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## Commercialization of Indian Agriculture

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**Abstract** Indian agriculture has been undergoing spectacular changes in recent period. These changes are manifestations of large scale commercialization taking place in the agricultural sector. They broadly include cultivation of new crops and varieties, increase in the share of area under cash crops, large scale spread of livestock activities and fisheries, pursuance of hi-tech agriculture in the areas of aquaculture, bio-technology, horticulture, processing, etc. The latest changes are basically responses of our agriculture to new economic environment ushered in by the process of liberalization.

**Keywords** The present paper is an attempt to examine different facets of commercialization.

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### 1. Historical Perspective

Before the advent of the British rule, crops such as cotton, tobacco and sugarcane were grown fairly extensively since land revenue had to be paid mostly in cash and the prices of these crops, relative to those of food grains, were much higher at that time. Even during the British rule, the situation did not change much. Though the primary concern of the rulers from then onwards was the expansion of trade, some of the policies in pursuit of this objective introduced market forces into agriculture. In the process, land was rendered marketable in principle as the British vested the property rights on land with the individual farmers for the first time. This, coupled with the growth in population and infrastructural investments in irrigation, communication and transport, resulted in rise in land value. Furthermore, the expansion of business opportunities in the agricultural sector also led to an influx of financial capital into agriculture from rent-seeking urban traders and moneylenders. This has given rise to a different vision of agribusiness, moving from one that provides a source of livelihood to one that has the potential of a commercial enterprise.

All India Rural Credit Survey (AIRCS) 1951-52 was a pioneering attempt to capture the salient features of the agricultural structure. The survey report has given a good idea about the level of commercialization from a regional perspective along with its correlates such as cropping patterns, value of gross produce per unit of land, share distribution, land rent paid in cash and kind, salary paid. In cash and in kind, loans, etc. AIRCS has classified the areas into three categories, namely (i) living areas characterized by a lower share of cash expenditure in total expenditure and a lower share of cash obtained from crop sales compared to with lower gross value of production, (ii) monetized areas have a significantly higher proportion of cash transactions but have a relatively low share of commodity crops in net sown area and (iii) Commercialized and monetized areas have a high proportion of commodity crops in the net sown area in addition to a higher proportion of cash transactions. Further, it was observed that the average rent paid in cash and kind to landlords as proportion of



gross value of produce was twice as high in the commercialized regions compared to subsistence regions. Similarly, the proportion of wages and salaries also was significantly higher in commercialized regions.

The onset of the Green Revolution in the mid-1960s led to widespread use of modern inputs such as HYV seeds, water, fertilizers and pesticides, leading to impressive productivity gains. As a result, the trade surplus increased sharply. For example, according to estimates by the Directorate of Marketing and Inspection (1981), the net market surplus of rice was 31.14% of the output of high-yielding varieties while it was (-) 0.7% for rice with traditional varieties in 1972. -73. . The growth in agricultural production is also due to favorable public policies on prices, marketing and credit as well as the widespread adoption of new agricultural technologies. The Commission on Agricultural Costs and Prices (CACP) (formerly the Commission on Agricultural Prices), established in 1966, has played a key role in recommending preferential prices for various crops. Regulation of markets has also been given due importance during the post Green Revolution period. On the credit front too, several innovations had been introduced to augment the working capital of the cultivators as well as to enhance their investment capabilities.

## **2. Concept of Commercialization**

Agricultural commercialization has occurred at different times in response to different stimuli. Previously, the cultivation of commercial crops such as cotton, sugarcane, jute, tobacco, etc., grown exclusively for sale in the market, was considered synonymous with commercialization. Over time, even food grains were produced for the market due to the cash flow needs of farmers. This transition was accelerated by the green revolution which increased market surplus. Favorable pricing policies for grains also contributed to this transition.

Given these developments, the degree of commercialization can be measured by the change in the share of output sold on the market or the change in the share of inputs purchased per unit of output. According to this definition, a situation in which the proportion of commercialized rice production increases from 20% to 50% can be considered as increased commercialization. But the situation of rice fields being converted into fish ponds, thereby replacing the previous business with a more profitable business, cannot be considered commercialization according to this definition. Likewise, this definition does not include a situation in which the proportion of inputs purchased in production is actually reduced without losing trade benefits due to technology that can increase resource efficiency. In fact, there is a constant search for new products, new markets and new technologies, and all these quests come from a business perspective.

Furthermore, with GATT (1995), business culture changed has crept into agriculture, taking advantage of urban consumers' preferences for processed, carefully packaged, and branded agricultural products. Transnational companies such as ITC and Pepsi have entered the food industry. High-tech projects in the fields of aquaculture and horticulture are emerging. Essentially, Indian agriculture is witnessing a gradual replacement of integrated farming systems by companies specializing in agricultural, livestock, poultry and fisheries products. Changes in product-mix and input-uses are determined largely by the market forces during this transition. This is the essential sign of commercialization (Pingali and Rosegrant, 1995).

