

A THEORY OF PROFIT:

**AN INQUIRY INTO THE
MARXIAN ANALYSIS**

PL. ANDIAPPAN

A THEORY OF PROFIT :

AN INQUIRY INTO THE
MARXIAN ANALYSIS

BY

PL. ANDIAPPAN

A THESIS SUBMITTED TO
THE UNIVERSITY OF MADRAS

FOR THE

guided by

DEGREE OF MASTER OF LETTERS

JANUARY 1969

University of M

I am also grateful to Mr. R. Narayanan, Lecturer, Department of American Studies, I.S.I.S., New Delhi, whose friendly disposition was a veritable source of encouragement and comfort whenever I was weary of my labour. I am thankful to Mr. S. Manoharan, Research Scholar, Department of Russian Studies, I.S.I.S., New Delhi, whose good familiarity with the growing literature on Marx, helped me. Also I would like to express my appreciation to my wife for her help during the preparation of the thesis.

I owe a good deal to the Librarians of the University of Madras, Madras, the Delhi School of Economics, New Delhi, the Indian Council of World Affairs, New Delhi and American Studies Research Centre, Hyderabad. My thanks are also due to the University of Madras for the financial support of my research.

PL. Andiappan

ASRC Fellow,
Department of American Studies,
Indian School of International Studies,
New Delhi.

Table of Contents

0. INTRODUCTION
 - 0.0 List of Symbols
 - 0.1 Plan of Study
 - 0.2 Methodology
 - 0.3 Concepts Defined
1. DECOMPOSITION OF PROFIT
 - 1.0 Trinity Formula
 - 1.1 Individual Forms of Profit : Rent
 - 1.2 Individual Forms of Profit : Interest
 - 1.3 Summary
2. RATE OF PROFIT
 - 2.0 Formulation of a General Rate
 - 2.1 Equalization through Competition
 - 2.2 Law of Profit
 - 2.3 Favourable Factors
 - 2.4 Counteracting Causes
 - 2.5 Critique of the Law
3. SIGNIFICANCE OF THE THEORY TO CAPITALISM
 - 3.0 Capital Accumulation and Profit
 - 3.1 Simple Reproduction
 - 3.2 Concentration and Centralization
 - 3.3 Results of Accumulation

- 3.4 Recurring Cycles
- 3.5 Crisis and Rate of Profit
- 3.6 A Study in Capitalism

4. APPRAISAL

- 4.0 Summary
- 4.1 Conclusion
- 4.2 Bibliography

APPENDIX

A Reprint of an article "Galbraith's
Concept of Convergence".

O. INTRODUCTION

"The abstract thinker learns in his intuition of nature that the entities which he thought to create from nothing, from pure abstraction, are nothing else but abstractions from characteristics of nature."

Manuscripts of 1844

0.0 LIST OF SYMBOLS

C	Commodity
M	money
c	constant capital
v	variable capital
s	surplus-value
s'	rate of surplus-value
s/c+v	specific rate of profit
C/c+v	organic composition of capital
k	cost-price
p'	average rate of profit
P	Prices of production
S	surplus-labour time
P	value of labour-power
n	number of labourers
i	interest
d	differential rent
r	absolute rent
C' pm	commodity capital
..P...	production process
n	number of capital turnovers
S'	annual rate of surplus-value
S	annual surplus-value.

0.1 PLAN OF STUDY

A study on Karl Marx is a familiar terrain to the contemporaries and explaining 'What Marx really meant' has ever been one of the most interesting indoor sports. Nevertheless, in this field inspite of a great inputs of scholarship the resultant product, more often than not, is not singularly known for its objectivity.

Probably that constitutes the first difficulty to the researcher, who is lost in the vast literature available on the subject. To winnow truth and objectively *assess* it, is a formidable task. It is found interesting and fruitful to devote more attention on Marx than trying to know him through works of others. This is not to belittle the learned contributions of Joseph Schumpeter, Paul Sweezy, Maurice Dobb, Joan Robinson and Ronald Meek. But it means that Marx himself is a better guide to understand him than the best critic available on him. Hence throughout the present inquiry only the words of Marx are cited, with the solitary exception of one section (2.5) where views of others are furnished; not so much to establish or strengthen a particular point of view but to indicate the wide band of opinions expressed about it.

In the present work, the terms, 'Marxism' and the adjective 'Marxian' are used with a special connotation. The former is employed to mean the Marxian system or the totality of the views held by Marx. It does not mean the vast literature that has sprouted around Marx. Similarly,

the expression 'Marxian analysis' simply means 'Marx's analysis'.

The present inquiry opens with a discussion on the abstract model of Marx. It is fairly pertinent to the investigation since his abstract method determines his analysis of profit. After making the Marxian philosophical preconceptions explicit, the inquiry progresses in Chapter 1, towards more fundamental issue - the origin and the decomposition of profit. The relationships between profit and rent, interest and wage are examined. Chapter 2 deals with the law of profit, and the favourable factors that help it and the counteracting causes that hinder the operation of the law in the real world. This chapter concludes with a cursory estimation of the law in general. Chapter 3 is purposed to study the relationship between the theory of profit and the process of accumulation. It also deals with the mechanism and results of capital accumulation. Further, it is seen how the theory of profit, by and large, furnishes the cause of crisis in capitalism. In the final chapter the assumptions of the theory and the method by which they were arrived at, are critically appraised.

0.2. Methodology

Karl Marx is no intramural philosopher. His task is not to understand the world but to change it. He purposed to show how capitalism will ruin itself. To suit this end he evolved his own methodology. In order to understand the full significance and implication of his theory of profit, his methodology should be understood first.

He inherited from the classicals the abstract- deductive method which means progressing gradually from the more abstract to the more concrete simplifying assumptions at successive stages of the investigation. In other words, it is an exploration from unknown to known. This enables the investigator to explain a wider range and depth of actual phenomena, because of the height on which he stands. However, it is a method where counting of trees is approximated to get a wide, though blurring, picture of the wood. Marx was fully aware of the advantages of the method of abstraction. "In the analysis of economic forms," he wrote in the Preface to Vol. I of Capital, "neither microscopes nor chemical reagents are of use. The force of abstraction must replace both".

Marx has desired to point out the areas of conflict of interest to replace the fiction of invisible hand harmonizing the warring nature of the various segments of the

society. David Ricardo, among the classicals, was struck by the economic origin of class conflicts. But, for him the clashes occurred or deepened between industrialists and landlords. But to Marx, such a view, even though realistic to a limited extent, in general is "erroneous" because of the conclusions that it gave rise to. It is due to the fact that the classicals were searching for the origin of the clashes in some other remote causes. To Marx, the villain of the piece is capital. He writes. " --- Capital is the all-dominating power of bourgeois society. It must form the starting point as well as the end... It would thus be impractical and wrong to arrange the economic categories in the order in which they were the determining factors in the course of history. Their order of sequence is rather determined by the relation which they bear to each other in modern bourgeois society, and which is the exact opposite of which seems to be their natural order or the order of their historical development. What we are interested in is not the place which economic relations occupy in the historical succession of different forms of society ---- We are interested in their organic connection within modern bourgeois society"¹ Thus according to Marx,

1. The Critique of Political Economy, p. 304.

capital is the predominant force in bourgeois society. Hence the arena in which the capital operates assumes pre-eminence. Viewed from this angle, the important economic relation is between capitalists and workers. "Society as a whole is more and more splitting up into two great hostile camps, into two great classes facing each other- bourgeoisie and proletariat."² Elsewhere he writes. "The relation between wage labour and capital determines the entire character of the mode of production."³

To analyse the relationship of Capital and labour, he sought the aid of abstraction. The aim is not to make a grand generalization, sweeping away the inconvenient subtleties but to hew down the given situation to its pure form, without the frills of irrelevant disturbances. Consequently capitalists and workers are abstracted to certain standard types stripped off from all idiosyncrasies. He wrote in the Preface to Vol. I of Capital. "The physicist either observes physical phenomena where they occur in their most typical form and most free from disturbing influence or wherever possible, he makes experiments under conditions that assure the occurrence of the phenomenon in its normality". Marx, akin to a physicist wanted to conduct

2. The Communist Manifesto, p. 41.

3. Capital, Vol. III, p. 1025.

some experiments. That is why in his analysis, "individuals are dealt with only in so far as they are the personifications of economic categories, embodiments of particular class-relations and class-interests".

The second aspect to be understood in the methodological approach of Marx is its association with logic and history. In other words this could be called 'logical-historical' method. Friedrich Engels, has amply explained this method.

"The criticism of economics... could... be exercised two ways: historically or logically. Since in history, as in its literary reflection, development as a whole proceeds from the most simple to the most complex relations, the historical development of the literature of political economy provided a natural guiding thread with which criticism could link up and the economic categories as a whole would thereby appear in the same sequence as in the logical development. This form apparently has the advantage of greater clearness since indeed it is the actual development that is followed, but as a matter of fact it would thereby at most become more popular. History often proceeds by jumps and zigzags and it would in this way have to be followed everywhere, whereby not only would much material of minor importance have to be incorporated but there would much interruption of the chain of thought; further more, the history of economics could not be written without that of bourgeois

society and this would make the task endless, since all preliminary work is lacking. The logical method of treatment was, therefore, the only appropriate one. But this, as a matter of fact, is nothing else than the historical method, only divested of its historical form and disturbing fortuities. The chain of thought must begin with the same thing that this history begins with and its further course will be nothing but the mirror-image of the historical course in abstract and theoretically consistent form, a corrected mirror-image but corrected according to laws furnished by the real course of history itself, in that each factor can be considered at its ripest point of development, in its classic form."⁴

The chief field of employment of this methodology is the theory of value. It is an important field and constitutes the scaffolding of Marxian system. Marx in his investigation, as Engels says, "proceeds from the simple production of commodities as the historical premise, ultimately to arrive from this basis at capital." He begins with the "simple" commodity, and then proceeds to analyse its "logically and historically secondary form ...

4. Engels, Ludwig Feuerbach, pp. 98-99.

the capitalistically modified commodity."⁵ He first analyses how in abstract pre-capitalist society, relations of production influence the prices of commodities and then proceeds to find how the basic connection between prices and relations of production is modified when capitalist relations of production encroach upon those appropriate to "simple" commodity production. That is the situation of "simple" commodity becomes "capitalistically modified". The mechanism of this metamorphosis is double fold. First, capital subordinates labour and in the second stage competition brings about a situation in which profit becomes proportional not to labour but to capital employed and in which a uniform rate of profit on capital comes to exist.

In Volume I of Capital, Marx starts his enquiry "from the first and simplest relation that historically and in fact confronts us"⁶ -- the wide socio-economic relation between men as producers and consumers of commodities. Under capitalism as economic life is based and conditioned on production and exchange of goods, men are related to one another only in their capacity as

5. Preface, Capital, Vol. III, p. 14.

6. Engels, Ludwig Feuerbach, p. 99.

of labour expended to produce them. This is the 'labour theory of value' so often and so fondly spoken by Adam Smith and Ricardo.

Man had left Eden. Marx proceeds to the second stage of his enquiry i.e. the advent of capitalist society. Under this system the workers have to pay a tribute to a new class, the owners of capital without whom capitalism is just impossible. Now Marx sets himself to explain the raison d'être for the origin of new form of class income—profit on capital. The next task is to explain the emergence and persistence of profit under capitalism. The basis of the present situation is the existence of a new class, owning capital, and commanding labour which has itself become a commodity that could be bought and sold in the market like any other commodity. The capitalist, who is only "personified capital,"⁷ compels, "the working-class to do more work than the narrow round of its own life-wants prescribes"⁸. The produce of this surplus-labour is the profit for the capitalists. This 'law' implies that profits are proportional to quantities of labour employed rather than to quantities of capital employed. This clearly "contradicts

7. Capital, Vol. I, p. 257.

8. Ibid, p. 309.

all experience based on appearance"⁹. What is the solution for this 'apparent contradiction'?

Proceeding on the 'historical' track, Marx reaches a point in Capital Volume III where he finds that due to extension of competition between capitalists, profit is made proportional not to labour but to capital employed and in which a uniform rate of profit prevails. This is the stage where the 'apparent contradiction' raised in the Volume I, is resolved. How the contradiction is resolved?

Marx has declared the purpose of his effort in the Preface of Capital Volume I. "It is the ultimate aim of this work to lay bare the economic law of motion of modern society." To discern such a law from the labyrinth of capitalist society, Marx sets to understand the various changes wrought by technology. He knows that, "Modern Industry never looks upon and treats the existing form of a process as final. The technical basis of that industry is therefore, revolutionary, while all earlier modes of production were essentially conservative."¹⁰ Marx had directed all his attention and energy to find out the mutual interaction of technological change and changes in the relations of production. In the

9. Ibid, p. 307.

10. Ibid, p. 486.

short run, due to the constant revolution in production the economy will be interrupted by "sudden stoppages and crises in the production process."¹¹ In the long run it would cause the rate of profit- the very purpose and spur of capitalist mode of production- to fall. The fall of profit dulls the incensive^t for the growth and saps the sustenance of the capitalism. Then capitalism dies a natural death. The situation can be expressed in the following way.

$$\frac{c}{v} = \text{Organic composition of capital}$$

$$\frac{s}{v} = \text{Rate of surplus-value}$$

$$\frac{s}{c+v} = \text{Rate of profit.}$$

With the development of capitalism, $\frac{c}{v}$ tends to rise as a result of technological changes. This rise is connected with an increase in productivity in the wage-goods industries, which makes $\frac{s}{v}$ to rise. The mutual interaction of technological change and relations of production, operates through the changes which it brings forth in these rates and in their relation to one another. In the long run, the

11. Capital, Vol. III, p. 244.

changes in the ratios will make the rate of profit to decline.

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

The rate of profit will tend to rise if $\frac{s}{v}$ rises and fall if $\frac{c}{v}$ rises. With the development of capitalism, both the ratios will rise. However, the effect on the rate of profit of the rise in $\frac{c}{v}$ would prevail over the rise in $\frac{s}{v}$, so that the rate of profit would tend to fall in the long run.

Entire philosophy of Marx, his approach and analysis of every problem, is inspired by and imbued with dialectical reasoning. Marx has borrowed the dialectic methodology from Friedrich Hegel. He has accepted that contradiction is the moving force of progress. He has repeatedly asserted that reality is a unity of opposites. Reality is material. Hence material reality is a unit of opposites pregnant with inner contradictions. This means that every material entity contains two mutually incompatible and exclusive parts. Motion in reality occurs not as a result of any external force but due to the inherent contradictions which are embedded in all things. This is precisely what motion is. Thanks to the contradiction, a thing acquires impulse and

activity. This is the mechanism of all motion. If reality by its very essence is a unity of opposites and if every reality carried a contradiction inherent in it and if contradiction is causation of motion, then there is no need for an outside force to effect or accelerate the motion.

We have already seen that how in Capital Volume I, Marx has discerned "an apparent contradiction" in the very system of capitalism and left its solution for this contradiction to be explained in the Volume III.

There he explains how, "crises are ... forcible solutions of existing contradictions."¹² Dialectic is a methodology, a branch of logic and a law of thought. It has aided Marx to conceive that capitalism dies in the process of resolution of the contradiction inherent in its being. The law of falling rate of profit shows that the internal contradictions of capitalism are driving the system to its downfall and disappearance in the course of a complex history. Contradictions will find a way to vent themselves in crisis. Hence crises are a logical corollary of capitalism. It is a catharsis. This logical necessity is purely of the dialectical variety. Thus the crisis is to be understood as a particular expression of the dialectical notion of capitalism

12. Ibid, p. 292.

0.3 CONCEPTS DEFINED

As explained in earlier section and as Marx himself has told in the 'Preface to the Critique of Political Economy', Marx is led to analyse the economic structure of capitalism only as a specific case study to understand the determinants of different state and social forms. He has found their roots embedded in the sum total of the material conditions of social life. Man is a social producer of his means of livelihood. Social production implies certain social relations and colour and contour of which will depend upon the degree of development of social productive powers. The social relations are the substance of economic structure of society on which is erected the superstructure of many and varied institutions. To understand the nature of these institutions, the economic structure which begets them, should be probed deeper. To Marx, no system is eternal and sacrosanct. And hence he looks every system as an ever-changing social order - a logical link in a chain. So is capitalism. If so, what is the motive-force of that change ?

Society, to Marx is compartmentalized inevitably into two segments, capitalists and workers; the one, owning the means of production and the other owning the labour-power. Peace between these two classes are contradiction in terms since their interests are incompatiable. In abstract, this is a struggle between capital and labour.

Hence, Marx, who is solely interested in studying struggle of the two antagonistic classes, is logically led towards a study of capital and labour. Thus, Marxian study of capital and labour, is incidental, though essential to his wider quest.

What is capital? In simpler terms, it is condensed, past and frozen labour. Viewed thus, capital is dead labour only. So, what Marx studies is different forms of labour or in Darwinian language, labour in different evolutionary process. Therefore, in abstract terms we can say that labour produces value; in the process of creation of value, the due which the living labour gets is wage and the bigger slice -- surplus-value is extolled by dead-labour. Dead-labour thrives at the expense of living labour. Capital has a "vampire thirst for the living blood of labour".¹³ Under capitalism, there is a progressively increasing suppression of the living labour by dead labour. Because both the forms of labour are dialectically opposed.

In this way, a study of surplus-value or profit (which are same for Marx) is inseparably from a study of wage. Because both nestle around only one factor, labour. So, with this background the present inquiry is to be understood.

13. Capital, Vol. I, p. 282.

"Profit", writes Marx, "is the form in which surplus-value presents itself to the view and must initially be stripped by analysis to disclose the latter. In surplus-value, the relation between capital and labour is laid bare".¹⁴ Therefore, let us start the inquiry with an analysis of surplus-value with its disguise removed.

WAGE

The Marxian theory of Profit is an elaboration of his theory of commodity valuation. Marx conceives labour-power as a commodity to be bought and sold in the market and the problem is merely to determine its value or wage.¹⁵ Even though like other commodities -- labour-power has a market value, Marx is interested to find its natural or real value. He is particularly concerned with the value of the labour-power under capitalism, in which the worker is the exclusive owner of his labour-power and is free to sell it to the capitalist and in which the worker being unable to produce and sell for himself commodities in which his labour-power is embodied, can exist only by selling his labour-power as a commodity. Since labour-power is a commodity, its value is determined by the quantity of labour-time needed to produce it. The value of labour-power depends not on what and how labour-power

14. Capital, Vol. III, p. 47.

15. Refer Capital, Vol. I, pp. 588-90.

produces but on what produces it. The wage is not a function of the labour-time which the worker spends for production but of the labour-time which is required to make worker's labour-power available in production. Now the question is how much labour-time is required to produce the worker's labour-power? The worker's labour-power will not be produced unless the worker is able to obtain the minimum necessities of life. Thus the amount of labour-time necessary to produce labour-power is the amount of labour-time required to produce the commodities necessary to the subsistence of the workers. In brief, wages are determined by the amount of labour-time required to produce the worker's labour-power and only work out incidentally to subsistence. In the long-run, wages were determined by the cost of production of labour-power in terms of labour-time. Marx says "the value of labour-power is determined as in the case of every other commodity, by the labour-time necessary for the production and consequently also the reproduction of this special article.... In other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of the labourer".¹⁶ And again "...as with all other commodities, so with labour, its market price will, in the long-run, adapt itself to its value; that, therefore, despite all the ups and downs and do what he may, the working man will on the average only receive the value

16. Ibid., pp. 189-190.

of his labour, which resolves into the value of his labouring power, which is determined by the value of the necessaries required for its maintenance and reproduction, which value of necessaries finally is regulated by the quantum of labour wanted to produce them".¹⁷

The theory of surplus-value is a logical derivative of the theories of value and wages. The difference between the value of the product created daily by the worker, and the value returned to him daily in wages, is value produced by the labourer but received and retained by the capitalist. This is surplus-value. The surplus-value -- the worker creates but never clasps. In other words, surplus-value is a mere congelation of surplus labour-time or materialised surplus-labour.¹⁸

Rent, interest and industrial profit, which we would discuss in detail in a subsequent section, are only different names for different parts of surplus-value. They are derived from this source. They are not derived from land as such or capital as such but land and capital enable their owners to get their respective shares out of the surplus-value extracted by the employing capitalist from the labourer. If the employing capitalist uses his own capital and land, then the whole surplus-value would go to him.¹⁹ Here it should be noted that surplus-value is a resultant of a bad economic system and not from bad employers.

17. Value, Price and Profit, pp. 115-6.

18. Ibid., pp. 77-99.

19. Ibid., p. 91.

SURPLUS-VALUE

Surplus-value is the excess value of a commodity over and above its cost price. The cost price is equal to the value of consumed capital and hence this excess value is an addition in the value of the capital used in the production of the commodity. However, surplus-value constitutes an addition not only of the segment of the advanced capital which enters into the self-expansion process, but also of the portion which does not enter into it. It is an accretion not only to the consumed capital, but to all the capital invested in production. The surplus-value, s emerges due to a change in the value of the variable capital, v . And hence originally it is an increment of variable capital but later on it becomes an increment of $c+v$, the expanded total capital. The formula

$$c + (v+s)$$

shows that s is produced through the conversion of a definite capital value v advanced for labour-power. This may also be represented as²⁰

$$(c+v) + s$$

SURPLUS-VALUE AND PROFIT

Marx writes "In its assumed capacity of offspring of the aggregate advanced capital, surplus-value takes

20. Capital, Vol., III, p. 46.

the converted form of profit. Hence, a certain value^e is capital when it is invested with a view to producing profit or there is profit because a certain value was employed as capital."²¹

Then Marx approvingly quotes Malthus "capital is that which is expanded with a view to profit".²²

The value of a commodity = Cost-price + profit

$$C = k + p$$

Then the formula $C = c+v+s = k+s$

$$C = k+s$$

$$k = C-s$$

The formula C is equal to $k+s$ reduces itself to $C=k$ or commodity value = commodity cost-price only if

$$s = 0$$

"a case which never occurs on the basis of capitalist production, although peculiar market conditions may reduce the selling price of commodities to the level of or even below their cost price".²³

RATE OF PROFIT

The ^{amount} rate of surplus-value measured against the variable capital is called rate of surplus-value. The rate of surplus-value measured against the total capital is called rate of profit. According to Marx, these two are the measurements

21. Ibid., p. 49.

22. Malthus, Definitions in Political Economy (London, 1827), p. 86, cited by Marx. Ibid., p. 49.

23. Capital, Vol. II, p. 50.

of the same entity.

Surplus-value is a surplus over the advanced total capital. The proportion of this surplus to the total capital is represented as $\frac{s}{C}$ where C stands for total capital. Hence the rate of profit is $\frac{s}{C} = \frac{s}{c+v}$. Let us remember that the rate of surplus value is $\frac{s}{v}$.

The transformation of surplus-value into profit must be deducted from the transformation of the rate of surplus-value into the rate of profit and not vice versa.²⁴ The rate of profit is numerically different from the rate of surplus-value. Nevertheless, surplus-value and profit are always the same. In other words, profit is a converted form of surplus-value, a form whose outlines are blurred and indistinct. In effect, profit is the form in which surplus-value appears. Marx says, "In surplus-value, the relations between capital and labour is laid bare; in the relation of capital and labour to profit i.e., of capital to surplus-value that appears on the one hand as an excess over the cost-price of commodities realized in the process of circulation and on the other, as a surplus more closely determined by its relation to the total capital, the capital appears as a relation to itself, a relation in which it, as the original sum of value, is distinguished from a new value which it generated".²⁵

24. Ibid., p. 56.

25. Ibid., p. 62.

CONSTANT AND VARIABLE CAPITALS

Capital is composed of two elements, variable capital and constant capital. The capitalist, in order to make profit, spends money M on labour, transforms labour into commodities C and sells these commodities for a greater amount of Money M' . The difference between M' and M is the surplus-value, the result of exploitation. The surplus-value is attributable to the variable capital alone. Variable capital is that part of entrepreneur's capital which is invested in labour-power and is used to pay wages. Such capital is called variable because by investing it in labour-power, the employer is able to get back not only the amount paid out as wage but also an additional sum called surplus-value. Naturally, surplus-value is derived from variable capital only:²⁶

"Constant capital", by contrast, "does not undergo...any quantitative alteration of value",²⁷ and derives its name for this fact. It consists of factory's plants, tools, machinery, raw materials, inventories etc., in brief all sorts of capital goods, minus land. They are constant capital because their value as a whole remains constant throughout the process of production. This capital produces no surplus-value, for it is the product of past labour.

26. Capital, vol. I, p. 233.

27. Ibid., p. 232.

The idea behind such a division of capital is this; when the capital was created, the labour which created it was exploited to the ultimate end and now that labour has escaped and cannot be further exploited in the present.²⁸

The organic composition of capital is the ratio between constant capital c and variable capital v .

Thus organic composition of capital is equal to $\frac{c}{v}$.

THE RELATION OF THE RATE OF PROFIT TO THE RATE OF SURPLUS-VALUE

The rate of profit is related to the rate of surplus-value, as the variable capital is to the total capital. This relation could be mathematically expressed.

Total capital C consists of constant capital c and variable capital v and produces a surplus-value s . The ratio of this surplus-value to the advanced variable capital or the rate of surplus-value is $\frac{s}{v} = 1$

Let the rate of surplus-value be s'

Therefore $s' = \frac{s}{v}$

Consequently, $s = s'v$

If the surplus-value is related to the total capital, instead of the variable capital, it is, as we have seen, called profit P . The rate of profit p' is the ratio of the surplus-value to the total capital $\frac{s}{C}$.

28. Ibid., pp. 227-29.

Therefore, $p' = \frac{s}{C} = \frac{s}{c+v}$

Substituting for S its equivalent $s'v$, we get

$$p' = s' \frac{v}{C} = s' \frac{v}{c+v}$$

This equation may also be expressed by the proportion

$$p' : s' = v : C$$

From this proportion we infer that the rate of profit is always lesser than the rate of surplus-value since the variable capital is smaller than the sum of $v+c$.

Assume a capital of 100 produces a surplus-value of 20 using 20 labourers for a weekly wage of 20 working a ten-hour day.

$$80 c + 20 v + 20 s$$

Therefore, $s' = 100\%$. $p' = 20\%$

If the working day is lengthened from 10 to 15 hours without increasing the wages, the total wealth produced will rise to 60.

$$80 c + 20 v + 40 s.$$

$$s' = 200\%. p' = 40\%.$$

In case if the ten-hour working-day remains unaltered but wages decrease from 20 to 12, then the total value product amounts to 40 but is distributed differently.

$$80 c + 12 v + 28 s.$$

$$s' = 233\frac{1}{3}\% \quad p' = 30\frac{10}{23}.$$

Thus we find that an enlarged working day and a fall in wages increase the rate of surplus-value. Likewise, a rise in wages would decrease the rate of surplus-value. "This indicates that changes in the working day, intensity of labour and wages cannot take place without a simultaneous change in v and s and their ratio and therefore p' , which is the ratio of s to the total capital, $c+v$Precisely this reveals this specific organic relationship of variable capital to the movement of the total capital and to its self expansion and also its difference from constant capital."²⁹

Then Marx proceeds to apply to various cases, changing the value of the individual factors of $s' \frac{v}{C}$. The product $s' \frac{v}{C}$ are s' and $\frac{v}{C}$.

Firstly, s' is treated as constant to analyse the effect of the possible variations of $\frac{v}{C}$. Then, the fraction $\frac{v}{C}$ as constant and s' as variable. Finally, all the factors are treated as variables so that all the cases from which the laws governing the rate of profit could be exhausted.³⁰

The conclusions emerge out are -

- (a) that a rising rate of profit may correspond to a falling or rising rate of surplus-value.
- (b) a falling rate of profit to a rising or falling rate of surplus-value, and

29. Ibid., p. 66.

30. For mathematical treatment refer Capital, Vol. III, pp. 69-84.

(c) a constant rate of profit to a rising or falling rate of surplus-value. A rising, falling or constant rate of profit may accord with a constant rate of surplus-value.³¹ Thus we find that rate of profit depends upon two chief factors -- the rate of surplus-value and the value-composition of capital. Marx thinks that the rates of profit of two different capitals or of one and the same capital in two successive different sets of conditions are equally provided.³²

(A) if the composition of the capital is the same and their rates of surplus-value are also the same.

(B) if their composition is not the same and the rates of surplus-value are unequal.

The rates of profits of two different capitals or of one and the same capital in two successive different conditions are unequal.

(a) if the composition is equal and the rates of surplus-values are unequal, in which case they are related as the rates of surplus-value.

(b) if the rates of surplus-value are the same and the composition is unequal, in which case they are related as the variable portions of the capitals and if the rates of surplus-value are unequal and the composition not the same, in which case they are related as the quantities of surplus-value calculated in per cent of the total capital.

31. Capital, Vol. III, p. 83.

32. Ibid., p. 84.

1. DECOMPOSITION OF PROFIT

"Political economists have hitherto studied the appearance of rent, wages, prices, values, profits, interest etc. Whereas the task of economic science, as of any science is to reveal the hidden connections behind all these varying appearances and that once these underlying laws have been ascertained we can then account for the constant divergence of appearances from underlying realities."

Capital Vol. III

TRINITY OR

1.0 TRINITARIAN FORMULA

According to Marx, capital, land and labour are the factors of production. These factors of production are combined in various proportions for productive purposes. To Marx, this is the trinitarian formula which comprises all the secrets of the social process of production. To him, interest is the specific characteristic product of capital, profit of enterprise is wage independent of capital and profit is a specific characteristic form of surplus-value. Labour is the source of wealth and value. Capital is frozen or past labour. When labour acquires the form of capital it can employ the labour itself. Capital begets surplus-value. Marx has not attached much importance to the organization factor. The organizer gets his reward only as a specialized or skilled labourer. Interest is paid out of surplus-value. So is wage. Hence to Marx, the villain of piece is capital, even though it conceals only innocuous labour. For a study of profit, a detailed enquiry into the nature and causes of interest, rent, and wage, is pertinent. Subsequently they are dealt with in detail. Here let us make a survey of the general relationship among them.

Capital which is the threshold of all Marxian writings, is not a thing, but a definite social production relation, belonging to a definite historical formation of society. Capital is not just the totality of all the means of production. It is the means of production

converted into a different form. All the three proceeds -- interest, rent and wages -- are components of the value of the products. The use-value land has no value but the exchange-value land fetches rent. If capital is taken as the sum total of values represented independently by money, then it is wrong; Marx has not reckoned with land as a factor of production and hence has eliminated rent as an economic category. To Marx rent is a surplus of profits above the average earned from a non-^{re}producible asset of a particular quality. This form of rent is a specially historical one, a form manoeuvred through the influence of capital and the capitalist mode of production and evolved either out of feudalland ownership or out of small peasants, agriculture carried on for a living. If rent consists of surplus-profit pools which cannot be priced away in the competitive process because of scarcity of non-^{re}producible assets, Marx has found it worth investigating first of all the formation of average rate of profit from which rent emerges and by which it is conditioned. Hence he assumes in his first approximation that all natural resources are homogeneous. They all are owned by the capitalist and have no marginal productivity. No surplus-profit pools can emerge and hence no rent different from profit. As there is no rent, there is no sustenance for a class, called rentier, different from capitalist.

After having eliminated land as a factor of production, Marx proceeds to exclude interest-bearing capital. Interest is

essentially a portion of profits given to a rentier or absentee capital. In bygone days, interest was paid for the money borrowed by extravagant prince, needy trader, poor patient etc. Since the advent of capitalism, the prominence assigned to interest has been reduced; nevertheless, it occupies a subordinate place. For myriad reasons, Marx has wanted to abstract the problems pertinent to interest. First and foremost is, he is one of those who believed that the behaviour of interest rates is affected by the pecuniary environment of the capital market. By implication, Marx claims that government loans for non-productive purposes influence the interest rates.

