

THE DOMESTIC FOOD MARKET: IS INDIA READY FOR FOOD PROCESSING?

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Introduction

In a country where more than 350 million people earn less than a dollar-a-day, and 100 million continue to go hungry, the food processing and the agriculture sector is bound to remain the focus of its political economy. Market driven approaches have been talked about for a while, but a large skepticism remains, given the large numbers that one is dealing with. At least two-thirds of the rural poor derive their primary livelihood from agriculture. The key to increasing the income of rural people in India is improving the profitability of small farms, at last count more than 100 million strong. This would in turn also push up the employment and wage-rates for farm labourers. Between 1960 and 2000, the average farm size in India shrank from 2.7 hectares to less than 1.2 hectares, divided into three to ten separate plots, and population growth continued to drive farm size downwards. What is called for is to enable new markets that integrate small farmers and new markets for the labor intensive high value crops they produce.

The Prime Minister's Council on Trade and Industry set up a group on food and agro industries and in its report in 2002 had outlined a reform agenda. This agenda is worth a re-look. "With 160 million hectares of gross cropped area, almost the size of US farmland and larger than that of Europe and China, agriculture is the key component of India's economy. Agriculture accounts for 30% of GDP, concerns the entire population, employs over 60% of it and is therefore the fulcrum of the Indian economy. India is one of the leading agricultural economies of the world and will need to harness and leverage this potential with a vision. To realize this vision, we need to focus on both the farmer and the Indian consumer. The task force has identified four objectives for this: Increase in food production; Utilize and market the food we produce through waste reduction and value addition; Create an enabling environment; Focus for exports. All these will help India to reduce disparities in incomes and increase the prosperity of our people. The Indian food chain is very fragmented and complex and is dominated by small players at the farm and intermediary level."

Integrating the food chain

It is important that the Indian chain is integrated with a view to move from a "green" to a "food" revolution. This will only be possible through sustained development in agriculture and large investments in technology, skills and capital equipment. There is a need to bring together the numerous loosely integrated players - seed companies, farmers, cooperatives, educational institutions, commodity and value-added producers. The need of the hour is to ensure that a very conducive environment is developed to promote healthy growth through the government, public and private

sectors. Agriculture and agro industry must be accorded the same priority as "Infrastructure" at the Centre and in the States.

Agricultural growth

“India’s agricultural production has shown a growth of 2.7% p.a. over the last 40 years. The growth in agriculture would need to be stepped up to 5% p.a. in the next millennium to feed our growing population and to meaningfully participate in world trade. The agricultural strategies for the future will entail augmenting the existing land and water resources through public and private investment, harnessing new technologies to increase the productivity of natural and other resources, implementing realistic pricing policies and creative management practices that optimize input use. The gross capital formation in agriculture has declined. The allocation for agriculture in the eighth five year plan has declined from 5.8% to 5.1%. Increase the plan allocation for agriculture in the 9th five year plan from 5.1% to 7.1%. Encourage investment in sectors like irrigation and rural infrastructure like roadways. Inadequate rural credit and working capital is a major area of worry for small farmers. The agro and food industry needs a specialized development finance institution. Set up an autonomous Food Development Bank of India (FDBI) and a revised credit system which will be "farmer friendly" and will deal with the following on an urgent basis: Lending to small farmers who own less than 2 hectares of land at concessional rates; Process loan applications expeditiously and provide timely credit to farmers; Rural and cooperative banks need to professionalise their operations and to shore up their equity through one – time recapitalization; No waiver of farmers loans should be permitted as it distorts the basic principles of banking.

