

# KARL MARX'S THEORY OF ECONOMIC DEVELOPMENT

Karl Marx, the father of scientific socialism, is considered as great thinker of history. He is held in high esteem and is respected as a real prophet by the people. Prof. Schumpeter wrote, "Marxism is a religion. To an orthodox, Marxist, an opponent is not merely in error but in sin". He is regarded as the father of history who prophesied the inevitable decline of capitalism and the advent of socialism. The Marxian analysis is the greatest and the most penetrating examination of the process of economic development. He expected capitalistic change to break down because of sociological reasons and not due to economic stagnation and only after a very high degree of development is attained.

The theory of development is based on certain assumptions such as nature of production functions, technological progress and the manner of capital accumulation. Irma Adelman asserts, "Taken together, these assumptions imply something concerning the behaviour of wage rates and of profit rate through time, they, therefore, have certain consequences for the dynamic behaviour of the economy. In particular, they imply the existence of structural maladjustments in growing economy. They suggest furthermore that the system is explosive in nature."

## MATERIALISTIC INTERPRETATION OF HISTORY

According to Marx, "Foundation and evolutionary cause of all social life is materialism." This implies that all the historical events are influenced and determined by economic conditions and all other non economic forces exert only a minor influence on historical developments. He attempts to explain the foundations and evolutionary cause of all social life. Marxian key to social behaviour is the 'mode of production' and the relation of production. The mode of production determines the general character of social, political and spiritual processes of life. The relations of production relate to the class structure of society uniquely characterised by following components :

- (a) The organization of labour in a scheme of division and co-operation, the skills of labour in social context with respect to degrees of freedom ;
- (b) The geographical environment and the knowledge of the use of resources and materials.
- (c) Technical means and processes and state of science generally.

The changes in the relations of production and the cultural super-structure of society tend to lag behind the development of material forces of production. Marx distinguishes four social systems in history :

- (i) Primitive communism.
- (ii) Ancient slave stage.
- (iii) Feudalism.
- (iv) Capitalism.

Under the first stage, the factors of production are owned and controlled by community and individuals get their requirements according to their need. In other three stages, the class that controls the factors of production also controls the society. In these stages, there are always two groups of people—dominant and depressed. It is the domination of one group of people over the other which creates tension and conflicts. Marx observed that, "All the social, political and intellectual relations, all religious and legal systems, all the theoretical outlooks, which emerge in the course of history, are derived from material conditions of life." In other words, we can say that economic environment influences the shapes and structures of the society.

It is the fact that man changes the direction of economic system, but ultimately the character of life is influenced by the economic system. The basis of social structure is the system of production, exchange and distribution. Thus, the final cause of all social and political changes is the mode of production and distribution. Edward Aueling has expressed his views regarding materialism as "The materialistic conception of history is that the chief, the fundamental factor in the development of any nation or society is the economic factor – that is the way in which the nation or society produces and exchanges its commodities."

The concept of materialism has been stated by Dr. Engles as, According to this concept, "the ultimate causes of social changes and political revolution are to be sought not in the minds of men, in their increasing insight to external truth and justice but the changes in the mode of production and exchange, they are to be sought not in the philosophy, but in the economics of epoch concerned."

The Marxian interpretation of history has been severely criticized :

- (a) The division of history into a series of discrete self contained and dissimilar economic and social system is an over simplification. He failed to take into account the influence of traditions on successive stages.
- (b) Marx's position that each economic social system passes through the same general cycle.
- (c) The assumption that the class struggle is the only means by which economic changes produce cultural and social change, cannot be accepted.

### LABOUR SURPLUS

This theory provides the framework on the basis of which Marx has developed his theory of capitalistic development. The labour theory explains that labour is the sole source of value in a commodity. In the short run, the value of commodity may be determined by the forces of demand and supply, but in the long run, the value is determined by the amount of labour spent in production of commodity. Marx defines commodity as concealed labour and value as crystalized labour.