After splitting interest from profit, a residuum called profit of enterprise is left over which would demand a careful and special analysis. Here too, Marx has subjected his analysis of the general category of profit as such - its mode of origin and its conditions - before enquiring into its more complex manifestations. Here, it should be made clear that Marx never has stated explicitly that capitalism came into existence or could progress further without the sustenance of banking, in particular lending phenomena. However, he felt that it is possible to investigate the production and distribution - rather the core of capitalism in abstraction. That is why in his first approximation, he assumes the identity of the

capitalist with the entrepreneur in the absence of affinity of loan with credit and of interest as a source of income. In this chapter, our analysis also is ridden with such assumptions. The scope of the chapter has not been expanded to accommodate the implications of such assumptions which at times strain the delicate issues of monetary theory.

Under the assumptions, all non-wage income is turned into a homogeneous profit of the capitalists who own the means of production and who employ the labourers. This process is theoretically well described by Marx, even though he cannot escape from accusation for over-simplifying a complicated structure. This, he considered, was to be the essential conclusions of classical economics. ~~That is why~~ Marx's method is characterized by the term pure capitalism. An abstraction-method is employed in order to isolate in pure form the processes of the formation of surplus-value.

We have already seen the emergence of surplus-value in a capitalist society and its transformation to the owner of the means of production under various names, rent, interest and profit. Before proceeding into a detailed discussion on rent, profit etc., we will dwell upon their interrelationships.

Surplus-products is divided among capitalists as dividends proportionate to the share of the social capital each has. In this way the surplus-product or surplus-value appears as average profit which is due to the share of

$$\text{then, } \frac{s}{C} = \frac{p}{C} = \frac{p' + i + r}{C}$$

$$\frac{p'}{C} + \frac{i}{C} + \frac{r}{C}$$

We know that when S the total amount of surplus-value is continually increasing with the capitalist development, $\frac{s}{C}$ is steadily declining. It is because C grows faster than s . Hence, it is not contradicting, for $\frac{p'}{C}$, i and r for steadily increasing, each individually, when $\frac{s}{C} = \frac{p}{C}$ and $\frac{p'}{C}$, $\frac{i}{C}$ and r declining.

With an increased total surplus-value or profit $S = p$ and a correspondingly falling rate of profit $\frac{S}{C} = \frac{p}{C}$, the proportions of the parts p' , i and r which make up $S=p$ may change within the limits set by the total amount of S without affecting the magnitude of s or $\frac{s}{C}$.

The mutual variation of p' , i and r is only a varying distribution of s among different classes. Hence the rate of individual industrial profit, the rate of interest and the ratio of ground-rent to the total capital, may increase in relation to one another, while the general rate of profit falls.

If the rate of profit declines from 50 to 25 per cent because the composition of a certain capital with a rate of surplus-value of 100 per cent has changed from $50_c + 50_v$ to $75_c + 25_v$, then a capital of 1000 will yield a profit of 500 in the first case and in the second, a capital of 4000 will

yield a profit of 1000. We find that p' has fallen by one half, while s or p have doubled. If that 50% was originally divided into 20 profit, 10 interest and 20 rent, then

$$\frac{p'}{C} = 20\%, \quad \frac{i}{C} = 10\% \quad \text{and} \quad \frac{r}{C} = 20\%$$

If the proportions had remained the same after the change from 50% to 25%, then $\frac{p'}{C} = 10\%$, $\frac{i}{C} = 5\%$ and $\frac{r}{C} = 10\%$. If,

however, $\frac{p'}{C}$ should fall to 8% and $\frac{i}{C}$ to 4%, $\frac{r}{C}$ would rise to 13%. The relative magnitude of r would have risen as against Pl and i , p' would have remained the same. Under both assumptions, the sum of Pl , i and r would have increased.

Whatever may be the disparity and disharmony in these relations, they have one thing in common. They are like the annually consumable ^vfruits of a perennial tree, or rather three trees. They form the annual incomes of these classes, capitalist, landowner and labourer, revenues distributed by the functioning capitalist in his capacity as direct exploiter of surplus-labour and employer of labour in general. Thus capital seems to the capitalist, land to the land-lord and labour-power to the labourer as different sources of their specific revenues, namely profit, ground-rent and wages.

These sources are no doubt perennial. The produced means of production are converted into capital, the land into private property. These means of production are in themselves capital by nature like land is earth monopolized by a certain land-owners. Capital presupposes labour as wage-labour.

Thus, capital appears as the natural form of the means of labour. Capital and produced means of production thus become identical. Likewise land and private property are identical. The means of labour as such, which are by nature, capital, thus become the source of profit, much as the land as such becomes the source of rent.

Surplus-value, in the form of profit, is no longer conditioned by that portion of capital invested in labour in which it is born but related to the total capital. The rate of profit is governed by laws of its own being, which require it to change while the rate of surplus-value remains unaltered. The compartmentalization of profit into profit of enterprise and interest, consummates the individualisation of the form of surplus-value. Even though they are opposed in forms, they are one in essence. Now let us study individual forms of surplus-value.

1.1 INDIVIDUAL FORMS OF PROFIT : RENT

PROFIT AND RENT

In the preface to the Volume III, Engels has stated that Marx intended to rewrite on rent because of the wide variety of forms of land ownership as well as of the exploitation of agricultural producers prevailing in Russia. The theory of rent has occupied the mind of Marx so much so that he has devoted about 200 pages for this. In the emergence of rent, he has found a secret spring that feeds the capitalists. He has traced the birth of private property to the accretion of rent. As we progress in our inquiry, we shall find how Marx has linked the origin of surplus-value to the private-property. Hence a deep insight on the Marxian concept of rent is imperative for a good understanding of his theory of profit. Therefore, let us turn for a detailed discussion on rent.

To Ricardo, the falling rate of profit was a resultant of the pressure of a growing industrial population on the scarce English land. Under that pressure, the price of 'Corn' rose, wages and rent rose, encroaching into the industrial capitalist. Marx, taking a clue from Ricardo, has conceived his own theory of rent. Marx has restricted interest and rent as payments to capital ownership and as in no way different from industrial profit, all of them deriving from the same source - surplus-value. Marx writes, "Rent, Interest and industrial profits are only different names for different parts of the surplus-value of the commodity, or the unpaid labour realized in it...equally derived from this source and from

this source alone. They are not derived from land as such nor from capital as such, but land and capital enable their owners to get their respective share out of the surplus-value extracted by the employing capitalist from the labourer".¹

Marx divides rent into three heads (a) differential rent I (due to extensive land cultivation); (b) differential rent II (due to intensive land cultivation) and (c) absolute rent. The capitalist way of production in agriculture is similar to the capitalist mode of production in industry.²

While the former mode is defined by the production of principal crops, the latter produces goods like yarn etc.³

Capitalist agriculture calls for action and reaction by three social classes. "Here then we have all three classes together, which constitute the framework of model society",⁴ says Marx. They are - (1) the actual tillers who are wage earners employed by the capitalist, (ii) the capitalist farmer who produces agricultural products, (iii) the land owner who is exploited by the capitalist-farmer. The return to land-lord for the use of property is ground-rent. "The renting capitalist pays to the land owner annually (just as the borrower of money capital pays a fixed interest) for the permission to invest his capital in this particular

1. Value, Price and Profit, p. 45.

2. Capital, Vol. III, p. 721.

3. Ibid., p. 722.

4. Ibid., p. 725.

sphere of production. This sum of money is called ground-rent, no matter, whether it is paid for agricultural soil, building plots, mines, fishing grounds, forests etc.⁵

It is paid for the entire time for which the land owner has contracted to rent his land to the capitalist farmer. Ground-rent is therefore that form in which property in land is realized economically, i.e., produces value.⁶

Capital can be fixed and incorporated in land either in a transitory manner like fertilization etc. or more permanently like irrigation works. Marx calls the capital thus applied to land as la terre-capital. Marx has made a distinction between terre-matiere and terre-capital. "The mere application of further outlays of capital to land already transformed into means of production increases land as capital without adding anything to land as matter, that is, to the extent of the land... land as capital is no more eternal than any other capital...land as capital is fixed capital; but fixed capital gets used up just as much as circulating capital".⁷ Both of them belong to the category of fixed capital. The interest on capital incorporated is based on improvements thus made in it as an instrument of production can "constitute a part of the rent

5. Ibid., p. 725.

6. Marx defines landed property which is "based on the monopoly by certain persons over definite proportions of the globe, as exclusive spheres of their private will to the exclusion of all others". Capital, Vol. III p. 721. Here he strongly criticizes the Hegelian concept of landed property.

7. Poverty of Philosophy, p. 165.

paid by the capitalist farmer". Marx says "can". Because under certain circumstances, this interest is regulated under law of ground-rent and therefore can disappear as in the case of competition between virgin lands of great natural fertility. It does not constitute the actual ground-rent which is paid for the use of land as such. What appears as qualitative differences in soil are merely the manifestations of quantitative differences of fixed capital. The land owners claim on this revenue emanates from the terms of land tenure which are contracted between the landlord and capitalist-farmer. During the contract, the returns due to soil improvement works are the property of the capitalist-farmer. No sooner did the contract expire, "the improvements embodied in the soil become the property of the land owner as an inseparable part of the land".⁸ After this in a renewed contract, the land owner leases an improved soil i.e., soil and land capital, which fetches a high ground-rent — former ground-rent plus the interest on land capital incorporated in the soil.⁹ That is why the landowners prefer short-term and the capitalist farmers desire long-term bases.¹⁰ These additions to land owner's revenue constitute "an extraneous component of ground-rent, a component which must become a continually growing extra charge on the total rent of a country

8. Capital, Vol. III, p. 726.

9. Ibid., p. 728.

10. Ibid., p. 789.

as economic development progresses".¹¹ Marx further states that the lease money may conceal a deduction from the average profit or from the normal wages or both. This portion, whether of profit or wages, seems to be ground-rent because instead of giving to the industrial capitalist or the wage worker, it is paid to the landlord. Neither the one nor the other of these portions constitutes ground-rent; but in practice it forms landlord's revenue -- an economic realisation of his monopoly.¹²

The lowest return to the capitalist-farmer is indemnified by the relative security of his investment and the social prestige attached to the landed classes. A number of small capitalists are compelled to be satisfied with less than the average rate of profits by circumstances, competition and social values.¹³ Here it should be noted that Marx always keeps the risk factor in mind whenever he discusses factors of production.

THE GENESIS OF GROUND-RENT

The determination of ground-rent, like the determination of profits due to innovation, depends generally on the difference between social and individual value. This difference depends upon the introduction of a new mode of production which considerably reduces the cost of production below the socially necessary value. The individual cost of commodity production

11. Ibid., p. 732.

12. Ibid., p. 733.

13. Ibid., p. 734.

falls below the social cost because of the employment of a natural force. What is a natural force? "A natural force or motive power of water which is found ready at hand in nature and which is not itself a product of labour, has no value, it need not be paid by an equivalent, it costs nothing. It is a natural agency of production which is not produced by labour".¹⁴

Then Marx proceeds towards the theory of ground-rent by illustrating two different techniques of production; one employing steam as motive power and the other, a water-fall. The value of the commodity produced with the help of the water-fall is lesser than the commodity value produced with steam power, because of the smaller quantity of labour materialised in the farmer's constant capital.¹⁵ Even though the commodity produced with water-power costs less, it is sold at the social value. That is to say, market price. And hence gets an extra surplus-value or surplus-profit. Since the level of general price of production is one of the limits of this surplus-profit and since the level of general rate of profit is one of its factors, this surplus-profit can only emerge from the difference between the general and individual price of production and hence from the difference between the general and the individual rate of profit. An excess above this variation presupposes the sale of products above and not at the price of production regulated by the market.¹⁶ Thus

14. Ibid., p. 753.

15. Ibid., p. 751.

16. Ibid., p. 752.

$$S_e = C_s - C_i$$

The general variation between the stability of surplus-profits resulting from labour-saving techniques other than natural power and the stability of surplus-profit flowing from applications of natural power depends upon the degree to which the techniques become widespread throughout their respective production process. As soon as a new style of production is introduced, there are always people to herd. As soon as the new technique is duplicated, the social value of the commodity falls to its lower individual value and consequently the surplus-profit vanish. The employment of a natural power does not necessarily result in super-profits. Super-profits are realised only where the natural power cannot be imitated or duplicated. Hence, if all the firms have the water-falls, the commodity value of the individual firm's production would fall. The market price would as well fall without surplus-profits emerging.¹⁷ Wherever, duplication is not feasible, surplus-profits are possible. When capitalist employs water power by and large, duplication is effectively eliminated. The increased productiveness of the labour used by him is neither due to the capital or labour itself nor from the mere application of some natural force different from capital and labour. It arises from the greater natural productiveness of labour bound up

17. Ibid., p. 754.

with the application of a force of nature but not a force of nature that is at the command of all capital. Its application is not to be taken for granted whenever capital is employed in this sphere of production. On the contrary, it is a monopolized natural power which is only at the command of those who have at their disposal particular portions of the earth and its appurtenances, "at the command".¹⁸ It is not within the power of capital to call into existence this natural premise for a higher productivity of labour like any capital can transform water into steam. It is found in nature and whenever it does not exist, it cannot be done by a definite investment of capital. The position of this natural force constitutes a monopoly in the hands of its owner. It is a condition for an increase in the productiveness of the invested capital that cannot be established by the production process of the capital itself; this natural force which can be monopolized in this manner is always bound to the land.

The possession of the non-duplicatable power is the property claim over the surplus-profits. In the words of Marx, "...private property in land does not create that position of value which is transformed into surplus-profit, but it merely enables the land owner who has possession of the waterfall, to coax this surplus-profit out of the pocket of the

18. Ibid., p. 755.

industrial capitalist into his own".¹⁹ Monopoly conditions are the salient features of agriculture.²⁰ The surplus-profit resulting from the employment of the water-fall falls as ground-rent into the hands of the owner of the land who can reap the benefits of water-fall. Thus the ground-rent emerges due to the greater relative fertility of definite individual capitals invested in a certain production sphere as compared with investment of capital which are excluded from these exceptional and natural conditions favouring productiveness. Marx illustrates this point. "...if the use of steam should offer overwhelming advantages not offered by the use of water power, despite the fact that coal has value and the water power has not, and if these advantages more than compensated for the expense, then the water-power would not be used and could not produce any surplus-profit and therefore could not produce any rent."²¹ Thus to Marx, rent is always a differential rent, because it does not enter as a determining factor into the general production price of commodities but rather is based on it. It invariably arises from the difference between the individual production price of a particular capital having command over monopolized natural force, on the one hand, and the general production price of the total capital invested

19. Ibid., p. 758.

20. Ibid., p. 756.

21. Ibid., p. 757.

in the sphere of production on the other.²²

Thus $S_e = GR$

Where S_e is surplus-profits and the GR is ground rent

$GR = P_1 - P_2$

GR is the dependent variable and prices (P_1 and P_2) fixed by technical factors, are the independent variables.

DIFFERENTIAL GROUND-RENTS

Differential rent I Case

Surplus-profit is always produced as a difference between the products of the equal quantities of capital and labour and this surplus-profit is transformed into two ground-rent when two equal quantities of capital and labour are employed on equal areas of land with unequal results.²³ These inequalities are due to variation in natural soil fertility and soil location. Fertility and location are not independent variables. The fertility could be further divided into natural and actual fertility. Natural fertility is a function of climatic factors and chemical composition of top soil and transient or permanent land capital already invested in the soil.²⁴ The location factor is a function of the economy's communication and transportation systems. A certain part of land may be very

22. Ibid., p. 756.

23. Ibid., p. 760. Here Marx approvingly quotes Ricardo "Whatever diminishes the inequality in the produce obtained on the same or on new land, tends to lower rent and whatever increased that inequality necessarily produces an opposite effect and tends to raise it". Ibid., p. 761.

24. Ibid., p. 763.

favourably located and yet be poor in fertility and vice-versa. "This circumstance is important, for it explains how it is possible that bringing into cultivation, the land of a certain country may equally well proceed from the better to the worse land as vice-versa".²⁵ It is clear that the progress of social production in general has, the effect of evening out the variations emerging from location as a cause of ground-rent, by creating local markets and improving locations by establishing communication and transportation facilities. It further increases the difference in individual locations of lands by separating agriculture from manufacturing and forming big centres of production. Marx then, gives an illustration.

Table No. 1²⁶

Type of Soil	Product		Capital advanced	Profit		Rent	
	Quarters	Shillings		Quarters	Shillings	Quarters	Shillings
A	1	60	50	1/6	10	-	-
B	2	120	50	1-1/6	70	1	60
C	3	180	50	2-1/6	130	2	120
D	4	240	50	3-1/6	190	3	180
Total	10	600				6	360

25. Ibid., p. 762.

26. Ibid., p. 764.

The above illustration is based on the following assumptions :

- (a) average rate of profit is 20%.
- (b) 50 shillings per acre of land capital are invested in every piece of land.
- (c) Every piece of land consisting of 4 acres A, B, C, and D is of increasing rate of fertility.
- (d) The market price of wheat per quarter is 60 shillings.
- (e) The price of wheat is determined by the price of production, cultivated on the inferior land.

The fertility conditions are decided from land D to A. The quantity of wheat produced on the inferior soil is 1/4.

$$P_a = K_a + K_a p^f$$

$$60 = 50 + 10$$

Marx says "Differential rent may then form either an ascending or a descending sequence, for although the sequence is given for the totality of actually cultivated plots of land, a series of movements leading to its formation has invariably taken place."²⁷ In other words, the succession of land cultivation which gives birth to differential rent (of I case) may either ascend from A to D, that is to say, from the inferior to the superior lands or descend from D to A, from the superior to the inferior lands. The price of production on the inferior soil i.e. which yields

27. Ibid., p. 764.

no rent is always the one regulating the market price, although the latter in Table No. I, if its sequence were found in an ascending column, only remained fixed. It is due to the fact that better and better soil was drawn constantly into cultivation. In such a case, the price of wheat produced on the superior soil is a regulating one in so far as it depends upon the quantity produced on such a soil. If B, C and D produced greater than demand, A would cease to be the regulator.

Differential rent arises from differences in the fertility of the soil which is given for every given stage of agricultural development. In the words of Marx, "...from the limited area of the best land and from the circumstance that equal amounts of capital must be invested on unequal types of soil, so that an unequal product results from the same amount of capital."²⁸

This takes care of the first false assumption regarding differential rent -- still found among men like West, Malthus, and Ricardo -- namely, that it necessarily presupposes a movement toward worse and worse soil, or an ever-decreasing fertility of the soil. It can be formed, as we have seen, with a movement towards better and better soil, it can be formed when a better soil takes the lowest position that was formerly occupied by the worst soil; it can be connected with a progressive improvement in agriculture. The precondition is merely the inequality of different kinds of soil.²⁹

28. Ibid., p. 771.

29. Ibid., p. 772.

The quantum of differential rent depends thus only upon the nature of production and demand functions in an economy. Ground-rent rises with increase in the differentials.

Next, Marx proceeds to analyse the effect of expansion of cultivation on differential ground-rent. This depends upon the relative significance of each land that occupies the expansion schematism. Here three prominent possibilities are visualized. The nub of first possibility; the proportional extension of cultivation on all lands. Then the differential ground rent increases in the same ratio. This is illustrated in tables 2 and 3. As shown in the Table No. 3, the cultivated lands increased from 4 to 8 acres, ground-rent GR, from 6 to 12 quarters and money-rent MR, from £ 18 to £ 36, the average money-rent per cultivated acre remained at £ $4\frac{1}{2}$ per acre. In the second case, money-rents per acre started declining. This could be discerned in tables 2 and 4. The third possibility where the money-rent increases is illustrated in table No. 5. Thus the differential ground-rent depends not only upon the productivity differential between the different lands but also upon the relation which the particular lands have to the total agricultural product.³⁰

30. Ibid., p. 781.

Table No. 2³¹

Type of Soil	Acres	Price of production	Product	Rent in Grain	Rent in money
A	1	£ 3	1 qr	0	0
B	1	£ 3	2 qrs	1 qr	£ 3
C	1	£ 3	3 qrs	2 qrs	£ 6
D	1	£ 3	4 qrs	3 qrs	£ 9
Total	4		10 qrs	6 qrs.	£18

31. Ibid., p. 774.

Table No. 3³²

Type of Soil	Acres	Price of Production	Product	Rent in Grain	Rent in Money
A	2	£ 6	2 qrs	0	0
B	2	£ 6	4 qrs	2 qrs	£ 6
C	2	£ 6	6 qrs	4 qrs	£12
D	2	£ 6	8 qrs	6 qrs	£18
Total	8 acres		20 qrs	12 qrs	£36

32. Ibid., p. 775.

33
Table No. 4

Type of Soil	Acres	<u>Price of Production</u>		Product	Rent in Grain	Rent in Money
		Per acre	Total			
A	4	£ 3	£ 12	4 qrs	0	0
B	4	£ 3	£ 12	8 qrs	4 qrs	£ 12
C	2	£ 3	£ 6	6 qrs	4 qrs	£ 12
D	2	£ 3	£ 6	8 qrs	6 qrs	£ 18
Total	12		£ 36	26 qrs	14 qrs	£ 42

33. Ibid., p. 775.

34
Table No. 5

Types of Soil	Acres	Price of Production		Product	Rent in Grain	Rent in Money
		Per acre	Total			
A	1	£ 3	£ 3	1 qr	0	0
B	2	£ 3	£ 6	4 qrs	2 qrs	£ 6
C	5	£ 3	£15	15 qrs	10 qrs	£30
D	4	£ 3	£12	16 qrs	12 qrs	£36
<hr/>						
Total	12 acres		£36	36 qrs	24 qrs	£72

34. Ibid., p. 775.

Differential Rent II Case

Differential rent is due, not only to land capital investments applied to unequally productive areas, but also to capital investments confined on any particular land. The former is extensive land capital investment and the latter is intensive land capital investment.³⁵ The differential rent due to intensive applications of land capital is similar to the extensive formulation in the descending succession of land cultivation.³⁶ When greater amount of capital is applied to agriculture, total productivity is enhanced. The increase in the supply of agricultural commodities reduces the price. The reduction in price depends upon the intensity of demand in relation to supply. The effect on money-rents is due to changes in prices and in productivity.

Money rent, MR is equal to the product of ground rent, GR and the price of grain, P:

$$MR = GR \times P$$

$$MR_1 = GR_1 \times P_1 = MR_2 = GR_2 \times P_2$$

or

$$\frac{P_1}{P_2} = \frac{GR_2}{GR_1}$$

However

$$\frac{P_1}{P_2} > \frac{GR_2}{GR_1}$$

35. Ibid., p. 790.

36. Ibid., p. 792.

MR declines. On the other hand if

$$\frac{P_1}{P_2} < \frac{GR_2}{GR_1}$$

MR increases.³⁷

In both intensive and extensive applications of land capital, total ground-rent results from the differences between the prices and products of the areas under contribution and the least fertile capital investment.³⁸

Absolute Rent

Absolute rent is a determinant of price and hence, it is an essential feature in the theory of rent.

$$P_b - P_a = d \text{ where}$$

P_a is cost of production in a superior land.

P_b is price of the commodity determined by the inferior land

d is differential rent.³⁹

$$(P_b + r) - (P_a + r) = d$$

where r is absolute rent.

Absolute rent is due to the institution of private property. Because of the use of the private property, the possessor of it can extract a charge for it. This charge is passed on to the consumer through an increased price, $P+r$.

It is interesting to note that Marx realizes how "rent enters into cost of production" for a particular commodity; "the rent or cereal land becomes a determining element in the price

37. Ibid., p. 826.

38. Ibid., p. 809.

39. Ibid., p. 868.

of cattle."⁴⁰

Commodities are sold at their market price i.e., cost plus average profit. The existence of absolute rent flows from a modification of the factor market. Because of the institution of private property, competition among capitalist is effectively eliminated. The flowing of capital would occur in agricultural sector in the absence of private ownership of land.⁴¹ This is because surplus-value in agriculture is normally higher than average profit in the economy.⁴²

The maximum ceiling to r is the difference between a surplus-value accruing to an investment in the agricultural sector and the average profit obtained by a quantitatively equal investment in a non-agricultural sector.⁴³

$$r = s - p$$

Even though the maximum limit of r is defined by the difference between the surplus-value and average profit, the existing r is conditioned by various factors like (a) the quantity of additional investment of capital made upon old lands, (b) the competition between landlords and (c) the wants of the consumer. In the words of the Marx, "although the private ownership of land may derive the price of the products of the soil above their prices of production, it does not depend upon this

40. Ibid., p. 892.

41. Ibid., p. 886.

42. Ibid., p. 882.

43. Ibid., p. 888.

ownership, but upon the general condition of the market, to what extent the market price shall exceed the price of production and approach the value, and to what extent the surplus-value created in agriculture over and above the given average profit shall either be converted into rent or enter into the general equalisation of the surplus-value to an average profit."⁴⁴

44. Ibid., p. 887.

1.2 INDIVIDUAL FORMS OF PROFIT : INTEREST

Interest is a derivative of surplus. Its magnitude, according to Marx, depends upon the quantum of the surplus and the market forces for loanable funds. Marxian concept of interest, by and large, is a study on the supply conditions in the market for loanable funds. As interest is a derivative of surplus, it significantly affects the quantity of profit and thence the cyclical fluctuations of the former affects the latter.

RETIONALITY OF INTEREST

Money has the independent expression of a certain amount of value existing either actually as currency or as commodities, may be converted from a given value to an increasing value. It produced⁴ profit, i.e., it enables the capital to extract a certain quantity of unpaid labour, surplus-product and surplus-value from the labourers and to appropriate it. Thus it acquires an additional use-value of serving as capital. Its use-value then is precisely in the profit it produces when transformed into capital. In this capacity of potential capital as a means of producing profit, it becomes a commodity.⁴⁵

As soon as productive capital becomes commodity capital, it should be placed in the market to be sold as commodity. As a commodity the product must realise its value and must

45. Capital, Vol. III, p. 402.

assume its transmuted form of money in the process of circulation by its sale. In the act of circulation, commodity capital, though acts like a commodity, is different from an ordinary commodity (a) because it is weighted with surplus-value, the realization of its value, therefore being simultaneously the realization of surplus-value, (b) because its function as a commodity is a phase in its process of reproduction as capital and therefore its movement as a commodity being only a partial movement of its process, is also simultaneously its movement as capital.⁴⁶ In the words of Marx "Capital exists as capital in actual movement not in the process of circulation but only in the process of production, in the process by which labour-power is exploited".⁴⁷

Interest-bearing capital is different from that and essentially this difference lends its specific character. The lender puts interest-bearing capital into circulation and converts it into a commodity as capital. It is a value endowed with the use-value of creating surplus-value and of creating profit. And a value which preserves itself in a movement and returns to its original owner in a swollen dimension. "It leaves him only for a specified time, passes but temporarily out of the possession of its owner into a

46. Ibid., p. 404.

47. Ibid., p. 404.

possession of a functioning capitalist is therefore neither given up in payment nor sold, but merely, loaned, merely relinquished, understanding that, first, it shall return to its point of departure after a definite time-interval and second, that it shall return as realized capital - a capital having realized its use-value, its power of creating surplus-value".⁴⁸

Capital manifests itself as capital through an elaborate process of self-expansion. The degree of its self-expansion expresses the quantitative degree in which it realizes itself as capital. The surplus-value or profit produced by it - its rate -- is measured only by the comparison with the value of the advanced capital. The greater or lesser self-expansion of interest-bearing capital is measured by comparing the amount of interest, its share in the total profits, with the value of the advanced capital. "If, therefore, price expresses the value of the commodity, then interest expresses the self-expansion money-capital and thus appears as a price paid for it to the lender".⁴⁹ Further, capital appears as a commodity in as much as the division of profit into interest and profit is regulated by supply and demand.⁵⁰

48. Ibid., p. 404.

49. Ibid., p. 415.

50. Ibid., p. 419.

DEFINITION

The price paid to the money capitalist for the use of capital is interest. If both money capitalist and industrial capitalist are one, interest does not appear. "If all capital were in the hands of industrial capitalist, there would be no interest and no rate of interest".⁵¹ Marx defines interest, "that part of the profit which...industrial capitalist pays to the owner, is called interest. It is merely another name, a special term for a certain part of the profit which capital in process of its function has to give up to its owner, instead of keeping it in its own pockets".⁵²

The existence of the money capitalist as we have seen implies the existence of industrial capitalist. A person having money can invest his money as money capital i.e., interest-bearing property or interest it as industrial capital productively, he is industrial capitalist and the return for his money capital is profit. However, if he invests his money as money capital i.e., as interest-bearing property he must get industrial capitalist who is capable of borrowing it and investing it productively. It is only for the production process, the profit is born and from profit interest emerges as Minerva from the head of Jupiter. Marx says "the idea of a conversion of the total capital of

51. Ibid., p. 443.

52. Ibid., p. 398.

society into money capital without the existence of people who shall buy and utilize the means of production which form the total capital with the exception of a relatively small portion existing in the shape of money, is sheer nonsense. It implies the additional nonsense that capital could yield interest on the basis of capitalist production without performing any productive function, in other words, without producing any surplus value, of which interest would be but a part, that the capitalist mode of production could run its course without any capitalist production".⁵³ Then Marx approvingly quotes from The Economist "The relations between the sum paid for the use of capital and this capital itself expresses the rate of interest, measured in money. The rate of interest depends - 1) on the rate of profit; 2) on the proportion in which the entire profit is divided between the lender and borrower".⁵⁴ Mathematically, the rate of interest could be expressed thus :

Let M_a represent the value of money advanced by the money capitalist. Let M_b represent the money capital in the hands of the owner of the production process. Let $M'b$ represent money equivalent of the commodity. $M'a$ represent

53. Ibid., p. 444.

54. The Economist, January 22, 1853.

the quantity of money returned to the money capitalist. Let us recall the assumption of Marx. "...this entire transaction takes place between two kinds of capitalist, the money capitalists and the industrial capitalists".⁵⁵ Thus the analysis of interest lies outside the purview of production. The contract between the borrower and lender be represented in

$$M_a - M_b \text{ and in } M'b - M'a$$

The magnitude of interest is determined by

$$\overline{M'a - M_a}$$

The industrial profit, due to the industrial capitalist is reduced to that extent. That is to say from

$$\overline{M'b - M_b} \text{ to } \overline{(M'b - M'a) - M_b}$$

Therefore $i' = \frac{M'a - M_a}{M_a}$.

INTEREST AND PROFIT

Marx repeatedly asserts that "there is no such thing as natural rate of interest".⁵⁶ The rate of interest, be it the average of market rate prevalent in each case appears as a uniform definite and tangible magnitude in a quite different way from the general rate of profit. The rate of interest is related to the rate of profit as the market price of a commodity to its value. As far as the rate of interest is decided by the rate of profit, this is always the general

55. Ibid., p. 416.

56. Ibid., p. 428.

rate of profit and never a specific-rate of profit of any particular industry. Hence the general rate of profit appears as an empirical, in a given average rate of interest. However, Marx admits that the latter is not "a reliable expression of the former".⁵⁷

The average rate of interest appears in a country in the long-run as a constant magnitude since the general rate of profit varies only in the long-run. Its relative constancy is sharply revealed in the constant nature of the average or common rate of interest.

The general rate of profit is determined by (a) the surplus-value created by the total capital, (b) the proportion of this surplus-value to the value of the total capital and (c) by competition. Therefore, the general rate of profit derives from reasons far more complicated than the market rate of interest and hence is not as tangible as the rate of interest. In delineating the difference between the rate of interest and rate of profit, Marx omits the following two things.

A. The historical pre-existence of interest-bearing capital and the existence of a traditional general rate of interest; and

B. The far greater direct influence exerted by the world market on establishing the rate of interest, as compared with its influence on the rate of profit.⁵⁸

57. Ibid., p. 429.

58. Ibid., p. 432.

Unlike the rate of interest, the average profit does not obtain as a directly established fact. On the other hand, it is a resultant product of the equalisation of opposite fluctuations. Marx thinks that there is always a definiteness about interest rate whereas the general rate of profit is blurred and ^hgazy. It is because the rate of profit may vary even within the same sphere for commodities with the same price, depending upon different conditions under which different capitalists produce the same commodity. It should be remembered that the rate of profit of an individual capital is never determined by the market price of a commodity, but by the difference between the cost-price and market-price.