Crop insurance is complicated and does not cover all crops. It has a complex system of loss assessment and is not widely accepted by farmers. Set up Agriculture Insurance Corporation (AIC). Revise insurance scheme. Cover all crops, input costs and cash requirements following a year of loss. Charge actuarial premiums. Subsidize only small and marginal farmers within the scheme. Only about 35% of agricultural land is irrigated. There is a potential to increase irrigated land from the current 33 to 53 million hectares. An increase of 1% in total irrigated area generates a 1.6% increase in crop output and an ROI of 17%. We must target to bring 20 million hectares under irrigation in the next five years. A taskforce to immediately implement 75% of the existing 300 incomplete irrigation projects. This should be completed between 2 - 3 years. All states should review and announce 5 year water rates. The well known Maharashtra model should be followed. The forecasting techniques for agricultural production do not provide for any time to take corrective action. The onion and potato crises and the spiraling prices of vegetables are cases in point. Such issues have a major bearing on Indian public opinion. International collaboration should be sought at a government to government level, to set up a National Centre for Crop Forecasting,. A multi-cropping map of India should be drawn up and information technology used to forecast, predict and analyze cropping patterns and

harvest. Mandate officials at block level to provide timely information and disseminate it through internet, TV and radio. Excessive and imbalanced use of water, pesticides, fertilisers etc. have reduced the productivity of land and yield of most crops. This is due to inappropriate and disproportionate subsidies and an inadequate seed policy. Government must reorient subsidies to ensure balanced and efficient use of inputs and nutrients.

Better Seeds

Consolidate the Seed Act 1966 and the Plant, Fruits and Seeds (Regulation of Import into India) Order 1989 so that better quality seeds are available through enhanced production and imports. Mandate select Agricultural Universities to focus research on specific high yielding varieties seeds for items of mass consumption. Farmers' skills need constant upgrading. The annual growth rate of expenditure on Agricultural Research and Education is woefully inadequate. This is sub-optimal. Farm Training Institutes should be set up for skill development in the agricultural sector (Replicate ITI model). Increase R&D expenditure to double of current levels. The Indian Council for Agricultural Research should be made autonomous and should become a pro-active body which is responsible for the achievement of clearly defined objectives. It should work jointly with all sectors of the agro industry. Fragmentation of land holdings have led to lower economies of scale. At the same time there are large amounts of arable land which are currently unsuitable for cropping due to wasteland; degradation, salination and water logging. Ideally, repeal Land Ceiling Act. Alternatively provide ways to consolidate farming by Contract Farming: Andhra Pradesh Model; Cooperative Farming; Lease of Land: replicate Rajasthan model for wasteland development for crops and afforestation; Panchayats should identify degraded land. Co-operatives of landless farmers should be permitted to use this for afforestation and cropping. The cropping pattern is heavily influenced by the farmer's perception of risk and anticipated market conditions. Currently support prices are for select crops only. Announce realistic "floor" price vis-à-vis current "support" prices. Restrict FCI procurement of cereals to the extent of targeted PDS requirements. Savings as a consequence will enable the government to announce floor prices for more commodities.”

Food grains and prices

“The demand for foodgrains is expected to touch 215 million tons by the year 2002. This increase in demand can be met by enhanced agricultural production and by reducing the high level of wastages that occur during the harvesting, procurement and storage stages. India wastes more grain than Australia produces. The complex food chain in India from the farmer to the consumer involves several intermediaries with multiple-point handling and long transit periods. The value of wastages in the food chain is estimated to be Rs 50,000 crores. Our production of 127 million tonnes of fruits and vegetables is one of the highest in the world. India wastes more fruits and vegetables than UK

consumes. We process less than 2% of our horticultural produce as compared to 70% in Brazil and 78% in Philippines. The current system of food procurement and storage has built-in inefficiencies which inhibit the development of an efficient market economy. The present system of announcing high support/procurement prices based on "extraneous considerations" should be discouraged. The prices proposed by the Agricultural Price Commission should be adopted as floor prices and no further "bonuses" should be announced. The storage limits on wheat and rice should be abolished.

India's wastage of 20 million tonnes of foodgrains at the first stage of harvest is equivalent to Australia's entire production. The agri-industry should be permitted to play a major role in creating warehouse space and developing bulk handling facilities in order to minimize wastage levels. As these are capital intensive projects, the state governments will need to provide land at extremely concessional rates. FCI should subcontract its warehousing to agri-industry to reduce wastage and operating costs.

