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Chapter I : The Role of Agriculture in the Process of Economic Development -

1.1 Agriculture and Economic Development -

Agriculture provides food and the raw materials for industry. In addition agriculture must generate export surpluses in order to earn the foreign exchange with which to finance the import of capital goods and certain kinds of industrial raw materials. However, agriculture is not only a supplier of goods for domestic and export needs but is also a supplier of production factors such as capital and labour. Hence, a well-known Agricultural Economist, Theodore W. Schultz, like other international economists, asserts, "There is no longer any room for doubt whether agriculture can be powerful engine of economic growth".[1]

Economic development is measured in terms of an increase in the economy's real national income over a long period of time. Prof. Baran say's "Let economic growth (or development) be defined as an increase over time in per capita output of material goods".(2)

In the words of Ckun and Richardson, economic development is "a sustained, secular improvement in material well being, which we may consider to be reflected in an increasing flow of goods and services".(3)

There are two special features of agriculture in the development process. First, agriculture is the most important industry in nearly all the underdeveloped countries with typically 40-60 per cent of G. N. P. dervied from agriculture and 50-80 per cent of labour forces employed in agriculture. Secondly, while contributing to economic growth the agricultural sector undergoes a secular decline relative to other sectors.[4]

Economic development is the final goal of every underdeveloped country. Agriculture contributes su substantially in its attainment. The greater the efficiency of agricultural sector the more will be the economic development. In fact economic development and agricultural development are interdependent.

Usually, the traditional agricultural sector is not efficient to contribute to the economic development. The farmer does not receive good yield out of his farming as his method of farming is traditional. The agricultural sector in the developing countries is the most backward one. The nature of the agricultural production activities carried on in them would aptly be described as tradition bound.[5]

It is true that traditional agriculture does not contribute to uplifting of the economy. But it should be recognised that modernised agriculture can make a large contribution to the development of the developing countries. For example, Denmark in Europe, Isreal in the near East, Mexico in Latin America and Japan in the Far East have modernised their agriculture. Food supplies in these countries have become abundant, incomes have risen rapidly and a smaller proportion of the increasing incomes in these countries is being spent on food. An overall economic development of these countries can rightly be attributed to the transformation of agriculture.

Let us discuss the historical experience of Japan and Taiwan.

Labour productivity in Japanese agriculture approximately doubled over a span of 30 years, comparing farm output and labour inputs during the years 1881-1890 with the decade 1911-20. The comparable increase in Taiwan appears to have been even larger some thing like 130 to 160 percent over the 30 year span between 1901-10 and 1931-40.

Japanese agriculture was a major beneficiary of he the nations economic development. Most of the grains in agricultural productivity were increased. While some of the benefit did go to rural landlords. These landlords appear to have used much of their increased income to develop small-scale industry in the rural areas. In either case it is clear that without the prior increase in agricultural productivity, the financing of Japanese industrial development would not have been possible.[6]

Hence in order to have faster economic development modernisation of traditional agriculture is necessary.

1.2 Agricultural Production and Economic Growth -

Johnston and Mellor mention the most important ways in which increased agricultural production and productivity contribute to overall economic growth.[7]

1.2.1 Agriculture and Food Supply :- An increase in the net output of agriculture itself represents a rise in a country's G. N. P. A marked advance of food supplies is central in the chain of economic development.[8] A rapid growth of agricultural productivity is important as it enables food supplies to be available at relatively lower prices. The non-agricultural sector then requires less of its income to produce food so increasing the effective demand for the output of the non-agricultural sector. This in turn increases the profitability of an expanded output in the non-agricultural sector and encourage entrepreneurs to invest there. Concurrently, expansion of the non-agricultural sector will increase the availability of job opportunities in that sector, both for the urban population and the labour released from rural areas. Furthermore, relatively decling food costs imply higher real incomes, thus reducing the pressure to increase wage earnings. This maintains or increases the profitability of investments in the non-agricultural sector.

The above pattern is critical for countries in the early stages of development, because the process of economic development, in the developing countries (D.Cs.) is generally associated with rising demand determined essentially by the growth of population and of per capita incomes.

