

A Study Of Productivity Of Indian Processed Food Industry

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Abstract

India has remained the land of agriculture since centuries and the same stands true in the present scenario as well, looking at the growth rate of the sector there is an annual increase of 8.41% and this is substantiation for the development of Indian food processing industry. In the last five years i.e. 2015 to 2019 the industry has achieved a new growth rate of 10.7% and this is expected to grow at multiplicative rate in near future. Policies of the government are supportive enough for the growth of food processing industry, infrastructure is sufficient, home market is big enough to deal with foreign collaborations; but still the country has not achieved the stature that it should have. This present study will evaluate the scenario of food processing industry in comparison of top ten industry player and present the stature of India for the same.

Keywords: Food processing industry, India, top ten players.

Introduction

Indian Food Processing Industry

In any of the given countries, food processing industry is the linkage between industry and agriculture and in case of India specifically, the food processing industry has contributed a lot in the economic development of the country. Just after independence there was a time when the country was suffering from the scarcity of food (especially grains) i.e. only a few food items were exported to other countries, this was the situation till late 50s'. Then the country achieved the surplus of food grains by the year 1965 when HYV (High Yielding Variety) were developed by an agricultural Scientist M.S. Swaminatah. This surplus of food grains and other related items, food processing industry started to develop in the country and by 1991 new industrial policy allowed a substantial foreign investment in the food processing industry and the country soon attained a prominent rank in international fronts.

Then in 21st century, India attained production advantage for some of the food items, like:

Milk: India is the largest producer of Milk at global level (around 180 MMT) till 2019,

Fruits and Vegetables: by 2015 India was announced as second largest producer of fruits and vegetable in the world (311.7 MT)

Meat:rearing of livestock has remained a hobby of people in the country and by 2018 India announced as the owner of largest livestock i.e. 8 MT in 2019

Poultry: On annual basis India produces around 95 billion eggs by 2018,

Fish and related items:by 2018 India secured second position in the world with approximate production of 13 MMT.

The report of CII in 2019 stated that India is processing only 10% of its total agricultural outputs, where the minimum processing is of fruits and vegetable (2% only) and maximum processing of milk (>35%). Then on the other hand primary processing of items is given more importance as compared to secondary food processing i.e. the secondary food processing is related to fruits vegetables, dairy, bakery, chocolate, etc. this can be viewed as a shortcoming in a sense but from the perspective of researcher and many of the independent agencies this is a huge opportunity.

At this point a question arises i.e. why this has not happened till date? Answer to this question is the dearth of backward linkages. Here the term backward linkages relate to the willingness of farmers and related agencies to establish a relationship between farmers and other national/international food processing industries. The role of intermediaries cannot be side-lined as well. this means that if any of the given agencies are willing to move up the value chain then it is very important to develop backward linkages. These backward \linkages are related to contribution of the said agencies in national food security and assessment of remaining material that can be processed for export and future processing. As a matter of fact there are number of benefits of the same i.e. income of the farmers will increase, value of money against investment will increase, living standard of agricultural labors will improve, cost of production and storage will be reduced and delay in payments can be assorted. If the secondary food processing industry in the country is developed then there are chances that wastage of food material is stopped and the value will assessment may reach up to USD 1.5 Billion in one year, then on the other hand the processed food industry may reach to a level of 11% as compared to present 2.5%.

As far as India is concerned the average growth rate on annual basis is around 8.41% and this is substantiation for the development of Indian food processing industry. Then from 2015 to 2019 the industry has achieved a new growth rate of 10.7% and this is expected to grow at multiplicative rate in near future. As far as food processing industry is concerned following are the growth markers till date:

- 16% of the total industries are engaged in food processing,
- 17% of the food processing plants are operating on their full efficiency,
- 11% of the total agricultural work force is engaged in food processing industry
- Total output is around 15% as against 19% of total agricultural input.