There is a need to develop commodity exchanges (futures market) for wheat and rice. A healthy commodity exchange system based on the lines of the Chicago Board of Trade and the Kansas City Board of Trade should be established. It needs to be appreciated that the futures market is not "satta" as is commonly understood in India. It would be best managed by an autonomous organization. The cold chain in India is woefully inadequate to meet the growing production of "perishables" such as fruits and vegetables, milk, fisheries and poultry for the domestic and export markets. The cold chain industry should be treated as a continuous process industry and awarded priority status for power like airports and hospitals.

Incentives would be required to attract investments in this nascent business: import duty on cold chain equipment to be reduced to 4%; excise duty on local freezer cabinets to 3%; 8-year tax holiday; 100% depreciation on equipment; FDBI, FIIs and banks to provide lending at agricultural interest rates. Empower BDO to allot land to cold chains at nominal rates. Investment approvals in the Food Processing industry in the last 7 years were Rs 70,000 crores. Actual implementation is only 15%, mostly in soft drinks and liquor/beer. Task force to be appointed in Ministry of Food Processing to investigate reasons for non-implementation and formulate and set-up single table approval system. Use Food Development Bank of India and Banks and Financial Institutions to fund Food Projects.

The processing of fruits and vegetables is as low as 2% in India. Quick action and demonstration effect from the government. Set up three specialized food parks focusing on the produce of the region with maximum potential. The Information Technology Parks of Bangalore and Hyderabad to be used as models. Select milk & fruit as initial thrust areas. Select three states to change laws to make this happen - such as contract farming, movement of food, abolition of sales tax.”

Reform measures

Liberalization of the economy over the last 7 years has concentrated on the industrial and financial sectors. We now need to focus on a New Food Revolution. The key dimensions are: Realign tax framework; Comprehensive review of food legislation; Restrictive administrative framework. In processed foods, India is amongst the highest taxed in the world. No where else in the world is there a taxation differentiation between branded and unbranded foods. On the contrary, incentives are always given for a movement from unhygienic unbranded foods to hygienically packed processed food. No excise duty or sales tax on processes for "preservation" of horticultural produce. Reduction in excise duty on processed food from existing levels to 3%. No distinction to be made between branded and unbranded sector.

100% modvat should be available on all inputs in the agro food processing industry. 8 year tax holiday for investment in the cold chain infrastructure sector. 100% depreciation should be allowed on freezer cabinets and other cold chain equipment. Import duty on all capital equipment for food processing and cold chain sector should be reduced from existing levels to 4%. Excise duty on local freezer cabinets to be reduced from 18% to 3%. Abolish cess on agri products to encourage free movement of agri products, reduce the cost of agri products. Persuade state governments to abolish sales tax on wheat & rice, the two main cereals and all other foodgrains. Nil excise duty on packaging materials for basic foods like milk in tetra-pack. The structure of governance in the Agriculture sector is complex. This results in compartmentalized decision making and lengthy lead times.

The administrative framework needs to be restructured. Set up a Cabinet Committee of the Ministries concerned with Agriculture, Food and Civil Supplies, Food Processing, Rural Development, Dairy and Animal Husbandry and other associated ministries to review, co-ordinate, monitor and implement decisions in a totally integrated manner. The amalgamation of APEDA, MPEDA, Cashew Promotion Development Council, National Cooperative Development Council and the National Horticultural Board under the Ministry of Food Processing will go a long way in streamlining the efficacy of the decision making process. Create a single Ministry for Agriculture, Fisheries and Foods like in the UK where it is called MAFF. The new set-up will continue to play its traditional role but with a wider perspective of balancing and integrating our highly complex food chain from production to processing and marketing. It will also be able to have a unified approach for managing and integrating essential aspects like food safety and environmental concerns.