First, underdeveloped or less developed countries are characterised by high rates of population growth ranging from 1.5 to 3 percent per annum. In India, the rate of growth of population has been on an average 2.5 percent per annum since the planned economic development began in the country. Besides, the decline in the death rate has been very steep owing to improvement in knowledge of technique in the field of public health. This in combination with the slow decline in birth rates has resulted into higher rates of natural increase in population substantially in a shorter span. Secondly, as development proceeds and the rate of economic growth is accelerated it is presumed that per capita income rises. The income elasticity of demand for farm foods in the less developed countries varies from 0.6 to 0.9 as against 0.2 to 0.3 in highly developed countries such as Western

European countries, the United States of Canada. In the words of Johnston and Mellor, "This is a simple consequence of the dominant position of food as a wage goods in lower income countries when 50 to 60 percent of the total consumption expenditure is devoted to food compared with 20 to 30 percent in developed economies".(9) The income elasticity of demand for food worked for India seems to have been in the range of 0.7 to 0.8. Therefore, a given rate of increase in per capita income and a given rate of population growth have a considerably stronger impact on the demand for farm goods than in economically advanced countries. Another important point is that with a rise in per capita income, the people, especially the wage earners, who formerly used to live on coarse foodgrains shift to superior food grains like rice and wheat. The result is, demand for agricultural commodities increases in the initial stages of economic development.

1.2.2 Agriculture and Supply of Labour - There are three potential sources of increased labour for the industrial sector; natural population increase, immigration and the farm population. But agriculture plays the most important role to release labour force needed by the new and expending industries. In underdeveloped countries majority of the labour force of the country is engaged in agriculture. For example, in India, according to 1981 census figures, 72.8 percent of working population is engaged in agriculture as compared to 72.0 percent in 1971.

Agriculture will be able to release labour for employment in other sector of the economy if there is underemployment in agriculture. At least in the earlier stages of economic development, the agricultural sector has to release an increasing proportion of labour force required for rapidly expanding secondary and tertiary sectors. The transfer of manpower from agriculture to the other sectors of the economy is faciliatated by the marginal productivity of labour being zero in the agricultural sector. That is agricultural sector alone contributes the essential factor of production, labour, without affecting adversely the total agricultural output under the existing techniques of production. With economic development, agricultural technology also improves so that lesser number of workers is required to be engaged in agricultural activitye This also makes it possible to release labour force for employment outside the agricultural sector.

In economically advanced countries like the U. K., U. S. A. , and Sweeden the additional labour required for the relatively more rapid expansion of economic activity in the favoured accupation or industries has been obtained mainly from agricultural sources". (11)

In India, however, considering the rate at which industrial development is expected to take place in the next fifteen years or so, it would not be necessary to transfer any additional manpower from agriculture. This is so because of two factors, namely, the existence at present of a large number of unemployed in the urban areas and the relatively fast rate of population growth noticed in the last two decades in the urban areas.(12)

1.2.3 Agriculture and Supply of Capital -

Agriculture makes an important contribution in permitting the formation of capital especially in the early phases of development when agriculture produces and receives a major share of national income.

There are three ways in which the farm sector contributes to industrial capital formation. First, increased agricultural productivity benefits the non-agricultural sector through lower food prices, enlarging its real income and so providing the means for increased saving and capital accumulation in the urban sector. Second, increased output may generate higher levels of farm income, part of which may be saved. These savings may be utilized in financing the growth of the non-agricultural sector.

The third contribution to capital formation occurs if the government imposes a compulsory transfer of funds from agriculture for the benefit of other sectors, deriving more tax revenue from agriculture than the cost of public services to that sector, the difference being spent by the government for the benefit of the other, industrial sector or used to finance government services. This contribution was large in the early stages of development of developed countries.

"Tax revenues from agriculture thus provided a large part of the funds that the Japanese government used in fostering development by constructing "model factories by subsidizing the creation of merchant marine and industry, and by strategic investments in overhead capital such as railroards, education and research.(13)

It should be recognised that agriculture can and should play a strategic role in contributing to the capital requirements of economic development.