PROFIT OF ENTERPRISE

Next, Marx poses an interesting question. How does this purely quantitative division of profit into net profit and interest turn into a qualitative one? In other words, how a capitalist who employs his own, not borrowed capital, categorizes a segment of his gross profit, under interest and as such calculates it separately? How all capital, whether borrowed or not, is differentiated as interest-bearing capital from itself as capital producing a net profit?⁵⁹

In order to answer this question, Marx assumes that money

59. Ibid., p. 437.

capitalist and industrial capitalist as persons in whose hands the same capital really performs a two-fold and basically different movement. The one merely loans it, the other employs it productively. For the productive capitalist, the gross profit falls into two parts -- the interest which he has to pay the lender and the surplus over and above the interest which forms his own share of the profit. "If the general rate of profit is given, this latter portion is determined by the rate of interest; and if the rate of interest is given then by the general rate of profit".⁶⁰ However, the gross profit may diverge in any specific case from the average profit. Then the share belonging to the functioning capitalist is determined by the interest. For the capitalist working on borrowed capital, retains only that portion of profit sans interest. This portion of the profit appears to him to be the product of a capital. He represents capital only as functioning capital. "He is its personification as long as it is profitably invested... such operations are undertaken with it through its employer as are prescribed by the branch of industry concerned."⁶¹ If the gross profit equals the average profit, the magnitude of the profit of the enterprise is decided by the rate of interest. If the gross profit differs from the average profit, its difference is determined by all the circumstances which cause a temporary deviation.

60.

60. Ibid., p. 438.

61. Ibid.

According to Marx, here the quantitative division of the gross profit turns into a qualitative one. The quantitative division depends on what is to be divided and the manner in which the active capitalist manages his capital. The portion of profit which is due to the action of capitalist is called profit of enterprise, "deriving solely from the operations or functions which he performs with the capital in the process of reproduction, hence particularly those functions which he performs as entrepreneur in industry or commerce".⁶² To him, interest is product of owning capital -- of capital which does not function while profit of enterprise is exclusive fruit of the functions which he performs with the capital. In fine, the profit of enterprise ^{follows from} flows to the functioning capitalist alone.

Profit of enterprise emerges not from capital as such but from the process of production. The only process of production other than capital is labour process. "... the industrial capitalist, as distinct from the owner of capital does not appear as operative capital but rather as a functionary irrespective of capital or as a simple agent of the labour-process in general, as a labourer and indeed, as a wage labourer".⁶³

62. Ibid., p. 439.

63. Ibid., p. 449.

Interest expresses the existence of conditions of labour as capital. It represents the ownership of capital as a means of appropriating the products of the labour. Interest represents a relationship of one capitalist to another, not between capitalist and labourer. The specific functions which the capitalist performs are merely functions of capital. He creates surplus-value not because he works as a capitalist but because he also works, regardless of his capacity as capitalist. This portion of surplus-value is not surplus-value proper, rather the opposite of it.

"Due to the alienated character of capital, its antithesis to labour, being relegated to a place outside the actual process of exploitation, namely to the interest-bearing capital, this process of exploitation itself appears as a simple labour-process in which the functioning capitalist merely performs a different kind of labour than the labourer."⁶⁴ Thus the labour of exploiting and exploited labour seem identical as labour. The labour of exploiting is just as much labour as exploited labour.

"The social form of capital falls to interest, but expressed in a neutral and indifferent form. The economic function of capital falls to profit of enterprise but abstracted from the specific capitalist character of this function."⁶⁵

64. Ibid., p. 450.

65. Ibid., p. 450.

The profit of enterprise as the wages of supervising labour is separated as wages from profit. This portion of wages is integral part of profit. This supervision work arises in all modes of production based on the antithesis between the labourer as the direct producer and the owner of the means of production. The greater this antagonism, the greater is the role played by supervision.

Marx writes : "The labour of supervision and management, arising as it does out of an antithesis, out of the supremacy of capital over labour, and being therefore common to all modes of production based on class contradictions like the capitalist mode, is directly and inseparably connected, also under the capitalist system, with productive functions which all combined social labour assigns to individuals as their special tasks".⁶⁶

The industrial capitalist is a worker, unlike the money capitalist, in the sense of "an exploiter of the labour of others". The wage he earns for his labour is equal to the appropriated and quantity of another's labour and depends directly upon the rate of exploitation of this labour.

66. Ibid., p. 454.

1.3 SUMMARY

Profit is that part of the total value of the commodity in which the unpaid labour or surplus-labour of the labourer is realised. The entire quantum of this profit does not go to the capitalist. The monopoly of land enables the landlord to slice out one portion of the surplus-value, under the name of rent. Like the capitalist who possesses the instruments of labour and who gets a portion of profit, the capitalist who borrows and employs the instruments of labour, gets a portion of surplus-value. In other words the money-lending capitalist claims one part of surplus-value under the name of interest and the employing capitalist gets industrial profit. In brief interest, rent, or industrial profit are only various components of the same being. As they are only different names for different parts of the surplus-value of the commodity or the unpaid labour enclosed in it, they are equally derived from the same source. They are derived neither from land as such nor from capital but land and capital enable their owners to get their respective shares out of the surplus-value obtained by the employing capitalist from the labourer. The labourer is indifferent to the fact that the surplus-value, the resultant of his unpaid labour, is pocketed by the employing capitalist or the latter is obliged to pay portions of it, under the name of rent or interest.

Like Marx, we have also discussed in detail about the concept of rent. Marx discusses the labour theory of value in relation to rent, which is nothing but a portion of surplus-value. According to him, there are four possible theories of rent of land. First theory, called monopoly theory, says that rent emerges from the monopoly price of agriculture products and that monopoly price is due to the existence of landed property. This theory corresponds with the second theory, differential rent. This theory implicates an identification of price of production and exchange-value on the marginal land, which he rejects. He also rejects another theory according to which rent is identical with the interest on the capital invested for the improvement of land. But this theory does not explain the rent of land in which no capital has been invested. Then Marx gives his own theory of rent. Private property in land has relevance for the genesis of rent. It allows for the existence of differential rent. This is not based on declining fertility and this does allow for absolute rent. In the Marxian analysis, commodities sell above or below their value because different organic composition of capital make them sell at a uniform price of production. The existence of rent does not refute the labour theory of value. On the other hand it gives an example of what he calls 'surplus-profit' i.e., a surplus above the average rate of profit which can emerge in two ways.

Due to the forces of competition, the same price will be paid for the same commodity, whatever the conditions under which it was produced. If the price of an individual commodity is lower than the average price of production, then the producer will obtain a surplus above the average rate of profits. Given the average rate of profits, it is determined by the difference between the productivity of labour of the particular concern and the average productivity of labour in the whole sphere of production. Differential rent is similar to this form of surplus-profit. However, the increased productivity which is the cause of surplus-profit tends to become general and it will continually tend to reduce or remove surplus-profits by equalising market price and price of production. Nevertheless, certain free gifts of nature like a fertile land, the condition of increased productivity is not urbane and hence is not available to all. It is monopolized and the surplus-profit is appropriated by the owner of that monopolized gift of nature in the form of rent.

As we have seen already that competition would tend to iron out the difference between different rates of profit. According to Marx, this would involve compelling agricultural produce to be sold below its value. The existence of landed property is an hindrance to the fair play of competition. Because it inhibits the facile employment of capital. Further, it lulls the levelling out of surplus-value to an average rate

of profit and appropriates a part of all of the surplus. Marx writes to Engels : "The land owner intervenes and extracts the difference".⁶⁷ When the organic composition of capital in the agriculture becomes the same as that in industry, absolute rent vanishes. Then the landowner is unable economically to extract absolute rent.

Marx discards interest as an independent revenue and makes it as a component of surplus-value. Money lender expects money to come back to him with an increment and the borrower takes it as a commodity whose use-value consists in its ability to beget surplus-value. Marx draws an analogy between money that is lent as capital and the commodity labour. Lender and borrower regard the same amount of money as capital. But only borrower -- industrial capitalist -- activates it and puts into operation. The quantity of money would appear as capital to both the parties if the profit which it procures is shared between them. The share which the money capitalist claims is interest. It is expressed as the price of the commodity, the money capital. Since interest is only a derivative of capital, its upper limit is the amount of profit itself, and there is no lower limit. Thus Marx permits only two basic revenues in capitalism, wages and surplus-value.

⁷
67. Marx-Engels Correspondence, p. 132. See also Capital, Vol. III, pp. 720, 755 & 909 and Poverty of Philosophy, p. 171 f.

Marx is happy over his endeavour in this field and he writes to Engels that the "fundamentally new and best elements" in his work consist in the contrast with the classical economics. Where as this economics "begins by taking the particular fragments of surplus-value in their fixed forms of rent, profit and interest as given entities", Marx first deals with the general form of surplus-value in an undivided unity like the uncrystallized components in a chemical solution."⁶⁸70

⁶⁹
70. Marx-Engels Correspondence, pp. 226-32.

2. RATE OF PROFIT
sted in its production as

"Natural laws cannot be set aside". The
is called the p

Letters to Kugelmann.

2.0 FORMATION OF A GENERAL RATE OF PROFIT

Technical relation of labour - power employed to the mass of the means of production and the price of these means of production are the determinates of the organic composition of capital at a given time. The magnitude of the actual value of a given product depends on the magnitude of the fixed part of the constant capital. Due to the different spheres of production and also the difference in per centage which the variable component constitutes in a total capital of a given magnitude, capitals of equal magnitude put into motion different quantities of labour appropriate different quantities of surplus - value. Consequently the rates of profit in various branches of production vary. These different rates of profit are equalised by competition to a single general rate of profit, which is the average of all these varying rates of profit.¹ The profit that emerges - disciplined by the general rate of profit, is called the average profit. The price of a commodity which is equal to its cost-price plus the share of the annual average profit on the total capital invested in its production decided by the conditions of turnover, is called its price of production. These and similar issues are discussed in this section.

1. Capital, Vol. III, p. 232.

Let us take five different spheres of production and let the capital in each have a different organic composition as follows-

Capitals	Rate of surplus-value	Surplus-value	Value of commodities	Rate of profit
1. $80_c + 20_v$	100%	20	120	20%
2. $70_c + 30_v$	100%	30	130	30%
3. $60_c + 40_v$	100%	40	140	40%
4. $85_c + 15_v$	100%	15	115	15%
5. $95_c + 5_v$	100%	5	105	5%

In the above table we find considerably different rates of profit corresponding to the different organic composition of these capitals.²

The sum total of the capitals invested in these five spheres of production: 500; the sum total of the surplus - value produced by them; 110, the aggregate value of the commodities produced by them : 610. If we consider the 500 as a single capital and capitals I to V as their

2. Ibid., p. 228.

constituent parts, then the mean composition of this capital 500 would be split up into

$$390_c + 110_v$$

If it is expressed in percentage,

: $78_c + 22_v$. If each of the capitals of 100 be regarded as 20% of the total capital, its composition would equal to this average. For every 100 there would be an average surplus - value of 32. In that case the average rate of profit would be 22%. Then the price of every $\frac{1}{5}$ of the advanced total capital would have to be sold at 122.³

With a rate of surplus - value 100% and with $80_c + 20_v$, the total value of commodities produced by capital I = 100 would be

$$80_c + 20_v + 20_s = 120.$$

This is so, if (a) the entire constant capital entered into the annual product and (b) the rate of profit of capital is 20% in every case.

Now we can let different portions of constant capital go into the value of the product of the same five capitals.⁴

3. Ibid., p. 229.

4. Ibid., p. 231.

Capitals	Rate of Surplus-Value $\frac{S}{V}$	Surplus-Value S	Rate of profit $\frac{S}{(C+V)}$	Used up C	Value of Commodities used up C+V+S	Cost price used up C+V
I 80_c+20_v	100%	20	20%	50	90	70
II 70_c+30_v	100%	30	30%	51	111	81
III 60_c+40_v	100%	40	40%	51	131	91
IV 85_c+15_v	100%	15	15%	40	70	55
V 95_c+5_v	100%	5	5%	10	20	15
Total 390_c+110_v		110	110%			
Average 78_c+22_v		22	22%			

If we assume capitals I to V as a single unit of total capital i.e. $500 = 390_c + 110_v$, then we obtain the same average composition, $78_c + 22_v$. In this case also the surplus-value remains at 22.

So we split this surplus = value uniformly among

capitals I to V; then we get the following commodity prices.⁵

Capitals		Surplus- Value \$	Value of Commodi- ties $c+v+s$	Cost price of commo- dities $c+v$	Price of Profit $\frac{s}{c+v}$	Rate of profit $\frac{s}{c+v}$	Deviation of price from value
I	80_c+20_v	20	90	70	92	22%	+ 2
II	70_c+30_v	30	111	81	103	22%	- 8
III	60_c+40_v	40	131	91	113	22%	-18
IV	85_c+15_v	15	70	55	77	22%	+ 7
V	$95_c+ 5_v$	5	20	15	37	22%	+17

From the above table we infer that the commodities are sold at $2 + 7 + 17 = 26$ above, and $8 + 18 = 26$ below their value. The deviations of price from actual value even out one another through the uniform distribution of surplus - value or through addition of the average profit of 20 per 100 units of advanced capital to the respective cost prices of the commodities.⁶ It is only the sale of the commodities

5. Ibid., p. 231.

6. Ibid.,

at such prices that retain the rate of profit for capitals I to V to be uniformly 22% inspite of their differences in organic composition. The prices gotten by adding the average of the various rates of profit in the different spheres of production, form the prices of production. This, of course, implicates the existence of a general rate of profit. These rates of profit should be deduced out of the values of the commodities.

Marx writes, "Without such deduction, the general rate of profit (and consequently the price of production of commodities) remains a vague and senseless conception. Hence, the price of production of a commodity is equal to its cost-price plus the profit, allotted to it in per cent, in accordance with the general rate of profit, or in other words, to its cost-price plus the average profit."⁷

Thus we find that the capitalists of the various branches of production recover only the value of the capital consumed in their production, by setting their commodities. But they do not get the surplus - value and consequently the profit, created in their own sphere by the production of these commodities. They obtain only profit that is uniformly distributed to the share of every aliquot part of

7. Ibid., p. 232.

the total social capital from the total social surplus - value or in other words profit produced in a given time by the social capital in all spheres of production. Thus when a capitalist sells his commodities at their price of production, he recovers only money in proportion to the value of the capital consumed in their production. Hence he secures profit in proportion to his advanced capital as the aliquot part in the total social capital. The profit added to the cost - prices are independent of his particular sphere of production, being a simple average per unit of invested capital.

Now let us assume that the above five investments I to V belong to one man. The quantity of variable and constant capital consumed per 100 of the invested capital in each of the departments I to V on the production of commodities. This portion of the value of the commodities I to V would make up a part of their price. It is because that at least this price is required to recover the advanced and consumed portions of the capital. Therefore these cost - prices would be different for each class of the commodities. The different quantities of profit would be regarded by the capitalist as profit on his advanced aggregate capital. The cost - prices of the commodities produced in the various departments would be different. However that portion of

their selling price derived from the profit added per 100 capital would be the same for all these commodities. The aggregate price of the commodities I to V would be equal to their aggregate value. Similarly "the sum of the prices of production of all commodities produced in society - the totality of all branches of production - is equal to the sum of their values."⁸

Apparently such a statement might seem to be conflicting with the already seen fact that under capitalism the elements of productive capital include the price of production of the respective industry together with the profit contained in it so that the profit of one branch of industry goes into the cost - price of another. To resolve this conflict, we should place the sum of the cost of prices of the commodities of the whole country on one side and the sum of its surplus - values or profits, on the other.

If there are n spheres of production and if each makes a profit of p , then their aggregated cost - price = $K - np$. Since the profits of the one sphere of production passes into the cost-price of another, they are included as components of the total price of resultant product.⁹

8. Ibid., p. 233.

9. Ibid., p. 234.

If the cost - price of a commodity includes a sum P , which symbolises the profits of the producers of the means of production and if a profit p , is added to this cost - price, then the aggregate profit,

$$P = p + p_1$$

The aggregate cost - price of the commodity, if considered without the profit components, is then its own cost - price;

$$K - P$$

Then , $k + p = k + p + p_1$

The formation of the average rate of profit is not merely a question of getting the simple average of the different rates of profit in the various spheres of production. But also getting one of the relative weights which these different rates of profit have while forming this average. However this depends on the relative magnitude of the capital invested in each specific sphere or on the aliquot part which the capital invested in each specific sphere forms in the aggregate social capital. There will be a wide gap of differences, depending on whether a greater or smaller part of the total capital produces a higher or a lower rate of profit which in turn depends on how much capital is invested in spheres, in which the variable capital is relatively smaller or greater compared

to the total capital.¹⁰

The general rate of profit is determined by two factors.

(a) The organic composition of the capitals in the different spheres of production and hence, the different rates of profit in the individual spheres.

(b) The distribution of the total social capital in these different spheres and thus the relative magnitude of the capital invested in each particular sphere at the specific rate of profit swaying in it — the relative share of the total social capital to be absorbed by each sphere of production.

Let us assume that the composition of the average social capital is $80_c + 20_v$ and that the annual rate of surplus - value, s' is 100 per cent. Then the general annual rate of profit would be 20%. Without any relevance to the cost - price K , of the commodities annually produced by a capital of 100, their price of production would then be $K + 20$. In these spheres of production, where the composition of capital is

$$(80 - x)_c + (20 + x)_v$$

10. Ibid., p. 236.

the actually produced surplus - value or in other words the annual profit produced in that specific sphere of production, would be

$$20 + \overset{x}{X}.$$

This is greater than 20, and the value of the produced commodities would be

$$K + 20 + \overset{x}{X}$$

This is greater than $K + 20$.

or in other words greater than their price of production.¹¹

In those sphere of production in which the composition of the capital

$$(80 + x)_c + (20 - x)_v.$$

the annually produced surplus-value or profit would be $20 - x$ or less than 20.

Hence the value of the commodities

$$K + 20 - \overset{x}{X},$$

is less than the price of production which is $K + 20$.

Apart from the differences which are possible during the

11. Ibid., p. 237.

periods of turnover, the price of production of the commodities would equal their value only in spheres, in which the composition would happen to be $80_c + 20_v$.¹²

Marx says "The specific development of the social productivity of labour in each particular sphere of production varies in degree, higher or lower, depending on how large a quantity of means of production are set in motion by a definite quantity of labourer, hence in a given working-day by a definite number of labourer and consequently, on how small a quantity of labour is required for a given quantity of means of production. Such capitals as contain a larger percentage of constant and a smaller per centage of variable capital than the average social capital are, therefore called capitals of higher composition and conversely, those capitals in which the constant relatively smaller and the variable relatively greater than the average social capital, are called capitals of lower composition. Finally, we call those capitals whose composition coincides with average, capitals of average composition."¹³

If the average social capital is composed in per cent of

$$80_c + 20_v$$

12. Ibid.,

13. Ibid., pp. 237-38.

then a capital of

$$90_c + 10_v, \text{ is higher}$$

and a capital of

$$70_c + 30_v$$

is lower than the social average.

If the composition of the average social capital is $m_c + n_v$ in which m and n are constant magnitudes

$$m + n = 100.$$

Then the higher composition of an individual capital is

$$(m + x)_c (n - x)_v.$$

The lower composition of an individual capital is

$$(m - x)_c + (n + x)_v$$

The way in which these capitals operate, after establishing an average rate of profit is given in the following table. The underlying assumption is one turnover per year.¹⁴

	$80_c + 20_v + 20_s$	
I.	Rate of profit	= 20%
	price of product	= 120. Value = 120.
	$90_c + 10_v + 10_s$	
II.	Rate of Profit	= 20%

14. Ibid., p. 238.

Price of product = 120. value = 110.

$$70_c + 30_v + 30_s$$

III Rate of profit = 20%

Price of product = 120. Value = 130.

While applying foregoing equations to any specific case, it should be considered whether a deviation of the ratio between C and V is simply due to a change in the value of the elements of the constant capital, rather than to a difference in the technical composition. From the above tabular presentation, we infer that in the case of capital I in branches of production in which the composition coincides the social average, value and price of production would be equal. The value of the commodities produced by Capital II would be smaller than their price of production and the price of the production of the commodities would be smaller than their value. The price of production of a commodity i.e. is cost-price plus profit, is defined as

$$p = \frac{kp'}{1} . \text{ Hence the price of production} \\ = k + kp' .$$

The price of production of the commodities in any particular sphere may change in magnitude. (a) whenever the general rate of profit changes this particular sphere while the value of the commodity remains unaltered. and (b) whenever

there is a change of value in this specific sphere, while the general rate of profit remains unaltered. The change of value occurs due to innovation or a change in the value of those commodities which constitute the elements of its constant capital.¹⁵

The rate of profit will not change until the mass of surplus-value remains the same or unless there is a change in either the value of the constant capital or the value of the variable or the value of both or until C changes. Other conditions for the change in the general rate of profit are:

(a) general rate of profit may change while the revalue of the commodities remains the same, when the degree of labour exploitation changes and (b) the general rate of profit may also change through a change in the amount of labour employed relatively to the constant capital as a result of technical changes in the production process, while the degree of exploitation of labour remains the same.

Even though the surplus-value and profit are identical from the stand point of their mass, the rate of profit is different from the rate of surplus-value. The rate of profit

15. Ibid., p. 240.

can increase or decline when the rate of surplus-value remains the same and vice-versa. There are differences of magnitude, between the rate of surplus-value and the rate of profit and not between the surplus-value itself and profit. Since the rate of profit or the surplus-value is calculated in relation to the total capital, and as latter forms its standard of measurement, the surplus-value seems to emerge from the total capital. This obliterates the organic difference between the constant and variable capital in the conception of profit. "Disguised as profit, surplus-value actually denies its origin, loses its character, and becomes unrecognisable."¹⁶

16. Ibid., p. 241.

2.1 EQUALISATION OF THE GENERAL RATE OF PROFIT THROUGH COMPETITION

Let us now consider one of the major consequences of the competition which is the force that equalises the rate of profit. Here the simple exchange $C_1 - M - C_2$ that reflects the exchange of equal quantities of labour, can be recalled. Since commodity prices are equated to commodity exchange-value, relative prices must reflect the relative quantities of labour contained in the commodities. When Marx defines market he assumes equal rates of surplus-value in all processes of production.¹⁷ and equal rates of profit in all processes, due to the forces of competition. Thus

$$\frac{s_1}{v_1} = \frac{s_2}{v_2} = \frac{s_3}{v_3} \dots = \frac{s_n}{v_n}$$

$$\frac{s_1}{(c+v)_1} = \frac{s_2}{(c+v)_2} \dots = \frac{s_n}{(c+v)_n}$$

This implies, however, another equative signifying equal organic composition of capital in all production processes

$$\frac{c_1}{(c+v)_1} = \frac{c_2}{(c+v)_2} \dots = \frac{c_n}{(c+v)_n}$$

17. Marx is aware of differing rates of surplus-value. In order to explain certain movements of other variables he has abstracted from varying rates of surplus-values.

We have already seen that rate of profit is originally high in fields of low organic composition of capital and low in the fields where organic composition of capital is high. To equalize profits, capital withdraws from fields with low profits and enters fields with high profits. Fields with high profits are those which have relatively large amounts of variable capital. These are the industries which use a relatively large mass of labour-power. The tendency to equalise profits leads to an increasing demand for labour-power. Competition forces the capitalist to expand more than proportionally the constant part of his total capital. This relative increase of constant capital in a given sphere of production lowers the rate of profit, in this particular sphere, below the average rate and thus calls forth an opposite competitive charge \leftarrow the transfer of investment funds from industries of high organic composition of capital. Thus labour, which has just been set free by the introduction of a new machine, will tend to be in greater demand than before in industries which capital newly invades in quest for higher profits.

Marx has discussed these issues in details. The rate of profit is the same in all spheres of production, for it is equalised on the basis of those average sphere of production that has the average composition of capital.

Consequently, the quantum of profits in all spheres of production should be equal to the quantum of the surplus-values, like the sum of prices of production of the total social produce will be equal to the sum of its value. The differences in the spheres of production of different compositions must tend to equalise them with the spheres of average composition.

"Between the spheres more or less approximating the average, there is again a tendency towards equalisation, seeking the ideal average i.e. an average that does not really exist i.e. a tendency to take this ideal as a standard. In this way the tendency necessarily prevents to make the prices of production merely converted forms of value or to turn profits into mere portions of surplus-value".¹⁸ However these are distributed in proportion to the mass of capital employed in each sphere. Thus in the case of average capitals, the price of production is the same as the value is approximate to that. Hence the profit is also the same as the surplus-value produced by them. Under the pressure of competition, all other capital, tend towards this average. "What competition, first in a single sphere, achieves is a single market-value and market-price

18. Ibid., p. 247.

derived from the various individual values of commodities. And it is composition of capitals in different spheres, which first brings out the price of production equalising the rates of profit in the different spheres. The latter process requires a higher development of capitalist production than the previous one."¹⁹ An average profit and consequently a general rate of profit, cannot be anything other than the profit on the average so that capital, whose sum is equal to the sum of surplus-value.

"It is evident that the average profit can be nothing but the total mass of surplus-value allotted to the various quantities of capital proportionally to their magnitudes in the different spheres of production. It is the total realised unpaid labour, and this total mass, like the paid, congealed or living, labour, obtains in the total mass of commodities and money that falls to the capitalists."²⁰

The capitalist is always indifferent to the distinctive features of any commodity he produces. In every sphere of production, his only concern is to produce surplus-value and to appropriate a certain quantity of unpaid labour incorporated in the product of labour. Similarly the labourer

19. Ibid., p. 254.

20. Ibid., p. 248.

is also indifferent to the distinctive features of his labour and submits to the transformation as demanded by the capitalist. Further for the capitalist one sphere of production is as good as another. Because every sphere yields the same rate of profit; If the commodities are sold at their values, then various spheres of production produce various rates of profit, depending on the different organic composition of masses of capital invested in them. "But capital withdraws from a sphere with a low rate of profit and invades others, which yield a higher profit".²¹ Through its distribution among the various spheres which depends on the behaviour of profits, it creates such a ratio of supply to demand that the average profit in the various spheres of production becomes the same. Values are converted into prices of production.

"Capital succeeds in this equalisation to a greater or lesser degree, depending on the extent of capitalist development in the given nation i.e., on the extent the conditions in the country in question are adapted for the capitalist mode of production. With the progress of capitalist production, it also develops its own conditions and subordinates to its specific character and its imminent

21. Ibid., p. 269.

laws of all the social prerequisites on which the production process is based."²²

"The incessant equilibrium of constant divergences" is determined by the mobility of capital and labour. The more fluent labour-power in shifting from one sphere to another the more mobile the capital, the greater will be the incessant equilibrium of constant divergencies.

To sum up; surplus-value is an exclusive product of variable capital. A higher organic composition of capital will reduce the rate of profit. Since there is progressive increase in constant capital in proportion to the variable under capitalism, there will be a gradual fall of the average rate of profit. However a high organic composition of capital would tend to diminish the rate of profit only if the rate of exploitation remains the same. An increasing rate of exploitation tends to increase the rate of profit. The Marxian assumption of a constant rate of exploitation is obvious and its consequences are too many. If the rate of exploitation were the same everywhere, different fields of industry would have the same rate of profit only if they had the same organic composition of capital. However, in practice different industries have different rates of profit with the

22. Ibid., p. 270.

same organic composition of capital. The exchange-value of a commodity equals the socially necessary labour time forzen in the commodity. Marx is aware of this dilemmatic situation.²³

Competition levels out the rates of profit in the different spheres of production. Marx gives a series of numerical illustrations to point out that different rates of profit in the different industries. This is not teneable "without abolishing the entire system of capitalist production."²⁴

23. "We have demonstrated, that different lines of industry may have different rates of profit corresponding to differences in the organic composition of capitals, and, within the limits indicated, also corresponding to different times of turn-over; the law (as a general detency) that profits are proportioned as the magnitudes of the capitals, or that capitals of equal magnitude yield equal profits in equal times, applies only capitals of the same organic composition, with the same rate of surplus-value, and the same time of turn-over. And these statements hold good on the assumption, which had been the basis of all our analyses so far, namely that the commodities are sold at their values. On the other hand there is no doubt that, aside from unssential, accidental, and mutually compensating distinctions, a difference in the average rate of profit of the various lines of industry does not exist in reality, and could not exist without abolishing the entire system of capitalist production. It would seem, then, as though the theory of value were irreconcilable at this point with the actual process, irreconcilable with the real phenomena of production, so that we should have to give up the attempt to understand these phenomena". Ibid., pp. 181-82.

24. Ibid., p. 185.

Capital starts to withdraw from the sphere with low profits, invade those with high profits and stay there till those rates of profits begin to ebb down.

After competition has done its job, after capital has withdrawn from the industries with a lower-than-average rate of profit and entered those with a higher-than-average rate^{of} profit, the price of the commodities do change. After the occurrence of such a change the prices no longer correspond to the values of the commodities. The price of commodities is determined by the cost-price of commodities plus the average rate of profit.

Marx finally gives up the labour theory of value. He admits that the commodities do not exchange in proportion to socially necessary labour used in their production.²⁵ On the other hand, their prices deviate permanently from the value which corresponds to past and present labour employed in their creation. Only if an industry's organic composition of capital happens to be the average composition do price and value correspond. Since the total surplus-value still determines the average rate of profit, the law of value regulates prices atleast indirectly.

25. Ibid., p. 186.

Even according to Marx, we are only reminded in a "vague and meaningless form" of the fact that the value of the commodities is determined by the labour contained in them.²⁶ Nevertheless he maintains that the law is valid.

"Only when production will be under the conscious and pre-arranged control of society, will society establish a direct relation between the quantity of social labour time employed in the production of definite articles and the quantity of the demand of society for them."²⁷

Then Marx proceeds to delineate the role of competition on the sphere of production. Competition forces the capitalist to increase more than proportionally the constant part of his total capital. This relative increase of constant capital in a given sphere of production lowers the rate of profit, in this particular sphere, below the average rate and thus calls an opposite competitive change - the transfer of investment funds from industries of high organic composition of capital to those of low organic composition. Thus labour which has been freed by the introduction of a new machine, will tend to be in greater demand than before in industries which capital newly invades in search of

26. Ibid., p. 203.

27. Ibid., p. ²²¹206.

higher profits. Labour-power will also tend to move on its own accord. The rate of exploitation tends to be the same in all industries just as the rate of profit does. Marx suggests that it must be assumed "that the intensity of exploitation or the rate of surplus-value, are the same", and that this pre-supposes obviously "a competition among the labourers and an equilibrium by means of their continual emigration from one sphere of production to another."²⁸

Thus we find that the law of progressive increase in constant capital has its counterpart in the law of equalization of profit. Technological progress demonstrates the equilibrium of profit and demolishes it again and again. The equality of the rate of profit is continuously disturbed.

Thus disturbance and re-establishment face each other every moment. The stronger the shift towards constant capital caused by progress, the stronger the instantaneous counteraction which transfers capital into the spheres with relatively much wage capital.

28. Ibid., p. 206.

2.2 LAW OF PROFIT

The growth of capitalism is possible only due to its passion for accumulating surplus-value. In capitalism, it is not only a rule, but also the very condition that profit should emerge. But the irony of the situation is the very condition that sustained the growth of capitalism should inhibit its growth after a point and finally jolt it to a painful death.

