

“The Classical Synthesis of Growth as a Deductive Process of Reasoning”*

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The essential problem for the Classical thinkers was the discovery of the laws underlying the capitalist system. The vital offspring of this effort was the classical synthesis of economic growth which constitutes the dynamic aspect of the classical system. In the Classical School, economic progress was a cumulative movement towards a stationary equilibrium. It will be obvious that the stationary state was the emanation of both classical methodology and growth theory. Nevertheless, the Classical writers also analysed the transition towards a stationary situation.

The theory of economic development refers to the examination of economic conditions by which certain changes take place. In classical economics by saying “certain changes” it is meant the long run tendency of economics magnitudes, wages, profits, and rents to change, representing the main part of the wealth of a society. Most Classical authors examined carefully how the relative shares of income behave over time, so giving a dynamic character to the theory of wealth distribution. As a result the relationship between changing income shares and other traits of the operating economic system had been the core of the theory of economic progress for each classical economist.

A considerable number of writers have in detail analysed the classical theory of economic growth, so that little scope exists for a further elaboration of this concept. In the present work, it will be stressed that the classical mechanism of economic development was the corollary of a deductive chain of reasoning. The chief purpose of this analysis is to demonstrate how the Classical writers, introducing a set of premises, derived deductively a number of conclusions indicating the long run trend of the capitalist system. Consequently, our argument will be as follows: “*the advent of the stationary state is an emanation of the deductive train of thought, in that cer-*

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tain economic principles lead to a set of conclusions which in turn compose the notion of the stationary state; by saying conclusions is meant these characteristics of the economic system that arise after the growth process has ceased". In the following figure 1, the sense of our argument is diagrammatically depicted:

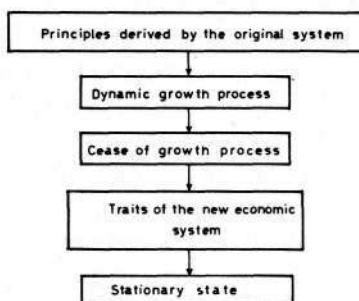


Figure 1

Thus, in this work, we will state how Adam Smith, David Ricardo, and John S. Mill derived deductively certain features of a stationary state equilibrium. Indeed, they contemplated an original economic system in which such principles as diminishing returns to land, declining profits, e.t.c., could set in motion forces leading to the future emergence of the stationary state position. It must be underscored that Malthus' theory of economic progress did not follow the path paved by A. Smith and D. Ricardo. The fundamental difference between Malthusian growth theory and the other Classical thinkers was that the former perceived this notion as a fluctuating process with ups and downs, while the latter believed in a stable economic intercourse leading to a stationary state situation. Malthus was not interested in deriving a growth theory leading to the onset of a stationary condition. On the other hand, he attempted to explore the main economic variables which participate in a growth process.

I. "The Fundamental Pillars of the Classical School on Economic Growth"

Smith's theory of economic growth has received more attention than his theories of value and distribution. His title, "An Inquiry into the Nature and Causes of the Wealth of Nations", itself indicates the notion of economic development. Adam Smith, analysing his views on economic evolution, followed the theoretical background of the eighteenth century as prepared mainly by his friend, David Hume, and the Physiocrats. He was highly influenced by Quesnay's tableau of circular income in formulating his theory of spiral growth. According to Prof. A. Lowe "it is

the singular feature of Smith's model that — with one exception — it does not contain any independent variables"¹. Prof. Lowe asserts that consumers' tastes constitute the only independent variable in Smith's model of growth.

Adam Smith in Chapter six of Book One distinguishes three original parts of revenue, wages, profit, and rent: ".....the revenue derived from labour is called wages. That derived from stock (or capital as he names it)..... is called profit....the revenue which proceeds altogether from land is called rent"². It is noticeable that the preceding quotation, brings in the recognition of three factors of production, labour, stock (capital), and land. A. Smith gave supreme importance to the division of labour, inasmuch as it mainly determines the productivity of both labour and land, effecting income increases. In this sense, the development of the division of labour sets limits to the productivity of labour and demonstrates the degree of effectiveness of the existing labour force. According to Prof. A. Lowe, in Smith's mechanism of equilibrium growth we encounter "in the concept of 'productivity' the strategic variable of the whole system"³; his reason is that changes in productivity influence the level of both profits and wages. Many advantages are derived from the division of labour, such as increase of dexterity, the saving of the time, and the invention of new productive methods. Clearly, these favourable factors substantially affect the economic growth of a country. On the other hand, the economic usefulness of the division of labour is determined by the size of the market. In Smith's view, the size of the market is influenced by the prevailing conditions of domestic and international trade as well as by the amount of accumulated stock. He perceived that an expansive division of labour brings in an increasing labour supply and extending market, as well.