There is no issue of greater importance for the well being of the people than an assurance of adequate and safe food supply. We must therefore ensure that laws are realistic, enforceable and modern in terms of science and technology to protect the interest of the consumer. Multiplicity of laws governing food quality and safety - Food Regulation Authority to Set up (FRA). One comprehensive

legislation to be exercised by a Food Regulatory Authority (FRA) concerning domestic and export markets with a view to formulate and update the food standards for all food products for the domestic and export markets. The FRA needs to revamp the PFA Act 1954 to conform to international standards. Ten specific recommendations to various sections of this Act have been set out in the main report. CODEX prescribes International Standards under WTO. We recommend the harmonization of Indian standards with those of the quality norms of GMP and HACCP to meet WTO deadlines i.e. 3 years. The industry and the government should work together to ensure that India is fully represented and heard at international forums. The Central Committee of Food Standards (CCFS) which operates under the aegis of the Ministry of Health and Family Welfare approves manufacturer of non-standardized food products, flavours and colours. The CCFS has met just 42 times in the last 44 years which makes the introduction of new products very time consuming. We recommend that the CCFS should be replaced by the FRA Governing Body which must meet three times a year for this purpose alone.

India: Distribution of Rural Household Income

Annual Household Income	1989-90 (%)	2001-02 (%)	2009-10 (%)
Below Rs. 45,000	67.3	42.7	20.6
Rs. 45,001-90,000	23.9	39.5	42.5
Above Rs. 90,000	8.8	17.8	36.9
Total	100	100	100

Note: Rs. at 2001-02 Prices

Source: Hindustan Times (29 September 2004)

There are several reasons cited for this dichotomy in the Indian rural economy – poverty and prosperity going hand in hand. However, the most important cause for this dualism has been an inability to manage the complexities involved in transition of our food and agriculture sector from a supply-driven value chain to a more market-oriented, demand-led value chain, and on the other the failure to ensure growth with equity or inclusion of all stakeholders in the growth process in agriculture. Past growth experiences have remained confined to a few sections of the rural population, mostly large and progressive farmers who have the capacity to invest in transforming their agriculture practices. The small and medium farmers have largely remained at the periphery of this transformation, and have neither openly participated in the process, nor have they been the direct beneficiaries of agricultural growth and development. With growing liberalization and globalization of the economy, agriculture has to become more and more market-led and demand driven and in this the role that processed foods and high value crops play is critical.

One of the reasons of emergence of the rural market recently is the rising income level of rural community. The income level phenomenon is increasingly percolating down to the middle-income group in the country. The NCAER Report reveals that the rural income in the (+ Rs. 90,000 category) 17.8 per cent to 36.9 per cent. The report also projects that the national average by 2009-10 will be a healthy 48.4 per cent against poor 28 per cent in 2001-02.

In the rural segment, the percentage of households in the low income group (< Rs. 45,000) is also projected to decline to 20.6 per cent by 2009-10, against a high of 42.7 per cent during 2001. The lower middle category (Rs. 45,001-90,000) has also seen a sharp rise in the last decade from 23.9 per cent (1989-90) to 39.5 per cent (2001-02).

The Ministry of Food Processing estimates the size of the processed food industry at Rs. 1,440 billion. Unorganized, small players (processing less than 0.5 tons per day) process more than 75 per cent of the industry output in volume terms and 50 per cent in value terms – these numbers correspond well to the share of unregistered agribusiness manufacturing discussed above. Processed foods account for 13 per cent of the country's exports and 6 per cent of total industrial investment in the country. The processed food industry employs 1.6 million workers, which constitute 18 per cent of the country's industrial labour force. The industry is estimated to consist of 9,000 organized units in the country of which more than 5,000 are in the fruit and vegetable processing segment.

The manufacturing sector is, however, only one component of the agribusiness sector. The other and possibly larger component consists of trade (wholesale and retail), storage and transport services. These activities account for 20 per cent of the GDP. We have, however, no estimates of the agribusiness component of these services. According to one estimate, food sales account for 63 per cent of the total retail trade. If this is indicative of the trade sector (which accounts for 14 per cent of the GDP), it would not be surprising if the agribusiness sector (including the manufacturing and services) accounted for at least 10 per cent of the GDP. Its contribution to employment would be even greater given the importance of unregistered manufacturing in agro-processing and also because trade tends to employ a lot of people. It should be remembered though that these are very crude estimates; more research would be valuable in establishing the contribution of agribusiness to the national economy.