Marx predicts that ultimately the rates of profit would decline in all industries adapting capitalist mode of production. This law is to capitalism what the law gravitation is to matter; so fundamental and so important. Marx has lot of faith on the efficacy of the law, and happy over its discovery. In a letter to Engles, he writes "I am getting some nice developments. For instance, I have thrown over the whole doctrine of profits as it has existed up to now. ... The tendency of the rate of profit to fall as the society progresses. This idea already follows from what was shown in Book I on the change in the composition of capital with the development of the social productive forces. This is one of the greatest triumphs over the great stumbling block of all previous economies."²⁹

29. Marx- Engles Correspondence p. 244.

Marx calls this law of falling tendency of the rate of profit as law of capitalism. "Simple as this law appears from the foregoing statements, all political economy has so far tried in vain to discover it ... the economists saw the problem and cudgeled their brains in tortorous attempts to interpret it. Since the law is of great importance for capitalist production, it may be said to be that mystery whose solution has been the goal of the entire political economy since Adam Smith".³⁰

Marx states this law" ... the same rate of surplus-value would express itself under the same degree of exploitation in a falling rate of profit because the material growth of the constant capital implies also equal- albeit not in the same portion - in its value and consequently in that of the total capital.

... the gradual growth of constant capital in relation to variable capital must necessarily lead to a gradual fall of the general rate of profit, so long as the rate of surplus-value or intensity of exploitation of labour by capital remain the same. ... the progressive tendency of the rate of profit is ... just an expression peculiar to the capitalist mode of production of the progressive development of the social

30. Capital Vol., III pp. 249-50.

productivity of value".³¹

The important determinents of the rate of profit are the rate of surplus-value $\frac{s}{v}$ and the organic composition of capital $\frac{C}{c+v}$. The quest for greater profits and necessacity of competition impell the capitalist to adopt labour-saving machineries which increase the organic composition of capital. As this composition increases, the rate of surplus-value remains ~~in~~ constant and the rate of profit tends to fall. Marx has given an illustration to explain this.³²

Assuming a given wage and working day, a variable capital of £ 100 represents 100 employed labourers, the value of their total product is £ 200 and hence the surplus-value produced is £ 100. The rate of surplus-value $\frac{s}{v}$ is 100 per cent. However, the rate of surplus-value expresses itself in different rates of profit depending on the different volumes of constant capital c and consequently of the total capital C , since the rate of profit

$$\frac{s}{c}$$

If $c = 50$, and $v = 100$, then $p' = \frac{100}{150} = 66\frac{2}{3}\%$;

31. Ibid., pp. 252 - ~~254~~.

32. Ibid., p. 247.

If $c = 100$, and $v = 100$, then $p' = \frac{100}{200} = 50\%$;

" $c = 200$, and $v = 100$, then $p' = \frac{100}{300} = 33\frac{1}{3}\%$;

" $c = 300$, and $v = 100$, then $p' = \frac{100}{400} = 25\%$;

" $c = 400$, and $v = 100$, then $p' = \frac{100}{500} = 20\%$. †

At a certain stage of capitalist development, where the organic composition of ^cCapital, $c:v$ was 50:100, a rate of surplus-value of 100 per cent was expressed in a rate of profit of $66\frac{2}{3}\%$ per cent and at a higher stage of economic development assumed $c:v$ was 400:100, then the same rate of surplus-value was expressed in a rate of profit of only 20 per cent. In a less developed country in which the former composition of ^cCapital is the average, the general rate of profit would be $66\frac{2}{3}\%$ per cent where as in a country with the later ^tcomposition of capital and a higher stage of development, it would be 20 per cent. According to Marx, the difference between the two national rates of profit might disappear, or even be reversed, if labour is less productive in the less developed country, so that a large quantity of labour is to be represented in a smaller quantity of the *same*

commodities,³³ and a larger exchange-value were represented in a less use-value. Suppose the labourer of the less developed country were to work $\frac{2}{3}$ of the working day for himself, and $\frac{1}{3}$ for the capitalist, then according to the above illustration the same labour-power would be paid with $133\frac{1}{3}$ and would furnish a surplus of $66\frac{2}{3}$ only. A constant capital of 50 would correspond to a variable capital of $133\frac{1}{3}$. The rate of surplus-value would amount to $66\frac{2}{3} : 133\frac{1}{3} = 50$ per cent, and the rate of profit to $66\frac{2}{3} : 183\frac{1}{3}$, or approximately $36\frac{1}{2} \neq$ per cent.

Here, Marx assumes certain conditions. In comparing countries in different stages of development, it is incorrect to measure the level of national rate of profit by, say, the level of the national rate of interest because this interest is more than the profit and this interest is largely determined by relations which have no relevance to the rate of profit. The law of the falling rate of profit which manifests the same or even a higher rate of surplus-value means in other words that any quantity of the average social capital comprises an ever larger portion of means of labour and an ever smaller portion of living labour.³⁴ Since the

33. Ibid., p. 251.

34. Ibid., p. 252.

aggregate mass of living labour working with the means of production declines in relation to the value of these means of production, it follows that the unpaid labour and the portion of value in which it is expressed should also decline as compared to the value of the total capital. In other words, an ever smaller aliquot part of the invested total capital is transformed into living labour and this total capital absorbs in proportion to its magnitude less and less of surplus-value in spite of the fact that the unpaid part of the labour applied may at the same time grow in relation to the paid portion.³⁵ "The relative decrease of the variable and increase of the constant capital, however much both parts may grow in absolute magnitude, is, as we have said, but another expression for greater productivity of labour."³⁵ Let a capital of 100 consist of 80 c + 20 v. Let 20 labourers work. The rate of surplus-value is 100 per cent. Let the capital 100 in a less developed country be 20 c + 80 v. And 80 labourers work. Everything being equal, the labourers in the first case produce a value of 40 and in the second 120. The first capital produces

$$80 c + 20 v + 20 s = 120.$$

rate of profit is 20 per cent

35. Ibid., p. 253.

The second capital produces $20 c + 80 v + 40 s = 140$

rate of profit is 40 per cent

In the second case, the rate of profit is double as much as the first, although the rate of surplus-value in the first is 100 per cent whereas in the second it is only 50 per cent.

What applies to any given mass of labour and surplus-labour applies to a growing number of labourers. If, the workers increase from 2 million to 3 million, the variable capital invested in wages also increases to 3 million from 2 million and if the constant capital also raises from 4 million to 15 million, then under the above assumptions, the mass of surplus-labour and of surplus-value raises by 50 per cent i.e. from 2 to 3 million. In spite of this growth of the absolute mass of surplus-labour and hence of surplus-value by 50 per cent the ratio of variable to constant capital would fall from 2 : 4 to 3 : 15 and the rate of surplus-value to total capital.

$$I \quad 4 c + 2 v + 2 s ; C = 6, p' = 33\frac{1}{3} \%$$

$$II \quad 15 c + 3 v + 3 s ; C = 18, p' = 16\frac{2}{3} \%$$

Even though the mass of surplus-value has increased by 50 per cent the rate of profit has fallen by 50 per cent.

Marx gives few causes which would counter the falling tendency of profit in the short run. We can discuss these causes in a subsequent section. Marx is emphatic in ascertaining that the "rate of profit will fall in the long run."³⁶

Now let us turn towards understanding the various factors which favour the operation of the law.

36. Ibid., p. 269.

2.3 FAVOURABLE FACTORS

Every economic system is constantly at flux. Everything is changing and only unchangeable thing is change itself. Hence a theoretical model purposed to study such a system should take note of various variables which are mutable. Marx is completely aware of such phenomena though he has not made an attempt to comprehend them.

Certain relationships within the Marxian theories of capital circulation, capital accumulation, profit, price, rent etc., are strengthened, at times are weakened; any way changed. For instance due to constantly changing values of the variables, the capital structures are subjected for variations. Such variations do bring about decisive impact on the rate of profit. The significant aspect of the forces which act to bring modifications is that they are not passing phenomena to be bothered only at a particular point of time. They are deep-seated and dog the economy as long as it tends to grow. For our purpose, it is adequate to consider the influence on the rate of profit of changing values of

- (a) capital turnover
- (b) of merchant's capital
- (c) of variable and constant capital and
- (d) of distributions of profit.

a. CHANGING VALUES OF CAPITAL TURNOVER

It signifies that due to time's span needed for turnover, not all the capital can be utilized in the process of production. Certain portion of the capital lies unutilised either in the form of money capital, of raw material supply, of finished commodity etc. The capital in active production i.e. in the appropriation of the surplus-value and the appropriated surplus-value is always lesser to the same extent. The shorter the period of turnover smaller is the idle portion of capital.

The important means of reducing the time of production is higher labour productivity which is identical with industrial progress.³⁷

Marx distinguishes two rates of profit, the general and the annual, in connecting rates of profit to changing organic composition of capital. Marx writes "we cannot compute the rate of profit on any output of commodities we choose eg. a weekly output but that

$$\frac{sv}{c} + v$$

here represents the surplus-value produced during the year

37. For detailed discussion: See Capital Vol. II Chap. XV "The Turnover of variable capital", and Capital Vol. III Chap. IV. "The Effect of the Turnover on the Rate of Profit".

to the capital advanced during the year (i.e. As distinct from the capital turned over). The formula

$$\frac{sv}{c} + v$$

stands here, therefore, for the annual rate of profit".³⁸ Marx thinks that the progress of capitalism necessarily involves continuing enhancement in the number of capital turnovers per year.

"The circumstances which augment the product of the individual working day such as cooperation, division of labour, employment of machinery, shorten at the same time the working period of connected acts of production. Thus machinery shortens the building time of houses, bridges, etc; a moving and threshing machine etc. shorten the working period required to transform the rich grain into a finished product. Improved ship building reduces by increased speed the time of turnover of capital invested in navigation".³⁹ Because of improved transportation, it could be possible to reduce the stock of inventories, the money locked up in non-surplus-value producing capital. On this ground also, profit rates would be increased.⁴⁰

38. Marx- Engels Correspondance p. 242.

39. Capital Vol. II p. 267.

40. Ibid., p. 291.

In addition, Marx brings forth an interesting prediction "the day is not far distant when, by a combination of railways and steam vessels, the distance between England and India measured by time, will be shortened to 8 days, and when that once fabulous country will thus be actually annexed to the Western world."⁴¹

The reproduction of a given magnitude of industrial capital is defined as a turnover, t . The number of turnovers per year is measured by

$$n = \frac{1}{t}$$

capital turnover n , connects the value of the capital advanced in the year, K_0 , to the value of the capital utilised during the year, K_e .

$$K_e = \frac{K_0}{n}$$

The surplus-value depends not on the value of the capital advanced in a year but upon the value of the capital actually utilised. Marx elaborates this point. "Now let us select a capital A composed of $80c + 20v = 100K$. Let this have

41. On Britain p. 387. In the days of Marx, the journey from Britain to India took about 4 months. Marx wrote this well before the war of Plassey which laid the foundation stone of British Empire in India.

a rate of surplus-value of 100 per cent let it be turned over twice per year. The annual product, then is

$$160_c + 40_v + 40_s$$

But for the purpose of ascertaining the rate of profit, we do not calculate the 40_s on the turnover capital of 200. We calculate it on the advanced capital of 100 and we obtain thus a rate of profit of 40 per cent.

Now let us compare this with a capital of B composed of

$$160_c + 40_v = 200 K,$$

which has the same rate of surplus-value, 100 per cent but which is turned over only once a year. The annual product of this capital is the same as that of A, viz. $160_c + 40_v + 40_s$. But the 40_s in this case are to be calculated on an advance of capital amounting to 200 so that the rate of profit of B is only 20 per cent or one half of that of A.⁴²

Marx, while establishing the general relationship between increasing organic composition of capital and capital turnover makes the following assumptions.⁴³

42. Capital Vol. III p. 87.

43. Capital Vol. II p.210.

1. $K_0 = 100000$
2. $c = 80000$
3. $v = 20000$
4. Depreciation of $\overset{c}{C} = 10\%$

So out of $80000 \overset{c}{C}$, 8000 every year forms the constant capital used in production.

5. $n = 5$.

So the constant capital per turn over per year is $\frac{1}{5}$ of 8000 i.e. 1600 .

6. $\frac{s}{v} = 100$. The annual structure of production, according to Marx, assumes the following form.

First t	:	$1600c + 20000v + 20000s$
Second t	:	$1600c + 20000v + 20000s$
Third t	:	$1600c + 20000v + 20000s$
Fourth t	:	$1600c + 20000v + 20000s$
Fifth t	:	$1600c + 20000v + 20000s$
Annual		$8000c + 100000v + 100000s$

The total capital advanced is 100000 .

The total capital employed is 108000 .

The total annual surplus is 100000.

The annual rate of profit is 100 %.

If 10,000 c is increased and put to the production, the organic composition of capital increases from

$$\frac{80000}{80000} + 20000 \quad \text{to} \quad \frac{90000}{90000}$$

+ 20000. Marx further assumes that the number of turnovers increases from five to six. In that case, the constant capital per turnover would be $\frac{1}{6}$ of 10 per cent of 90,000 c . That is to say, 1500 c . Then the structure of production would take a different form.

First	t	:	1500 c	+	20000 v	+	20000 s
Second	t	:	1500 c	+	20000 v	+	20000 s
Third	t	:	1500 c	+	20000 v	+	20000 s
Fourth	t	:	1500 c	+	20000 v	+	20000 s
Fifth	t	:	1500 c	+	20000 v	+	20000 s
Sixth	t	:	1500 c	+	20000 v	+	20000 s
<hr/>							
Annual			9000 c	+	120000 v	+	120000 s
<hr/>							

The total capital outlay in this case is 120000.

The total Capital employed is 129000.

The total annual surplus-value is 120000.

The annual rate of profit is 109 per cent.

In brief, although the total capital outlay increased at the rate of surplus-value, the annual rate of profit increased from 100 to 109 per cent. This enhancement, obviously, is due to the increase in the number of capital turnovers per year.

b. CHANGING VALUES OF MERCHANT'S CAPITAL

Merchant capital stripped of all heterogeneous functions such as transporting, distributing etc. creates neither value nor surplus-value but acts as middleman in their realisation. In other words, merchant capital is a capital which shares in the profit without participating in its production.⁴⁴ The relation of merchant's capital to surplus-value is different from that of industrial capital. The latter produces surplus-value by directly appropriating the unpaid labour whereas the former appropriates a portion of this surplus-value by having this portion transferred from industrial capital to itself. The formation of a general rate of profit results from industrial capital and their competition which is later corrected, supplemented and modified

44. For a detailed discussion, refer Capital, Vol.III, Chap. XVII "Commercial Profit".

by the intervention of merchant's capital. However, in the course of its historical development the process is reversed. It is the commercial capital which first decides the prices of commodities by and large in consonance with their values and it is in the sphere of circulation, a general rate of profit initially takes shape. Hence it is the commercial profit at the earlier stage, which determines the industrial profit. This continues till the capitalism has grown up and the producer himself has become merchant and then the commercial profit is reduced to that "aliquot part of the total surplus-value falling to the share of merchant's capital as an aliquot part of the total surplus-value falling to the share of merchant's capital as an aliquot part of the total capital engaged in the social process of reproduction."⁴⁵ Just as industrial capital realizes only such profits as already exist in the value of commodities as surplus-value, merchant capital reaps profits only because the entire surplus-value or profit has not yet been fully realized in the price charged for commodities by the industrial capitalist. The merchant's selling price exceeds the purchase price not because the former exceeds the total value, but because the latter is below this value.

45. Ibid., p. 340.

Merchant's capital, thus, participates in levelling surplus-value to average profit, even though it does not participate in its production. Consequently, the general rate of profit contains a deduction from surplus-value due to merchant's capital. Hence a deduction from the profit of industrial capital. From the above discussion, the following would be deduced.

(A) The larger the merchant's capital in proportion to the industrial capital, the smaller is the rate of industrial profit and vice versa.

(B) The rate of profit is always lower than the rate of the actual surplus-value. (it always understates the intensity of exploitation) The average rate of profit of the capitalist expresses a rate of profit smaller than it actually is. Marx illustrates this. "If... a capital of $720c + 180v + 180s$, assisted by a merchant's capital of 100 produces a profit of 162, or 18% for the industrial capitalist, hence implying a deduction of 18, then, but for this independent merchant's capital, the additional capital required would probably be 200, and we should have a total advance by the industrial capitalist of 1,000 instead of 900, which, based upon a surplus-value of 180, would yield a rate of profit of only $16\frac{4}{11}\%$."⁴⁶

46. Ibid., p. 343.

c. CHANGING VALUES OF VARIABLE AND CONSTANT CAPITAL

As the capitalist economy progresses, a series of both quantitative and qualitative changes affecting the valuables, i.e. constant and variable capital in the organic composition of capital, take place. The qualitative changes are discernable on

- (i) the values of raw material
- (ii) the values of labour-power and
- (iii) the values of capital appreciation and depreciation.

(i) THE VALUES OF RAW MATERIAL

The raw material segment of commodity values rises with increasing organic compositions of capital.⁴⁷

Since the rate of profit is $\frac{s}{c}$ or $\frac{s}{c+v}$, it is obvious that everything causing a variation in the magnitude of c and thereby of c should also bring a variation in the rate of profit, even if s and their mutual relation remain unaltered. Now raw materials are one of the principal components of constant capital. Even in industries which consume no raw materials, these enter as auxiliary materials or components of machinery and consequently, their price

47. Capital Vol. I p. 682.

fluctuations influence the rate of profit. If the price of raw material falls by an amount, d , then $\frac{s}{c}$ or $\frac{s}{c+v}$ becomes $\frac{s}{c-d}$ or $\frac{s}{(c-d)+v}$. Thus the rate of profit rises. Conversely if the price of raw material falls by an amount that is equal to d , then

$$\frac{s}{v} \text{ or } \frac{s}{c+v}, \text{ becomes } \frac{s}{c+d}, \text{ or } \frac{s}{(c+d)+v},$$

and the rate of profit falls. Other conditions being equal, the rate of profit falls and increases inversely to the price of raw material.⁴⁸

The value of raw materials enters into the value of the product in the manufacture of which they are consumed while the elements of fixed capital transfer their value to the product only in proportion to their wear and tear. Even though the rate of profit is decided by the total value of the capital applied irrespective of the quantity that is consumed in the making of the product, the price of the product is influenced far more by the price of raw material than by fixed capital. The price of the product does not rise or fall in proportion to that of the raw material.

The quantity and value of the machinery increase with

48. Capital Vol. III pp. 126-127.

the enhancement of labour productivity but lesser to the proportion of the productivity i.e. not in the proportion in which machinery increases its output. In these industries, the increasing labour productivity is expressed in the proportion in which a larger quantity of raw materials absorbs a definite quantity of labour. Hence the increasing amount of raw material is converted into products. Thus the value of raw material constitutes an ever-increasing component of the value of the commodity product in proportion to the development of the productivity of labour. It is because in every aliquot part of aggregate product, the portion representing depreciation of machinery and the portion formed by the newly added labour- both continually decrease.⁴⁹

Due to such a falling tendency the other section of the value representing raw material increases proportionately unless this is neutralized by a proportionate decrease in the value of the raw materials emerging from the increasing productivity of the labour.

Like wages, raw materials constitute parts of circulating capital and hence need to be replaced by the sale of the product. This indicates how a rise in the price of

49. Ibid., p. 129.

raw material can retard or arrest the entire process of reproduction if the price obtained by the sale of commodities is inadequate to replace all the elements of these commodities.

(ii) THE VALUE OF LABOUR-POWER

The metamorphosis from manufacture to machinery brought about two important qualitative changes in the mode of production.

1. The use of machine
2. The replacement of Human motive power by mechanical power.

Before the advent of machinery, the quantum of products produced depended only upon the efficiency of the worker wielding the tool. The introduction of machine in the realm of production brought out a situation in which the number of tools that could be operated was not confined to workers' "bodily organs".⁵⁰ The substitution of mechanical power for human power is an essential factor to the development of machine. This released the productiveness of the machine from limitations of human strength.⁵¹ In fine, the

50. Capital Vol. I p. 408.

51. Ibid., p. 412.

contrast of the role of labour before and after the introduction of machinery is startling. Thanks to machinery, the command of the situation by the labourer is reduced to a larger extent. He is no more the master of the situation.⁵² "Owing to the extensive use of machinery and the division of labour, the work of the proletariat has lost all the individual character and consequently all charm for the workman. He becomes an appendage of the machine and it is only the most simple, most monotonous and most easily acquired knack that is required of him".⁵³ Marx says that in manufacture the workmen are not more than parts of a living mechanism. "The special skill of each individual insignificant factory operative vanishes as an infinitesimal quantity before the science."⁵⁴

The advent of machinery brings forth a lot of changes in the social structures. The family, purely social relationship between man and wife, parents and children, derived hues from the existing mode of production.⁵⁵

52. Ibid., p. 415.

53. Communist Manifesto p. 18.

54. Capital Vol. I, p. 462.

55. For a detailed discussion see German Ideology pp. 17-18. Also refer Communist Manifesto p. 32.

After indulging on such issues which have wider ramifications, Marx gives the general production that as modern industry develops the value of labour-power declines.

The value of labour-power is decided by the subsistence of the family. With the introduction of machinery woman and child labour are also utilised in the factory, since, as we have already seen, the muscular strength is replaced by mechanical force. Inclusion of women and children in the labour force gives more than one earning member for a single family.⁵⁶ Thus the qualitative changes in the labour component of the capital composition enhance relative surplus-value and thereby the rate of profit. As long as industry expands, this tendency to increase the rate of profit would linger.

(iii) THE VALUES OF CAPITAL APPRECIATION AND DEPRECIATION.

Lengthening the working day ensures greater utilisation of constant capital. This enhanced rate of capital absorption into the process of production decreases the cost of capital depreciation and thereby affects the quantum of surplus-value. The concepts, appreciation and depreciation are self-explanatory. As a result of certain general

56. Capital Vol. I, p. 431.

economic conditions, a given capital increases or decreases in value. The value of a capital invested in production either rises or falls, irrespective of its self-expansion by virtue of the surplus-labour employed by it.⁵⁷ Appreciation and depreciation may affect either constant or variable capital or both and in the case of constant capital it may, in turn affect either the fixed or the circulating portion or both. If the value of labour-power increases due to a rise in the value of the means of subsistence required for its reproduction or falls due to a reduction in their value, a decrease in surplus-value corresponds to such appreciation and an increase in surplus-value to such depreciation. This holds good provided the length of the working day remains the same.

If wages fall in consequence of a depreciation in the value of labour-power (which may even be extended by a rise in the real price of labour) a portion of the capital hitherto invested in wages i.e. variable capital, is released. In the case of new investments of capital, this has the effect of its operating with a higher rate of surplus-value. It takes less capital than before to activate the same quantity of labour and thus the unpaid labour

57. Capital , Vol. III p. 138.

increases at the expense of the paid portion. However, in case of already invested capital, not only does the rate of surplus-value increase, but a portion of the valuable capital is also freed which could be used as a new investment.

Let us assume, that £ 500 per week were required at first to employ 500 workers and that now only £ 400 are required for the purpose.⁵⁸ If the quantity of value produced in either case is equal to £ 1000, the amount of weekly surplus-value in the first case is equal to £ 500 and the rate of surplus-value $\frac{500}{500}$ is equal to 100 per cent. But after the wage reduction the quantity of surplus-value £ 1000 minus £ 400 is equal to £ 600 and its rate $\frac{600}{400}$ is equal to 150 per cent. This increase in the rate of surplus-value is the only effect for one who starts a new enterprise in this sphere of production with a variable capital of £ 400 and a corresponding constant capital. But if this occurs in a business already in operation, the depreciation of the variable capital does not only enhance the quantity of surplus-value from £ 500 to £ 600 and the rate of surplus-value from 100 to 150 per cent but frees £ 100 of the variable capital for the further exploitation of labour. Hence the same amount of labour is being exploited

58. Ibid., pp. 136.

and not only that; the release of £ 100 helps to exploit more labourers than before at the higher rate with the same variable capital of £ 500.

The situation could be reversed. Suppose with 500 employed workers, the original proportion in which the product is divided $400_v + 600_s = 1000$, making the rate of surplus-value, 150 per cent. In that circumstance, the worker receives $\pounds \frac{4}{5}$ per week. If 500 workers cost £ 500 per week, due to an appreciation of variable capital, each one of them will receive a weekly wage of £ 1 and £ 400 can employ only 400 workers. If the same number of workers as before is employed, $500_v + 500_s = 1000$. The rate of surplus-value would fall from 150 to 100 per cent which is one-third. In the case of new capital the only effect would be this lower rate of surplus-value. The rate of profit would have also fallen, if other conditions being equal. For example, if $c = 2000$ we have in first case.

$$2000 c + 400_v + 600_s = 3000.$$

The rate of surplus-value, 150%

$$\text{The rate of profit, } \frac{600}{2400} = 25\%$$

In the second case:

$$2000c + 500_v + 500_s = 3000$$

Then the rate of surplus-value= 100 %

The rate of profit $\frac{500}{2500} = 20\%$

In the case of already invested capital, there could be a dual effect. Only two workers would be employed with a variable capital of £ 400 and at a rate of surplus-value of 100 per cent. They would, therefore, produce an aggregate surplus-value of only £ 400. Besides, since a constant capital of £ 2000 requires 500 workers for its operation, 400 workers can put into motion only a constant capital of £ 1600. For production to continue on the same scale, so that one-fifth of the machinery does not stand idle £ 100 must be added to the variable capital in order to employ 500 workers as before. This can be done only by tying up hitherto disposable capital, so that the portion of the accumulation purposed to extend production serves merely to stop a gap or to an addition to the old capital from a portion reserved for revenue.⁵⁹ More capital is required to employ the same number of workers and at the same time the surplus-value produced by each worker is reduced.

Marx explains three types of capital depreciation.

59. "By the tie-up of capital we mean that a certain portions of the total value of the product must be reconverted into elements of constant ^{or} variable capital, if production is to proceed on the same scale." Ibid., p. 131.

(a) circulatory, direct physical consumption of capital in the production process (b) non-use, capital "idleness."⁶⁰ and (c) moral laws of exchange-value "either by machinery of the same sort "being produced cheaper than it or by better machines entering into competition with it."⁶¹ Circulatory depreciation differs directly with the working day while non-use and moral depreciation vary inversely to it.

Moral depreciation dm is measured by

$$dm = c_1 - c_2$$

where c_1 is the value of the machine at the beginning of the process and c_2 is the value of the new machine introduced during the production period.⁶²

This obsolescence is inserted into the equation of profit rate as an additional capital charge on production.

$$p_1 = \frac{s}{c + v + dm}$$

60. Marx defines non-use depreciation "constant capital ... only exists to absorb labour... while they fail to do this, their mere existence causes a relative loss to the capitalist, for they represent during the time they lie fallow, a useless advance of capital and this loss becomes positive and absolute as soon as the intermission of their employment necessitates additional outlay at the recommencement of work". Capital Vol. I p. 282.
61. Ibid., p. 442. Also refer Ibid., p. 631.
62. Ibid., p. 282.

By this charge, the rate of profit is reduced.

Obviously speedier the introduction of technology into the economy the higher will be the disparity between new and prevailing techniques. Consequently, the rate of profit will decline with greater rapidity.

d. CHANGING VALUES OF DISTRIBUTIONS OF PROFIT.

The economies of distribution accounts for the sharing of the wealth produced by a community among the agents which have been active in production. The theory of distribution is just an extension of the theory of value. Labour is the one and only agent that creates exchange-value. However, according to Marx, nowhere injustice is so naked and unashamed than in the field of distribution. As a result, profit, resultant of the productiveness of labour, is shared by industrial capitalist, merchant capitalist and land owners, under the rubric of profit, interest and rent. According to Marx, rent, interest and profit are not organically different from each other. They are chips of the same block. These and similar allied issues have been discussed .

A redistribution of profit among industrial capitalist, merchant capitalist and land owner affects the rate of capital accumulation and thereby causes a change in the general rate of profit. Even though the ultimate decline in the rates of return to all surplus-receiving segment of

the society is inevitable, the degree of decline among them may differ. The rate of profit due to industrial capitalist, atleast during some phases of capitalistic development may actually increase or remain constant or decline slowly than the rates of interest and rent. In brief, the degree of decline in profit is far lesser than in interest and rent. Now let us have a cursory analysis of the declining rates of rent and interest.

(A) DECLINING RATE OF RENT:

Ground-rent is consisted of 2 components (a) differential and (b) absolute rent. The magnitude of absolute rent is decided by the monopolisation of land and lesser organic composition of capital invested in agricultural industry. This low organic composition of capital is due to slackning pace in the introduction of innovations in agricultural industries.⁶³ This gap is by and large reduced due to the impact of science and technology on agricultural industries.⁶⁴ Even though agriculture receives lesser share of technology than industry, its productiveness is not lagging behind. "In the sphere of agriculture modern industry

63. Capital, Vol., III, p. 882.

64. Marx- Engles Correspondance p. 132. Also refer Capital Vol. III, p. 897.

has more revolutionary effect than elsewhere.⁶⁵

The differential rent depends on the varying productivities of land-capital investments. Whether the total productiveness of land rises or declines is immaterial. Only the distribution of land capital among the varying fertilities of soil is pertinent. If the product per unit of land-capital between the superior and inferior soils declines, as more capital is invested in agriculture, differential rent declines. Thus, in agriculture as in money capital, there is a persistent tendency for the rates of return to decline.

(B) DECLINING INTEREST RATES

In general, the rate of interest depends on the prevailing rate of profit, and the relative intensity of the demand for and supply of loanable funds. The rate of profit, of course, sets the ceiling. As there is an unfailing tendency for the rate of profit to decline, Marx says that "the fall in the interest on money is a necessary consequence and result of industrial capitalism."⁶⁶

Marx finds no general law or tendency to determine the interest rates. There is no natural rate of interest

65. Capital Vol. I, p. 554.

66. Economic and Philosophic Manuscripts of 1844, p. 127.

and it is as much a purely empirical fact "belonging to the realm of accident as the division of the share of common profit of some corporative business among different shareholders by percentages".⁶⁷ If a comparison is made between capitalism and earlier economic systems, the declining rate of interest will be more visible. According to Marx, India is a country, "... where the ryot manages his farm as an independent producer, whose production, strictly so called is not yet under the complete sway of capital, although the usurer may not only rob him of his entire surplus-labour by means of interest but also curtail his wages, to use a capitalist term. For the interest of such stages comprises all of the profit... instead of merely expressing an aliquot part of the produced surplus-value, or profit, as it does in countries with a developed capitalist production".⁶⁸

To sum up, a falling rate of profit does not express a falling rate of surplus-value, unless the proportion of the value of the constant capital to the quantity of labour-power which activates it remains unaltered. Or in other words the amount of labour-power raises in relation to the value of the constant capital.

67. Capital, Vol., III, p. 428.

68. Ibid., p. 252.

The acceleration of the accumulation of capital and a decline in the rate of profit are different expressions of the same process but only in so far as both reflect the development of productiveness. Accumulation hastens the fall of the rate of profit since it implies concentration of labour on a large scale and a higher composition of capital. A fall in the rate of profit, in turn, hastens the concentration of capital. "This accelerates accumulation with regard to mass, although the rate of accumulation falls with the rate of profit".⁶⁹

Thus given a sufficient accumulation of capital and the intensity of exploitation, the creation of surplus-value is limited only by the labouring population.

69. Ibid., p. 283.

2.4 COUNTERACTING CAUSES

Even though Marx asserts the law as an inevitability, he enumerates six counteracting causes which "thwart annual the effect of the general law of the falling rate of profit leaving to it merely the character of a tendency".⁷⁰

(A) RAISING THE INTENSITY OF EXPLOITATION⁷¹

The degree of exploitation of labour, the appropriation of surplus-labour and hence surplus-value, is intensified by lengthening the working day and intensifying labour. In his blind passion for surplus-value, the capitalist over-steps not only the moral but even the merely physical maximum bounds of the working day. The capitalist has his own view of ultima thuli. All his concerns are simply the maximum labour-power that can be rendered fluent in a working day. There are many ways of intensifying labour-power which imply an increase of constant capital. There are other aspects of intensification, such as the greater machines which consume more raw material and which do not affect the relation of its value to the price of the labour which sets it in motion. But of all these, the prolongation of the working day which measures the mass of appropriated labour without altering the proportion of the labour-power to the constant capital set in motion by it.

70. Capital, Vol., III, p. 272.

71. Refer Capital, Vol. I, Chapter XVII, "Changes of magnitude in the price of Labour-power and in surplus-value", pp. 568-81.