Now as far as Indian food processing industry is concerned, above given parameters are highest in the industry and to a certain extent remain at number one. India is one of the largest producers of agricultural inputs for the food processing industry and the only requirement is to take the advantage of this superiority position at international front. Remaining all other things same, the Indian food processing industry will reach to an extended level of USD 550 Billion by 2022 and then to USD 570 billion in 2026. The numbers are huge but then again only requirement is to put the resources in work at the right time and right place. Here it is important o mention that policy framework in this regard will also play a crucial r\ole.

Key Development Segments

- The production strength of the country is enormous and at present only a segment of the same is being processed, this calls for great opportunities in this field,
- Then the stature of the country as the largest producer of fruits and vegetables in the world again opens the doors for great opportunities because in the present times only 2% of the processing capacity has been unleashed,
- Processed fruits and vegetables is one of the greatest market in the present times and India is looking forward to other structures of the same in the form of frozen foods, canned, puree, paste, snacks, pickles, juices, jams, jellies, etc.
- Then in case of marine wood processing, India is working with 20% of efficiency and if the efficiency of the same is increased then the level of exports may be increased which will be an add on in the processed food industry.
- Increasing demand of processed food at both the domestic and international level can improve the stature of overall food processing industry of the country.
- Then the poultry industry is working with the processing efficiency of 6% only and if the capacity and scale is increased then certainly demand will also rise.
- After vegetable and fruits, processing of dairy products is second in the list and the segment covers around 35% of the total processing capacity. Here it is important to mention that in India per capita availability of milk is around 400 grams which is higher than the international availability of 300 grams **CII, (2017)**
- With the increase in urban population demand of related segments like flat bread, dairy products, ready to mix items, etc. is increasing and the processing industry of the country is not able to meet the demand of the same at present.
- Then focus of the young generation on nutritious food items is another important segment that is required to be tapped by the processed food industry. Right from organic extracts to processed sea foods, demand is increasing like anything and there is huge opportunity in this area.
- It is not so that only Indian companies are lined up in this regard i.e. a number of foreign companies are also lined up to take the advantage of this market segment .

Table 1: Export volume of Food Processing Sector

| Year(Apr-March) | (US\$Million) | | | | | | | AAGR |
|---|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | |
| FPI-Exports | 20277.60 | 31459.58 | 35898.06 | 38051.43 | 36171.92 | 29672.37 | 14483.06 | -0.70 |
| Growth(%) | 37.3% | 55.1% | 14.11% | 6.00% | -4.94% | -17.97% | | |
| Average Annual Growth Rate for 6 years ending 2015-16; Source: DGCI&S | | | | | | | | |

As stated in the above given table it can be seen that the highest growth in export volume is expressed in the year 2011 and 2012, cumulative growth was around 18%. As a matter of fact from 2012 to 2016 the respective trend was declining as far as exports are concerned. The total decline in volume in these four years was around USD 30 Billion. This has caused a steep decrease in the total exports of the country. In this period a number of other studies were conducted and the results stated that the food safety and health standards had put a cap on the export potential of a number of countries and India was one of them. **Goyal et al (2017)**

Table 2: Foreign Direct Investment in Food Processing Sector

| S.No. | Year(April-March) | FDI(Rs.Crore) | FDI(US\$ Million) |
|-------|-------------------|---------------|-------------------|
| 1 | 2010-11 | 858.03 | 188.67 |
| 2 | 2011-12 | 826.16 | 170.21 |
| 3 | 2012-13 | 2193.65 | 401.46 |
| 4 | 2013-14 | 25,106.78 | 3,982.88 |
| 5 | 2014-15 | 3159.36 | 515.86 |
| 6 | 2015-16 | 2500.85 | 384.59 |
| 7 | 2017-18 | 3100.10 | 423.62 |
| 8 | 2018-19 | 3341.78 | 510.52 |