Society consists of two types of people—workers or labourers and capitalist or employers. In a capitalist society the production is owned by small group of people called capitalists. Those who sell their labour to capitalists are called workers. The production of commodity commands a certain value in market. The difference between the market price and the wages paid to the workers constitutes the surplus. The rate of surplus value is manifested in terms of degree of explanation. To quote Marx, "Capitalists are not interested in producing those goods, which are useful and needed by the society, but in extracting as much surplus value as possible." So explanation of labour creates surplus value and its reinvestment ensures the progress of society under capitalism. The net output of the economy is given as :

$$c + v + s$$

c = Value of material and machinery.

v = Amount of labour used during particular period.

s = Surplus value.

The ratio of surplus value to variable capital is called rate of surplus value i.e.  $S_v = s/v$

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The ratio of the surplus value to the total capital is called rate of profit i.e.

$$P = \frac{s}{c + v}$$

The ratio of the constant capital to variable capital is called organic composition of capital. Symbolically.

$$Q = \frac{c}{c + v}$$

The relation between these ratios is expressed as under :

$$P = S_v (1 - Q)$$

This equation implies that rate of profit is directly proportional to the rate of surplus value but inversely proportional to the organic composition of capital.

Prof. Marx argues that the best way to increase the surplus value is to increase the productivity of labour class. The capitalist who first introduces the new machinery or new production instruments would gain advantages over his competitors. He would tend to increase a amount of economic surplus and hence, initiate capitalist development. Thus, economic surplus has a great role in the development process of a society. To increase the surplus, Prof. Marx advises, "accumulate, accumulate ! that the Moses and prophets." Hence, capital accumulation serve as a cradle for development.

### CAPITAL ACCUMULATION

According to Prof. Marx, it is the surplus value that leads to capital accumulation. The main aim of the capitalist is to increase the surplus value which goes to swell his profits. He tries to maximise his profit in following three ways :

1. By increasing working hours. If the working hours are extended from ten to twelve, the surplus will automatically increase from four to six.
2. By decreasing the number of hours required to produce labourer's subsistence.
3. By increasing the productivity of labour. This requires a technological change that helps in raising the total output and lowering the cost of production.

Profits are determined by the amount of capital. As Marx points out, "Capital is dead labour that vampire like only lives sucking living labour and lives more, the more labour it sucks." Marx separates capital into constant capital and variable capital. The surplus value is denoted by  $s$ . So the total output is  $w = c + v + s$ .

Marx divides the total output of the economy into Department 1 and Department 2. The former is related to the reduction of capital and the latter to the consumer goods. The total output of each department is

$$\begin{aligned} w_1 &= c_1 + v_1 + s_1 \\ + W_2 &= c_2 + v_2 + s_2 \\ + w &= c + v + s \end{aligned}$$

The simple reproduction scheme indicates a situation of stationary state in which all that is produced is consumed. Hence, the net investment is zero and there is no accumulation or surplus. Therefore, equality prevails in both departments. Then, the value of total constant capital in both the departments must be equal to the output of department 1 i.e.

$$\begin{aligned} c_1 + c_2 &= c_1 + v_1 + s_1 \\ C_2 &= V_1 + S_1 \end{aligned}$$

Similarly, the total consumption in both the departments ( $v_1 + s_1 + v_2 + s_2$ ) must be equal to the total output of Department 2 i.e.

$$\begin{aligned} c_2 + v_2 + s_2 &= v_1 + s_1 + v_2 + s_2 \\ C_2 &= V_1 + S_1 \end{aligned}$$

This implies that the value of constant capital in department 2 must equal the value of commodities consumed by workers and capitalist in Department 1.

In Expanded Reproduction Scheme of Marx the accumulation takes place because the production of Department 1 is greater than the demand for constant capital in both the departments.

$$\begin{aligned} c_1 + v_1 + s_1 &> c_1 + c_2 \\ v_1 + s_1 &> c_2 \end{aligned}$$

This shows that accumulation is taking place which is being invested in employing more labour ( $v_1$ ) and means of production ( $c_1$ ) in Department 1 than in Department 2. This, in turn, increases the surplus value  $S_1$ .