The level of wage, which is compatible with a fixed population, is called "subsistence wage". The long run behaviour of wages towards the subsistence level is the causal nexus inciting Adam Smith to insert the 'iron law of wages'. Any divergence from the subsistence wage will modify the rate of population growth. If the remuneration of labour is higher than the subsistence level population will increase, while population will diminish if the labour rewards exceed the subsistence wage. When wages are high, this means that the demand for labour force will increase and "necessarily encourage in such a manner the marriage and multiplication of labourers"⁴, and vice versa. In such a case, the law of demand and supply is working, since "it is in this manner that the demand for men, like that for any other commodity, necessarily regulates the production of men"⁵. Adam Smith also answers the question what determines the relation between demand for labour and national

1. Lowe, A: "On Economic Knowledge", 1965, page 168.

2. Smith, A: "The wealth of Nations", edited in Everyman Paperback, Vol I, page 46.

3. Lowe, A. page 172.

4.5. Smith, A. Vol I, page 71.

wealth, arguing that the increase of wages depends on the expansion of national wealth. Afterwards, he introduces a set of examples bearing in mind the actual conditions in some countries of his own times, in order to support empirically the previous view. His conclusions are in fact impressive. In an expanding economy wages will be high, in a declining economy they will be low, and in a stationary economy they will approach the subsistence level. It is understood that after a period of time the adjustment forces of the market will restore the wage level in both expanding and backwarding economies. It is worthy of note that the rate of rent follows a different trend to that of wages: "every improvement in the circumstances of the society tends either directly or indirectly to raise the real rent of land, to increase the real wealth of the landlord, his power of purchasing the labour, or the produce of the labour of other people"⁶.

In Smith's system capital is employed as fixed, or circulating capital. The circulating capital indicates any kind of investment used to sell products as goods in order to yield profit; the fixed capital means any investment in machines, buildings, land, etc., which affords a revenue or profit without circulating or changing masters. Smith asserted that the capital employed in the agricultural sector had been the most important for the development of a country. This Smithian opinion had been to a great extent influenced by the Physiocrats' emphasis on agriculture. He avowed that in a growing economy the bulk of capital must be firstly directed to agriculture and afterwards to manufactures and commerce. The investor, knowing much better than anybody else his own self-interest, invests his capital in the most lucrative and productive use. In Smith's opinion, investments towards foreign countries are beneficial and economically attractive, if a country is rich in surpluses disposing them abroad. In Smithian economics, the stimulus for savings depends on the rate of profits which in turn determines the rate of capital accumulation. Smith, formulating his theory of profits had in mind the economic history of his country, observing that the rate of profits had been falling since the times of Henry VIII, though the wealth of England had been advancing. He concedes that "risk" constitutes a basic factor influencing the incentive for accumulation. In other words, the motive to accumulate is determined by the existing risk of investment. In Smith's view, the extent of the wealth of a country acts on the fluctuating rate of profits which in turn affects the rate of economic growth. The regulations of trade and competition also exert influence on the profits rate.