Marx, here, includes both the lengthening of the working day and split of the system. An extension of the working day enhances the surplus-labour time without a corresponding increase in the 'necessary-labour-time'. The ratio $\frac{s}{v}$ or in other words s' is raised. If the lengthening of the working day leads to an additional worksheet, even then s' would increase markedly than the organic composition of capital. Similar results are obtained when the speed of the machines is increased. Marx, in almost modern terminology talks about the development of technology.⁷² In manufacture, the revolution in the mode of production begins with the labour-power but in capitalism it begins with instruments of labour. A radical change in the mode of production in one sphere of industry involves a similar change in other spheres. "Modern industry", says Marx, "had therefore itself to take in hand the machine, its characteristic instrument of production, and to construct machines by machines".⁷³ In manufacture, the organization of the social process is purely subjective, it is a blend of detail labours. In modern industry, the productive organism is more objective, in which the labourer is reduced to a mere appendage to an already existing material condition of production. It raises the productiveness of the labour to a magnificent magnitude.

72. Ibid., Chapter XV, "Machinery and Modern Industry", pp. 405-556.

73. Capital, Vol. III, p. 420.

Nevertheless machinery like any other part of constant capital, creates no new value but yields up its own value to the product that it serves to procreate. A detailed discussion on this point is done elsewhere. Here it is suffice to say that even though machine can do more work than a human being, it, instead of acting to help the labourer, becomes an instrument of intensification. The mass of surplus-value produced by a capital of a given magnitude is the result of two factors, the rate of surplus-value and the number of labourers employed.⁷⁴ At a given rate of surplus-value it therefore depends on the number of labourers and at given number of labourers employed it depends on the rate of surplus-value. In other words, it depends on the composite ratio of the absolute magnitudes of the variable capital and the rate of surplus-value.⁷⁵ The same factors which enhance the rate of relative surplus-value lower the mass of the labour-power. This would occur, asserts Marx, depending on the definite proportion in which this conflicting movement obtains. Further the tendency towards a reduction in the rate of profit is weakened by a rise in the rate of absolute surplus-value that originates with the lengthening of the working-day.

74. For a detailed discussion see, Capital, Vol. I, Chapter XVI, "Absolute and Relative Surplus-Value", pp. 557-567.

75. Capital, Vol. III, pp. 274.

The rise in the rate of surplus-value is a factor which determines the mass of surplus-value and consequently the rate of profit also, under the circumstances in which the constant capital is either not increased or not proportionately in relation to the variable capital. These counteracting circumstances do not abolish the general law. But on the other hand it makes the law mere a tendency, the law whose efficacy and enforcement are checked, retarded and weakened.

(B) DEPRESSION OF WAGES BELOW THE VALUE OF LABOUR-POWER

It is one of the most important factors checking the tendency of the rate of profit to fall by increasing the rate of surplus-value even though Marx makes only a passing reference to it. This factor, he remarks, "has nothing to do with general analysis of capital but belongs in an analysis of competition which is not presented in this work."⁷⁶

As machinery dispenses with muscular power, it becomes a means of employing labourers of "slight muscular strength".⁷⁷ The labour of women and children was therefore sought for by capitalists. The value of labour-power was decided not only by the labour-time necessary to maintain the individual

76. Ibid., p. 276.

77. Marx discusses this point in detail in Chapter XV, Section 3 "The Proximate Effects of Machinery on the Workman", Capital, Vol. I, pp. 430-456.

adult labour, but also by that necessary to maintain his family. Machinery by throwing every member of that family to the labour market, spreads the value of man's labour-power over his whole family. To buy the labour-power of a family of say 5 workers may cost the capitalists more than it did to purchase the labour-power of the head of the family but in return five days' labour takes the place of one and their price falls in proportion to the excess of the surplus-labour of five over the surplus-labour of one. Now the family of five in order to eke out their life, have not only to labour but expand surplus-labour for the capitalist.⁷⁸

Thus the machinery, while augmenting the human material that forms the principal object of capital's exploiting power, at the same time raises the degree of exploitation.

This leads Marx to conclude "by the excessive addition of women and children to the ranks of the workers, machinery at last breaks down the resistance which the male operatives... continued to oppose (to) the despotism of capital".⁷⁹

(C) CHEAPENING OF THE ELEMENTS OF CONSTANT CAPITAL

This constitutes a fascinating exercise on the technology of capital-saving investment. Here various factors

78. Here Marx cites from Th. de Quincey The Logic of Political Economy (London) p. 147. Capital, Vol. I, p. 431. "The numerical increase of labourers has been great, through the growing substitution of female for male and above all of childish for adult labour. Three girls of 13 at wages of from 6 shillings to 8 shillings have replaced one man of mature age, of wages varying from 18 to 45 shillings".

79. Capital, Vol. I, p. 440.

are discussed which tend to increase the rate of profit by lowering the organic composition of capital. The increased use of machinery and rising productivity of labour reduce their value per unit of constant capital. "In this way, the value of the constant capital, although continuously increasing, is prevented from increasing at the same rate as its material volume, that is, the material volume of the means of production set in motion by the same amount of labour-power. In exceptional cases, the mass of the elements of constant capital may even increase while its value remains the same or even falls".⁸⁰ During depression the deterioration of physical assets and their depreciation by writing down, is also one of the important factors in the rise of rate of profit.⁸¹

In a different context, Marx discusses how technology has given capital a power of expansion "independent of a given magnitude of capital actually functioning."⁸² Further, he continues in a different place, "constant capital may be released without depreciation when improvements -- the harnessing of natural powers etc. -- enable a constant capital of smaller value to perform the same technical services as those formally performed by a constant capital

80. Capital, Vol. III, p. 277.

81. Marx elaborately discusses this point in Capital, Vol. III, Chapter XV, Section 3, pp. 294-304.

82. Capital, Vol. I, p. 664.

of greater value".⁸³ Further, he writes "In exceptional cases, the mass of the elements of the constant capital may even increase, while its value remains the same or even falls".⁸⁴ Marx informs that with a given rate of surplus-value, the rate of profit will increase with the reduction of the value of constant capital and with the technological progress.⁸⁵ Thanks to science, quality of the raw materials is improved and thereby wastage is reduced. "Good material leaves less waste".⁸⁶ The 'excrements of production' are converted into valuable by-products. The cost of the constant capital is reduced both as a portion of the total value of product and relative to the variable capital. Consequently both the rate of surplus-value and rate of profit tend to increase.

Marx subtly distinguishes between physical and value formation of the organic composition of capital. He writes "the same developments which increase the mass of the constant capital relatively over that of the variable, reduces the value of its elements as a result of the increased productivity of labour".⁸⁷ Here he brilliantly exposes and interprets the implications of increases in productivity.

83. Capital, Vol. III, p. 139.

84. Ibid., p. 277.

85. Refer Capital, Vol. III, Chapter V "Economics in the Employment of Constant Capital", pp. 92-124.

86. Ibid., p. 99.

87. Ibid., p. 277.

The historical tendency of the organic composition of capital to increase is weakened and the falling rate of profit is moderated. The law thus becomes "a tendency whose effects become clearly marked only under certain conditions and in the course of long periods."⁸⁸ The failure on the part of Marxists and anti-Marxists to understand the fuller significance of these qualifications perhaps by a too cautious Marx has led to bad distortions of theory of profit, and to a lot of empty exercises.

(D) RELATIVE OVER-POPULATION

According to Marxian prognostication, after a certain degree of developments, capitalism acquires more luxurious and extensive habits.⁸⁹ This is due to the development of surplus-population. With the increase of the compositions of capital, the labourers who are thrown out of employment because of the introduction of new technology join the ranks of the relative surplus-population. Thus, when the supply of labour exceeds the demand the surplus -- the industrial reserve army - produces a downward pressure on wages.⁹⁰ Larger the proportion of the industrial reserve army, greater the competition among the sellers of

88. Ibid., p. 280.

89. Economic and Philosophic Manuscripts of 1844, p. 120.

90. Capital, Vol. III, p. 277.

labour and hence, lower is the wage rate.⁹¹ Marx uses the terms relative and absolute surplus-population interchangeably. In doing so, he confuses the issue and overlooks the question of labour reabsorption.

The growing supply of labour provides the incentive for production of luxurious commodities. Since luxury production is characterized by relatively low organic compositions of capital -- the average rate of profit increases.⁹² Here also Marx has not explained why this factor cannot remain permanently.

(E) FOREIGN TRADE

This factor increases the rate of profit in two ways. Imports of food stuffs aid to reduce the price of labour-power*. Thus s' is increased. Imports of raw material lower the value of the constant capital and so the organic composition of capital is reduced. Capitals invested in foreign trade yield a higher rate of profit. Here he secures a surplus-profit.⁹³ Capitals invested in colonies, yield higher rates of profit for the simple reason that the rate of profit is higher due to backward development there.⁹⁴ The

91. Capital, Vol. I, p. 680.

92. Capital, Vol. III, p. 297.

93. V.I. Lenin in his book Imperialism, the Highest Stage of Capitalism. Selected Works (New York, 1943), Vol. V., ~~It~~ has developed this idea to an extreme conclusion.

94. Marx thinks here Adam Smith is more correct than Ricardo. "They contend that the equality of profits will be brought about by the general rise of profits and I am of the opinion that the profits of the favoured trade will speedily submit to the general level". Capital, Vol. III, p. 278.

* Marx is having in mind probably the effects of the abolition of Corn Laws in England.

same foreign trade which develops the capitalist mode of production in the home country also causes over-production in respect to foreign markets so that in the long run it again has an opposite effect. In brief, foreign trade causes the expansion of the home capital and to this time it leads to a rise in the organic composition and subsequently to a lowering of the rate of profit.

(F) THE INCREASE OF STOCK CAPITAL

With the progress of capitalist production, which goes hand in hand with accelerated accumulation, a portion of capital is calculated and applied only as interest-bearing capital.⁹⁵ These capitals, although invested in large productive enterprises yields to a smaller measure only. Because the constant capital in these larger enterprises is greater in its relation to the variable capital; hence these do not go into levelling the general rate of profit since their yield is lower than average rate of profit.

Here we clearly see how Marx anticipates the capitalistic development taking the form of joint-stock companies. To sum up : six contracting influences, as repeatedly told by Marx, check, retard and weaken the absolute enforcement of the law but they are too feeble to suspend it.⁹⁶ Hence,

95. Ibid., p. 280.

96. Ibid., p. 275.

Marx concludes "the law therefore shows itself only as a tendency whose effects become clearly marked only under certain conditions and in the course of long periods."⁹⁷

It should be noted here that Marx's treatment of the counteracting causes are neither exhaustive nor analytical. Akin to many discussions in Volume III, this too is left incomplete due to the demise of the author.

97. Ibid., p. 280.

2.5 A CRITIQUE OF THE LAW

Thus far we have seen both 'favourable factors' and 'counteracting causes' operating on the rate of profit. The absolute and relative surplus-value and consequently the rate of profit increased with falling values of labour-power, with prolongation of the working day and with changes in the price of raw materials. The number of turnovers per year was seen to enhance with higher organic compositions of capital so that the annual rate of profit also inclined to increase. It was also understood that although general rate of profit may decrease, the rates of return to the money capitalist and land owner fall at a greater rate than the average. So that the rate of profit due to the industrial capitalist may simultaneously increase. Such a distinction between the general and industrial rate of profit has close affinity with the rate of capital accumulation and, therefore, upon the rate at which the rate of profit declines.

In general, the exposition of the law by Marx is wrought with vagueness. In simpler terms, the law behaves in some way under certain circumstances and behaves differently at different circumstances.

The law should be understood with all its implications since it forms the very basis of Marxian study on capitalism. This particular point is treated in details elsewhere.

Marx has constructed the entire structure of the law upon two assumptions, when he stated that the organic

composition of capital increase while the rate of surplus-value remains constant. The first assumption is organic composition of capital is ever increasing with the development of capitalism. It is this fact that due to modern technology, the organic composition of capital is ever rising. This is an innocuous assumption. And there is little controversy about it. However, a lot of disputes and difference of opinion are haunting both academic and non-academic circles about the second assumption of the constancy of the rate of surplus-value.⁹⁸ A rising organic composition is matched with enhanced labour productivity. Hence a constancy in the rate of surplus-value implies a rise in real wages proportional to the increase in labour productivity. A constancy in the rate of surplus-value means the labourer works the same amount of labour hours for himself and for capitalist as before. If so both the physical output as represented by the wage and physical output represented by surplus-value have increased. In that case the labourer also reaps the gain along with the capitalist that accrues due to the rise in the labour productivity. Even though this assumption is logically tenable there are reasonable grounds to question it.

98. It has embarrassed quite a few marxists and furnished a happy hunting ground for anti-marxists. Paul Sweezy, whose sympathy for Marx is pronounced, hastens to make adequate modifications. The Theory of Capitalistic Development (New York, 1942), pp. 100-08.

If the foregoing analysis is logically carried, it leads to expect a rising rate of surplus-value. The corollary of enhanced labour productivity is the creation and its perpetuation of an industrial reserve army which causes a decline in wages and thereby to increase the rate of surplus-value. "Here the capitalist mode of production falls into another contradiction. Its historical mission is the ruthless development in geometrical progression of the productivity of human labour."⁹⁹

Marx, in many places especially in Capital, Volume I Part IV, 'Production of Relative Surplus-Value', covering about 200 pages, has repeatedly asserted the increasing productivity of labour.¹⁰⁰ Marx says : "...since relative surplus-value increases in direct proportion to the development of productiveness of labour."¹⁰¹

Like the dictum of Osker Wilde "dead rules the living", under capitalism the past labour in the form of constant capital controls the living labour. In another place "...hand in hand with the increasing productivity of labour goes...the cheapening of the labourer, therefore a higher rate of surplus-value even when the real wages are rising. The latter never rises proportionally to the

99. Capital, Vol. III, p. 308.

100. Capital, Vol. I, pp. 342-556.

101. Ibid., p. 351.

productive power of labour."¹⁰² "Modern Industry raises the productiveness of labour to an extraordinary degree."¹⁰³ From these we infer that Marx conflicts with what he has so fondly built in the earlier section. So Marx is less convincing in assuming a constancy in surplus-value in the face of increasing productivity of labour. Higher productivity goes with higher rate of surplus-value -- as hand with gloves.

This leads us to an entirely different situation, a situation in which both organic composition of capital and rate of surplus-value become variables. When both the factors are variable, then the direction in which rate of profit moves, becomes indeterminate. At the best we can say that the rate of profit may tend to fall, if the degree of increase in the rate of surplus-value is lesser than the degree of decrease in the proportion of variable to total capital such a conclusion reduces much of the substance in the law. Paul Sweezy has mathematically expressed this situation¹⁰⁴ -

$$p = s' (1 - q)$$

From this it follows that if we assume the rate of surplus-value (s') to be constant the rate of profit (p') varies

102. Ibid., p. 662.

103. Ibid., p. 422. Likewise, innumerable references can be culled from Capital Eg. Capital, Vol. III, p. 178, p. 257, p. 261, p. 269, p. 290 etc.

104. Sweezy, op. cit., p. 102.

inversely with the organic composition of capital (q). Thus, we have $p = s' (1 - q)$. Let $1 - q$, the ratio of variable to total capital, be represented by q' . Then the equation, can be written $p = s' q'$. Now $dp = s' dq' + q'ds'$. Hence dp is negative, i.e., the rate of profit is falling, if $q'ds'$ (which is essentially negative) is numerically larger than $s'dq'$ (which is essentially positive). This condition can also be written

$$|ds'| / s' < |dq'| / q'$$

By differentiating from the mathematical expression of Sweezy, we can obtain

$$dp' = q'ds' + s'dq'$$

For Marx, $ds' = 0$

$$ds' = 0$$

since the rate of surplus-value is constant and hence the rate of change in the profit rate

$$dp' = s'dq'$$

Hence if the organic composition of capital rises,

$$dq' < 0$$

and hence

$$dp' < 0 \text{ also.}$$

The rate of profit and q' can be shown to have the same critical points by setting

$$dp' = 0$$

$$dq' = 0 \text{ also.}$$

There moreover, are both maxima as can be seen by differentiating again, whence

$$d^2 p' = s' d^2 q' + dq' ds'$$

since $ds' = 0$ and $s' > 0$, $d^2 p'$ and $d^2 q'$ have the same sign.

With the help of illustrations, let us further go into details. In the earlier section on surplus-value, we have seen the upper limit imposed by Marx to surplus-value. Marx has introduced this riddle on the law of the falling rate of profit to give more strength and justification for it. His prediction about the declining rate of profit requires some sort of ceiling for the rate of increase of surplus-value. Lest the ever-increasing rate of surplus-value would permanently arrest the operation of the law. Because this is such a potent factor. Marx writes : "To the extent that development of the productive power reduces the paid portion of the employed labour, it raises the surplus-value by raising its rate; but to the extent that it reduces the total mass of labour employed by a certain capital, it reduces the factor of numbers with which the rate of surplus-value is multiplied in order to calculate its mass.... Two labourers each working 12 hours daily, cannot produce the same mass of surplus-value as 24 labourers, each working only 2 hours even if they could live on air and did not have to work for themselves at all.... In this respect, then, the compensation in the reduction of the number of labourers

by means of an intensification of exploitation has certain impossible limits. It may for this reason, check the fall of the rate of profit, but it cannot prevent it entirely."¹⁰⁵ Herein comes the major difficulty confronted by Marx. We know that Marx measures surplus-value in terms of labour hours. Employing this yardstick, he is not able to take account of the variation in productivity resulting from different capital compositions and incorporate it into his calculation of rate of profit. Had he taken full note of the enhancement of productivity, definitely he could have advocated more sober and guarded approach. His enthusiasm and preoccupation made him more an Hotspur than a scientist treading on unknown affairs.

If the neglected factor of productivity is incorporated into the Marxian upper limit of surplus-value then the conclusions would be significantly altered. Let us assume now that 24 men work 2 hours daily. If U represents the unit of measurement of real output, then

- (1) constant capital is 24 U
- (2) output is 84 U.
- (3) organic composition of capital is 100% since the variable cost is zero and
- (4) The price of a unit of constant capital 1U.

The Capital - labour ratio is 24 U for 24 labourers or 1 unit per labourer.

105. Capital, Vol. III, pp. 370-71.

Thus the production function is as follows :

$$c + v + s = C$$

$$24 U + 0 + s = 84 U$$

$$s = 60 U$$

Surplus is 60 U. The rate of surplus-value is

$$\frac{s}{v} \text{ is } \frac{60 U}{0} \text{ or infinitive.}$$

The rate of profit is $\frac{60 U}{24 U}$ or 250%.

The important point here is that the relationship between surplus-value and rate of profit solely depends on the rate of productivity.

Let us compare this with the following case, where, according to the assumption of Marx, only 2 labourers are employed. We assume that -

(1) constant capital is 24 U

(2) output is 96 U

(3) organic composition of capital is 100% and

(4) The price of a unit of constant capital is 1 U.

The capital-labour ratio is 12 U per labourer. That means an increase of 12 times in Capital per man. Then the production function is as follows :

$$c + v + s = C$$

$$24 U + 0 + s = 96 U$$

$$s = 72 U$$

The surplus is 72 U. The rate of surplus-value is

$$\frac{s}{v} \text{ is } \frac{72 U}{0} \text{ or infinitive}$$

The rate of profit is $\frac{72 U}{24 U}$ or 300%.

To the chagrin of Marx, rate of profit increases with the decline of number of labourers. So too the total output. There are some pertinent doubts about the supposition that two labourers each with 12 units of capital will not produce a higher output than 24 labourers each working with only one unit. With that questioned supposition, we cannot be sure about the declining rate of profit.

Marx calls the law as tendential because it states an ever-present tendency, smouldering yet urbane in capitalism. Although hidden, or arrested by antagonistic forces, it can exist and sway even if profits continued to increase. This law is a statement of a situation where the 'counteracting causes' and 'favourable factors' act and react on each other and whose cumulative forces push and pull in diametrically opposite directions like two pullies behave in a parallelogram. However, Marx has faith on the ultimate triumph of the positive forces over the 'counteracting causes' in the law.

This law has caused a lot of disputes and difference of opinions. John Strachey has accepted it in its entirety. "We know that as the technique of the production develops, less and less living labour v , and more and more plant and machinery c , are used to produce a given quantity of produce. Therefore, less and less value must be created. And if less value is created, less surplus-value will also be created."¹⁰⁶ Hence, the rate of profit would fall.

106. John Strachey, The Nature of Capitalist Crisis (New York, 1935), p. 242.

Stratchey has ignored that more machinery need not mean correspondingly more c in value and also v may be falling; s may rise if s' is increasing. While John Eaton has taken this law for granted,¹⁰⁷ Edmund Wilson has not viewed this seriously.¹⁰⁸ Schumpeter has made a passing judgement saying that the law is "sufficiently condemned by its premises".¹⁰⁹ Stalin, as it is expected of him, has asserted the falling rate of profit "in view of the increasing organic composition of capital."¹¹⁰

To Blodgett, the Marxian conclusion in this facet "contradicts the regular Marxian theory of value which makes exchange value depends on labour-time and not on costs of production."¹¹¹ Maurice Dobb, wants hasty critics not to give a "too mechanistic twist, depicting it as though it relayed on the forecast of profit falling in a continuous downward curve until it reached a point at which the system would come to an abrupt stop.... The true interpretation seems to be that Marx saw tendency and counter tendency as elements of conflict out of which the general movement of the system emerged.... Marx not only expected that the tendency of profit to fall would prevail at least as a long-term tendency but

107. John Eaton, Political Economy : A Marxist Text-Book (New York, 1949), p. 130.

108. Edmund Wilson, To the Finland Station (New York, 1940), p. 296.

109. Joseph, A., Schumpeter, Capitalism, Socialism and Democracy (New York, 1950), p. 30.

110. Joseph Stalin, Economic Problems of Socialism in the USSR (New York, 1952), p. 31.

111. Ralph H. Blodgett, Comparative Economic Systems (New York, 1949), p. 797.

also saw in this phenomenon, a periodic curtailment of new investment and of production and employment."¹¹²

Dobb further has ventured to strengthen the few links in the Marxian structure by saying that technological changes, rising the organic composition are to be of defensive type allied with upswing of the business cycle; the closer we get to absolute over-production of capital, the greater will be the increases in organic composition meant to maintain the going rate of surplus-value. Marx has argued that with total utilisation of the labour force, the only realm in which accumulation can further progress is in constant capital. This accumulation, by increasing the organic composition is also a response to increased wage pressures hovering around the rate of surplus-value. Dobb refers these technological changes intensive, contra distinct to extensive accumulation of constant capital which reduced the value of the product.¹¹³ With all the fairness to Dobb it could be told that he not only under-estimates the possibility of extensive technology but also fails to note the secular trend of the profit rate. Of course, Dobb's interpretation has had its own merit. As Dobb had pointed out that there is a residual of new constant capital that is not ruined by the crisis and which continues to add to the base of capital stock employed for

112. H. Maurice Dobb, Political Economy and Capitalism (New York, 1949), pp. 97-98.

113. Ibid., p. 122.

the calculation of the profit rate. Such a residual would be of the same magnitude as the long-run increases in the rate of surplus-value brought about by the technological change as Wolfson has rightly pointed out. "A cyclical interpretation of the rate of profit theory neglects the fact that the crisis tends to wring out inefficient firms and techniques as well as lower inflated wages."¹¹⁴ It thus serves to increase long-run productivity and enhance the rate of surplus-value. One could equally make out in this way a cyclical theory of the increase in the profit rate through the relative and absolute production of surplus-value. For Henry Chamber, this law appears to be "dissatisfactory". Another critic views "in hundreds of pages of Capital, Volume III, with endless repetition and futile efforts to escape from his own net, he is forced to the conclusion that prices are not proportional to variable capital or labour-cost and that rates of profit are in no wise related to rates of surplus-value. In dialectical terms, the labour-cost theory, carried to its logical conclusion brought its own negation."¹¹⁵

George N. Halm thinks that this law leads Marx into "a fatal contradiction with the rest of his system."¹¹⁶

114. Murray Wolfson, A Reappraisal of Marxian Economics (New York, 1966), p. 133.

115. J.E. Le Rossignol, From Marx to Stalin (New York, 1940), p. 206.

116. Economic Systems : A Comparative Analysis (Calcutta, 1965), p. 137. Mr. Boher is of the same opinion. He says : "Marx's twin assumptions of a rising organic composition of Capital and a constant rate of surplus-

Marx Beer, the biographer of Marx, thinks that these laws "need not in themselves be true, only they must record with the sentiments of the struggling mass."¹¹⁷ George Sabine has gone to the extent of saying that even for Marxist this is to-day "an object of respect as being a relic of the master rather than a serious part of the system."¹¹⁸

Rosa Luxemburg has brought her own interpretations. According to her, both internal and external markets are essential to capitalism. The internal market is the capitalist market where production itself buys and supplies its own products. The external market is the non-capitalist economy, which absorbs the products of capitalism and supplies producer's goods and labour-power for capitalist production.

Internal capitalist trade can realise only certain quantities of value contained in the social product; the constant capital that has been utilized, the variable capital and the consumed part of the surplus-value. That part of surplus-value which is earmarked for capitalization must be realised elsewhere. If capitalization of surplus-value is a motive force and purpose of production, it must yet

(contd. f.n. 116)

¹¹⁶ -value carry implications which are incompatible with some of his key theorems". Karl Marx's Interpretation of History (Cambridge, 1950), p. 224.

117. The Life and Teaching of Karl Marx (London, 1921), p. 131.

118. A History of Political Theory (London, 1949), p. 657.

proceed within the limits delineated by the renewal of constant and variable capital. "Further with the international development of capitalism, the capitalization of surplus-value becomes once more urgent and precarious and the substratum of constant and variable capital becomes an ever-growing mass -- both absolutely and in relation to the surplus-value."¹¹⁹ Eventhough the old capitalist countries provide even larger markets and increasingly become a dependent on one another, compete more vigorously for trade relations with non-capitalist countries. Hence, the conditions are the "capitalization of surplus-value clash increasingly with the conditions for the renewal for the aggregate capital - a conflict which incidentally, is merely a counterpart of the contradictions implied in the law of a declining profit."¹²⁰ Samuelson convincingly has demonstrated the necessity of a rise in real wages with a decline in profits. However, he has not derived from Marx's own premise. It is an attempt to provide the translation of Marxian reproduction schemes into a dynamic Harrod-Domar model.¹²¹

Steindl has ventured to answer the criticism against Marx that he has not given any logical proof of his law.¹²² He feels that Marx could have obtained a logical proof without

119. Rosa Luxemburg, The Accumulation of Capital, (New Haven, 1951), p. 367.

120. Ibid.

121. See Paul A. Samuelson, "Marxian Economic Models", American Economic Review, Vol. XLVII, No. 6 (1957), pp. 897-98. See also, Evsey D. Domar "The Problem of Capital Accumulation", American Economic Review, Vol. XXXVIII, No. 5 (1948), p. 790.

difficulty if he has selected a different concept of the organic composition, i.e. ratio of capital invested to the net product. The ratio of profits in the net product can increase only by a certain maximum level. For instance, assuming that it was originally 15%, it could at best only be doubled. As the rate of profit is a ratio of profits in the net product divided by the ratio of capital to the net product, the proposition follows; "with the increase of capital in relation to a given net product, the profit rate must necessarily decline sooner or later".¹²² Then he hastens to remark that in mature capitalism the ratio of capital to net product does not increase. He next poses the chief question about the law of the declining rate of profit; do we have to conceive of this tendency as an actual fall in the rate of profit which in fact takes place as a consequence of a change in capital structure? The amount of profit realized is solely decided by the amount which capitalists invest and consume. As long as the amount of capitalist consumption and investment, as a ratio of their capital, does not decrease, the rate of profit can never decrease.

(continued from back page)

122. J. Steindl, "Karl Marx and the Accumulation of Capital" originally appeared as Chapter XIV of Maturity and Stagnation in the American Economy (Blackwell, 1952), reproduced in Marx and Modern Economics, Edited by David Horowitz, (London, 1968), pp. 244-69.

123. Ibid., p. 260.

Steindl redefines the concept of the organic composition of capital not as an exercise to find out what Marx really meant, but to suit his own purpose of criticising Marx. Lawrence R. Klein, the author of The Keynesian Revolution in a celebrated article has tried to build a new Marxian Model.¹²⁴ The demand for investment goods depends upon two variables -- profits and the stock of capital. According to Marx, the dependence on profit is positive, whereas the dependence on capital is negative. The stock of capital is always a drag upon the system. Klein has conducted a number of statistical investigations and concluded that the stock of fixed capital is negatively related to investment. The more capital there is, other things being unchanged, less is the demand for new capital. The depressing influence of capital accumulation operates not only partially in the demand equation for producer's goods but also depressingly influences the entire system.¹²⁵ Marxian model conceived by Klein is a compromise between two extremes - one of long-run equilibrium in which investment is zero and one of short-run equilibrium in which the stock of capital is taken as

124. Lawrence R. Klein, "Theories of Effective Demand and Employment", Marx and Modern Economics, op. cit., pp. 138-175.

125. Ibid., p. 170.

explained. The introduction of the stock of fixed capital is the investment -- demand equation of the Marxian system fits convincingly with the theory of the falling rate of profit.¹²⁶

Dickinson feels that the connection between increasing organic composition of capital and a falling rate of profit is "a sound intuition" and that it is impossible summarily to dismiss Marx's theory of the falling rate of profit "as a mere Chimaera".¹²⁷ Ronald L. Meek, "on the basis of a mere half-dozen examples" concludes that "the rate of profit is first to rise and then some time afterwards to fall." The initial rise in the rate of profit will be higher and the point of downturn will be later - (a) the lower is the rate of surplus-value in the situation from which we start; (b) the greater is the rise in overall productivity associated with the rising organic composition and (c) the greater is the rise in productivity in the wage-goods industries relatively to that in the capital-goods industries.¹²⁸

Professor Shibata¹²⁹ questions one of the basic

126. Klein says : "It is also possible to argue that an implied 'theory of the declining marginal efficiency of capital' in the Keynesian theory would call for the introduction of a variable representing capital accumulation in the Keynesian investment schedule". Ibid., p.171.

127. H.D. Dickinson, "The falling Rate of Profit in Marxian Economics", The Review of Economic Studies, Vol. XXIV No. 64 (1957), pp. 120-30.

128. Economics and Ideology and other Essays (London, 1967), pp. 141-42.

129. "On the Law of Decline in the Rate of Profit", Kyoto University Economic Review, Vol. IX, No. 1, 1934, pp. 61-75.

assumptions of the Law i.e., the connection between the rising organic composition of capital and the falling rate of profit. To him, the elevation of the organic composition of capital in a capitalist society does not "of itself, constitute" a cause of the decline of the average rate of profit. Professor Nobuo Okisio points out that the rate of profit cannot exceed the inverse of the organic composition of production.¹³⁰ So,

$$\frac{s}{c + v} \leq \frac{v + s}{c}$$

His conclusion is that the increase of the organic composition of production is an upper limit of the rate of profit "which itself decreases as time passes by...." To Korus,¹³¹ a well known Russian economist, "the tendency for the rate of profit to fall and the counteracting tendencies, which are always emphasized by Maurice Dobb" can be "substantiated... by the analysis of the fundamental formulae of the labour theory of value."

Professor Yoohindo Chigusa deals in detail about the favourable factors and counteracting influences concerning the law.¹³² He feels that there is "no telling sweepingly"

130. Nobuo Okisio, "Technical Changes and the Rate of Profit", Kobe University Economic Review, Vol. VII, 1961, pp. 87-99.

131. "The Tendency for rate of Profit to Fall", in Socialism Capitalism and Economic Growth, edited by Feinstein (Cambridge, 1967), pp. 72-83.

132. "Non-Marxists' view on Marxist Economics", Keio Economic Studies, Vol. III, 1965, pp. 142-158.

as to which agency works more powerfully, one which lowers the profit rate and the other which hampers this trend.