Factors Driving Agribusiness Growth

Where subsistence agriculture dominates, the agribusiness sector is small dealing primarily with the limited volumes of marketed food surplus. In an economy with a highly productive agricultural sector, the agribusiness sector is large consisting of complex layers of activity in marketing, storage and

processing. Productivity in the agricultural sector is therefore a key determinant of agribusiness growth especially in its initial stages.

The impacts of agricultural productivity on agribusiness are of two kinds: (a) on commercial agriculture and (b) on the marketing sector. Regarding the first kind of impact, agricultural productivity affects both the supply and demand of the products of commercial agriculture.

On the supply side, higher productivity in food staples releases land and other resources for commercial agriculture. On the demand side, higher productivity raises rural incomes which lead to a greater demand for non-staple foods. Regarding the second kind of impact, higher agricultural productivity creates marketable surpluses without which the marketing system remains under-developed. As the supply of marketing and processing services is subject to fixed costs, higher marketable surpluses lower the cost of these services and expand this sector. Seen in this context, the Green Revolution that substantially increased the marketed surpluses of food grains has laid a firm foundation for the growth of commercial agriculture and agribusiness in India.

To ensure a vibrant agricultural marketing network, fulfillment of certain preconditions is necessary. The first and foremost of them is the legal framework involving marketing network, which might restrict the entry of certain players, thereby causing distortion. The existing state of infrastructure, with immense effect on the supply chain, comes next. Last but not the least, the state of cultivation in force plays a major role. Various concerns like land-holding structure come under this category. In India, agriculture is still largely considered as a means of livelihood for a substantial proportion of population residing in the rural areas, and not as an economic profession. This notion has been reflected in the mindset of the policy-making community as well, who instead to streamlining the marketing network, kept on providing support to the community.ⁱ No wonder, various policies directed towards ensuring a vibrant agricultural system could never match the desired result.

Agricultural marketing in India is constrained by a number of problems.ⁱⁱ First, small and marginal farmers account for more than 65 percent of the land holdings, while they hold 30 percent of cultivable lands. Owing to this reason, the average level of marketed surplus is quite low. This fact, coupled with the inadequate rural road connectivity and other supporting infrastructure (e.g., cold storage etc.), leads to a huge amount of wastage.ⁱⁱⁱ Upto 2003, opening of private markets in the rural areas was not allowed, and all transaction was supposed to be performed through regulated markets. Only the government was entrusted to establish these markets by the AMPC Act. The multiplicity of charges imposed at these markets was a major disincentive for the players to participate in the mechanism. Although the marketing network expanded to a great extent over the years, quite naturally its accessibility by small and marginal households remained low. On the other hand, the hazards of this mechanism produced a dampening effect on the participation by private players at the

ground level. The poorer infrastructure level and lower penetration of the marketing network caused the entry of a number of intermediaries in the system, who bridged the gap between the buyers and the sellers. However, the payment received by the farmers remained at the lowest end, since the entire margin between the farm-gate and the final price has been consumed by the intermediaries. This coupled with an imperfect credit market, resulted low investment on land, and stagnation in productivity in turn.

In short, the overprotective marketing regime left the system crippled. The absence of private participation in marketing activities, or 'agri-business' has also been marked with two qualitative concerns. First, the final producer company acquired the crops from various sources, and therefore it was difficult to obtain produce of uniform quality, for which a premium price could be charged. Second, the system of MSP resulted a wheat-rice monoculture in most of the states. Although during nineties, a trend of diversification was noticed with certain level of government encouragement, a shift towards cash crops would have been much faster in the presence of a vibrant private marketing network. In the current framework, we concentrate on the trends in corporate farming and the consequences.

