CHAPTER : XIII

PRODUCTIVITY

Productivity is a necessary element in growth. Increasing productivity sets in a virtuous circle in the economy and thereby ensures lasting economic prosperity. It is a ratio of output to the input of a factor of production. Productivity can be determined in relation to any one factor of production. Productivity can be related with man-power or it can be related with capital. It can also be related with land. Productivity, as a concept, is akin to efficiency. It is a means of improving the standard of living of the people. If an economy exhibits an upsurge in its productivity it is a clear indication that its factors of production and commodity inputs are efficacious and are contributing to actual output increase. The need for increasing productivity is reinforced by resource scarcities.


263
Productivity is not synonymous with increase in production. 'Production' and 'Productivity' are not the same thing. 'Production' is the amount of the absolute flow of product during a given period. 'Productivity' is the measure of the efficiency (in terms of production) of factors or inputs.

The term 'Productivity' is used with reference to efficiency in production. Statements pertaining to increase in land yields, per worker productivity, net output-capital ratio, profit per unit of capital, social or private yardsticks measuring the capability and competence of organisations like Government, etc. refer to improvements and appraisals of productivity.

The various factors that affect productivity are technology, resource endowment, educational levels, quality of labour, level of employment, government policy, management style, industrial relations, cultural and social values and institutions, capital accumulation, and above all, resource allocation.

Technological improvements help to increase
productivity. Improvements in technology allow a nation to produce goods more efficiently and to reduce waste. When a nation produces more capital goods, labour's productivity also increases. This occurs because labour can produce more with a larger quantity of machinery and because new technology is often embodied in new capital goods.

If the average productivity of labour rises owing to a technological improvement or an increase in the capital stock, or an increase in the quality of labour or a more efficient allocation of resources, the aggregate production function will shift upward. National output is a function of the average productivity of labour and the quantity of labour employed. Output varies directly with each of these two variables. If the size of the labour force increases through time because of a rising participation rate, then output will grow through time. Output will also grow if the average productivity of labour rises through time. In general, the rate of growth in output will approximately equal the sum of the rate of growth of labour plus the rate of

growth of labour productivity.

There is abundance of manual resources in the rural areas which remain unemployed and under-employed. This clearly indicates that surplus labour in the rural areas remains unutilized and therefore goes waste. A labour day unutilized is a labour day wasted. If these labourers in the village could be utilized, it would perhaps lead to higher level of production in the economy and national income could have risen at the same rate.

According to Prof. V.K.R.V. Rao "When the disguised unemployed get employment with the progress of economic development it is possible to treat the resulting phenomenon as an increase in productivity per unit of labour, the disguised unemployment being regarded not as unemployed but as employed with nil output who now begin to produce some output and, therefore, add to the average productivity of all the employed labour .... ".

The average productivity of labour is a ratio of total output to total labour employed and is generally expressed as output per man per standard day. It is generally said that in countries where labour hours are more productivity should be higher whereas in those countries where labour hours are few the productivity should be lesser. But, curiously enough, productivity of the industrial sector is higher in all those countries where hours of work per labourer are minimum. Therefore, merely longer hours of work may not help to raise productivity. On the contrary, there may be negative marginal productivity during the extra hours of work.

Apart from the optimum-time principle, the state of a person's physical health has a close link between levels of income and productivity. It is well-known, for example, that poor nutrition in childhood can severely restrict the mental as well as the physical growth of individuals. Poor dietary habits, inadequate foods, and low standards of personal hygiene in later years can cause further deterioration in a worker's health and thereby adversely

influence his attitudes towards the job and the people around him. His low productivity may be due, not so much to a lack of complementary resources but to his physical lethargy and inability to withstand the daily pressure of competitive work. Thus, low levels of living and of productivity are self-reinforcing social and economic phenomena in under developed countries.

Another significant factor which influences productivity is education. The favourable impact of education on the economy can be witnessed only in the long run. Development programmes can be implemented more appropriately with people who are in a position to read and write. Education increases productivity via skill development and dissemination of latest methods of production. In most developing economies industrial units are operated by unskilled and semi-skilled labour usually drawn from the agricultural sector. Their illiteracy is the greatest impediment. If they were literate they would have contributed to higher productivity in the industrial sphere. In the absence of qualified persons, the

economy has to rely on unskilled and semi-skilled labourers who are incapable of handling the machines efficiently and dexterously. Thus, maintenance and replacement costs are steeped up. Inability to utilize, operate and maintain the machines in the proper manner results in frequent breakdowns and curbs the production process, thereby adversely affecting productivity.

Another critical factor which contributes to higher productivity is the quality of capital. Quality of capital is not distinguishable very clearly from the form of capital. For instance, any improvement in the quality of capital would imply better machines with up-dated technique. It is not feasible to completely change the entire capital goods which become out-dated. Even when new inventions and better methods of production are discovered they can only be annexed to the already existing modes of production. A complete replacement by new machines is impracticable. Thus, it takes a long time before the complete national capital can be transformed into better capital machines and thereby completely revolutionize the productivity of capital. Infact, if we trace the dates of inventions and the period when they
were put to effective use, we find that there is generally a gap of 10 to 15 years and sometimes even longer. Moreover, it is not a matter of change-over from one method of production to another more proficient method of production, nor is it a simple method of introducing better machines or competent methods of production alone. Sometimes, the introduction of large-scale new methods of production require many other subsidiaries which have to be antecedent to the application and successful working of the new techniques.

Productivity is an excellent indicator of an economy's performance especially with respect to the performance of different sectors. In addition, productivity trends and changes therein suggest whether an economy is subject to diminishing returns, constant returns or increasing returns. Productivity improvements can postpone the onset of diminishing returns in various sectors of the economy.

Differences in agricultural productivity exists on a much larger magnitude than differences in industrial productivity. Similarly, differences in

productivity in the manufacturing sector are little higher than differences in productivity of the services or transport sectors. Further, the degree of variation in the level of productivity in the industrial sector is not of the same magnitude as that of agriculture. Productivity in the agricultural sector is conditioned by size of land-holdings, quality of land and factor inputs along with the uncertainty and vagaries of nature.

Differences in productivity in the manufacturing sector differ primarily because of difference of capital and organisation. The fundamental difference between agricultural sector and the industrial sector is that, by and large, the latter is capital-intensive and the former labour-intensive. Capital not being a living factor of production can be used more efficiently and reliably than human beings. Whenever work is left to human-beings, even if they are highly experienced, there are possibilities of variation in the product. In the case of a machine, possibilities of variation in the quality of output are very little.
Large scale production has become possible in the industrial sector because of technological changes and scientific innovations. There have been phenomenal changes in the modes of production. Everyday some new machines are invented to produce more and more, employing lesser labour. Thus speed is achieved through new machines and economies of scale emerge more conveniently. Large scale production also reduces the cost of production.

Differences in productivity in the industrial sector exist largely because of mechanisation. Non-manual techniques raises productivity. The importance of power in production is so great that differences in the utilisation of per capita electricity can favourably be compared along with the comparison of productivity of countries. Those countries which have the higher per capita consumption of electricity are also the countries where the productivity is the highest, and vice versa.

Although mechanisation is a basic requirement for boosting up productivity, by itself it cannot be adopted in a vacuum. There are certain pre-requisites for
mechanisation. One of the factors which plays an important role in mechanisation is the market. If the market for the product is limited and large scale production is not viable, mechanisation becomes uneconomical and therefore machines cannot be employed. On the other hand, if the market is large and production is required in larger volume, then automation and mechanisation of the productive process works out to be economical and productive.