Mrs. Joan Robinson, whose tolerance for Marx is not abundant, after reading Marxian theory of profit has convinced herself that Marx has "ill-judged habit of writing".¹³³ She points out that the law of falling profits made sense only in orthodox economic theory, which had no objections to the conclusions "that real wages are equated to the marginal productivity of labour" and that "the marginal productivity of labour rises as capital per man increases".¹³⁴ Further, she points out "Marx can only demonstrate a falling tendency in profits by abandoning his argument that real wages tend to be constant".¹³⁵ To her, it is a 'drastic inconsistency'. Hence she concludes that "Marx started off on a false sc̄ant, when he supposed that it was possible to find a law of profits without taking account of the problem of effective demand and that ^{her} his explanation of the falling tendency of profits explains nothing at all."¹³⁶ According to her "the trouble probably arose like most of the obscurities in Marx's argument, from his method of reckoning in terms of value."¹³⁷

133. In the introduction to the Rosa Luxemburg's book, The Accumulation of Capital, op. cit., p. 16.

134. Joan Robinson, "An Essay on Marxian Economics" (London, 1952), p. 37.

135. Ibid., p. 36.

136. See Joan Robinson "Marx and Keynes" in Marx and Modern Economics, op. cit., pp. 103-115. Ibid., p. 42. For the collaboration of the law of profits in connection with the problem of effective demand.

137. Joan Robinson, An Essay on Marxian Economics, op. cit., p. 39.

There is little reason to have 'trouble', as Joan Robinson has met. Marx is fairly clear whenever he argues and talks of the relationship between the organic composition of capital and rate of profit. He refers always to 'value-composition' and not to 'technical-composition'. In the unequivocal words of Marx "wherever I refer to the composition of capital without further qualification, its organic composition (value-composition) is always understood."¹³⁸ Marx has also given the specific conditions under which the relations between the technical and value compositions might differ.¹³⁹

So far we have summarized the various trends and substance of the controversies that center around the Marxian theory of falling rate of profit. The extent and the depth of the difference of opinion shows only the importance of the law to Marxism. No fruitful result could be obtained by joining this or that school and that of adding one more dimension to the hostility. On theoretical discussions only logic is the determining factor. After all, logic is a **law** of thought; a law that is not too inflexible.

Hence, there cannot be any cessation for the flow of theoretical arguments.

138. Capital, Vol. I, p. 671.

139. Capital, Vol. III, pp. 889-90.

There is little reason to have 'trouble', as Joan Robinson has met. Marx is fairly clear whenever he argues and talks of the relationship between the organic composition of capital and rate of profit. He refers always to 'value-composition' and not to 'technical-composition'. In the unequivocal words of Marx "wherever I refer to the composition of capital without further qualification, its organic composition (value-composition) is always understood."¹³⁸ Marx has also given the specific conditions under which the relations between the technical and value compositions might differ.¹³⁹

So far we have summarized the various trends and substance of the controversies that center around the Marxian theory of falling rate of profit. The extent and the depth of the difference of opinion shows only the importance of the law to Marxism. No fruitful result could be obtained by joining this or that school and that of adding one more dimension to the hostility. On theoretical discussions only logic is the determining factor. After all, logic is a law of thought; a law that is not too inflexible. Hence, there cannot be any cessation for the flow of theoretical arguments.

138. Capital, Vol. I, p. 671.

139. Capital, Vol. III, pp. 889-90.

Before proceeding to analyse the significance of the theory one should make note that Karl Marx, after formulating the law of falling rate of profit, out of his mental equipment, did not have sufficient statistics to test it. Only with the help of the hypothetical data, he was able to demonstrate some trends and tendencies. Joseph M. Gillman, an American Marxist, ventured to submit it to statistical test. He started counting the horse's teeth, when many continued to speculate their number.¹⁴⁰

140. Joseph M. Gillman, The Falling Rate of Profit (London, 1957). His views are dealt with in the last section *chapter*.

practical bourgeois, most strikingly in the case of
3. SIGNIFICANCE OF THE THEORY TO CAPITALISM
periodic cycle through which modern industry
"Modern bourgeois society is like the sorcerer,
so crowning itself is the general officer. It is
who is no longer able to control the power of the nether
e again overwhelming, although he yet holds the spell-
world whom he has called up by his spells. For many a
ary steps, and by the universality of its theatre and the
decade past the history of industry and commerce is but
the history of the revolt of modern productive forces
against modern conditions of production, against the
(private) property relations." 7.

Communist Manifesto

Significance of the Theory of Profit to Capitalism

We have already seen that due to an increase in the organic composition of capital compared to the rate of surplus-value, the rate of profit tends to fall in the course of capitalist development.¹ Beyond a certain point, a fall in the rate of profit becomes the cause of a crisis.

Even though Marxian concept of crisis is not in the main body of theory, the analysis is conditioned by the dynamic purpose of the entire theory. The most spectacular part of Marx's work- that part which imparts a far more dramatic appeal than the laboured exercise of the theory of value, is his theory of capitalist development.

Marx has never forgotten the importance of crises for his purpose. The 'Postscript to the Second Edition' of Volume I of Capital has a note about this. "The contradictory movement of capitalist society imper^ses itself upon the practical bourgeois most strikingly in the changes of the periodic cycle through which modern industry runs and whose crowning point is the general crisis. The crisis is once again approaching, although as yet but in its preliminary stage; and by the universality of its theatre and the

1. Capital, Vol. III, pp. 296-7.

intensity of its action it will drum dialectics even into the heads of the mushroom upstarts of the new, holy Prusso-German empire."² Moreover, throughout the three volumes of Capital and throughout the book Theories of Surplus value, the problem of crises continually recurs.

However, such an important aspect of the Marxian thought is not coherently presented by Marx. As a matter of fact, he has never presented a theory of cycles but many remarks about crises and inherent disturbances of capitalism are scattered throughout his writings. Largely it is an unwritten chapter, despite its importance and relevance to Marxism. The main parts, containing in Capital are the discussions of accumulation in Volume I and the theories of the falling tendency of the rate of profit and of crises in Volume III. These must be supplemented by the analysis of the Theories of surplus-value in Volume II and of the problem of Reproduction in Volume III of Capital.

There is certain ambiguity of the word 'crises' in Marx's writings. Sometimes Marx employs it in somewhat current usage, like the crisis of 1825 or that of 1847. Other times he uses it in the sense of a deep-seated disease

2. Capital, Vol. I, p. 26. Also refer The Communist Manifesto pp. 14-15.

inherent in the capitalism.³ What is Marx's idea of a cycle? Business cycles are exclusive property of the Capitalist system.⁴ "It is a series of periods of moderate activity, prosperity, over production, crisis and stagnation."⁵

The period of over production results due to involuntary accumulation of commodity Capital. This accumulation, emerges when capitalists are not able to sell their commodities. The continuity of capitalist production depends upon the entire sales of commodities at their values. When involuntary accumulation of commodity capital occurs, capitalist production is checkmated. Then the period of crisis ensues.

The entire theory of crisis gravitates around two centres; first is the tendency of the rate of profit to fall and the second is underconsumption caused by the antagonistic conditions of distribution. The connection of crises to the falling rate of profit is related thus

"The barrier of the capitalist mode of production becomes apparent... in the fact that the development of the productive power of labour creates in the falling rate of profit a law which turns into an antagonism of this mode of production

3. See Capital , Vol. I, Chap. XXV .
4. Theories of Surplus Value , p. 380.
5. Capital , Vol. I, p. 495.

at a certain point and requires for its defeat periodical crises."⁶

The cause of underconsumption is explained thus. "The last cause of all real crises remains the poverty and restricted consumption of the masses as compared to the tendency of capitalist production to develop the productive forces in such a way, that only the absolute power of consumption of the entire society would be then limit."⁷

Now let us study the relationship between the law of falling rate of profit and occurrence of business cycle. We should recall Marxian theory of value here. According to him "The value of a commodity ... varies directly as the quantity and inversely as the productiveness, of the labour incorporated in it."⁸ This labour theory of value and categories based upon it, provide the reliable indication to understand the Marxian theory of business cycle. The total value of the commodities produced by a given capitalist economy, although not the relative prices of particular commodities, is determined by the amount of socially necessary labour time expended in their production.

6. Capital , Vol .III, p. 303.

7. Ibid., p. 568.

8. Capital, Vol. I, 47.

The law of the falling tendency of the rate of profit, which originates in the above context, has the basis on the labour theory of value.

It has already been shown that the falling rate of profit is the logical concomitant of the notion that value is produced by living labour alone. As and when the economy progresses techniques of production become more complex. As a result less and less living labour and more and more machinery are employed to produce a given quantity of products. Consequently in the given quantity of products, less and less value will be created. As surplus-value is the capitalist's share of value, less amount of value produces less amount of surplus-value. Thus we find that a decreasing tendency in the amount of surplus-value or profit. The rate of profit depends predominantly upon the magnitude of $\frac{v}{c}$. As the proportion of variable to constant capital, according to Marx, has fallen, is falling and must continue to fall, the rate of profit should also fall. The fall in $\frac{v}{c}$, is but "an expression of the progressive development of the productive powers of society, which is manifested by the fact that the same number of labourers, in the same time, convert an ever growing quantity of raw material, into products, due to the growing application of machinery and

fixed capital in general, so that less labour is needed for the production of the ^asome or of more, commodities."⁹ This shows that how the rate of profit tends to fall with the development of capitalism. Nevertheless the capitalist finds an incentive for the expansion of production, in an ever growing amount of profit obtained by an ever growing total capital, inspite of the ever falling rate of profit. This necessitates the growth of total capital fast enough to more than offset the falling proportion of v to c . In other words, v must grow in absolute quantum, inspite of the inevitable fall in its magnitude relative to c . The capitalist will go on expanding the production to the growth of the total capital, even though he confronts a continually falling rate of profit on his continually increasing total capital. "We see, then", says Marx,¹⁰ that inspite of the progressive fall in the rate of profit, there may be an absolute increase of the number of labourers employed by capital, an absolute increase of the labour set in motion by it, an absolute increase of the mass of surplus-labour absorbed, a resulting absolute increase of the produced surplus-value and consequently a resulting absolute increase in the mass

9. Capital, Vol. III, p. 248.

of the produced profit. And this increase may be progressive. And it may not only be so. On the basis of capitalist production, it must be so, aside from temporary fluctuations.

The capitalist process of production is essentially a process of accumulation.*¹⁰

3.0 Capital Accumulation and Rate of Profit.

The conditions of low wages and employment are maintained by the rate of accumulation of constant capital exceeding the rate of growth of total capital. If the rate of growth of constant capital exceeds the growth of total capital, then,

$$\frac{\Delta c}{c} > \frac{\Delta (c+v)}{c+v}$$

and

$$\frac{\Delta c}{c} - \frac{\Delta (c+v)}{c+v} = k$$

where $k > 0$. Performing the subtraction, we get

$$\frac{v \Delta c - c \Delta v}{c (c+v)} = k$$

and

$$v \Delta c - c \Delta v = kc (c+v)$$

10. Ibid., p. 255.

Since $c (c + v) > 0$ and $k > 0$

$$v \Delta c > c \Delta v$$

$$\frac{\Delta c}{\Delta v} > \frac{c}{v}$$

$$\frac{\Delta (c + v)}{\Delta v} > \frac{c + v}{v}$$

Therefore $\frac{\Delta v}{v} > \frac{\Delta (c + v)}{c + v}$

If we have absolute over production of

Capital, $\Delta (c + v) = 0$

then, $v > 0$

$$\Delta v < 0$$

Thus Marx shows that increased profit and increased employment are feasible despite a falling rate of profit. This is due to rapid growth of the total capital or in other words sufficiently fast accumulation alone. That is why Marx conceives the capitalist process of production as essentially a process of accumulation.

From this, it follows that in order to function,

the capitalists should acquire a fast rate of accumulation, a rapid growth of the total capital. Otherwise the whole structure will collapse.

The mass of surplus-value and of profit, appropriated by the capitalist should grow simultaneously with the falling rate of profit and in spite of it. Like the Red Queen in Alice in the Wonderland capitalist should run faster and faster in order to stay on the same place. The moment he ceases to run, he loses; he loses not the place but the pulsation. The capitalist in order to exist accumulates fast enough to offset the fall in $\frac{v}{c}$ and the fall in the rate of profit. This Marx conceives as a law. He presents it not as something which capitalist strives to achieve but as something which he actually does achieve. Thus, this rate of accumulation is an essential condition for the existence of capitalism. In other words, a rate of accumulation, high enough to counter the effects of the falling rate of profit, is presupposed for the very existence of capitalism.

Thus the law, like Janus, is double faced. It is so because it promulgates a falling rate of profit and a rising quantum of profit for the existence of capitalism.

Now the next question to be posed and analysed is, how fast should be the rate of accumulation of the total capital? It must be fast enough to make v increase, or in

other words, should be fast enough to compensate the fall of $\frac{v}{c}$. Viewed thus, the rate of accumulation is decided by the rate of the fall of $\frac{v}{c}$. If the velocity of fall of profit is low, then the rate of accumulation need not be high. On the other hand if the fall of $\frac{v}{c}$ is high, then it necessitates a rapid growth in the total capital. Marx has given the necessary rate of accumulation.

* In order that the mass of profit made at a declining rate of profit may remain the same as before, the multiplier indicating the growth of the total capital must be equal to the divisor indicating the fall of the rate of profit."¹¹

According to Marx, the rate of accumulation should be fast enough to make the total amount of profit not only to remain constant but also grow a little from year to year, inspite of the fall in the rate of profit. Or else there will not be any incentive to the capitalist for production. As and when the rate of accumulation falls below this level, capitalism would collapse.

Thus we find that according to Marx, under capitalism there exists a minimum rate of accumulation, a minimum speed at which its total capital should grow if the system is to

11. Ibid., p. 260.

function. This minimum rate of accumulation is determined by the speed at which $\frac{v}{c}$ is falling; by the speed of technical progress. In the words of Marx.

“With accumulation and the development of the productiveness of labour that accompanies it, the power of sudden expansion of capital also grows; it grows not merely because the elasticity of capital already functioning increases, not merely because the absolute wealth of society expands, of which capital only forms an elastic part, not merely because credit, under every special stimulus, at once places an unusual part of this wealth at the disposal of production in the form of additional capital; it grows also because the technical conditions of the process of production themselves—machinery, means of transport etc.—now admit of the rapidest transformation of masses of surplus-product into additional means of production. The mass of social wealth, overflowing with the advance of accumulation, and transformable into additional capital, thrusts itself frantically into old branches of production whose market steadily expands, or into newly formed branches, such as railways etc., the need for which grows out of the development of the old ones. In all such cases, there must be the possibility of throwing great masses of man suddenly on the decisive points without

injury to the scale of production in other spheres."¹² Marx has clearly given the kinship between crises and the tendency of the rate of profit to fall. He notes, "... the rate of self expansion of the total capital, or the rate of profit, being the goad of capitalist production." Similarly, "... its fall checks the formation of new independent capital and thus appears as a threat to the development of the capitalist production process. It breeds over-production, speculation, crises and surplus-capital alongside surplus-population."¹³ Moreover, "... the main thing about their [capitalists] horror of the falling rate of profit is the feeling that capitalist production meets in the development of its productive forces a barrier which has nothing to do with the production of wealth as such; and this peculiar barrier testifies to the limitations and to the merely historical, transitory character of the capitalist mode of production, testifies that for the production of wealth, it is not an absolute mode, moreover, that at a certain stage it rather conflicts with its further development."¹⁴

12. Ibid., pp. 693-4.

13. Ibid., p. 283.

14. Ibid., p. 284.

Marx closely connects the tendency of rate of profit to fall with the process of accumulation. The declining character of the former accelerates the speed of the latter. Greater the speed of the latter, numerous would be the consequences which mark the features of aging capitalism. Under capitalism it is not only the object, it is the very condition of production that a profit should result. Consequently the law of profit is both an incentive and regulator of the capitalism.

"A fall in the rate of profit and accelerated accumulation are different expressions of the same process only in so far as both reflect the development of productiveness. Accumulation, in turn, hastens the fall of the rate of profit, in as much as it implies concentration of labour on a large scale, and thus a higher composition of capital. On the other hand, a fall in the rate of profit again hastens the concentration of capital and its centralisation through expropriation of minor capitalists, the few direct producers who still have any thing left to be expropriated. This accelerates accumulation with regard to mass, although the rate of accumulation falls with the rate of profit."¹⁵

15. Ibid., p. 283.

So far we have seen how the falling rate of profit causes and accelerates the process of accumulation. Before examining the consequences of accumulation, it is worth to understand the mechanism of accumulation.

Accumulation is the process of transformation of surplus-value into capital.¹⁶ The capitalist consumes one slice of surplus-value which is called revenue. Thus accumulation is surplus-value minus revenue. Consequently, given the mass of surplus-value, the larger the accumulation, smaller should be the revenue and vice versa. In other words accumulation is inversely proportional to revenue.

As capitalist, " ... he is only capital personified. His soul is the soul of capital."¹⁷ Except as personified capital, the capitalist has no historical value and no right to that historical existence. Capital has a , "vampire thirst for the living blood of labour."¹⁸ Thus capital, by its very definition and logic, should^{be} accumulate^d. And hence the capitalist should accumulate. Accumulation breeds a desire for further accumulation. It is the old story. Abraham begets Issac; Issac begets Jacob and so on. Surplus-

16. Capital, Vol. I, p. 634.

17. Ibid., p. 257.

18. Ibid., p. 282.

value begets capital, capital begets surplus-value and so on. "Employing surplus-value as capital, reconvertng it into capital, is called accumulation of capital."¹⁹ It is interesting to note here that Marx rejects the abstinence theory of capital accumulation. Only in the earlier period, the capitalist had restricted his consumption. "The capitalist gets rich, not like the miser in proportion to his personal labour and restricted consumption, but at the same rate as he squeezes out the labour-power of others, and enforces on the labour abstinence from all life's enjoyment."²⁰

At a different place, he says

"That accumulation should take place at the expense of consumption, is, as a general consumption, an illusion contradicting the nature of capitalist production. For it takes for granted that the aim and compelling motive of capitalist production is consumption, instead of the gain of surplus-value and its capitalization, in other words, accumulation."²¹

Further he says

"Accumulate ! That is Moses and the prophets Therefore,

19. Ibid., p. 640.

20. Ibid., p. 605.

21. Capital, Vol. II, p. 588.

save, save i.e. reconvert the greatest possible position of surplus- value or surplus-product into capital ! Accumulation for accumulation's sake, production for production's sake: by this formula classical economy expressed the historical mission of the bourgeoisie and did not for a single instant deceive itself over the birth-throes of wealth."²²

Accumulation (a) emerges with the allocation of surplus to capital.

$$a = g (s)$$

Given the value of g, Marx says

".... accumulation resolves itself into the reproduction of capital on a progressively increasing scale. The circle in which simple reproduction moves, alters its form and to use Sirmondi's expression, changes into a capital."²³

3.1 Simple Reproduction

Francois Quesnay, the eminent leader of the physiocrats, was first to venture a systematic presentation of the structure of relations existing in capitalist production. His renowned Tableau Economique was regarded by Marx as the "incontestably the most brilliant idea of which political economy had hitherto

22. Capital, Vol. I, p. 652.

23. Ibid., p. 637.

been guilty."²⁴ Marx was influenced by Quesnay to a significant extent and regarded his own methodology 'simple reproduction' for examining the capitalist society, as a developed version of the Tableau. A letter from Marx to Engels, dated 6 July 1863, opens like this. "If you find it possible in this heat, look at the enclosed Tableau economique which I substitute for Quesnay's Table and tell me of any objections you may have it. It embraces the whole process of reproduction."²⁵

Simple reproduction refers to a capitalist system which retains to eternity, the same size and the same proportions among its various parts.²⁶ Assume all industry is divided into two departments in I, means of production are produced and in II, consumption goods are produced.²⁷ Let us subdivide the consumption goods department into two: one producing workers' consumption goods and the other producing capitalists' consumption Goods.²⁸

24. Theories of Surplus value, p. 92.

25. Correspondence, p. 153. However, Marx abandoned the diagram but developed the ideas. See Capital, Vol. I, Chap. XXIII and Capital Vol. II, Chap. XX.

26. Capital, Vol. I, p. 621.

27. Capital, Vol. II, p. 457.

28. The distinction drawn by Marx is 'necessities of life' and articles of luxury'. Refer Capital, Vol. II Chap. XX.

In each department the composition of capital varies in constant and variable proportions. The total outlay in the economy K , is defined as the accumulation of the capital outlay in the two departments.

$$K = (K)_1 + (K)_2 = (c + v)_1 + (c + v)_2$$

Total production in the economy C is equal to the commodities produced by both departments during the period.

$$C = C_1 + C_2 = (c_1 + v_1 + s_1) + (c_2 + v_2 + s_2)$$

The annual surplus S is the difference between total annual product and the cost of production.

$$S = C - K = (s_1 + s_2)$$

The following table represents the total production.

	Dept.I	Dept.II	Total
Department I	c_1	$(v_1 + s_1)$	$c_1 + v_1 + s_1$
Department II	c_2	$(v_2 + s_2)$	$c_2 + v_2 + s_2$
Total	$(c_1 + c_2)$	$(v_1 + s_1) + (v_2 + s_2)$	C

For the conditions of Simple-Reproduction to be fulfilled, the constant capital used up must be equal to the output of the producers' goods branch, and the combined

consumption of capitalists and workers must be equal to the output of the consumers' goods branch.

Then

$$c_1 + c_2 = c_1 + v_1 + s_1$$

$$v_1 + s_1 + v_2 + s_2 = c_2 + v_2 + s_2$$

By eliminating c_1 from both sides of the first equation and $v_2 + s_2$ from both sides of the second equation, the two can be reduced to the following

$$c_2 = v_1 + s_1$$

or more directly

$$\text{since } v_1 - c_1 = c_2$$

$$\text{and } v_2 - (v_2 + s_2) = v_1 + s_1$$

$$\text{but } v_1 - c_1 = v_1 + s_1$$

$$\text{hence } c_2 = v_1 + s_1$$

Since the capitalists increase their investment, they do not consume their income completely.

Therefore,

$$v_2 < (v_1 + s_1) + (v_2 + s_2)$$

The total value of the products of Department I in the form of the means of production will be larger than the sum of the means of production required by the two departments for replacement use; namely

$$v_1 > c_1 + c_2 .$$

From the above two equations we derive a third:

$$c_2 < v_1 + s_1 .$$

The stability of the system is defined by the above equation of interdepartmental sale and purchase. This equation is not inevitable. Under a system of capitalist production, Marx remarks, "because nothing is undertaken according to social plans, but everything depends on the infinitely different conditions, means etc., with which the individual capitalist operates",²⁹ great disturbances will inevitably occur. There is nothing inherent within capitalism to bring out the harmony. Rather the equation is quite "accidental."³⁰ He says "The premise of simple reproduction ... is irreconcilable with capitalist production"³¹

29. Capital, Vol.II, p. 196.

30. Ibid., p. 578.

31. Ibid., p. 608.

The expansion of capital can be expressed in the following form.

$$\begin{aligned} K_1 &= K_0 + p \cdot K_0 g \\ &= K_0 (1 + p \cdot g) \end{aligned}$$

$$\begin{aligned} K_2 &= K_1 + p K_1 g \\ &= K_1 (1 + p \cdot g) \\ &= K_0 (1 + p \cdot g)^2 \end{aligned}$$

$$K_t = K_0 (1 + p \cdot g)^t$$

Where K_1 is the amount of capital in time t , K_0 is the original ^{capital,} p the rate of profit and g the proportion of surplus converted into net investment.

Marx has formulated a 'Capital accumulation model'. This model can be called 'two-department model', since it traces the process of two departmental transactions that account for the spiral process of capital formation.

The new Capital structure is presented in the following form:

$$\text{Department I} \quad (c_1 + \Delta c_1) + (v_1 + \Delta v_1) + s_1 - (\Delta c_1 + \Delta v_1)$$

$$\text{Department II} \quad (c_2 + \Delta c_2) + (v_2 + \Delta v_2) + s_2 - (\Delta c_2 + \Delta v_2)$$

The period of production ($t+1$)

$$\text{Department I} \quad (c_1 + \Delta c_1) + (v_1 + \Delta v_1) + (s_1 + \Delta s_1)$$

Department II $(c_2 + \Delta c_2) + (v_2 + \Delta v_2) + (s_2 + \Delta s_2)$

Transaction between

$$\lceil v_1 + s_1 - a (=gs_1) \rceil$$

and c_2 where $(v_1 + s_1 - a)$ represents the total consumption of capitalists and labourers in Department I. For Department I, a is decomposed into the organic elements of capital.

$$(ac_1 + av_1)$$

For providing av_1 , transaction takes place between capital goods av_1 and consumer goods s_2 , where $s_2 = av_1$. c_2 has in the course of the above interdepartmental transactions, increased to

$\lceil c_2 + \Delta c_2 (= av_1) \rceil$ and in order to maintain the capital composition in Department II, v_2 is necessary to offset the increased c_2 and it is provided from s_2 .

Marx has illustrated the process of accumulation with numerical examples.

$$\text{Department I } 4000c + 1000v + 1000s = 6000 \text{ c}$$

$$\text{Department II } 1500c + 750v + 750s = 3000 \text{ c}$$

$$\text{Annual product} = 9000 \text{ c}$$

Marx assumes the following values.

- (1) The rate of exploitation is 100 per cent
- (2) The rate of profit is 20 per cent for Department I and $33\frac{1}{3}$ per cent for Department II
- (3) The organic composition of capital in Department I is 80 per cent and $66\frac{2}{3}$ per cent in Department II
- (4) The rate of accumulation in Department I is 50 per cent.

Accumulation in Department I is

$500a_1$ ($= \frac{1}{2} s_1$) which takes the form

$400 c_1 + 100 v_1$

Consequently c_1 increases from $4000c_1$ to $4400c_1$.

Department I wants to exchange the value of $1100v_1 + 500s_1$ of capital goods for the equivalent value of consumer goods.

But Department II wants only $1500 c_2$ for replacement. To satisfy Department I, the exchange of the additional $100v_1$ must be made from $100s_2$. This reduces the consumption of capitalists in Department II from 750 to 650.

With the transfer of $100v_1$ to Department II, enhancing c_2 from $1500 c =$ to $1600c_2$, an increase in v_2 , proportionate in the organic composition of capital in Department II, of $50v_2$ is made. The outlay for $50v_2$ results from s_2 , which ultimately reduces s_2 from 650 to 600.

After this phase of process, the capital structure takes the following form.

Department I $4400 c + 1100 v + 500s$

Department II $1600 c + 800 v + 600s$

The Capital values

$(c_1 + v_1) (c_2 + v_2)$ have expanded from 7250 to 7900.

In the following period the net increase of capital values is 650 and the production is expanded:

Department I $4400c + 1100v + 1100s = 6600c$

Department II $1600c + 800v + 800s = 3200c$

Annual product $= 9800c$

To the same process of accumulation is followed for period(t+2)

Department I $4840c + 1210v + 1210s = 7260c$

Department II $1760c + 880v + 880s = 3520c$

Annual product $= 10780c$

To The rate of accumulation is an independent variable.³²

32. Capital, Vol. I, p. 679.

The process of accumulation derives sustenance from the surpluses of Department I and II. The former is decided by g , whereas the latter by the consumer goods needed to fill out the increase in constant - capital formation. Since the net investment is propped up by surplus, the surplus consumed by the capitalists

$[s(c)_1 + s(c)_2]$ must be less than that surplus produced by the process ($s_1 + s_2$). When consumption in the simple reproduction model corresponds with its surplus production, a point will be reached beyond which the surplus consumed by capitalists in accumulation exceeds the consumption of capitalists in simple reproduction, as given in the same capital investment.³³ Marx writes

" At the historical dawn of capitalist production- and every capitalist upstart has personally to go through this historical stage - avarice, and desire to get rich, are the ruling passions. But the progress of capitalist production not only creates a world of delights; it lays open, in speculation and the credit system, a thousand sources of sudden enrichment. When a certain stage of development has been reached, a conventional degree of prodigality, which is also an exhibition of wealth, and consequently a source of credit, becomes

33. Ibid. , p. 650.

a business necessity to the "unfortunate" capitalist."³⁴

The quantum of the surplus consumed in any period of time depends upon the rate of accumulation, and the organic composition of capital in both departments.³⁵

$$s(c)_2 = s_2 - \left[v_1 + s_1(1-g) - c_2 \right] + \frac{av_1}{\frac{c_1 + v_1 + v_2}{c_2}}$$

$$\left[v_1 + s_1(1-g) - c_2 \right] + \left[\frac{v_2}{c_2} \right] \left(\frac{av_1}{c_1 + v_1} \right)$$

$$s(c)_1 = s_1 (1-g)$$

In the simple case where $v_1 + s_1(1-g) = c_2$, the above equations may be reduced to

$$\begin{aligned} s(c)_2 &= s_2 - \left[\frac{av_1}{c_1 + v_1} + \frac{v_2}{c_2} \right] \left(\frac{av_1}{c_1 + v_1} \right) \\ &= s_2 - \left[\frac{1 + v_2}{c_2} \right] \left(\frac{av_1 + v_1}{c_1} \right) \end{aligned}$$

$$s(c)_1 = s_1 (1-g)$$

As capital accumulation at a given time is the conversion of surplus-value to capital in that particular period, its magnitude can be expressed in the following manner.

34. Ibid., p. 651.

35. Ibid., p. 605.

$$\begin{aligned}
Kt &= \left[v_1 + s_1 (1-g) - c_2 \right] + \left[\frac{av_1}{c_1} + v_1 \right] \\
&+ \left[\frac{v_2}{c_2} \right] \left[v_1 + s_1 (1-g) - c_2 \right] \\
&+ \left[\frac{v_2}{c_2} \left(\frac{av_1}{c_1} + v_1 \right) + s_1 (1-g) \right] t.
\end{aligned}$$

This could be simplified thus

$$Kt = \left[\left(1 + \frac{v_2}{c_2} \right) \left(\frac{av_1}{c_1} + v_1 \right) + s_1 (1-g) \right] t.$$

3.2 The concentration and the Centralization of Capital

We have seen that the law of profit imposes a certain unrelenting logic on accumulation to increase. The accumulation of capital in its very process brings an increasing centralization of production and finance. Viewed thus, concentration of Capital is the natural sequence of the law of profit.

Concentration of capital, as defined by Marx is accumulation in the hands of few.³⁶ This is different from centralization of capital which means "concentration of capitals already formed, destruction of their individual independence, expropriation of capitalist by capitalist transformation of many small into few large capitals."³⁷

36. Ibid. , p. 685.

37. Ibid. , p. 686.

Thus centralization should not be confused with concentration. "This process differs from the former, in this, that it only presupposes a change in the distribution of capital already to hand and functioning; its field of action is therefore, not limited by the absolute growth of social wealth, by the absolute limits of accumulation. Capital grows in one place to a huge mass in a single hand because it has in another place been lost by many. This is centralization proper, as distinct from accumulation and concentration." Marx has no intention to expound "the laws of this centralization of capitals" but rather contended himself with "a brief hint at a few facts."³⁸

The "two levers of centralization"³⁹ are competition and capitalist credit system. Under capitalism, the availability of credit is greater to the big, than to the small capitalists. Credit discrimination kills the small and enriches the big.⁴⁰ The competitive situation is described by Marx :

"Industry leads two armies into the field against each other, each of which again carries on a battle within its own ranks among its own troops. The army among whose troops the least

38. Ibid., p. 686.

39. Ibid., p. 650.

40. Ibid., p. 687.

fighting takes place gains the victory over the opposing host."⁴¹

In periods of stagnation and crisis over production prevails. "Except in periods of prosperity, there rages between the capitalists the most furious combat for the share of each in the markets."⁴² Because of the competition, centralisation is inevitable. "The battle of competition is fought by cheapening of commodities. The cheapness of commodities depends, ceteris paribus, on the productiveness of labour and this again on the scale of production. Therefore, the larger capitals beat the smaller. It will further be remembered that, with the development of the capitalist mode of production, there is an increase in the minimum amount of individual capital necessary to carry on a business under its normal conditions. The smaller capitals, therefore crowd into spheres of production which Modern Industry has only sporadically or in completely got hold of. Here competition rages in direct proportion to the number and in inverse proportion to the magnitudes, of the antagonistic capitals. It always ends in the ruin of many small capitalists, whose capitals partly pass into the hands of

41. Wage, Labour and Capital, p. 24.

42. Capital, Vol. I, p. 495.

their conquerors, partly vanish."⁴³

The chances of survival of smaller capitalists are less.⁴⁴ The process of centralization is cumulative and it is like a snowball rolling down hill. Consequently, it results in a period of monopoly.⁴⁵ Marx has described the growth of the monopoly in dialectic terms.