As far as FDI in food processing industry is concerned, 100% FDI was allowed in food processing industry, through approval route for retail trading, this also includes the process of e-commerce, this applies on the food products manufactured and produced in India. Here it is important to mention that the items reserved in the list of MSME with the laws applicable for the same. In this duration Amazon proposed around USD 500 million from its American branch. Then from 2000 to 2015 total value of FDI invested in food processing industry of India was around USD 7 Billion. And it was expected that the country will receive the same stature with an increase of around 23% in the coming ten years or so. The industry shown a potential of USD 35 Billion of FDI by 2022. **Rais et al (2013).**

Major Challenges

- a. **Lack of Infrastructure:** It has been observed in the recent past that India is lacking basic infrastructure for storage and grading of food items, then on the other hand there are bottle necks for post harvest management. Then the poor road connectivity was another major issue. As a matter of fact the cold storage use to play a crucial in the storing food grains and other related items till further use.
- b. **Policy related deficiencies':** Most of the prominent researchers and experts from the field state that there are so many laws and acts in the business of food processing that the business man wastes a large amount of time in dealing with the same. Then on the other hand both central and state governments are having different law and policy structure in this regard and this makes the situation even worse.
- c. **Lack of Skilled Human resource:** As per the report of FICCI from 2015 to 2018, the demand of food processing industry in terms of skilled human resource was never fulfilled and still there is a deficiency of the same. Then on the other hand in the same reports it has been mentioned that more than 70% of the human resource was not satisfied with their respective work place. Also the required technical knowledge and expertise is not available in the present workforce because of which many food processing companies have outsourced their major operations to overseas branches.
- d. **Logistics related issues:** Elongated and fragmented supply chain is majorly responsible for the wastage of food items in India, even the cost of material and final products also increases. This leads to general uncertainties of business and the effect of the same can be felt on the growth of overall industry.

- e. Availability of Credit:** this is a well known fact the food processing industry is capital intensive in nature and farmers in our country are not capable enough to drag the whole business on their own, then the processing of credit from government and private agencies is so lengthy complicated and not more than 10% of the farmers are able to deal with the same. The valuation of the same can be seen in the below given chart.

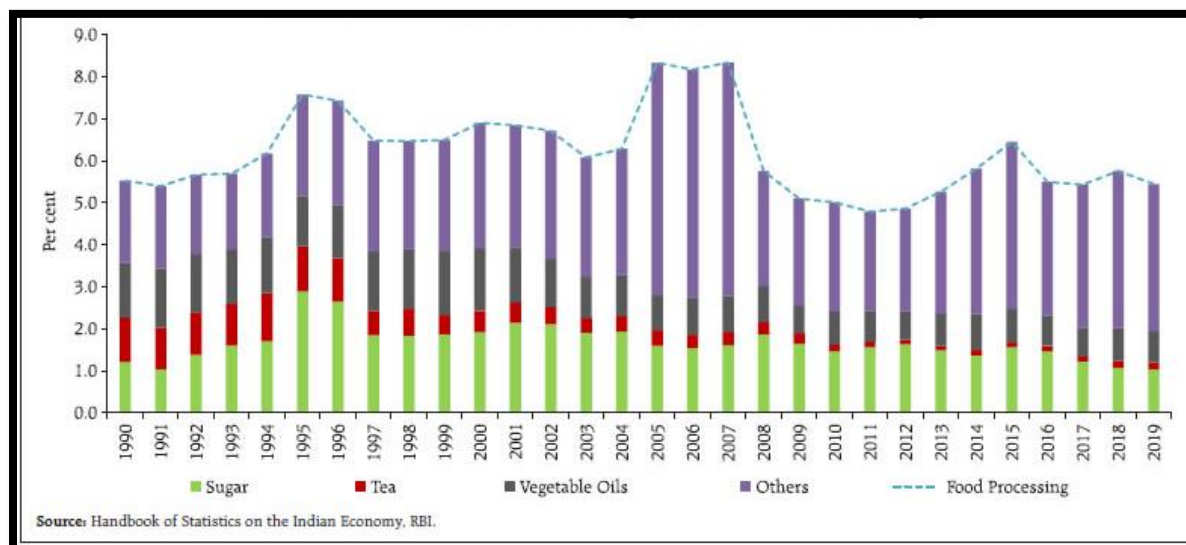


Figure 1: Total Credit Advances to Indian Food Processing Industry

Literature Review

Wilkinson (2015) studied that there is a transformation in the overall food processing industry in the world, the reason of the same can be the growth of information science and information technology, relative scientific measures used in agriculture, improved level of seeds and irrigation tools, increase in export demands, improvement in the strategic formulation of respective companies and many other related components. Increase in domestic demand for processed food has taken the industry to next level and also the liberal policies of respective government had changed the fate of international exports forever.