According to Adam Smith a stagnant equilibrium emerges after a cumulative process which ceases when the rate of profits tends to zero. In this sense, the stationary state is the upper limit of this process. Smith illustrates the establishment of the stationary state as follows: "In a country which had acquired that full complement of riches which the nature of its soil and climate, and its situation with respect

6. Smith, A. Vol I, page 228.

to other countries, allowed it to acquire; which could, therefore, advance no further, and which was not going backwards, both the wages of labour and the profits of stock would probably be very low. In a country fully peopled in proportion to what either its territory could maintain or its stock employ, the competition for employment would necessarily be so great as to reduce the wages of labour to what was barely sufficient to keep up the number of labourers, and, the country being already fully peopled, that number could never be augmented. In a country fully stocked in proportion to all the business it had to transact, as great a quantity of stock would be employed in every particular branch as the nature and extent of the trade would admit. The competition, therefore, would everywhere be as great, and consequently the ordinary profit as low as possible"⁷. Consequently, the basic traits of the Smithian stationary state are: constant population, least profits, wages approaching the subsistence level, zero rate of net investment, and unchanged income. China had been Smith's main example of stationary economy, although it had not yet attained the "full complement of riches"; in Smith's view, the nature of Chinese institutional background and laws were the chief reason of its stationary conditions.



David Ricardo was perhaps the first classical writer who formulated a rigorous theory of economic growth, so preparing the ground for John S. Mill to advance it. The cornerstone of Ricardian thinking concerning his theory of economic growth was that of diminishing returns to scale in agriculture. The theory of rent was firstly developed by James Andersson (1777), T. Malthus (1815), and Sir E. West (1815). Indisputably, Ricardo's perception of rent theory followed, to a great extent, a different path of analysis, illustrating the English conditions in agricultural sector during his own times. On the other hand, Prof. G.J.Stigler argues that "in the theories of population and rent.....Ricardo was chiefly a borrower, and he did not improve upon either theory in any basic respect"⁸. Ricardo concedes that only industry is subject to increasing returns. He states that different areas of land have dissimilar properties, or quality. Since land is limited, with every increment of population, a worse degree of fertile land will be cultivated and as a result the rent of more fertile land will increase. In other words, the marginal productivity of labour declines, since "rent invariably proceeds from the employment of an additional quantity of labour with a

7. Smith, A. Vol I, page 86.

8. Stigler, G.J: "The Ricardian Theory of Value and Distribution", the Journal of Political Economy, 1952; reprinted in G.J.Stigler, "Essays in the History of Economics", 1965, page 185.

proportionally less return"⁹. The marginal productivity of capital will also decline, since the rate of profits on agricultural capital will decrease as worse and worse portions of land yield lower and lower net produce. In the long run, the trend of diminishing returns in agriculture depends on improvements in technology, skill, and division of labour.

In order to apprehend Ricardo's view on population, we must insert his definitions of the "natural" and "market price of labour". The quantity of food, necessaries, and conveniences, which support the workman and his family to survive, constitute the natural price of labour. "The habits and the customs of people" determine the rate of subsistence wage. On the other hand, "the market price of labour is the price which is really paid for it, from the natural operation of the proportion of the supply to the demand; labour is dear when it is scarce and cheap when it is plentiful"¹⁰. In other words, the law of demand and supply determines the rate of price of labour. In this sense, the increase of population is accompanied by an extension of demand for labour, and vice versa. Ricardo accepts that variations in the demand for labour would rest on changes in the capital stock; "if the increase of capital be gradual and constant, the demand for labour may give a continued stimulus to an increase of people"¹¹. Population will increase if the market price of labour is higher than that of natural, since the labour class enjoys better conditions of life, and inversely. In the long run, the wage level will approach the natural level that implies an unchanged population. We may see two basic differences in Ricardo's and Smith's population theories. On the one hand, Ricardo postulates a functional relationship between population expansion and demand for labour in the divergences of market wage from that of natural wage, while in Smith's view this relationship is simply proportional. On the other hand, in Smithian economics the subsistence wage remains constant through time, while in Ricardo's view it tends to vary over time.

Ricardo, like A. Smith, distinguishes between fixed and circulating capital introducing similar definitions. According to Ricardo capital cannot be redundant. As is well known, T. Malthus did not accept this view arguing that capital would be redundant in a general glut of commodities. Ricardo distinguishes two distinct dimensions in the notion of capital, "labour and time". He designated "capital as accumulated labour", so introducing the concept of two dimensional capital. Ricardo ascribes prime importance to the dimension of time which in a great extent affects the relative value of commodities. He observes that the relative price of a commodity depends greatly on the process of productive activity and the required time of its production, as well, of course, on the increase or diminution of the quantity of