In order to study the nature of capitalist accumulation, Marx establishes a certain relationship between  $c$ ,  $v$  and  $s$ . The ratio of constant capital to variable capital is determined as organic composition of capital. The rate of surplus value is defined as the ratio of surplus value to variable capital or of profits to wages. This is called the rate of exploitation. The rate of profit is not dependent solely on the rate of surplus value. The rate of profit can change even though the rate of surplus value remains constant, if a change occurs in the organic composition of capital. The influence of technical progress is to alter the organic composition of

capital. Hence, the tendency of industrial progress is to lower the rate of profit even though there is no decrease in the rate of surplus value.

Competition among the capitalists tries to cheapen their products which can be done by introducing labour saving machines which increase labour productivity. Those capitalists who are unable to replace labour by machines are squeezed out.

Capital accumulation and concentration in value, increase in constant capital and decline in variable capital. The process of supplanting labour by machines creates an industrial reserve army which increases as capitalism develops. The larger the industrial reserve army, the worse are the conditions of employed workers. Capitalist are able to cut down wages to a surplus value. This is the law of the increasing misery of the masses under capitalism. This is explained with the help of a diagram 2.1. The labour force is taken along X-axis and wage rate on Y-axis. D is the demand curve and S is the supply curve of labour. At the wage rate W, there is increase in the industrial reserve army equal to LP (L<sub>1</sub>P<sub>1</sub>). As the industrial reserve army expands, capitalists start adopting labour saving machines and reduce the rate to minimum subsistence level OQ in order to have more surplus value.

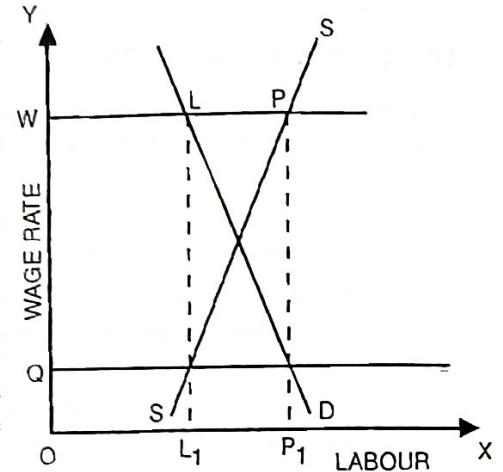


Fig. 2.1.

But when the capitalist is replacing the labourers by machines, he is killing the goose that laid the golden eggs and there is continuous reduction in surplus value. Prof. Marx opines that technological progress tends to increase organic composition of capital. Since the rate of profit is inversely proportionate to organic composition of capital, the former tends to decline with accumulation. Marx explains the falling rate of profit as under :

$$r = \frac{s}{c + v} = \frac{s/v}{c/v + 1}$$

Thus, the rate of profit varies inversely with organic composition of capital and directly with the rate of surplus values. Hence, the rate of profit 'r' rises with the rate of surplus value and falls with the organic composition of capital.

### CAPITALIST CRISIS

When the rate of profit declines, the production is no longer profitable. Consumption dwindles as machine displaces men and industrial reserve army expands. Every capitalist tries to dump goods in the market and in this process small firms disappear and a capitalist crisis begins. Marx points out that the ultimate cause of the economic crisis is poverty and limited purchasing power of masses. During the crisis, unemployment increases sharply, the wages of workers are further cut, credit facilities break down and small employers are ruined. Marx wrote, "A crisis always forms the starting point of new investments. Therefore, from the point of view of society as a whole, a crisis is more or less a new material basis for the next turn over cycle." The various causes of economic crisis are under noted :

**1. Disproportionality.** There is unbalanced growth in different sectors of the economy. Each producer produces according to his poor information of the activities of his competitors and imperfect knowledge of the market as a result, too little of some and too much of other commodities are produced. This leads to a disproportionate growth of various branches of the economy which gives rise to general crisis.