Chengappa et al (2016) stated that the Indian consumers have always preferred fresh and non-processed food items i.e. the processed or packed food has remained the second choice of general Indian customer. In the post liberalization era i.e. after 1991 the effect of western culture and mannerism took a major stride in the Indian scenario and since then the face and fate of Indian food processing industry has changed forever. Then on the other hand increase in the nuclear families and migration of people for better job opportunities & business and the changed life style of people also called for the need of processed or packed food. Surprisingly vegetable and fruits are still used in their raw form (mostly) and for rest of the items processed items are being preferred.

Mukherjee et al (2017) conducted a study on the visiting foreign tourist in India and the focus of the study was on the tourists coming in from Europe and other countries to West Bengal. Findings of the

study stated that in case of foreign tourists 99.9% of them used packaged drinking water and rely on packaged food items, though in many of the cases tourist use to taste the local Indian foods but then again such instances are minimum i.e. mostly they use the processed food items, also they follow the instruction given on the pack very seriously. In the humid atmosphere of West Bengal there is always a possibility of low immunity and in such cases packaged food items may be used as a remedy for the same. Though Indian tourists presented a low level of demand of packaged food items as compared to foreign tourists.

Goyal et al (2018) stated that higher rate of urbanization in the country has given rise to 'Generation Y' who do not have time for preparing food i.e. packaged and ready to eat items are taking place in their list of food items and this list is growing with every passing day. This generation is very busy in earning money and arranging for luxuries of life in minimum time, we can say that they do not have time for anything. This generation has raised the demand of processed and packaged food items in many ways.

Sharma (2019) stated that the stature of India in case of processed food industry has taken a U-turn after the period of liberalization i.e. after 1991, this was the time when new industrial policy was announced and many of the foreign companies were allowed to enter the Indian market, then on the other hand FDI in many cases has reached to 100%. This called for an overall development of the industry in a multifold manner. At present India lies at 17th place in processed food industry and 18th place in agricultural produces.

Objective

The main objective of the study is to evaluate the stature of Indian food processing industry in comparison to other countries and also to assess the future scope of the same in Indian context.

Research Methodology

Type of Research

This present study is based on the evaluation of Indian processed food industry with that of in other countries. The researcher is required to find the stature of Indian food processing industry in present times and compare the same with other countries as well; this calls for a trail of secondary data and authenticity of the source from where the data is taken. The processed food industry in India started in late 70s', being a late starter initial growth opportunities were lost but still there is no dearth of opportunities on international level and even on domestic level. The researcher will also evaluate these opportunities in real time and present the state of the same in quantitative form.

Sources of Data

Being an exploratory study the researcher had not left any stone unturned and touched all the authentic sources for collection of data and assessment of the same. Some of such sources are as follows:

- Most of the sources were from internet i.e. reports from national and international agencies, government reports, independent reports from various channels, etc.
- Research journals of national and international repute on processed food industry
- Some newspaper articles on food processing industry.

Nature of study

As this is a cross-sectional study and the researcher has taken reference from some of the other studies as well, initial investigation unfolded that such studies are based on comparison of data and the

respective outcomes are also in quantitative terms. In this regard the researcher has considered a few studies as base and tool the present study further. On the other hand some of the present issues were identified by the researcher himself.