"We all know that competition was engendered by feudal monopoly. Thus competition was originally the opposite of monopoly and not monopoly the opposite of competition. So that modern monopoly is not a simple antithesis; it is on the contrary the true synthesis."⁴⁶

Another force that aids centralization is the capitalist credit system.

"In its beginnings the credit system sneaks in as a modest helper on accumulation and draws by invisible threads the money resources scattered all over the surface of society into the hands of individual or associated capitalists. But soon it becomes a new and formidable weapon in the competitive struggle and finally it transforms itself into an

43. Ibid., pp. 686-87.

44. Capital, Vol. III, p. 308.

45. Capital, Vol. I, p. 688.

46. The Poverty of Philosophy, p. 169.

immense social mechanism for the centralization of capitals."⁴⁷
 Centralization due to the capitalist style of credit system does not mean the expropriation of smaller capitalists by larger, but the amalgamation of a number of capitals which already exist or are in the process of formation ... by the smoother road of forming stock companies"⁴⁸. This is the fastest way of deriving the advantages of economies of scale.
 "The world would still be without railroads if it had been obliged to wait until accumulation should have enabled a few individual capitals to undertake the construction of a railroad. Centralization, on the other hand, accomplished this by a turn of the hand through stock companies."⁴⁹

Joint-stock companies, enlarge with centralization which further accelerates the process of centralization.⁵⁰
 This abolishes the capitalist private industry in proportion as it expands and invades new fields of production.⁵¹

Centralization ceases when there is only one firm left. However, for society the upper limit would not be reached

47. Capital, Vol. I, p. 687.
 48. Ibid., p. 688.
 49. Ibid., p. 687.
 50. Capital, Vol. III, p. 517.
 51. Ibid., p. 519.

"until the entire social capital would be united either in the hands of one single capitalist, or in those of one single corporation."⁵² In brief, in the process of centralization, "little fishes are swallowed by the sharks and the lambs by the wolves."⁵³

Capital accumulation is linked with increasing organic composition of capital in the Marxian model.

"The continual re-transformation of surplus-value into capital now appears in the shape of the increasing magnitude of the capital that enters into the process of production. This in turn is the basis of an extended scale of production, of the methods for raising the productive power of labour that accompany it, and of accelerated production of surplus-value. If, therefore, a certain degree of accumulation of capital appears as a condition of the specifically capitalist mode of production, the latter causes conversely an accelerated accumulation of capital. With the accumulation of capital, therefore, the specifically capitalist mode of production develops and with the capitalist mode of production the accumulation of capital."⁵⁴

52. Capital, Vol. I, p. 688.

53. Capital, Vol. III, p. 521.

54. Capital, Vol. I, pp. 684-5.

Thus centralization implies increasing organic compositions of capital. The rate of profit is inversely related to the organic composition of capital. Hence in the equation.

$K_t = K_o (1 + p \cdot g)^t$, the rate of profit falls with the development of technology.

We have seen how the rate of profit, by its internal compulsions and logical demands, gives birth to centralization. The centralization, in its process of development, causes the rate of profit to fall. Because centralization which is the consequence of technical change and the rising organic composition of capital, acts to hasten the technical change. Marx says

"Centralization, by thus accelerating and intensifying the effect, of accumulation, extends at the same time the revolutions in the technical composition of capital which increase its constant part at the expense of its variable part and thereby reduce the relative demand for labour. . . ., the additional capital formed in the course of accumulation attracts fewer and fewer labourers in proportion to its magnitude."⁵⁵

3.3 The Results of Accumulation

Now let us look into the results of accumulation.

55. Ibid., p. 689.

Marx enumerates them in his celebrated 'General Law of Capitalist Accumulation.'⁵⁶ The most important factor in progressive accumulation is the organic composition of capital. Variable capital declines relatively as accumulation progresses. The relative decline in variable capital results in the creation of what Marx calls the "industrial reserve army". Accumulation and concentration of capital involve both absolute increase and relative decline in variable capital.

Let us now study "the influence of the growth of capital on the lot of the labouring class." In this enquiry the main factor is "the composition of capital and the changes it undergoes in the course of the process of accumulation."⁵⁷

As capital accumulates, technological changes will increasingly acquire labour-saving stint. This will be found in a change called the 'value- composition' of capital.

" There may be, e.g., originally 50 percent of a capital laid out in means of production and 50 percent, in labour-power; later on, which the development of the productivity of labour, 30 percent in means of production, 20 percent in labour-power and so on."⁵⁸ This process, which simultaneously

56. Refer Capital, Vol. I, Chap. XXV.

57. Capital, Vol. I, p. 612.

58. Ibid., p. 622.

goes with and is accelerated by already explained processes, concentration and centralization of capitals, means that "the additional capital formed in course of accumulation attracts fewer and fewer labourers in proportion to its magnitude" and that "the old capital periodically reproduced with change of composition, repels more and more of the labourers formerly by it."⁵⁹ Thus "capitalist accumulation itself ... constantly produces ... a relatively *redundant* population of labourers i.e. a population of greater extent than suffices for the average needs of the self-expansion of capital and therefore, a surplus-population."⁶⁰ This surplus-population constitutes "a disposable industrial reserve army,"⁶¹ whose size varies with the phases of the cycles and whose ^swhole expansion or otherwise exclusively govern the "general movements of wages."⁶² It consists of those who are irregularly employed, whom Marx calls "paupers."⁶³ To this "relative surplus-population", Marx applies his first formulation of the general law of capitalist accumulation. "The greater the

59. Ibid., p. 628.

60. Ibid., p. 630.

61. Ibid., p. 632.

62. Ibid., p. 637.

63. Ibid., p. 640.

social wealth, the functioning capital, the extent and energy of its growth and therefore, also the absolute mass of the proletariat and the productiveness of its labour, the greater is the industrial reserve army. The same causes which develop the expansive power of capital, develop also the labour-power at its disposal. The relative mass of the industrial reserve army increases therefore with the potential energy of wealth. But the greater this reserve army in proportion to the active labour-army, the greater is the mass of a consolidated surplus-population whose misery is in inverse ratio to its torment of labour. The more extensive, finally, the lazarus-layers of the working class, and the industrial reserve army, the greater is official pauperism. This is the absolute general law of capitalist accumulation."⁶⁴

Increases in the size of the industrial reserve army are connected with cyclical fluctuations as well as with the growth and changing technical composition of capital.

"The course, characteristic of modern industry viz., a decennial cycle (interrupted by smaller oscillations), of periods of average activity, production at high pressure, crisis and stagnation, depends on the constant formation, the greater or less absorption, and the reformation of the industrial reserve army of surplus-population. In their turn, the

64. Ibid., p. 644.

varying phases of the industrial cycle recruit the surplus-population and become one of the most energetic agents of its reproduction."⁶⁵

Again, the industrial reserve army, during the periods of stagnation and average prosperity, weighs down the active labour-army; during the periods of overproduction and paroxysm, it holds its pretensions in check. "Relative surplus-population is therefore, the pivot upon which the law of demand and supply of labour works. It confines the field of action of this law within the limits absolutely convenient to the activity of exploitation and to the domination of capital."⁶⁶

The existence of the industrial reserve army is also closely connected with the methods which the capitalist-employers use in extracting surplus-value from the workers.

The over work of the employed part of the working class swells the ranks of the reserve. The greater pressure of competition exerts on the former and forces them to submit to over-work. The condemnation of one part of the working-class to enforced idleness by the over-work of the other part, and the converse, becomes a means of enriching the

65. Ibid., p. 694.

66. Ibid., p. 701.

individual capitalists, and accelerates at the same time the production of the industrial reserve army on a scale corresponding with the advance of social accumulation.⁶⁷

There was no doubt in Marx's mind as to the effects of all these things on the status and general welfare of the proletariat as a whole. As Marx says in a famous passage:

" ... Within the capitalist system all methods for raising the social productiveness of labour are brought about at the cost of the individual labourer; all means for the development of production transform themselves into means of domination over, and exploitation of, the producers; they mutilate the labourer into a fragment of a man, degrade him to the level of an appendage of a machine, destroy every remnant of charm in his work and turn it into a hated toil; they estrange from him the intellectual potentialities of the labour-process in the same proportion as science is incorporated in it as an independent power; they distort the conditions under which he works, subject him during the labour-process to a despotism the more hateful for its meanness; they transform his life-time into working-time, and drag his wife and child beneath the wheels of the Juggernaut of capital. But all methods for the production of surplus-value are at the

67. Ibid., p. 698.

same time methods of accumulation; and every extension of accumulation becomes again a means for the development of these methods. It follows therefore that in proportion as capital accumulates, the lot of the labourer, be his payment high or low, must grow worse. The law, finally, that always equilibrates the relative surplus-population, or industrial reserve army, to the extent and energy of accumulation, this law rivets the labourer to capital more firmly than the wedges of Vulcan did Prometheus to the rock. It establishes an accumulation of misery, corresponding with the accumulation of capital. Accumulation of wealth at one pole is, therefore, at the same time accumulation of misery, agony of toil, slavery, ignorance, brutality, mental degradation, at the opposite pole....."⁶⁸

This is the general law of capitalist accumulation. It exposes the fundamental antagonism inherent in capitalism. Capital accumulates, wealth expands and is concentrated in fewer hands, but over the whole field of capitalism there is also an accumulation of misery.⁶⁹ This is the celebrated law of the increasing misery of the toiling class under capitalism.

68. Ibid., p. 708-9.

69. Capital, Vol. III, pp. 576-613.

One of the primary consequences of accumulation- the increasing organic composition of capital- will through the force and mechanism of competition, by and large, appear in all spheres of production. But since the rate of profit is inversely related to the organic composition of capital, accumulation procures an inevitable, tendency for the average rate of profit to decline. Thus Marx arrives at a conclusion that the falling rate of profit originates from conditions inherent in capitalism.⁷⁰ Consequently Marxian theory of profit leads to a theory of crises.

3.4 The recurring feature of the cycle.

Marx now turns to the question how recovery is brought about. He is not obliterate to the other features of business cycles viz, recovery and prosperity. The seeds of recovery are embedded in the latter stages of the preceding crisis.

Capitalists during a crisis purchase the ruined production processes after the total depreciation of their capital values and advance a smaller outlay of capital on value terms than the physical assets represented by the process they buy. During a crisis, even at a low crisis-price, the rate of profit accruing to the new owner of the process will be positive. This is a saving grace of the

70. Ibid., pp. 191-212.

ailing system. Here is Marx's account of what would now be called "the upswing" of the trade cycle. "The stagnation of production would have laid off a part of the labouring class and thereby place the employed part in a condition, in which they would have to submit to a reduction of wages, even below the average On the other hand, the fall in prices and the competitive struggle would have given to every capitalist an impulse to raise the individual value of his total product above its average value by means of new machines, new and improved working methods The depreciation of the elements of constant capital itself would be another factor tending to raise the rate of profit. The mass of the employed constant capital, compared to the variable, would have increased, but the value of this mass might have fallen. The present stagnation of production would have prepared an expansion of production later on, within capitalist limits.

And in this way the cycle would be run once more. One portion of the Capital which had been depreciated by the stagnation of its function would recover its old value. For the rest, the same vicious circle would be described once more under expanded market, and with increased productive forces."⁷¹

71. Ibid., pp. 298-9.

The new techniques of production introduced during depression reduce individual values below their social values and thereby create surplus-value.⁷² According to Marx, "A crisis is always the starting point of large amount of new investment."⁷³ This process of recovery is further aided by increased production made possible by intense exploitation of the old and the conquest of new markets.⁷⁴ Rates of profit try to buy up and instill confidence into the capitalists. Capitals of higher organic composition are introduced and the quantum of production surpasses the situation before the occurrence of that particular crisis. Once again it is the old episode of production outstripping consumption. With the continual improvement in the means of production and expansion of credit system, the gravity and consequences of the crisis must be severe. "And in this way", Marx asserts, "the cycle would run once more".⁷⁵ Hence Marx writes "As the heavenly bodies, once thrown into a certain definite motion, always repeat this, so that it is with the social production as soon as it is once thrown into this movement

72. Ibid., pp. ³⁰⁴~~304~~.⁹

73. Capital, Vol. II, p. 211.

74. Communist Manifesto, p. 17.

75. Capital, Vol. III, p. 575.

of alternate expansion and contraction. Effects, in their turn, become causes and the varying accidents of the whole process, which always reproduces its own conditions, take on the form of periodicity."⁷⁶

3.5 The trend of crises and the decline in the Rate of Profit.

In the previous section we have seen how the business cycle is an inalienable and recurring feature of capitalism. It is due to the very stuff of which capitalism is made of. However, the mere repetition is only the obverse side of the coin. Another important facet is the increasing susceptibility of capitalism to progressively more critical crises. "Crises.... by their periodical return put the existence of the entire bourgeois society on trial, each time more threateningly.... The productive forces at the disposal of society no longer tend to further the development of the conditions of bourgeois property; on the contrary, they have become too powerful for these conditions, by which they are fettered, and no sooner do they overcome these fetters than they bring disorder into the whole of bourgeois society.... And how does the bourgeoisie get over these crises? On the one hand by enforced destruction of a mass of productive forces, on the other, by the conquest of new markets, and by the more through exploitation of the

76. Capital, Vol. I, p. 695. See also Wage, Labour and Capital, p. 51.

old ones. That is to say, by paving the way for more extensive and more destructive crises, and by diminishing the means whereby crises are prevented."⁷⁷

For Marx, the cause, course and consequences of cycles are important. In the falling rate of profit Marx has conceived the propelling force and compelling impulses for the business cycle.⁷⁸ He ascertains that given the rate of surplus-value as an index of the relative bargaining capacities of the capitalist and labourer and the tendency for the accumulation of capital to increase the organic composition of capital, the rate of profit would tend to decline. In other words

$$p' = \frac{s}{(c + v)}$$

Consequently total amount of surplus-value may rise due to the employment of more variable capital. However as the constant capital increases faster than the variable capital, the rate of profit tends to fall.

It is the rate of profit that governs and conditions *the* its growth of capitalism. Capitalist production is, "in its inner most essence", production for profit.⁷⁹ It is therefore

77. The Communist Manifesto. pp. 14-5.

78. Capital, Vol. III, Chaps. XIII to XV.

79. Ibid., p. 303.

conceivable how there can be an overproduction, both of capital and of commodities, when making profit becomes the object. There can be "too many means of production and necessities of like ^f to permit of their serving as means for the exploitation ^{of} at the labourers at a certain rate of profit."⁸⁰

It is the phenomenal over-production that brings the death- the biological conclusion of the being. The very emergence of overproduction unfailingly indicates that the rate of profit is no longer enough to sustain a further progress of the productive forces. When overproduction becomes deeper and deeper and with further development, it asserts that the rate of profit can not be reinstated to a level sufficient to permit the employment of all Capital and labour. Here Capitalism collapses due to its own weight. Its prop, the spur of profit, is gone. It is atrophied. It is not done to death, it dies a natural death. Marx writes "Capitalism comes to a standstill at a point determined by the production and realisation of profit, not by the satisfaction of social needs."⁸¹ Thus we find that the falling rate of profit is closely affiliated with the inevitable decline and

80. Ibid., p. 304.

81. Ibid., p. 302.

fall of capitalism. The falling rate of profit imposes a crippling barrier to accumulation and production- the former is the basis and latter the end of capitalism. It accelerates the process of concentration and centralization of capital. It further creates conditions which tear at the vitals of the system. If the Marxian thesis of a long-run decline of the rate of profit is tenable, then it could be safely argued that business cycles are oscillations around a falling trend of profit.

3.6 A Study on Capitalism

Marx is not interested in explaining events as much as changing them. His philosophy is dedicated to revolutionary change and his dialectic is meant to be an armour for use in the struggle against the existing system. Hegel has taught him that nothing is completely permanent but every thing is continually evolving, developing and becoming. Marx believed that capitalism is only a passing phenomenon with a limited life time. He examined history to discover its laws. He thought if he could discover and understand them, he could find the future of the system. With this intention he found that the falling rate of profit will bring the permanent crisis. Thus, the law of profit assumes an important position in his analysis of capitalism. The flora and

fauna, the rise and fall of capitalism are to be read in the falling rate of profit. In a letter to Engels in 1868, Marx refers to the problem of "the tendency of the rate of profit to fall as society progresses" as "the great original sin of political economy to date".⁸²

To Marx, a crisis is retribution. It is the price for the original sin. A crisis, is not a superficial disturbance till the establishment of the new equilibrium. Rather it plays a positive role in shaping the long-term trend of the system. Crisis serves to resolve the original contradiction of capitalism as well as being a product of it." Crises are always momentary and forcible solutions of existing contradictions, violent eruptions which restore the disturbed equilibrium for a while."⁸³ Thus Marx has conceived crises, not as stray deviations from predestined equilibrium but in themselves as vehicles of progress which, obeying the laws of history determined the development of capitalism.

82. Correspondence, p. 244.

83. Capital, Vol. III, p. 292.

4.

APPRAISAL

"At any rate I hope the bourgeoisie will think of my carbuncles all the rest of their lives."

Letter to Engels.

4.0 SUMMARY

No where in the Marxian analysis do we find a definite shift of emphasises and marked alterations as in the theory of price. In Volume I, he identifies price with labour content and demand with use-value. Nevertheless in the later section of Volume III he takes note of the varying organic compositions of capital and tries to include the market forces of supply and demand. This concept of prices of production and not the labour theory of value, constitutes the axis of Marxian teachings. Here Marx makes the subtle distinction between surplus-value and profit. Even though surplus-value is exclusively the product of variable capital, to the capitalists it is a product of total capital outlay.

Marx theory of profit is a development of his theory of commodity valuation. He asserts that surplus or profit is the important part of value. It is extracted from the process of production. The formation of profit is classified under two chief divisions, absolute and relative, based on the source of labour exploitation. Relative surplus-value is the important factor. Here it is noteworthy that relative surplus-value which is a significant factor in the Marxian analysis is due to the increasing mechanization i.e. due to an increase in the constant capital. However Marx believes that all surplus, both absolute and relative, is derived from the variable capital. His concept of innovation is the critical variable in the dynamic model, which gives scope for the occurrence of

super-profit. Interest is a component of surplus. Its level depends upon the magnitude of the surplus and also upon the market forces for loanable funds. Interest as a derivative of surplus, influences the rate of profit. Absolute rent is the difference between the social organic composition of capital and the capital composition in agriculture. Both differential and absolute rents belong to the landowner. Any surplus earned over the average profit is the property of the landowner, and not of the capitalists.

With the development of capitalism, due to the improvement of technology, the total period of production i.e. time of production and time of circulation, is abridged. Annual capital turnovers, which is calculated by the number of times industrial capital is reproduced, multiply. The annual production of surplus-value which is related to the total number of turnovers, is therefore, increased. Marx expresses simple reproduction and capital accumulation in value and not in price terminology. The complete disposal of capitalists' surplus through purchase of consumer goods is called 'simple reproduction'. Capital accumulation is the allocation of surplus to capital. The model, evolved by Marx to study the capital formation in the capitalist economy, is based upon the analysis of capital-goods and consumer-goods industries i.e. Department I and II. The rates of profit in both the departments vary since they consist of different organic compositions of capital. However, he introduces another

assumption saying that in the capitalistic system the rate of profit in all industries is equal. Capital accumulation, Marx states, should increase. This is achieved by the introduction of technology. The inclusion of increasing technology into the model, causes a fall in the rate of profit. In order to arrest such a fall in the profit - since it is the basis of the economy - the process of capital accumulation is accelerated by the further introduction of technology. This does not save the situation. The rate of profit discloses a tendency to fall. This falling rate of profit is tendential because it expresses an ever-present tendency, even if concealed or thwarted by antagonistic causes and it can exist even if profits in general continue to increase.

A careful study on theories of interest, rent and capital accumulation reveals the existence of other factors that influence the rate of profit. They are (a) changing value of merchant's capital, (b) changing values of variable and constant capital, (c) changing values of capital turnover, and (d) changing values of distributions of profit. An examination of the above factors indicates that the rate of profit increases with declining values of labour-power, with rise in the working hours, with decrease in the price of raw materials, and with increase of annual capital turnovers.

Cycles are inherent in the stuff of which capitalism is constructed of. They become increasingly severe with the higher organic compositions of capital. The productive capacities increase more than the absorbing capacities. The

lacuna between these two results from the laws of capitalist development. Over-production is another word for this hiatus and the crisis follows this.

The tendency towards decrease of the profit rate acts as a barrier upon the development of the capitalist system. There is consequently a kind of self-limitation to the development of capitalism which discloses the contradiction indigenous to the system. The purpose of capitalist production is the creation of surplus-value and the conversion of a slice of it into new capital. This process rests upon the size of the working population and on the rate of exploitation. The product which consists of surplus-value is to be sold. The capitalist will not realize his surplus-value if the product cannot be sold or if it can only be sold at prices which are below the prices of production. The factors that favour the realization of surplus-value are the same as those for creating one. If the former depends on the productive capacity, the latter on the consuming capacity of society. The consuming capacity is limited by the urge for accumulation which is inevitable. Fierce competition compels every capitalist to accumulate more and more, lest he will be eliminated from the race. This results in a continual increase in social productive powers which involves a progressive intensification of the conflict between production and consumption, between the creation of surplus-value and its realization. On the one hand, there is the tendency towards development of productive capacity as

the result of the urge to obtain the maximum individual profit; on the other, the tendential decrease of the profit rate. This opposition shows the contradiction between the state of productive capacity and that of actual production returns. The scent of dialectic, here, is irrepressible.

4.1 CONCLUSION

It is rather a delicate and difficult task to estimate Marx's contribution to the theory of profit. His views on this subject require to be pictured against the wider canvas of his socio-economic philosophy. His theorization of profit is a striking note in his larger commentary on capitalism. The vastness of the literature to which Marxism has given scope, the militancy with which its message has been delivered and the vehemence with which it has been assailed, all combine to make the task of evaluation hard and hazardous. The grand vision of an intrinsic evolution of economic process -- that works through accumulation, and finally destroys the competitive society -- stands still admirable, inspite of its subjective assumptions and defective techniques. The breadth and beauty of the vision, even after the most vigorous criticism has done its worst, might dazzle many even more than it dazzled Engels, who was very near to the workshop. The vision of Marx is a product of purposive wanderings in various branches of sociology, definitely surpassing economics. Hence it is arduous and also unjust to understand and assess it purely by the tools of economics. It is not only a tribute to Marx but also a delineation of the difficulties involved to attempt such a one. Thus, realising such tremendous limitations, let us venture a beginning in that line.

Marx, in the 'Preface of Capital' Volume I, as cited already, says the purpose of his endeavour. "It is the ultimate aim of this work to lay bare the economic law of motion of modern society." What is this law that imparts the propelling force for the progress of the society? A clinical scrutiny of Marxism, enables to perceive four 'laws of motion'. They are -

- (1) the law of the falling rate of profit,
- (2) the law of the increasing severity of the cyclical crises,
- (3) the law of concentration and centralization of capital; and
- (4) the law of the increasing misery of the labourers.

Laws in social sciences are not to be considered as laws in the physical sciences, because the exactness of facts and the infallibility of prognostications of the latter can never be attained in the former sciences. Because they deal with the subtle and mutable nature of man. Hence the laws in social sciences are to be viewed as tendencies, in the sense that they predict certain possibilities and that certain situations are more likely to materialise than, not as a result of certain given causes, or simply, a given cause tends to produce a particular effect. Thus, the laws, as expounded by Marx, should be regarded only as expressions of tendencies, which under given circumstances, might be thwarted by countering causes. They are too nebulous to reduce to mathematical exactitude. Thus these four laws are to be thought of as tendential only.

Of these four laws, the law of the falling rate of profit forms the cardinal around which other laws revolve.

If the whole Marxism could be reduced to these four laws, and if the law of falling rate of profit is found to be the pivot around which other laws nestle, then the study of the law of falling rate of profit assumes special importance. In other words, a study of the law of falling rate of profit gives a fair glimpse of Marxism.

Let us start with the Marxian conclusion of the development of international capitalism. Capital will withdraw from the field where the rate of return for capital is low and invade to the field where it is high. Because of the differences in the profit rates among various countries, capital seeks a country where it gets a higher return. It is the genesis of world market and the creation of colonies is the concomitant of it. Such a process brings also the internationalization of capitalism.

Turning to home front, we find that due to falling rate of profit, surplus for the capitalist becomes progressively smaller. In order to increase the size of the surplus or in other words, to arrest the declining tendency of the profit, the capitalist increases the ratio of constant capital. Such an act, because of an inevitable increase in the capital compositions, only aggravates the state of affairs. Increase in the constant capital, which is supposed to be the saviour of the situation, results in the creation of the industrial reserve army. Due to a

progressive increase in the constant capital, which is promulgated by the law of declining tendency of profit, the industrial reserve army will go on increasing because the displacement of labour must ultimately be greater than the reabsorption. The increasing size of the industrial reserve army will pull down the wage level to subsistence and since subsistence is malleable downward, it will result in the increasing misery of the proletariat. Thus the law of misery of the proletariat is rooted in the law of profit and the increasing misery of the proletariat is a natural corollary of the declining tendency of the rate of profit.

The increasing misery of the proletariat brings forth the class-consciousness. A proletariat without class-consciousness cannot perform the function assigned by history. Class-consciousness causes class-struggle. In the class-struggle, the proletariat wins.

Overproduction is the logical resultant of an increase in the organic composition of capital which is directed towards arresting the falling rate of profit. As the organic compositions of capital increase, market capacities expand lesser than the production capacities. This eventually leads to general overproduction. Over production causes cycle; a series of deeper over-production results in increasingly severe cycles which ultimately contrive the fatal crisis.

The Marxian conclusion of increasing concentrations of production is also a derivative of the law of profit.

During cyclical adversities, the number of capitalists is reduced. In spite of decrease in the number, the total production is ever-increasing during subsequent phase of the cycle. This implies concentration of production. To wither the critical forces of competition -- an inevitable sequence the capitalists' bid to increase production -- the capitalists increase the capital compositions which necessarily lead to centralization.

The increasing concentration of production and misery the proletariat divides the society into two water-tight compartments for preparing ^{for} ultimate assault. With the declining rate of profit, rates of rent and interest (as it related to wage) should also decline. With the declining rates of rent and interest, the money lending class and the landowning class, are eliminated. Other classes have no historical justification for existence.¹ Only two classes remain: bourgeois, the class which owns the capital and the proletariat, the class which is subordinated by capital. Thus we find that the Marxian conclusions of the development of international capitalism, the concentration and centralization of production and finance, the increasing misery of the proletariat, the inherent instability of the capitalist system, the class-consciousness and the class-struggle or in fine, the very essence of Marxism, are greatly a

1. Communist Manifesto, p. 23.

logical derivative of the theory of falling rate of profit. The dynamic model of Marx, is a compendium of the above conclusions and hence the entire model rests upon the premise of the theory of the falling rate of profit. If Marxism is a commentary on the future of capitalism and if the whole² Marxism could be simplified to the theory of falling rate of profit, then the veracity of the theory is to be established to test the accuracy of the Marxian prediction.

TEST OF THE THEORY

Now let us try to subject the theory to statistical tests. It is a formidable venture because Marx has never given the bolts and nuts of the theory nor attempted to offer unequivocal definitions of the concepts used in it. That is why so far very few have tried in this direction.²

Recalling that $\frac{c}{v}$ = the organic composition of capital, $\frac{s}{v}$ = the rate of surplus-value and $\frac{s}{c+v}$ = the rate of profit, p' , we have been dividing both the numerator and the denominator of $\frac{s}{c+v}$ by v

$$p' = \frac{\frac{s}{v}}{\frac{c+v}{v}} = \frac{\frac{s}{v}}{\frac{c}{v} + 1}$$

-
2. Probably the first to venture in this field is Eugene Varga. See his, The Great Crisis and its political consequences (New York, 1935), pp. 174-75. The work of Joseph Gillman in this field deserves appreciation. Even though his interpretation of the law is not fully convincing, it is a remarkable attempt. The subsequent statistics are reproduced from his book The Falling Rate of Profit (London, 1957).

Assuming as Marx does, a constant rate of surplus-value of the rates $\frac{s}{v}$, p' will decrease as $\frac{c}{v}$ increases and will increase as $\frac{c}{v}$ decreases.

Gillman has devised an ingenious test for the law. He seeks to establish the statistical relations between the Marxist categories, c , v and s and to compute their trends with the help of the data published by the United States Bureau of census for the years 1849 to 1939.

In his calculation, c corresponds roughly to the value of 'materials, supplies, fuel, purchased electric energy and contract work' of the U.S. Census of Manufactures, plus an allowance for depreciation of plant and equipment. v corresponds roughly to wages in that census when the c and v equivalents of the census are subtracted from its 'value products', one obtains the s of the formula.³ The calculations of the Marxian ratios are carried both on the basis of the constant capital consumed ('flow' basis) and on the basis of the capital invested ('Stock' basis).

In the Table No. 1* this method is illustrated.

The findings of the 'flow basis' are summarised in Table No. 2.**

During the period 1919-39, by and large, the organic composition of capital did not rise, the surplus-value did not fall and the rate of profit never tended to fall except during depression years.

* (See page 233).

** (See page 234).

The calculation on the 'Stock' basis only confirms the same conclusion, as it is shown in Table No. 3.**

Table No. 1⁴

The organic composition of capital (o.c.c.), the Rate of Surplus-Value (s') and the Rate of Profit (p'). United States Electrical Machinery Industry. 1941.

(Dollar amounts in millions)

Line	Item and computation	Amount and ratios
1.	Net sales (or value of product)	2172
2.	Materials*	784
3.	Depreciation, etc.**	64
4.	Constant Capital (line 2 + line 3) = C	845
5.	Variable capital (v): wages of production workers	606
6.	Total Capital (c+v) : Line 4 + line 5	1451
7.	Surplus-value (line 1 - line 6) = S	721
8.	O.C.C. (line 4 ÷ line 5)	1.4
9.	S' (line 7 ÷ line 5) x 100	119
10.	P' (line 7 ÷ line 6) x 100***	249.7

* Does not include fuel, etc., as the corresponding Census item does.

** Includes depletion and amortization.

*** This is the elementary form of the profit rate of which we spoke earlier.

** (See page 235).

3. Gillman notes here that "this basis contains serious shortcomings", See, Ibid., pp. 33-74.

4. Ibid., p. 35.

Table No. 2⁵

The organic composition of Capital (o.c.c.), the Rate of Surplus-value (s') and the Rate of Profit (p') United States Manufacturing Industries 1919-39.

Flow Basis 2.

(Materials consumed, plus depreciation allowance)

Year	O.C.C.	S' Per cent	P' per cent
1919	3.9	135	27.6
1920	3.4	111	25.2
1921	3.5	116	26.0
1922	3.5	124	27.2
1923	3.5	128	28.6
1924	3.6	131	28.9
1925	3.7	142	30.3
1926	3.6	140	30.4
1927	3.6	144	31.6
1928	3.7	159	34.1
1929	3.6	164	35.4
1930	3.6	161	35.0
1931	3.5	154	34.4
1932	3.6	145	31.5
1933	3.7	154	32.9
1934	3.6	137	29.6
1935	3.8	136	28.2
1936	4.0	150	30.2
1937	3.7	134	28.6
1938	3.9	149	30.6
1939	3.7	149	32.0

6. Ibid., p. 55.

5. Ibid., p. 40.

Table No. 3⁶

The Organic Composition of Capital (o.c.c.), the Rate of Surplus-Value (S'), and the Rate of profit (p') United States Manufacturing Industries. Various years since 1880.