1.2.4 Agriculture and Export - Underdeveloped countries must often buy capital goods and technical know how from presently advanced countries. To be able to trade with these more advanced countries the poorer nations must develop the products in which they have a comparative advantage, typically natural resources based industries. As agriculture expands its exports the revenue gained can be used for both the purchase of imports necessary for the development process mainly capital goods but also some consumer goods and pay of loans made by foreign investors. The concentration on sectors such as agriculture in which the country has a comparative advantage will not only enlarge exports, but may also contribute to economic growth via raising the nation's productive efficiency. However, an expansion in primary product supplies may lead to a reduction in their prices, thereby turning the terms of trade against the primary producers.(14)

1.2.5 Agriculture and Price Stability - Agricultural prices also have to play an important role in economic development. The consumption function in underdeveloped country is 60 percent. A larger portion of money income is spent on foodgrains. The population growth rate in a developing economy is high. Further, increasing population leads to increased demand for foodgrains. In case farm food supplies do not expand in order to keep pace with rising demand for it, a result would be a substantial rise in the food prices in developing countries. A substantial rise in the food prices would lead to an increasing pressure on wage rate with consequent adverse effects on industrial profits and in turn on investments and ultimately on rate of economic growth.

Again, the fall in the prices of agricultural products will reduce the purchasing power in the hands of the rural people. This will lead to a fall in the demand for industrial products. Past experience shows clearly that a recession in agriculture authomatically leads to a general recession in the country.(15)

Generally, the prices of foodgrains and agricultural raw materials hold a key position in the price structure of the developing country. A rise of fall in agricultural prices will immediately generate a similar rise or fall in the general price level. Hence, rising and falling prices are not likely to be favourable for capital formation and economic development. Therefore, economic development requires smooth and minimum fluctuation in the general price level. Price stability and price incentives are thus important for economic development.

1.2.6 Agriculture and Demand for Industrial Goods -

Lewis himself emphasised in his report on 'Industrilisation at the Gold Coast' that increased rural purchasing power is a valuable stimulus to industrial development. Nurkse has given the concise statement of the problem..." The trouble is this there is not a sufficient market for manufactured goods in a country where peasants, farm labourers and their families comprising typically two thirds to four fifths of the population are too poor to buy any factory products or anything in addition to the little they already buy. There is a lack of real purchasing power, reflecting the low productivity in agriculture. From this it seems that there is a great need for extending the rural market for manufactured goods. Without an enlarged rural market for manufactured goods there shall be no incentive for investment in the non-agricultural sector.

It is therefore, expected that in the initial stages of economic development, it is the agricultural sector that is expected to trigger off development in the secondary and tertiary sectors of the developing economies. After reaching a certain stage of economic development, a need for concurrent growth in the agricultural and non-agricultural sectors arises. The economy needs both an agricultural base and an industrial base, these are not in conflict but are really complementary and beyond a certain initial stage of development the growth of one conditions and facilitates the growth of the other.[16]

1.3 Role of Agriculture in the Indian Economy -

In India, the vital role of agriculture arises out of the position the agrarian sector occupies in the overall economy of the country. Agriculture is the largest sector of the economic activity and has a crucial role to play in country's economic development by providing food and raw materials, employments to a very large portion of population, capital for its own development and surplus for national economic development. While the development of agriculture seems to hold a key to the progress of the economy as a whole and should receive due attention, the linkage between Agriculture and non-agriculture sectors also needs to be recognised.

First : The agriculture sector contributes the largest share to the national income of India. The distribution of national income by industrial origin for the period 1950-51 to 1980-81 (the latest year for which such estimates are available) shows that the share of various agriculture commodities, animal husbandry and ancillary activities has always beean more than 45%. As a matter of fact, during the fifties it contributed around half of the national income (output). In the sixties and the seventies its contribution, though it has shown a fall, has been more than 44%. This trend of declining share of agriculture in national income is broadly in consonance with the conclusions derived by the development economists. What is however, arrazing is the fact that the rate of change has been rather slow. Inspite of three decads of planned development the agriculture sector continues to hold the dominant place. This in turn, indicates the two things as follows.

i) The Indian economy still holds out a vast potential for growth by developing secondary and tertiary sectors.

ii) The growth of secondary and tertiary sectors has been relatively slow as compared to what would have been expected in initial stages of growth.