Thus, conceptually, commercialization can either take the form of product commercialization which can occur on the output side through increased share of marketed surplus, introduction of new crops/activities or factor commercialization which can occur on the input side through increased use of purchased inputs. In the former case, the surplus can be had in the form of additional amount, over and above self-consumption, or in the form of a cash crop which is allotted a higher proportion of the cultivated area owing to favorable economics. An expected increase of production and income motivate the farm-firms to enter the exchange economy and become more commercialized. In the second case, commercialization can be understood as the adoption of modern inputs such as seeds, fertilizers, pesticides, irrigation and mechanical power, most of which are purchased on the market. Therefore, at the farm level, the level of marketing can be measured as the ratio between the value of market arrivals and the total value of agricultural production, or as the ratio between the value of inputs purchased to market and total input value. Agricultural production value. Considering various aspects of commercial agriculture, several ratios can serve as indicators of the degree of commercialization, specifically the ratio of market arrivals to production, the ratio of non-food grain and commercial grain crops in



the total cultivated area as well as the value of production, the ratio of purchased inputs to the value of all inputs (plus outputs), and the share of agricultural exports in agricultural GDP.

Historically, Indian agriculture was dominated by food crops, although the cultivation of commercial crops such as cotton, sugarcane, tobacco, etc. has been popular since ancient times. At the beginning of the planning period, grain crops accounted for 73.58% of the total planted area, of which cereals and beans accounted for 59.25% and 14.33%, respectively. Cereals are the basic food of the people and since independence the country has committed itself towards self-sufficiency in food production, the cultivation of cereals by the majority of small farmers cannot be done for commercial purposes. Thus, during the 1950s, most of the total crop area (59.25%) was used to grow cereals for domestic purposes. However, legumes are not grown solely for their own consumption and can therefore be considered from the outset as economically valuable crops. The remainder of the total cultivated area is partly occupied by other crop groups (17.08%), such as oilseeds, textile crops, fruits and vegetables, drugs, beverages, livestock and poultry. sugarcane, natural rubber, sugarcane, etc., are traditionally considered as commercial crops as they are grown for market and partly (9.34%) by other miscellaneous crops such as food. eat livestock and forage.

While in 2020-21, cereals accounted for 51.19%, pulses 14.58% and oilseeds 14.61%.

### **3. Consequences of Commercialization**

#### **1. Food Security**

The growing importance of non-food cereal crops in terms of their increasing share over time will seriously hinder the security system our food without the introduction of Green Revolution technology during this period of 1967-68 which brought impressive growth in agricultural output. As a result, output increased and the amount of goods reaching the market also increased. Increase in household income and change in consumption pattern in terms of nutritive values are natural consequences of commercialization. Based on a preliminary data of a study conducted in developing countries, Bouis (1995) concluded that commercialization has increased income levels in almost all the developing countries which in turn has led to higher calorie intake. There is little evidence that commercialization, per se, has altered consumption behavioral pattern in a manner that is detrimental to proper nutrition. Greater dependence on the market for food has not led to higher cost per calorie intake.

Other important changes in agricultural sector that had positive influence on our food security were increasing share of livestock and fisheries, on one hand, and increase in the share of fruits and vegetables in our food basket. These developments have had the effect of improving the availability of animal proteins as well as fruits and vegetables in the Indian diet (Satyasai and Viswanathan, 1996).

#### **2. Environment**

However, commercialization also has negative effects. Illnesses linked to the increasing and indiscriminate use of chemicals in agriculture have been documented by countless studies. Chemical residues in food products, destruction of natural enemies of pests, irreparable damage to the groundwater regime due to groundwater depletion, soil salinization due to chemical use and salinization due to Large-scale brackish water aquaculture are important factors.

### **4. Factors Influencing Commercialization**

#### **1. Population and Food Security**

Demographic change is a key determinant of commercialization facilitating or impeding the process depending on the availability of resources. In a situation where expansion of the cultivated area is still possible, and if the marginal labor productivity exceeds the marginal subsistence requirements, population growth may enable in increasing the marketable surplus on one hand. On the other hand, due to perceived food security risks, population growth might lead to reduced volume of marketed surplus in relative or even in absolute terms in regions with deficient market linkages. In the case of Indian agriculture, there is ample evidence to prove that the growth of population had been a driving force to bring about marginal expansion in cultivated area but nevertheless a substantial increase in productivity especially after the seventies.



## **2. Technological Factors**

Technological change is another factor affecting marketing. Although increased commercialization can occur without technological change in agriculture, technological change without increased commercialization is unlikely because of increased use of purchased inputs and Specialization is an inherent element of technological innovation in agricultural production. Complementarity between technology and commercialization can be of different types. As observed in Guatemala and the Philippines, the shift to commercial crops (vegetables in Guatemala and sugarcane in the Philippines) could encourage smallholder farmers to adopt technology to increase productivity of staple foods. Or as observed in Kenya commercialization (i.e., shift towards sugar cane) can lead to expansion of area under staple foods (in this case fallow land was brought under maize with constant yield levels) (Binswanger and Braun, 1991). The experience in India seems to be different from the above experiences as the introduction of technology has rendered the staple food crops of rice and wheat commercial crops.