**2. Falling Rate of Profit.** The long run falling rate of profit is due to increasing organic composition of capital, while short run fall in profit rate is caused by rise in wages. Since

$$P = \frac{S}{C + V}$$

Multiplying Numerator & Denominator by V we get

$$P = \frac{SV}{V(C + V)} = \frac{SV + SC - SC}{V(V + C)}$$

$$\begin{aligned}
 &= \frac{S(V+C) - SC}{V(V+C)} \\
 &= \frac{S}{V} - \frac{SC}{V(V+C)} \\
 &= \frac{S}{V} - \frac{S}{V} \cdot \frac{C}{C+V} \\
 &= S_v - S_v \cdot Q \\
 P &= S_v (1 - Q) \\
 S_v &= \text{rate of surplus value} \\
 Q &= \text{Organic composition of capital}
 \end{aligned}$$

The increase in organic composition of capital will lead to decline in the rate of profit and vice-versa. The supply of labour being inelastic in short period, the wages will rise and unemployment will be reduced. The rise in wages will lead to a fall in profits and will discourage accumulation. When the demand for labour falls, the reserve industrial army increases, the profits rise and the accumulation is accelerated. Thus, the fluctuations in the rate of profit caused by changes in wages is the leading force behind the cyclical ups and downs in capitalist economy.

**3. Under Consumption.** Under consumption is another factor leading to economic crisis in a capitalist economy. Marx does not believe in Say's Law of markets that "Supply creates its own demand." He rather makes critical remarks about this law. "Nothing can be more childish than the dogma that because every sale is a purchase, and every purchase is a sale, therefore, circulation of the commodities necessarily implies an equilibrium of sales and purchases ..... If the interval in time between two complementary phases of the complete metamorphosis of a commodity becomes too great, if the split between the sale and purchase becomes so pronounced, the initial connection between them, their one-ness, asserts itself by producing a crisis."

The tendency to accumulate enlarges the size of working class, increases unemployment and reduces the wage rate to subsistence level. The working class has a higher propensity to consume but cannot consume as its ability to consume is restricted by low income and poverty. Thus while on one hand, production increases rapidly, but on the other side consumption lags behind, the result being towards over production and economic crisis.

When the capitalists find themselves caught in the web of economic crisis and when they find that their profits are shrinking and demand is declining, the capitalists try to discover and explore new markets. Marx maintains that colonialism increases exploitation of resources and markets of the poorer countries for the benefit of the capitalist nations. When colonialism is firmly rooted in poor countries, their markets are flooded with the products produced in the developed countries. The developed countries capture the markets of poor countries and establish their dominance. Even the flow of capital to the backward countries fetches a higher rate of profit. In this way, export of goods and capital to backward countries lessens the tendency of stagnation in the capitalist society and relieves it of the domestic pressure of over production.

It cannot be concluded that the export of goods and capital will prevent doom of capitalism but it merely postpones the doom. The modern world is dominated by rich nations who compete with each other in an effort to capture poor countries market because they provide safe outlets for their goods and capital and in this way, the imperialistic war begins. Marx explains the necessity and inevitability of the revolutionary transformation from capital socialist society. Capitalism leads to the proletarian revolution whereby dictatorship of the proletariat is established. Poverty is removed. The state will wither away and each individual will contribute to income according to his needs. Socialism replaces capitalism.

### **MATHEMATICAL INTERPRETATION**

The mathematical explanation of the model is based on mathematical equations constructed on its basic propositions :

**1. Production function**

The Marxist idea of production function is same as those of classical writers i.e.

O	=	f (L, K, Q, T)
L	=	Size of labour force.
K	=	Supply of known sources.
Q	=	Stock of capital.
T	=	Level of technique.
O	=	Output.

Marx considers the relationship between investment and technological progress as two way traffic i.e. investment is needed for the technological progress and technological progress, in turn, provide opportunities for productive investment. L refers to labour force actually employed and not growth of population.

**2. Technological Progress depends upon investment**

[i.e.]	T	=	T (I)
	T	=	Level of technological progress.
	I	=	Investment

**3. Investment depends upon rate of profit**

I	=	I (R')
R'	=	Rate of return on capital.
I	=	Investment

**4. The rate of profit is ratio of profits to the variable capital plus constant capital**

i.e.	R'	=	$\frac{Q - W}{W + Q_c} = \frac{R}{W + Q_c}$
	O	=	Output
	W	=	Variable capital
	Q - W	=	R = Profits
	Q'	=	Constant capital

According to Marx, the increase in capital per worker must result in a fall in the rate of profit.