The limitations of the APMC Act became too obvious since early 2000, and a number of government committees and documents prescribed its modification. The Tenth Plan document called for encouraging private and joint sector participation in agricultural marketing with suitable policies and incentives for free and competitive trade. In addition, for improving the efficiency at the regulated markets, it suggested reduction / rationalization of fiscal levies (excise, customs, sales tax etc.) by Central and State Governments.^{iv}

In line with the Tenth Plan document, the Committee on Long Term Grain Policy (2002) opined in favour of relaxation of procedures on establishment of new regulated markets, and allowing private players to set up own procurement centres outside regulated market yards.^v Finally, the Inter-Ministerial Task Force on Agricultural Marketing Reform (2002) recommended modification of APMC Act and modernization of other relevant legal provisions, apart from rapid enhancement of storage and warehousing facilities. In addition, the committee strongly advised in favour of legalization of contract farming. In line with these recommendations, the government set up a committee to formulate a Model Law on Agricultural Marketing. The Model legislation was finalized on 8-9th September 2003, and various aspects of the report was discussed in a National Conference of State Agriculture Ministers was held on 7th January, 2004.^{vi}

The timely introduction of the new model act is likely to enhance the level of 'agri-business' in India to a great extent. A few major features of the act are briefly discussed in the following:

1. The act allows private bodies to open markets to sale agricultural produce, apart from encouraging private-public partnership at the management level.
2. Provisions for avoiding duplication of fees at the markets have been enacted.
3. Market Committees are permitted to use its funds to create facilities like grading, standardization, quality certification and infrastructure on its own or through public private partnership for post harvest handling of agricultural produce and development of modern marketing system.
4. The act provides for separate constitution for Special Markets for commodities like onions, fruits, vegetables, flowers etc.
5. Contract farming has been allowed in all three phases - market-specification, resource providing, and production management. The Contract Farming Sponsor only needs to register himself with the Market Committee concerned, or a prescribed officer. In addition, the agricultural produce covered under the Contract Farming agreement is allowed for selling outside the market yard and in such a case, no market fees would be imposed on it.
6. Disputes arising out of contract farming agreement are referred to the prescribed authority, who would resolve the dispute within thirty days after giving the parties a reasonable opportunity of being heard. Disputes relating to and arising out of contract farming agreement are not to be called in question in any court of law, if not specifically mentioned earlier. The decision made by the authority is enforceable as it is equivalent to the decree of the civil court. In addition, provisions for dispute resolution between private market or consumer market and market committee is also outlined in the model law.

The advantage for contract farming is a both-way phenomenon. Chadha and Gulati (2003) argue that through this mechanism, the farmers get access to product market; inexpensive credit and farm inputs, extension services and a risk sharing arrangement in case of fall in prices once the harvesting decision has been undertaken. On the other hand, the private companies gain from the elimination of responsibility for direct production, higher degree of control over the quality and uniformity of the produce and assured supply of products. However, Ghosh (2003) is skeptical about these gains.^{vii} Saran (2004) on the other hand argues that not only this benefits the participating farmers, but also the non-participating ones through a rise in mandi rates. The good thing is that the government is viewing the option as a positive step. In his budget speech (2004-05), the finance minister Mr. Chidambaram had expressed satisfaction at the stream of events, and hoped that the states would find the Model Act useful.

Today agriculture markets are working in monopolistic environment, which don't provide many choices to small farmers. Wheat in wholesale mandi in hapur is Rs 900/qt mp variety, while in retail in Mumbai it is Rs 1800/ qt for same variety. A return of 100% on one yr cycle. This is a proven fact in our regulated agriculture markets since long and hence carries no business risk for a new entrant in the market. Then question arises why it doesn't attract too many players horizontally in the chain to run for same produce leading to higher margins to producers. Our producers are in sellers market while margins suggest they should be in buyers markets. Absence of choices is precursor to an environment strangulating change. Need of the hour is to provide choices to growers to sell his produce outside the monopolistic environment of mandi's.