Whatever it is, sitnation as it obtains presently requires that more of available resources should be devoted to the develop. Programmes in the agriculture sector; so as to raise the productivity and level of output in this sector. This is one simple truth that has to be accepted by out plan Framers

Secondly : Agriculture has been and is a major source of livelihood in India. The size of labour force in agriculture increased from 87.72 million in 1921 to 163.33 million in 1971 and is projected to grow further 213.2 million in 1983. Over the years 1921-71 the size of the labour force depend on agriculture had more than doubled and over the next decad is projected to grow up more than

25%. What is surprising is the fact that the development economists generally hold that as a country develops the share of labour force dependent upon agriculture as a source of livelihood declines. This has obviously not happened in India. This sectors as are already know, is plagued by such evils as under-employment; disguised unemployment and low productivity, ~~employment~~. The increasing labour force in agriculture would only add further to the already low productivity and create alternative employment opportunities. The sector, thus, presents challenging opportunities for the plan- Framers in India.

Thirdly : Indian agricultural plays an important role in the country's international trade. The main agricultural commodities which are exported are Tea, oilcakes, fruits and vegetables, spices, tobacco, cotton, coffee, cccoa, sugar, hides and skins raw wool and other varieties of animal hair and vegetable oils. Cotton and jute textiles, which are important commodities, also depend for their raw material on agriculture. The important items of import have been cereals at least still recently raw cotton, fruits and vegetables, fertilizers vegetable oils and fats dairy products, raw jute, tractors, raw wool, rubber and agriculture machinery and implements. The development of domestic production capacity of wheat, rice and cotton has lately resulted in aa gradual decline in the proportion of imports of these commodities to total domestic supplies; as a matter of fact. India has also emerged self sufficient interms of food grains in the wake of bumper crops recorded during the period 1975-82. As a result of these developments the agriculture sector has emerged as a net earner of foreign exchange which is needed for capital and maintenance imports required in the non-agriculture sector.

Fourthly : Fluctuations in agricultural output levels plays a key role in the state of the national economy, since agricultural commodities comprise almost 80% of the total consumer expenditures. Reports of various rounds of National sample surveys give useful data on consumption expenditure. Generally speaking, as much as 63% of the total expenditure is incurred on food with food grains accounting for nearly 37% . Another 16% of the consumer expenditure is incurred on items like textiles footwear, fuel, household equipments of agriculture origin. Prices of consumer goods as also the general price level fluctuate with the rise and fall in the agricultural prices. The purchasing power of the vast majority of the people in India is thus inextricably linked up with the fluctuating fortunes in agriculture.

Fifthly : During the process of development the interdependence between agricultural and industrial sectors has become stronger. This close interdependence is reflected in (a) The supply of raw materials and inputs from agriculture to industry and vice versa. (b) The supply of wage goods to industrial sector. (c) The supply of materials from industry to agriculture for the building up of economic and social overheads like machines, river valley projects, buildings etc. and (d) The supply of basic consumption goods like furniture, cloth etc. to the rural population. Experience shows that growth and diversification of agricultural production have helped to develop various types of industries and diversification employment, a short fall in agricultural growth in some years had an adverse effect on prices causing an all-round imbalance and hardship in the economy.

1.4 Summary :

The foregoing discussion points out that the development of agriculture should proceed alongwith the development of industries in the less developed countries. For in the process of structural transformation of developing country should in fact be accompanied by improvement in hthe agricultural productivity. Otherwise, the backlog in the sphere of agricultural development may hamper the process of structural transformation. Structural transformations between agriculture and the rest of the economy are likely to be such that if one sector limits the growth of the other, it is more likely to be a case of agricultural growth limiting non-agricultural than vice-versa. It is therefore expected that in the initial stages of economic development, it is the agricultural sector that is expected to trigger off the development in secondary and tertiary sectors of the developing economies. After reaching a certain stage of economic development a need for concurrent growth in agricultural and nonaagricultural sector arises. The economy needs both an agricultural base and industrial base, these are not in conflict but are really complementary and beyond a certain initial stages of development the growth of one condition and facilitates the growth of others. The practical application of concurrent growth thesis, as explained above, is found in the case of Japan's process of economic development. Agricultural and industrial development went together forward in the process of concurrent growth, expansion of non-agricultural sector of course proceeded a good deal more rapidly than agricultural sector. So that overwhelming agrarian character of economy has been transformed. But throughout the period of economic growth the interaction between agriculture and rest of the economy associated with the structural transformation have had profound implication for growth in both the sectors.

Here, therefore strong plan can be made that the same type of experiment can be carried out in India also Japan which transformed its traditional agriculture into a modernised one which has helped a lot in the matter of development of its non-agricultural sector.

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