**5. Wages depend upon level of investment**

i.e.	W	=	W (I)
	W	=	Wages
	I	=	Investment

**6. Employment depends upon level of investment i.e. employment rises only if investment goes up. In other words, employment and investment are directly proportional**

L	=	$L \left( \frac{I}{Q} \right)$
I	=	Number of workers actually employed
Q	=	Existing stock of capital

**7. Consumption depends upon wage bill**

C	=	C (W)
W	=	Wage
C	=	Consumption

**8. Profits depend upon the level of technology and level of consumer expenditure**

R	=	R (T, C)
R	=	Volume of profit

T = Level of technology

C = Level of consumption

In order to make Marxian system determinate, three identities are introduced :

1. Total output is equal to total profits plus total wages i.e.

$$O = R + W$$

2. Since the economy is divided in two sectors consumption goods and capital goods sector, so the total output is sum of the consumption goods and investment goods.

$$O = C + I$$

3. There is fixed relationship between the current capital costs  $Q'$  and stock of capital  $Q$

$$Q' = \mu Q$$

$$\mu = \text{User Cost}$$

### CRITICAL APPRAISAL

Marx theory of capitalist development has been accepted by his followers as a gospel of truth and on the other hand, it has been severely criticized on the following grounds :

**1. Materialistic Interpretation of History is Partial Truth.** The foremost point of criticism against Marx is that it is a partial concept. Marx has minimized the significance of other non-economic factors in the history. The non-economic factors like ethical, ideological, religious, cultural and the political conditions also greatly influence the history. Man does not live by bread only, other things are also necessary. Bertrand Russell has rightly remarked in this regard, "Larger events in our political life are determined by the interaction of material conditions and human passions." Thus, the material and non-material factors play an important part in the development of various economic activities.

**2. Theory of Surplus Value is Unreal.** The whole Marxian theory is based on the theory of surplus value. In real world, we are not concerned with values but with real tangible prices. Thus, Marx has created an abstract and unreal world which has made it difficult and cumbersome to understand proper working of capitalism.

**3. Marx – A False Prophet.** According to some other opponents, Prof. Marx has been proved a false prophet. The countries which have toed the Marxian line of thinking have been curiously those in which capitalist development lagged behind. All the communist states had been poor and are even now so, as compared to capitalist countries. On the contrary, the real wages of workers have continuously increased in their value. The workers tend to become more prosperous with capitalist development and the middle class instead of disappearing, has emerged as dominant class. There have been also no signs of the withering away of the state in these countries.

**4. Technology does not Create Unemployment.** Marx contended that with the introduction of technology, industrial reserve army expands. But, this is an exaggerated view for the long run effect of technological progress is to create more employment opportunities by raising aggregate demand and income. The improved techniques of production even if they may be labour saving can show immense benefits on the labourers.

**5. Falling Tendency of Profits not Correct.** According to John Robinson, "Marx's explanation of the falling tendency of profits explains nothing at all." Marx contends that as development proceeds, there is an increase in the organic composition of capital which brings decline in the profit rate. But this is wrong opinion because as development proceeds, capital output ratio falls and so the output increases and profits also increase.

**6. Capitalist did not Meet its Predicted Doomsday.** Marx also could not understand the emergence of political democracy as the protector and preserver of capitalism. The introduction of social security measures anti trust laws and the mixed economies have given a lie to the Marxian prediction that capitalism contains within itself the seeds of its own destruction.

**7. Cyclical Theory Wrong.** Marx emphasized that capital accumulation led to reduction in the demand for consumption goods and fall in profits. But he failed to realise that with economic development, the share of wages in aggregate income need not fall, nor the demand for consumer goods.

**8. Static Analysis.** In the words of Schumpeter, "It is unsuited for two main props being (a) labour theory of value and (b) modified version of subsistence theory of wages. Marx was analysing the problem of growth with the help of tools which were essentially suited to static economic analysis."