Stock basis 2.

(Total constant capital)

Year	O.C.C.	S' per cent	p' per cent
1880	1.5	102	69
1890	1.9	114	60
1900	2.6	132	50
1912	3.2	137	42
1919	4.3	125	29
1920	4.3	-	-
1921	5.6	103	18
1922	4.7	-	-
1923	4.2	121	29
1924	4.4	-	-
1925	4.3	136	32
1926	4.4	-	-
1927	4.4	139	32
1928	4.5	-	-
1929	4.4	159	36
1930	5.1	-	-
1931	5.9	147	25
1932	7.3	-	-
1933	6.7	150	22
1934	5.4	-	-
1935	4.7	130	28
1936	4.3	-	-
1937	4.0	130	33
1938	4.9	-	-
1939	4.3	151	35
1940	4.0	-	-
1941	3.4	-	-
1942	2.7	-	-
1943	2.2	-	-
1944	2.1	-	-
1945	2.5	-	-
1946	3.3	-	-
1947	3.3	129	39
1948	3.5	-	-
1949	3.8	129	34
1950	3.6	141	40
1951	3.5	133	38
1952	3.6	132	38

6. Ibid., p. 55.

We infer from the limited statistical tests conducted on the law of profit, that Marx is not invulnerable. It probably means that some factors are working to upset the operation of the law of falling rate of profit. The why of this could be explained in simple terms.

As it has been told in the earlier chapter, Marx has derived this law on a high level of abstraction and hence its veracity is relative to the level of abstraction on which it is conceived. It should undergo a modification if it is to be brought to a more concrete level, to which probably it is not intended for.⁷

We can accept that Marx has operated at a high level of abstraction and has evolved a model of pure capitalism from which all inessential features have been eliminated. But, Marx has conducted the analysis on progressively lower levels of abstraction in subsequent Volumes of II and III. As a matter of fact, in Volumes II and III, he has qualified many of the conclusions derived from the abstract model expounded in Volume I. This view is further reinforced if we remember that he has stated the theory of the falling

7. Gillman has redefined the Marxian formula in the form, $P = S - U/C + V+U$. In other words the rate of profit is equal to surplus-value minus unproductive expenses of circulation divided by the sum of constant and variable capital and there same unproductive expenses. The expenses of circulation U are expenditures which are required for the 'realization' of surplus-value in the

rate with its riders only in Volume III, even though he has ample logical occasions to give them in Volume I. Hence if the theory of profit fails in the limited statistical tests, that failure should not be attributed to the operation of 'counteracting causes'. In a given real situation, in which the theory is to be tested, it is impossible to purge on the influences either of "counteracting causes" or "favourable factors". At any particular point of time, the contributions of these causes and factors can seldom be ignored. Hence, if "the favourable factors", that aid the operation of the law so much are deliberately ignored and only the "counteracting causes" are repeatedly mentioned, then there is no possible end to this type of reasoning. If one chooses this line of argument, one can then go on to show that the 'tendency' ought not to be interpreted as concrete predictions about the future of real capitalism and that a ^{fail} future of the 'tendency' to manifest on the surface of reality shows that it is 'counteracted' and not that it does not exist.

(contd. f.n. 7)

form of profits by the capitalists. The revised formula asserts that these 'unproductive' expenses of circulation are of importance relative to the rate of profit, on the one side, and the capitalist's investments in constant and variable capital on the other. From the capitalists' point of view, the investment 'on unproductive expenses' of circulation is also significant to the realization of a profit as his investment in productive constant and variable capitals; hence U in the denominator. However, these very expenditure causes a drain on productive labour -- hence the U in the numerator. Gillman, Ibid., pp. 66-106.

If a theory desires to produce an appeal more than intramural -- an appeal to the whole world which its author intended -- then it should not loom only in the abstract world. The method of the abstract theory is always hypothetical; for though based ultimately on observation, it works from artificially processed data. It is in itself incomplete, since we cannot by its aid alone adequately understand the complex phenomena of actual life. Such an abstract model can itself only give broad outlines of the essential determining factors and the general manner of their interactions and it can be used for purposes of prediction only; (a) if the assumptions of the model are attuned to the real world and (b) if the secondary determining factors abstracted from the model, do not exercise any significant influence. This exposes the inadequacy of the Marxian model. If the abstract model is ill-suited to analyse the real situation, because of its inability to explain actual world, the model should be strained to accommodate the "counter-acting causes" which are inexorable parts of real life. If the 'counteracting causes' are taken into account, then it explains how they would ever present in real world and thereby permanently cancel the operation of the law of the falling rate of profit. This is another way of pointing out the basic imperfection in Marxism. Nevertheless, so many Don Quixotes are still tilting at windmills.

Marx has asked the right questions but given the wrong answers. It is fitting to end our enquiry with the inimitable words of Schumpeter. "What a pity, but at the same time, what a lesson and what a challenge".⁸

8. History of Economic Analysis (New York, 1954),
p. 433.

Letters Written 1853-1856
Edited by
(Swan

4.2 Select Bibliography

1. WORKS BY KARL MARX

Capital, A Critique of Political Economy. Volume I : The Process of Capitalist Production. Edited by Frederick Engels. Translated from the 3rd German edition by Samuel Moore and Edward Aveling. Revised and amplified according to the 4th German edition by Ernest Untermann. (Charles H. Kerr & Co., Chicago, 1908).

Capital, A Critique of Political Economy. Volume II : The Process of Circulation of Capital. Edited by Frederick Engels. Translated from the 2nd German edition by Ernest Untermann. (Charles H. Kerr & Co., Chicago, 1933).

Capital, A Critique of Political Economy. Volume III : The Process of Capitalist Production as a Whole. Edited by Frederick Engels. Translated from the 1st German edition by Ernest Untermann. (Charles H. Kerr & Co., Chicago, 1909).

The Civil War in France. (International Publishers Co., New York, 1933).

The Class Struggles in France. (International Publishers Co., New York, 1934).

A Contribution to the Critique of Political Economy. Translated from the 2nd German edition by N.I. Stone. (Charles H. Kerr & Co., Chicago, 1940).

Critique of the Gotha Programme. (International Publishers Co., New York, 1933).

"The Discourse on Free Trade", Pocket Library on Socialism No. 50. (Charles H. Kerr & Co., Chicago, 1907).

The Eastern Question : A Reprint of Letters Written 1853-1856 Dealing with the Events of the Crimean War. Edited by Eleanor Marx Aveling and Edward Aveling. (Swan Sonnenschein & Co., London, 1897).

Economic and Philosophic Manuscripts of 1844. Translated by Martin Milligan. (Foreign Languages Publishing House, Moscow, 1959).

The Eighteenth Brumaire of Louis Bonaparte. Translated from the 2nd German edition by Daniel De Loen. (International Publishers Co., New York, 1926).

A History of Economic Theories. The Physiocrats to Adam Smith. Edited by Karl Kautsky. Translated from the French by Terence McCarthy (Langland Press, New York, 1932).

Letters to Dr. Kugelmann. (International Publishers Co., New York, 1934).

Marx on China, 1853-1860. Articles from the New York Daily Tribune (Lawrence & Wishart, London, 1951).

The Poverty of Philosophy. (Foreign Publishing House, Moscow, 1956).

Revolution and Counter-Revolution, or Germany in 1848. Edited by Eleanor Marx Aveling. (George Allen & Unwin, London, 1937).

Selected Essays. Translated by H.J. Stenning. (International Publishers Co., New York, 1926).

Theories of Surplus Value. Translated from Marx's preliminary manuscript for the projected 4th volume of Capital by G.A. Bonner and Emile Burns. (International Publishers Co., New York, 1952).

Value, Price and Profit. Edited by Eleanor Marx Aveling (Charles H. Kerr & Co., Chicago, 1913).

Wage-Labor and Capital. (Foreign Languages Publishing House, Moscow, 1947).

3. WORKS BY OTHER AUTHORS

BOOKS

BLAKE, W.J., Elements of Marxian Economic Theory. (Cordon, New York, 1939).

BOHM-BAWERK, E., Karl Marx and the Close of His System. Translated by A.M. MacDonald. (T.F. Unwin, London, 1898).

DICKINSON, H.D., Economics of Socialism. (Oxford University Press, London, 1939).

DOBB, M., Capitalism Yesterday and Today. (Lawrence and Wishart, London, 1958).

_____ Marx as an Economist - an Essay. (Lawrence and Wishart, London, 1943).

_____ Political Economy and Capitalism. (George Routledge and Sons Ltd., London, 1937).

_____ Studies in the Development of Capitalism. (George Routledge and Sons Ltd., London, 1946).

FEINSTEIN, C.H., (ed.), Socialism, Capitalism and Economic Growth : Essays Presented to Maurice Dobb. (The University Press, Cambridge, 1967).

GILLMAN, J., Prosperity in Crisis. (Marzani and Munsell, New York, 1965).

_____ The Falling Rate of Profit, Marx's Law and Its Significance to Twentieth-Century Capitalism. (Dennis Hobson, London, 1957).

HOOKE, S., Towards the Understanding of Karl Marx. (The Humanities Press, New York, 1933).

- HOROWITZ, D., (ed.), Marx and Modern Economics. (MacGibbon and Kee, London, 1968).
- KAUTSKY, K., The Economic Doctrines of Karl Marx. (A. and C. Black Ltd., London, 1925).
- KORSCH, K., Karl Marx. (Russell and Russell, New York, 1963).
- LENIN, V.I., Imperialism, the Highest Stage of Capitalism. (Progress Publishers, Moscow, 13th revised edn., 1966).
- LEONTIEV, A., Marx's Capital. (International Publishers, New York, 1946).
- LUXEMBURG, R., The Accumulation of Capital. Translated by A. Schwarzschild. (Yale University Press, New Haven, 1951).
- MEEK, R.L., Economics and Ideology and Other Essays. (Chapman and Hall Ltd., London, 1967).
- ROBINSON, J., An Essay on Marxian Economics. (Macmillan & Co., Ltd., London, 1952).
- _____ On Re-reading Marx. (Students' Bookshops Ltd., Cambridge, 1953).
- SCHUMPETER, J.A., Capitalism, Socialism and Democracy. (Harper Brothers, New York, 2nd ed., 1947).
- _____ History of Economic Analysis; (Oxford University Press, New York, 1954).
- STRACHEY, J., The Nature of Capitalist Crisis. (Covici Friede Inc., New York, 1935).
- SWEEZY, P., The Present^{As} History. (Monthly Review Press, New York, 1953).
- _____ The Theory of Capitalist Development : Principles of Marxian Political Economy. (Oxford University Press, New York, 1966).

UNTERMANN, E., Marxian Economics. (Charles H. Kerr & Company, Chicago, 1911).

WOLFSON, M., A Reappraisal of Marxian Economics. (Columbia University Press, New York, 1966).

ARTICLES

AFANAS'EV V., "Marx's Capital and the crisis of Bourgeois Political economy". Problems of Economics, Vol. X, No. 12, 1968, pp. 3-13.

BOBER, M.M., "Marx and economic calculation". American Economic Review, Vol. XXXVI, 1946, pp. 53-72.

BRONFENBRENNER, R.M., "Das Kapital for the modern man". Science and Society, Vol. XXIX, No. 4, 1965, pp. 419-38.

BRON FENBRENNER, M., "Marxian Macro-economic model". Kyklos, Vol. XIX, No. 2, 1966, pp. 201-18.

BUCHURIN, A. and Pervukhin A., "Concerning Profit under Socialism". Problems of Economics, Vol. VII, No. 4, 1964, pp. 16-26.

CHAMBERLAIN, G.L., "Man Marx Made". Science and Society, Vol. XXVII, No. 3, 1963, pp. 302-20.

_____ "Creative Marxism in political economy". Science and Society, Vol. XXVIII, No. 4, 1964, pp. 448-53.

CHIGUSA, Y., "Non-Marxists' View on Marxist Economics", Keio Economic Review, Vol. III, 1965, pp. 142-158.

DAYA., "Surplus Value, Profit and Exploitation : an attempt at an analysis of some concepts in Marxian economy". Review of Economic Studies, Vol. XXII, No. 2, 1955, pp. 96-108.

DICKINSON, H.D., "The Falling Rate of Profit in Marxian Economics", Review of Economic Studies, Vol. XXIV, No. 64, 1957, pp. 120-30.

DOBB, M., "A note on some aspects of the economic theory of Marx". Science and Society, Vol. II, No. 3, 1938, pp. 322-31.

- DOBB, M., "Marx and the so-called 'Law of Increasing Misery". The Economic Review, Vol. VIII, No. 1, 1957, pp. 29-33.
- _____. "Marxism and economic theory". Modern Quarterly, Vol. III, No. 2, 1948, pp. 117-268.
- _____. "The falling rate of profit". Science and Society, Vol. III, No. 2, 1959, pp. 97-103.
- _____. "Vulgar economics' and 'Vulgar Marxism' : a reply". Journal of Political Economy, Vol. XLVIII, April 1940, pp. 251-88.
- DREWNOWSKI, J., "Economic Theory of Socialism : A Suggestion for reconsideration". Journal of Political Economy, Vol. LXIX, No. 4, 1961, pp. 341-54.
- DUNAVEVSKAYA, R., "A new revision of Marxian economics". American Economic Review, Vol. XXXIV, 1944, pp. 531-87.
- _____. "Revision or reaffirmation of Marxism? A Rejoinder". American Economic Review, Vol. XXXV, 1945, pp. 660-84.
- FELLNER, W., "Marxian hypothesis and observable trends under capitalism", Economic Journal, Vol. 67, March 1957, pp. 16-26.
- GORDON, S., "Why does Marxian exploitation theory require a labor theory of Value?" Journal of Political Economy, Vol. LXXVI, No. 1, 1968, pp. 137-40.
- GOTH, W., "Marx Chamberlain made". Science and Society, Vol. XXVIII, No. 2, 1964, pp. 208-13.
- GOTTLIEB, M., "Marx's Mehrwert Concept". Review of Economic Studies, Vol. XVIII, 1950-51, pp. 164-178.
- HODGES, D.C., "Unity of Marx's Thought", Science and Society, Vol. XXVIII, No. 3, 1964, pp. 316-23.

HOSELITZ, B.F., "Karl Marx on Secular economic and Social Development". Enquiry, Vol. I, No. 1, 1964, pp. 27-68.

HOWTON, F.W., "Laying the Ghost of Marx - and Weher". Social Research, Vol. XXXI, No. 2, 1964, pp. 244-51.

ISE, J., "Significance of Marxian economics : discussion". American Economic Review, Vol. XXVIII, 1938, pp. 17-20.

KAMAIMURA, S., "General Conditions of Crisis : Stages of Accumulation of Capital and reproduction". Kyoto University Economic Review, Vol. XXXIV, No. 1, 1964, pp. 16-35.

KIHARA, M., "Socialism and Political Economy". Kyoto University Economic Review, Vol. XXXIV, No. 2, 1964, pp. 35-56.

LERNER, A.P., "From Vulgar Political economy to vulgar Marxism". Journal of Political Economy, Vol. XLVII, 1939, pp. 557-67.

LEXIS, W., "The Concluding Volume of Marx's Capital". Quarterly Journal of Economics, Vol. X, 1895, pp. 1-33.

OKISIO, N., "Technical Changes and the Rate of Profit". Kobe University Economic Review, Vol. VII, 1961, pp. 87-99.

PATEL, S.J., "Marxism and Recent Economic Thought", Science and Society, Vol. XI, No. 1, 1947, pp. 52-65.

PESENTI, A., "The Falling Rate of Profit". Science and Society, Vol. XXIII, No. 3, 1959, pp. 233-52.

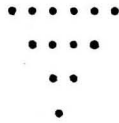
RAKSHIT, M., "Reserve Army, effective demand and Marxian Crisis models". Arthaniti, Vol. V, No. 1, Jan. 1962, pp. 1-25.

- ROBINSON, J., "The Falling Rate of Profit : A Comment". Science and Society, Vol. XXIII, No. 2, 1959, pp. 104-6.
- SAMUELSON, P.A., "Marxian Economic Models". American Economic Review, Vol. XLVII, No. 6, 1957, pp. 897-98.
- SCHLESINGER, R., "Continuity of Marx's thought". Science and Society, Vol. XXIV, No. 2, 1965, pp. 217-31.
- SHIBATA, K., "Marx's Analysis of Capitalism and the general equilibrium theory of the Lausanne School". Kyoto University Economic Review, Vol. III, No. 1, 1933, pp. 107-36.
- _____, "On the General Profit Rate". Kyoto University Economic Review, Vol. XIV, No. 1, 1939, pp. 40-66.
- _____, "On the Law of Decline in the Rate of Profit". Kyoto University Economic Review, Vol. IX, No. 1, (1934), pp. 61-75.
- SMITH, H., "Marx and the Trade cycle". Review of Economic Studies, Vol. IV, 1937, pp. 192-204.
- _____, "Marx as pure economist". Economic History, Vol. III, 1939, pp. 245-58.
- SOWELL, THOMAS., "Marxian Value reconsidered". Economics, Vol. XXX, No. 119, 1963, pp. 297-308.
- SPENGLER, J.J., "Significance of Marxian Economics : discussion". American Economic Review, Vol. XXVIII, 1938, pp. 20-22.
- SWEEZY, P.M., "Marxian and Orthodox economics". Science and Society, Vol. XI, No. 3, 1947, pp. 225-33.
- TAJIMA, K., "New Theory of Surplus-Value and the Harmony of the various classes of society". Kyoto University Economic Review, Vol. II, No. 2, 1926, pp. 1-14.

TSURU, S., "Marx's tableau economique and 'under consumption' theory" ..Indian Economic Review, Vol. I, No. 1, 1953, pp. 1-13.

VARLEY, D., "On the computation of the rate of surplus-value". Science and Society, Vol. II, 1938, pp. 393-6.
96.

VYGODSKY, S., "Marx's economic theory and his present critics". Problems of Economics, Vol. I, no. 7, 1958, pp. 12-17.



APPENDIX. A REPRINT OF AN ARTICLE
"GALBRAITH'S CONCEPT OF CONVERGENCE"

"The capitalist mode of production has been brought to a point where the work of supervision, entirely divorced from the ownership of capital, is always readily obtainable. It has, therefore, come to be useless for the capitalist to perform it himself."

Capital Vol. III

Galbraith's Concept of Convergence: A Study

By PL. ANDIAPPAN*

*Is Galbraith really serious about the concept of convergence? One does not know. But the author of this article sees special significance in his recent writings—his book, **New Industrial State**, in particular—and says that it is not mere wishful thinking.*

IN the latter part of the last century and the early decades of this, no subject was more discussed than the future of capitalism. Economists, political philosophers, men of unspecific wisdom and Bernard Shaw—all contributed their personal revelation. All agreed that the economic system was in a state of development and in time would transform itself into something hopefully better but certainly different. Socialists drew strength from the belief that theirs was the plausible next step in the natural process of change. But, the future of the modern industrial economy is not much discussed now, "partly because of the influence it exercises over our belief."¹ Nevertheless, Prof. Galbraith, "Huxley of modern economics"², takes up the question for the main reason that with the progress achieved thus far, the next step will be a general recognition of the convergent tendencies of modern industrial systems, even though differently billed as socialism or capitalism.

To Galbraith, this is a good thing. Because in time it will dispose of the notion of inevitable conflict based on irreconcilable difference. The difference is still cherished by the ideologists on both sides. But the fact is that the difference between economic systems... does not exist. What exists is an image.³

Overwhelming Similarity. Galbraith is not a lone ranger in this field. Berle and Means, Palmer, A. M. F. Burnham, J.⁴ and others share the opinion with him. Palmer opines: "If an intelligent observer from Mars

* Research Scholar, Indian School of International Studies, New Delhi-1.

1. Galbraith, J. K. "Capitalism, Socialism and the future of the Industrial State," *The Atlantic*, June 1967.

2. *Time*, February 16, 1968.

3. *Ibid.*

4. See Berle, A. A. and Means, G. C., *The Modern Corporation and Private Property*, N. Y., 1933. Burnham, James, *The Managerial Revolution*, N. Y., 1941.

5. "On Public Accountability," *Socialist Commentary*, January 1960, p. 13.

6. Many economists have studied this development in the growth of corporate sector. For example, see: Berle, A. A. and Means, G. C., *The Modern Corporation and Private Property*, N. Y., 1933, for a lucid analysis. Also see: Hirai, Y., *Conception of High Grade Corporation*, Tokyo, 1966, for an analysis of the structure of the corporate sector, and Maurer, H., *Great Enterprise*, N. Y., 1965, for the study of growth of corporations.

7. To illustrate the effect of astounding advancement in technology Galbraith cites the case of the Ford Motor Company. This company was formed in June 1903 with a capital of \$ 0.15 million and the staff of 125 and it produced its first car in October the same year. In 1954, the same company having a capital of \$ 6,000 million and employing about 317,000 men placed in the market a car on which work had been initiated in 1962; engineering and styling cost \$ 9 million and tooling up for production of the car cost another \$ 50 million.

8. *Ibid.*, P. 105.

or Venus should come and examine all large contemporary industrial concerns—public or private—as working enterprises, he would notice, I suspect, only their overwhelming sameness."⁵ But there they stop while Galbraith proceeds to expound the 'convergence theory.' While others saw the kettle boiling, he found out the use of the steam. What is 'convergence theory' as expounded by Galbraith? Prof. Galbraith in his recent Reith lectures on the B.B.C. and his latest book *The New Industrial State* has developed a thesis on the following grounds.

The economic structure in the capitalist countries has undergone a great change in the post-war period. Industrial corporations have grown into unimaginable proportions. For example, the gross revenue of General Motors in 1963 was 50 times those of the State of Nevada, eight times those of the State of New York and about one-fifth of those of the Federal Government of the U.S.A.

Gone are the days of great entrepreneurs like Rockefeller, Ford, etc., directing the decision-making process in the big corporations. Nor does the decision-making power rest with the shareholders. It precisely lies in the hands of specialists⁶ or in the words of Galbraith 'technocrats.'

The factor which has induced the above mentioned changes is technology. The contemporary means of production have become so sophisticated that they require highly educated skills and enormous investments of money over long periods of time.⁷ It is "technological compulsion," according to Galbraith, not ideological or political will" which triggers the chain reaction of industrial system. The long period of the production process, great amount of investment involved and inflexible commitment of the investment to the particular task necessitate the planning in every aspect of production.

The two systems. The difference between a Soviet and American firms is this. In America a large corporation sets its prices, organizes the demand for its products, establishes or negotiates prices for its raw materials and components, takes steps to ensure supply and establishes or negotiates rates for various categories of trained and specialized employees. In Soviet Union, these tasks are all performed by the State planning apparatus. Production and investment targets, which are established by the American firms for itself, are also given to the Soviet firm, though with some flexibility in application, by the State.⁸ The fact that planning is done not by the State but by the large corporations should not mean that the latter wishes to keep away from the State.

Rather, the modern giant corporation and the 'technostructure' are closely allied to and inter-woven with the government. It must be so because technology cannot advance without the tremendous investment and guaranteed demand of government—in space science, in aviation, in electronics, in nuclear physics and weapons. The presumed antagonism of business

to government is an anachronistic relic of earlier days of influence of the "entrepreneurial corporation" without either heavy dependence on modern technology or necessity and ability to control the market. Big business and the 'technostructure' in particular are partners of government."

The Ruling Class. How does the firm secure autonomy over its decisions? Galbraith says that decisions in the giant corporations are taken not by individuals, however high in the formal hierarchy but by specialized groups. When power is exercised by groups, it passes irrevocably to the organization. It rests in groups of 'technocrats' and is exercised by them imperceptibly and impersonally. It is interesting to note the view of James Burnham⁹. To him, the managerial revolution obliterates the essential differences between the various economic systems. In all systems the managers are the ruling class¹⁰.

Earlier, the need for planning in corporations has been referred. The success of the plans requires


9. *The Managerial Revolution*, N.Y., 1941.


10. On the Soviet side, a few studies have been undertaken in this respect. Notable among them are: Azrael, James, R., *Managerial Power and Soviet Politics*, Cambridge, 1966, and Dijilas, Milovan, *The New Class: An Analysis of the Communist System*, N.Y., 1957.

11. Gidadhubli, R. G. and Vaidyanath, R., "Recent Soviet Economic Reforms," *India Quarterly*, Vol. XXII, No. 4, October-December 1966, P. 353. It should be noted here that this and other reforms do not signify a return to the market system but only a shift of some planning functions from the State to enterprise.

that the planning authority should be able to control or sufficiently influence the various categories which affect the result sought and that it should not be subject to the power of those who might frustrate its plans by interference. The need for autonomy in corporations has been emphasized by many economists time and again. Galbraith asks a pertinent question: "If autonomy is necessary for the effective performance by the firm, it should be needed also in the Soviet type economies." To him, the requirement begins with the need to combine specialized information of different men. This need, to repeat, cannot be dispensed with by an ideology. It is relevant here to note that in September 1965, the Plenary session of the CPSU Central Committee, U.S.S.R., made "an endeavour . . . of vesting in factory managers greater freedom to decide how and what to produce."¹¹

Decision Making Process. While discussing the nature of corporations, Galbraith makes out two important propositions. Firstly, the persons who effectively participate in the decision-making process are not interested in maximization of profit; they are concerned with the growth and expansion of the firm so that they may get their own promotions in the expanding firm. And so the prices which are set are not exploitative but those which win many customers and thereby allow expansion of the firm. Almost similar views are expressed by Berle and Means. To them, the development of the modern corporation has resulted in the dissolution of the old atom of ownership into its component parts, control and beneficial ownership and this explosion of the atom of property destroys the basis





LEADS THE WAY IN THE TERPENE-BASED INDUSTRY

- SYNTHETIC CAMPHOR
(Technical and
Pharmaceutical Grade)
- CAMPHOR MONOBROMIDE
- CAMPHOR
SULPHONIC ACID
- ISOBORNEOL
- SYNTHETIC CAMPHOR OIL
- CAMPHENE
- TERPENE 'G'
(Technical Isocamphane)
- DIPENTENE (Technical)
- DELTA-3-CARENE
- LONGIFOLENE
- DISTILLED TURPENTINE
- TERPENE B-T
- ISOBORNYL FORMATE
- DITERPENE
- SODIUM FORMATE
(Technical)
- PINE TAR—(Heavy, Medium
and Light)
- ISOBORNYL ACETATE—
(Technical and Perfumery
grade)

Please Contact:

CAMPHOR & ALLIED PRODUCTS LTD.
H.O: Jehangir Bldg., 133 Mahatma Gandhi Rd., Bombay 1, India
Factory: P.O. Clutterbuckganj, Dt Bareilly (U.P.), India

everest/113B/CAP

of the old assumption that the quest for profits will spur the owner of industrial property to its effective use.¹²

Secondly, according to Galbraith, consumer sovereignty has become only a myth in the industrial society dominated by large corporations. Initiative for production of an article generally lies with the corporations who, after manufacturing it, try to persuade the consumers to buy it. With this assumption, Galbraith builds an unconventional definition of planning. When initiative lies with the consumer, we have a market economy and if it passes on to the producer, we have a planned economy.

With these pillars, Galbraith builds the 'convergence theory' according to which it is technology which makes it necessary for a large scale corporation to plan and to acquire autonomy for that purpose. And the imperatives of technology transcend ideology. Accordingly, we find that just as advance in technology has altered capitalism, taking the power away from the capitalist entrepreneur and lodging it in the body of the firm, in the same way it has changed socialism, making the industrial unit beyond the reach of social control. This should not mean that there is a tendency for the Soviet and Western systems to convergence by the return of the Soviet system to the market. Both the systems have outgrown the market. What in fact is occurring is a perceptible and important convergence of both the systems to the same form of planning and the growing authority of the business firm.

Lucid Analysis. Galbraith's thesis has evoked considerable interests among the economists and statesmen. To Michael Harrington, *The New Industrial State* "is one of the most significant works of social thought in this generation."¹³ To him, *The New Industrial State* is an attempt to help American liberalism recover from its own intemperate victory. This attempt is made by means of an extraordinary lucid analysis of the planned, privately collectivized, and state supported system of production which obtain in this mythically free enterprise land. There were thinkers before Galbraith who caught the broad outlines of this trend—Rathenau Schumpeter and Keynes being among the most notable—but it is Galbraith's achievement to have presented in detail its economic, political and even its cultural structure.¹⁴ There are others¹⁵ who regard Galbraith's new book in equal significance with J. M. Keynes' "General Theory of Employment, Interest and Money." To Milton Friedman, "it is old wine in new bottle."¹⁶ These estimates do not explain until we throw light upon the various criticisms

12. *The Modern Corporation and Private Property*, N.Y., 1933.

13. In his article, "Liberalism according to Galbraith," *Commentary*, October 1967, Pp. 77-83.

14. *Ibid.*, p. 78.

15. For example, Robert Eisner in his interesting review of the book, "The New Industrial State."

16. Quoted in *Time*, February 16, 1968.

17. Machlup, Fritz, *The Political Economy of Monopoly*, Baltimore, 1952, P. 239.

18. See: *The Quarterly Review of Economics and Business*, Autumn 1967, Pp. 83-84.

19. Oxford and IBH Publishing Company, Calcutta, 1965.

20. *Ibid.*, P. 41.

21. Aron, Raymond, *18 lectures on Industrial Society*, London, 1967, P. 2.

22. *Ibid.*, P. 7.

that can be levelled against the propositions Galbraith has made.

Fritz Machlup's criticism centres around the "imperatives of technology." He points out that the extent to which concentration has proceeded is entirely out of proportion to so-called technological necessities of economies. Most of the growth of corporate empires during last fifty or sixty years was "not a matter of technological integration but rather financial integration of control."¹⁷

Robert Eisner questions the divorce of the corporation from profit incentives by Galbraith. He asks, "would not the economy behave differently without the guide, however indirect, of profit"¹⁸ as the members of an orchestra, seemingly bent intently on their own notes and instruments, would indeed have a different output without their conductor? To him, Galbraith understates the extent to which the members of the 'technostructure' are concerned with their own incomes and the extent to which their incomes are related to the success of their companies as measured in earnings and capital appreciation of outstanding securities.

Consumer Sovereignty. It is difficult to accept, in toto, the idea that consumer's sovereignty has become a myth in 'the industrial society.' If the giant corporations are able to determine both price and demand, it should follow that product failures should be few and far between. This is, however, not so. This will be evident if one compiles a list of products, both consumer and industrial, which flopped despite vast amounts spent on advertisement.

Not only some of the propositions of the Galbraith thesis, but the very idea of convergence is questioned. George Halm in his book *Economic Analysis*¹⁹ vehemently doubts the tendency of the corporation and nationalized industry to converge. To him, it is true that with respect to the internal functional division of labour, there is much similarity between the big private corporation and a public firm. "The mistake lies in the confusion of this internal division of functions with the problems of external relations."²⁰ The capitalist manager makes free investment decisions which are based on cost-price relations; the public manager in a centrally planned economy fulfils prescribed production quotas as the plan commands. In this respect, says Halm, there is a word of difference between the capitalist manager and the public manager.

With Reservations. Raymond Aron, whose liberal views are no matter of secret, subscribes to the idea of convergence with many reservations. Even though he realises that ". . . at a time when science is universal and the techniques and means of production are similar in every industrial economy, it would be . . . unreasonable to deny all resemblance between the Soviet and the Western types of societies,"²¹ he says, "to be sure, this book (*18 lectures on Industrial Society*) does not support" the thesis embraced by western thinkers and even by some Marxist-Leninists, of the convergence of all the industrial societies whether Soviet or Western. In essence, Aron's conclusion is this: The idea that Soviet and Western societies are gradually drawing closer together and are tending to converge towards a mixed form "is at the most only a hypothesis."²² It remains to be seen whether Galbraith's theme about gradual convergence of the capitalistic and planned economic systems is a hypothesis. But it should be admitted that it is not merely wishful thinking.