This has been recognized by most people and Government of India constituted a committee to evolve a model act, which can provide space for increasing choices to growers.

- The biggest bottleneck in expanding the food-processing sector, in terms of both investment and exports, is lack of adequate infrastructure.
- Without a strong and dependable cold chain vital sector like food processing industry, which is based mostly on perishable products, cannot survive and grow. Even at current level of production, farm produce valued at Rs 70,000 million is being wasted every year only because there is no adequate storage, transportation, cold chain facilities and other infrastructure supports. Cold chain facilities are miserably inadequate to meet the increasing production of various perishable products like milk, fruits, vegetables, poultry, fisheries etc.
- Lack of post harvest facilities to handle perishables, for onward processing- over 20 % of the fresh harvest valued at Rs 50 billion is lost on this account alone.
- Lack of suitable processing-grade varieties - Indian products have low yields, which together with inadequate preservation, increase the end product costs considerably
- Import restrictions on commercially important crops like potato, and horticulture seeds/planting materials- which deter free import of exotic varieties for cultivation
- Complex phyto-sanitary certification requirements and post entry quarantine conditions for imported planting materials and seeds
- Impediments in land holding policies for organized cultivation, which restrain commercial production advantages.
- A large part of the food processing industry is in the small scale and household sectors, and lacks economies of scale
- Lack of quality awareness as well consistency of quality as per international standards
- Regulations such as the Prevention of Food Adulteration Act impede the launch of new products, by stipulating cumbersome- and in some cases, unnecessary controls

- The retail distribution network of perishables is not yet developed across the country, which limits the geographical reach of processed foods.

The main problem in rural area is shortage of credit leading to higher interest rates. Wherever co-operative credit structure exists it is monopolistic in nature giving no scope of choices to people. The source of money lending has been strangled by negative social image created over years. Though money-lending act exists in many states but the business is never promoted because of social connotations attached with it leading to strangulation of easy credit availability. Introducing competition in co-operative credit structure by allowing district banks to lend directly to growers and simultaneously allowing the primary credit societies to borrow from sources other than district banks can help in introducing competition in the sector. Similarly promotion of money lending can help in drawing more resources to rural areas.

Though India is one of the largest producers of various kinds of primary products but we add value to only about 2 % of our produce. At the same time the capacity utilization of various capacities created for processing is about 40- 50 %. This poses a big paradox before us. The main reason for it is lack of markets. Processed food markets are quite elastic and any price reduction can influence markets. Today our tax structure for process food industry is very high if we take into account all taxes like, excise, state taxes on both product and the packaging used in processed food industry. It will range from about 25 to 40 % of final product cost. High taxes not only market from growing and consequently lower revenues too, thus don't help anyone then evaders. There is a need to immediately reduce taxes of processed food industry to give results in short term

Today agriculture markets work in a monopolistic environment, which does not provide many choices to small farmers. Wheat in wholesale mandis in some parts of Northern India sells at Rs 900/qt mp variety, while in retail in Delhi it is sold at Rs 1800/ qt. This is a proven fact in our regulated agriculture markets since long and hence carries no business risk for new entrants in the market. Then why does it not attract many players horizontally in the chain? Producers operate in a sellers market while margins suggest they should be in the buyers markets. Absence of choices is strangulates change.

Demand projections estimate that demand from non-staples such as fruits and vegetables, meat and milk will grow faster than demand from food grain staples. The CII-McKinsey study postulates that the biggest growth will come from the "basic" foods which are the mass consumption processed foods such as *atta*, milk and chicken.

Transport and communication costs play a critical role in determining the size of the agricultural markets and agribusiness. These have historically been determined by state investments in highways,

railways and communication infrastructure. Even though there is greater private investment in these activities, government financed infrastructure will remain paramount for the foreseeable future. Even though it would be hard to quantify, there is little doubt that India's recent efforts in improving its road highways including rural connectivity and the increase in telephone density would have stimulated agribusiness.