Technical considerations such as replenishing soil fertility, besides providing nutritious diet was an important factor behind inclusion of pulses in the cropping pattern. With the advent of new technology, the cash requirements of farm households increased on account of increased use of purchased inputs necessitating the cultivation of cash crops on a large scale. As a result, the proportion of area under these crops, especially wheat, increased overtime.

Oilseeds like niger and sunflower which were introduced in mid-sixties and soybean and sunflower which were introduced in 1970-71 also resulted in a shift in cropping pattern in favor of commercial crops. The demonstrations conducted by the Research stations/Agricultural Universities and the success of these crops in the fields of progressive farmers would have spread the cultivation of these crops in larger areas.

## **3. Infrastructure**

Infrastructural support is an important pre-requisite for commercialization which is, at present, not commensurate with the production potentials available across states. For instance, concentration of production of fruits and vegetables and infrastructural facilities including processing capacity were observed to be mismatched across states (Viswanathan and Satyasai, 1997). Policies have to focus on aspects that foster commercialization by facilitating an open domestic and international trade environment, improving hard and soft infrastructure for opening up new market opportunities and ensuring legal security. A study conducted by Ahmed (Ahmed, 1995) while attempting to quantify the impact of investments in rural infrastructure in the process of commercialization concluded that improved infrastructure is a primary driving force under every condition for commercialization. The benefit of commercialization and specialization, to a greater extent, depend upon infrastructure and both have a 'push and pull' relationship.

## **4. Government Policy**

Marketing can also be imposed by direct government action through regulations relating to the establishment and management of plantations. Marketing in a country also depends on the global economic environment and existing business relationships.

Public policies such as agricultural pricing policies, market interventions to make food accessible to the poor, and national priorities such as food security, irrigation infrastructure construction, land development wild, etc., have influenced changes in farming patterns. For example, the area devoted to oilseeds - especially non-traditional oilseeds - recorded impressive growth after the mid-1980s, following the launch of the Oilseed Technology Mission in 1986, to meet national priorities including reducing rising oil import costs.

## **5. Price Factors**

Relative crop prices are the most important factor in determining crop structure. Coarse grains have been replaced by more profitable crops such as oilseeds due to favorable prices.

## **6. Information Technology**

Information technology can provide some of the most innovative tools/applications in the field of agricultural marketing in general and export trade in particular. If these tools are appropriate to national trade policies and international technological sophistication, the technology can be used effectively for planning, analysis and



policy development using use computer information management systems, forecasting, modeling and other quantitative techniques.

### **5. Restrictions on Commercialization**

The commercialization process has faced a number of limitations in the past, and many of these remain relevant even today as new restrictions emerge.

#### **1. Marketing Barriers**

Inefficient agricultural marketing systems are a major obstacle to the growth of market surplus and the realization of profitable prices by farmers. Despite all the efforts of the State, weaknesses still exist. Some of the ills that affect agricultural marketing are the presence of excessive number of intermediaries, length of marketing channels, poor performance of intermediaries, lack of information due to lack of free and effective flow of information.

#### **2. Input supply constraints**

Providing inputs in the right quantity and time is essential for the success of commercial projects. For example, for successful afforestation, the supply of quality seedlings is a prerequisite. In large areas of our country that are rain-fed, water is a major obstacle to the implementation of commercial projects on land.

#### **3. Technological limitations**

The lack of appropriate technology and the failure to adopt available technology pose serious limitations. Technology can alleviate certain limitations. For example, tissue culture can solve the problem of insufficient quantity and quality of plants. Water saving technologies such as drip/spray irrigation can reduce water shortages in rainy areas. Recent advances in information technology can fill information gaps in agricultural marketing systems.

#### **4. Infrastructure limitations**

Limitations due to the fact that our country's agricultural marketing system has too much adequate infrastructure. Lack of roads, cold storage, transportation facilities (including refrigerators), air transportation, pre-cooling, etc. Inadequate post-harvest facilities related to processing, grading, packaging and irregular power supply etc. is also a big obstacle. Delays in electric connection is yet another important constraint.

#### **5. Institutional Constraints**

The present level of exploitation of agro based hi-tech potential in the country has been observed to be very low. The supply of credit is inadequate to meet the demand notwithstanding the significant role played by NABARD and credit restitutions. Lack of awareness among entrepreneurs, bank personnel and other implementing authorities about the relevance of hi-tech and absence of effective coordination among different agencies involved are the major constraints.

The existing provisions of Land Ceiling Act in the country impedes large scale cultivation. Most high-tech and commercial enterprises require large farming areas to break even.

#### **6. Socio-economic Constraints**

The socio-economic characteristics of our farmers are not always favorable for the adoption of new technologies. Because green revolution technology is scale neutral, it can involve most farmers, sooner or later, regardless of the size of their farms. However, new commercial agricultural projects are capital intensive, require extensive knowledge and have a high degree of risk, and are therefore unsuitable for individual farmers, many of whom are illiterate.

The commercialization of agriculture, despite the benefits it brought to specialty crop producers in some areas, has led to the country's overall food situation deteriorating due to increased export of wheat and rice, reducing domestic food reserves, due to increased grain prices and discourage the cultivation of substandard food grains such as Jowar and Bajra as there is no immediate export demand.

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