International Scenario of Food processing Industry

The international food processing industry had developed to new heights in the recent times and maximum growth has been achieved in the past 5 years. At the global level the demand of processed food is increasing with every passing year, this can be the result of increasing income of people in urban areas and even the increase in the disposable income with all other social classes. In the last five years even the dimension of e-commerce has been added to the same and this has added new heights to the overall business. Like this many of the trends have started to take shape in the industry and as a developing country, India is getting benefitted from the same. Being a separate industry, processed food is becoming popular in terms of industrial sales and on the other hand joint ventures with retail sector have provided a boom to the industry.

Some of the developments in the industry are presented here, these data present the stature of the industry in the past five years and also include the state of Indian processed food industry.

Trends in Processed food industry

| Rank | Country | 2015 (USD Billion) | 2020 (USD Billion) | CAGR | Share in International Market |
|------|----------------|-----------------------|-----------------------|--------|----------------------------------|
| 1 | USA | 42.7 | 64.5 | 11.2 | 8.2 |
| 2 | Germany | 46.8 | 62.54 | 7.2 | 7.8 |
| 3 | Netherlands | 41.5 | 57.12 | 9.1 | 6.9 |
| 4 | France | 40.02 | 51.47 | 5.7 | 6.3 |
| 5 | China | 31.8 | 46.72 | 11.5 | 5.8 |
| 6 | Italy | 25.7 | 33.01 | 7.01 | 3.8 |
| 7 | Belgium | 24.6 | 30.24 | 7.3 | 4.1 |
| 8 | United Kingdom | 21.4 | 27..92 | 8.2 | 3.2 |
| 9 | Spain | 19.3 | 26.10 | 8.5 | 3.7 |
| 10 | Brazil | 7.2 | 17.81 | 6.2 | 2.4 |
| 14 | India | 7.3 | 18.46 | 27..04 | 2.6 |

As can be seen from the above data table that India is at 14th place and the total contribution of the share of the country in case of processed food industry is around 2.6% as against rest of the world i.e. top 10 countries. Here it is important to mention that India was at 17th place till 2010 and reached 14th place in next 5 years. Apparently USA topped the list with 8.2% of global share, then it can be seen that UK is very rich on agricultural grounds but in case of food processing industry it lies at 8th rank, this may because of the reason that the domestic demand of the country is more than the export stature.

Though in the present scenario the global share of India is only 2.6% but the same is expected to grow in near future, because the developments like organic farming, better yields, appropriate monsoon, etc. has made the country a 'grain sufficient' one and now we are having a great amount of disposable agricultural produces and the same can be used for the processed food industry and relative exports of the same.

The Intensity of Trade

Till the year 2018, total exports estimated to around USD 89 billion and this has grown at the CAGR of 7% for the period of five years i.e. 2013 to 2018 and in the present times the total value of exports can be estimated to around USD 93 billion at the CAGR of 8.1%. the changes are visible through the data itself and the same can be viewed in the below given table.

| Rank | Country | 2015 (USD Million) | 2020 (USD Million) | CAGR | Share in International Market |
|------|-------------|-----------------------|-----------------------|------|----------------------------------|
| 1 | China | 8124 | 13457 | 8.5 | 17.3 |
| 2 | USA | 4462 | 5921 | 9.3 | 10.4 |
| 3 | Netherlands | 3758 | 5148 | 8.2 | 10.2 |
| 4 | Belgium | 3451 | 4174 | 5.9 | 8.4 |
| 5 | Italy | 3014 | 3852 | 6.2 | 7.5 |
| 6 | Spain | 3104 | 4092 | 10.8 | 7.2 |
| 7 | Germany | 2748 | 3459 | 9.7 | 6.2 |
| 8 | Turkey | 2041 | 2652 | 8.4 | 5.6 |
| 9 | Brazil | 2368 | 2560 | 4.2 | 5.7 |
| 10 | France | 1968 | 2361 | 5.2 | 5.4 |
| 16 | India | 693 | 1048 | 12.7 | 3.7 |

As can be seen from the above given table that China has topped the list of given 10 countries, here it is important to mention that a number of components are responsible for the same like cost effective technology, cheap labor, unit distribution of cost, global reach, etc. this calls for added advantage in global trade. Rest of the countries have secured their position for the last 5 years i.e. 2015 to 2019, then in case of India the development in global trade are also visible i.e. the CAGR was 12.7% (2.4% greater than previous five years) and share in global trade has improved to 3.7% that can be stated as achievement for the country. The total growth of the country is around 3.45% in total ten years and the same is expected to grow by 4% additional in next five years.