**9 Analysis of Crisis is Out-dated.** Marx considered the business cycle as an integral part of capitalist development but it lacks precision. The analysis of crisis is based on nature of capitalist production rather than on monetary and fiscal factors and the theory which neglects the monetary and fiscal factor is considered to be incomplete and inadequate. Marxian analysis of crisis at the most can be regarded as suggestive rather than analytical and convincing.

**10. Unable to Solve Various Complex Problems.** Regarding consumption theory, Marx does not attempt to break sharply with classical thinking, this analysis of the problem is inadequate. It is suggestive but vague. He fails to explain that how the rate of profit and investment depends upon consumption.

## CONCLUSION

It can be concluded that as a formal model Marxian economics is weak. There are serious internal contradictions in the Marxian system. The development process occurs in an uneven and discontinuous fashion is appreciated by all modern economists. Marx pointed out that the state of under consumption was the main cause of depression and that for stable growth, a proper balance between investment and consumption was essential. He indicated that too low or too high wages in relation to total output can adversely affect investment and, thus, stifle economic growth. Industrial employment is one of major variables in his system. Despite of all these drawbacks, Marxian tools have become part and parcel of the theory of economic growth.

## MARXIAN THEORY AND UDC

The Marxian theory is not applicable directly to UDC. Marx did not think about the problem of these countries. "Apart from a few illusions remarkable for their determinant note with regard to obtaining prospects for economic development in regions like Western Asia or India, no special attention is given to the problems of change in UDC."<sup>1</sup> He talked of colonial exploitation and foreign domination as the principal cause of the poverty and economic backwardness of colonies but he never analysed the problem of their development.

This model is not applicable to UDC because it neglects the existence of excessive population pressure which is the main characteristic of these countries. Most of the UDC are trying to develop their economies under the conditions of controlled capitalism, or mixed economy with planning as pre-dominant characteristic. Here we are denying the fact that some of variables of Marxian Model are found in UDC such as exploitation of labour, near subsistence wage, concentration of capital in few hands, increasing misery of working class and a reserve army of the employed and underemployed. Marxian notion of planned development also seems to appeal to those backward countries which are in a great hurry to industrialize at the risk of excessive national belt tightening.

Marx's Departmental Scheme is applicable to UDC. Such a country consists of two sector economy—capitalist sector and a subsistence agriculture and small scale sector which may represent Marx's two departments. Expansion of economic surplus or capital accumulation is the basic requirement of these economies. It is the capitalist sector which yields more surplus while the subsistence sector yields small surplus. Rapid economic development requires reorganisation and modernisation of the sector by bringing about both structural and technological changes. D. Lange points out that, "It is the commodity character of agricultural production which determines the course and rate of industrialization also with increased production of capital goods."

The countries like India, Egypt, Burma and Ghana have followed the Marxian Departmental Scheme in their development plans. The basic strategy has been to increase investments in capital goods industries and services, and to increase the supply of consumer goods by increasing investment and production in agriculture and small scale sector. The primary aim is to create larger employment opportunities to increase purchasing power and fresh demand, to build strong capital base and increase productive and technical capacities within the economy.

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1. A. Bonne.



Thus, the greatest lesson which the planners of underdeveloped countries can learn from Marxian economics is that accelerated development means complete reorganisation of the economy both technologically and structurally. There is a need for both quantitative and qualitative economic and non-economic changes in these countries before they can progress rapidly.

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### QUESTIONS FOR EXERCISE AND REVIEW

1. Critically examine the Marx's theory of development.
2. What are the main components of the Marxian theory and how they are related to development ?
3. Discuss the applicability of Marxian theory of Economic Development to underdeveloped countries.
4. "Socialism replaces capitalism." Comment upon it.
5. Explain the capitalist crisis shown by Marx.
6. "The society is sharply divided between two classes, the middle class being virtually non existent." Explain and discuss.
7. Why Marx has been said to false Prophet ? Comment.
8. Write short notes on –  
(i) Theory of surplus value.                      (ii) Accumulation of capital.