International trade could be a powerful engine of agribusiness growth in the future. The exports of agricultural products grew at an annual rate of 8 per cent in the 1990s as against 3 per cent in the 1980s. Exports of fruits and vegetables have more than doubled from US \$110 million in 1981-82 to US \$262 million in 1999-2000. Although India's exports are small compared to world trade in fruits and vegetables, India has a presence in specific food products such as grapes and mango pulp. India could be a sourcing hub for products such as rice, organic produce and food products such as ready to eat meals [CII, 2003]. Finally, like any other sector, agribusiness is also affected by government policy. The role of government has already been seen in the sphere of supporting infrastructure. Trade policy, taxes, industrial and agricultural policy are some other ways in which government actions can impact the agribusiness sector.

Conclusions

The transformation of agriculture into a productive, dynamic sector leads paradoxically to its decline compared to the other sectors of the economy. The same economic forces lead to the growth of the agribusiness sector as storage, marketing and processing activities become specialized and complex. While there are no firm estimates of the size of the agribusiness sector, it would not be surprising if it accounted for at least 10 per cent of India's GDP.

The manufacturing component of the agribusiness sector in India is characterized by the significant presence of small household production units. For this, as well as the fact that trading services are usually labour-intensive, the agribusiness sector is likely to employ a significant fraction of the country's workforce.

The growth of the agribusiness sector is positively affected by agricultural productivity, changes in consumption patterns away from food staples, improvements in transport and communication infrastructure, international trade, and supportive government policy. In India, components of commercial agriculture such as fruits and vegetables, oilseeds and sugars are growing faster than food grains. Such supply behaviour has its counterpart in consumption pattern changes which has also seen a more rapid growth in the consumption of items such as fruits and vegetables, oils and milk products than in food grains. In the future, these trends may be reinforced by international trade.

Endnotes:

ⁱ For instance in spite of removing the systemic obstacles in agriculture, the policies undesirably focused on end-product price support (setting a high minimum support price for rice and wheat), or providing input subsidy (free electricity to farmers). In case of the former, Parikh, Kumar and Darbha (2003) have shown that the MSP set at a higher than market price has worsened the welfare of 80 percent of the rural population and all persons in urban areas. For the later, Sidhu (2002) notes that in Punjab more than nine lakh tube wells are being supplied electricity free of cost, leading to indiscriminate use. This in turn is causing underground water to deplete at a rate of 23 cm per annum. This is future would require submersible pumps to be installed, which only rich farmers could afford to bear.

ⁱⁱ See Acharya (2004) for details.

ⁱⁱⁱ A CII- Mckinsey report on Modernisation of Indian Food Chain noted that the inefficiency in the system result in wastage and value loss in excess of Rs 50,000 crore annually, as around 20 per cent of the value of food produced each year is lost.

^{iv} Describing the state of events, the 10th Plan document noted, “The current market system is dominated by traders. Appropriate and effective linkages between the producers and sellers continue to be weak. The absence of rural road connectivity and other infrastructure, combined with improper management, lack of market intelligence and inadequate credit support has resulted in a system that is unfavourable to the farmers. The adverse impact of all these is more pronounced in the case of the small and marginal farmers who constitute about 78 per cent of the entire farming community..... The primary rural markets are, however not equipped with basic facilities like platforms for sale and auction, electricity, drinking water, link roads, traders premises, facilities for post harvest management etc..”.

^v In order to strengthen the system, the committee recommended that, “In particular the market system has to be revitalised to (a) provide incentives to farmers to produce more, (b) convey the changing needs of the consumers to the producers to enable production planning, (c) foster true competition among the market players and (d) to enhance the share of farmers in the ultimate price of his agricultural produce.”

^{vi} The full text of the model act is available at <http://agmarknet.nic.in/agmreform.htm>.

^{vii} “The case for contract farming has emerged only because public institutions have failed to provide farmers with the essential protection and support required for viability on a sustained basis.” Ghosh (2003), pp. 12.
