation; New Delhi.*

Alemberg, A. (2011). VALUE CHAIN FINANCING for AGRICULTURE and RURAL MICROENTERPRISES. *VALUE CHAIN FINANCING for AGRICULTURE and RURAL MICROENTERPRISES.*

Bikram, K. B. (2014). The Procurement of Fruits and Vegetables Supply Chain Planning. *International Journal of Supply Chain Management, 3* (2), 111-131.

CCI. (2012). *A Brief Report of Food Processing Sector in India.* CCI (Corporate Catalyst India).

Chandrasekhara, R., & Sukti, D. (2009, April 25- May 1). Nature of Employment in the Food Processing Sector . *Economic and Political Weekly , 44* (17), pp. 109-115 .

Deloitte. (2009). *Enhancing firm level competitiveness: Indian food and agro processing industry-Strategies and road map development.* National Manufacturing Competiveness Council (NMCC); GOI.

Diop, N., & Jaffee, S. M. (2005). FRUITS AND VEGETABLES: GLOBAL TRADE AND COMPETITION IN FRESH AND PROCESSED PRODUCT MARKETS. In J. C. M. Ataman Aksoy (Ed.), *Global Agricultural Trade and Developing Countries* (pp. 237-257). The World Bank.

FICCI. (2010). *Bottlenecks In Indian Food Processing Industry.*

Gandhi et.al, G. K. (2001). Agroindustry for Rural and Small Farmer Development: Issues and Lessons from India. *International Food and Agribusiness Management Review* .

Halder, P., & Simayan, P. (2011). A Need for Paradigm Shift to Improve Supply Chain Management of Fruits and Vegetables. *Asian Journal of Agriculture and Rural Development, 1* (1), 1-22.

IFPRI. (2001). *2020 Global Food Outlook: Trends Alternatives, and Choices.* International Food Policy and Research.

K. Laxminarayan, R. (2006). *Agro-industrial parks Experience from India* . Food and Agriculture Organisation of the United Nations, Agricultural and Food Engineering. Rome: FAO.

Kiruthiga, K., Karthi, R., & Daisy, B. A. (2015). Agricultural Marketing – An Overview . *International Journal of Scientific and Research Publications , 5* (4), 1-3.

Kumar, M., & Basu, P. (2008). Perspective of productivity growth in Indian food industry:a data envelopment analysis. *International Journal of Productivity and performance management* , 503-522.

Mohan, R. (2006). Agricultural Credit in India: Status, Issues and Future Agenda. *Economic and Politica Weekly* , 1013-1023.

Mukesh, K., & Partha, B. (2008). "Perspectives of productivity growth in Indian food industry: a data envelopment analysis". *International Journal of Productivity and Performance Management , 57*, 503 - 522.

NMCC. (2009). *Enhancing firm competitiveness: India food and agro processing industry-startegies and road map development.*

ONICRA. (2014). *Food Processing Industry in India: Adding Value by Creating Synergy between Agriculture and Industry.* Onicra Credit Rating Agency of India.

Saumya, C., & Anirban, K. (2009, March). Rural Non-Farm Economy: A Note on the Impact of Crop-Diversification and Land- Conversion in India . *Economic and Political Weekly , 44* (12), pp. 69-75.

Sherawat, P. S. (2006). AGRO PROCESSING INDUSTRIES---A CHALLENGEING ENTREPRENEURSHIP FOR RURAL DEVELOPMENT. *Journal of Asia Entrepreneureship and Sustainability, 2* (3).

Shruti, S. (2007). *Horticulture Post Harvest Technology: Principles of Food Processing.* New Delhi: Indian Agriculture Research Institute.
Sidhu, R. S. (2014). Agribusiness/Export Opportunities for Inclusive Growth. *Indian Journal Of Agriculture Economics, 69* (1), 85-88.
Sing, B., & Panders, A. (2000). Marketing of Jute in Bihar. *Agriculture Encyclopaedia, 6*, 291.
Singh, S. P., & Ekenemc, F. T. (2012). The Food Processing Industry in India: Challenges and Opportunities. *Journal of Food Distribution* , 81-89.
Vishwanadham, N. (2007). CAN INDIA BE THE FOOD BASKET FOR THE WORLD? In N. Vishwanadham, *Achieving Rural and Global Supply Chain Excellence: The Indian Way* (pp. 9-22). Hyderabad: GLAMS Research Publications .
Vogel, S. (1994). Structural Changes in Agriculture: Production Linkages and agricultural Demand-Led Industrialisation. *Oxford Economic Papers* , 136-156.
Wilkinson, J. (2003, October). *Workshop Paper* .
Wilkinson, J., & Rocha, R. (2006). Agi-processing and Developing Countries. *World Development Report (2008)* .