Advantage India

In terms of arable land India stands at second place in the world, on the other hand India is having the advantage of very diverse climate conditions. In such a scenario India is having an opportunity to grow a number of different crops at the same time and this may include variety of grains, fruits, vegetables, herbs, etc. as a matter of fact such conditions are very helpful for the food processing industry. This is evident from the previous studies that the full agri-potential of the country is not tapped yet.

Then on the other hand, large population of the country (increasing @1.3% per annum) makes the country a big market and opportunity for India and even for other countries to sell and buy the processed food items. Also the developing and increasing middle class of the country, changing diet pattern of the cautious young citizens, etc. state the increasing pattern of processed food industry in the country.

Government of India states that the country is one of the major producers of dairy products, specific fruits (Banana, Guava, Papaya, mango, etc.) then on the other hand India stood second in the world for the production of grains like, rice, wheat, etc. this means that India is having ample quantity of raw material to be invested in food processing industry and for the consumption of the same within the country itself.

As per the data published by Indian agencies, food processing industry in the country had developed at a faster rate as compared to the growth of agriculture. Like the growth rate of processed food industry was 2.26% till 2015-16 and agricultural growth rate was around 1.7% for the same period. On the other hand the food processing industry has also performed better than manufacturing in the recent years i.e. the growth rate of manufacturing industry was 2.3% and growth rate of former was around 4.8%. this states that there lies a great potential for food processing industry in the country and even better potential for exports.

As far as FDI is concerned, after 1991 100% FDI was allowed in food processing industry and that too via automatic route. Since then India has remained a preferred destination for FDI in food processing industry. From the year 2000 to 2016 the estimated FDI was around USD 7.5 Billion and this was equal to the share of India (2.3%) at global level. From 2000 to 2020 highest amount of investment was made in the year 2013-14 i.e. USD 3982 million but the same has declined in 2016-17 i.e. stood around USD 500 million.

Also the policies of the government are supportive enough in this regard, like in 2011 food processing industry was recognized as the industry of priority sector and linked to new manufacturing policy of the same year. All the loans forwarded to food and agro processing units were covered under priority sector sending. 100% FDI was allowed via automatic route in food processing sector. Some concessions were allowed in custom duties for imported equipment and stated under project import benefits. Then the income tax deductions on capital expenditure were allowed at the rate of 150% for setting up and operating the warehousing system for the industry. There was 100% exemption on new food processing and packaging industry and then the rate was revised to 20% to 30%. A 'Food Processing Fund' was also set up and the total worth of the same was around USD 300 million.

Conclusion

The high level of agriculture production in the country and other associated components calls for high end opportunities in this market and potential for all the player in the chain of food processing industry. In case of India the policies and infrastructure is very supportive of the growth of the industry, many of the financial incentives were provided to the companies coming forward and taking risk in this market. Then on the other hand regulatory framework is also very supportive for the growth of the industry, this has reached to the level of USD 540 Billion in 2020-21. Then there are major shifts in the consumption patterns of the so called 'Convenience food' in the form of ready meals, noodles, snacks, pasta, etc. in the present times consumers are becoming conscious enough for their food habits and choices, attention in more focused on the smell, taste and other related aspects of the food items. Some of the attributes were differentiated on the basis of packaging and labeling features. Also the sustainable sourcing is now a pre-requisite throughout the food chain in the terms of value and evaluation of these companies is done on the basis of their efficiency in maintaining supply chain and logistics. India is capable enough to play in the international market and ready enough to cater the international players on home ground.

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