9. Ricardo, D: "The Principles of Political Economy and Taxation", edited in Everyman Paperback, page 37.

10. Ricardo, D. page 37.

11. Ricardo, D. page 53.

labour. The accumulation of capital depends on the rate of savings. The level of "net income" determines the bulk of savings; the net income is given by the additional product over the total product which supports the subsistence level of working class. The portion of net income which will be saved depends on the profit rate. This syllogism leads us to conclude that "their (men's) motive for accumulation will diminish with every diminution of profit, and will cease altogether when their profits are so low as not to afford them an adequate compensation for their trouble, and the risk which they must necessarily encounter in employing their capital productively"¹². In this event, total capital grows with the increase of net income, and vice versa. Thus, Ricardo states a positive functional relationship between rate of capital accumulation and profits.

Let us next turn our glance to the crucial question, what determines profits in a Ricardian system? In Ricardian economics, the level of wages determines profits, in that each portion of wages which exceeds the subsistence level reduces profits. The profits level will fall, in the long run, since in an expanding economy "the additional quantity of food required is obtained by the sacrifice of more and more labour"¹³. We must underscore that although both Smith and Ricardo accepted a falling rate of profits over time, however, they followed different routes to arrive at the same conclusion; in Smith's view, profits fall through time due to the competition in the labour, investment, and commodity markets; on the other hand, Ricardo attributed the law of falling profits to the known principle of population increase.

The economic system will arrive at the stationary state position, when wages approach the subsistence level, the rate of profits approximates zero, accumulation of capital is checked, and population stops to grow. In a Ricardian economy the dynamic process towards the stationary state passes through periodical equilibrium positions, where the wage level approximates gradually the subsistence wage. Ricardo exhibits the following characteristics in a stationary equilibrium: ".....the wages of labour is limited; for as soon as wages should be equal..... there must be an end of accumulation; for no capital can then yield any profit whatever, and no additional labour can be demanded, and consequently population will have reached its highest point. Long, indeed, before this period, the very low rate of profits will have arrested all accumulation, and almost the whole produce of the country, after paying the labourers, will be the property of the owners of land and the receivers of tithes and taxes"¹⁴. We can observe that the notion of the stationary state occupies a slightly different degree of emphasis in Smith's and Ricardo's representations. According to Ricardo the natural tendency towards the stationary state could cease temporarily by adopting technological improvements and better terms of trade. Briefly, the follow-

12. Ricardo, D. page 73.

13. Ricardo, D. page 71.

14. Ricardo, D. pp. 71-72.

ing chain of reasoning depicts the trend to a stagnant position. During periods of positive investments, the demand for labour increases which means a wage level above subsistence wage; in this event, population rises, profits decrease driving down the rate of capital accumulation; when the supply of labour will be equal to its demand, wages will approach the subsistence level and population will be unchanged; an equilibrium position will be then established.



Before looking at John S. Mill's theory of economic development, we will look at the conception of the "machinery effect" as elaborated in Ricardo's hands. In the classical model of growth the improved machinery could postpone the arrival of the stationary state by increasing the productivity of labour. In fact, the concept of machinery is closely connected with the theory of economic evolution, as affecting the level of both income and employment. For example, Adam Smith had argued that machinery and labour are not competitive but complementary, since with the invention of new machines "a certain quantity of materials, and the labour of a certain number of workmen.....are thus diverted to another employment.....it is upon this account that all such improvements in mechanics.....are always regarded as advantageous to every society"¹⁵. In this fact, new investment opportunities would facilitate and abridge the division of labour.

The Smithian view on machinery was firstly upset by John Barton (1817) and afterwards by David Ricardo. Both Prof. D.Collard and Prof. Hollander have shown that Ricardo's analysis on machinery differs essentially from that of Barton, also demonstrating the nature of Barton's influence on Ricardo's contribution to the machinery effect¹⁶. The basic conclusions of Barton's representation are as follow: in any increase of fixed capital, population will remain unchanged, since the demand for labour depends on the changes of circulating capital; in case of a technical change the rate of employment will diminish; and the demand for labour may decline if the wages go up due to the extension of fixed capital. In Prof. Hollander's view, "Barton was primarily concerned with an actual reduction in employment caused by the initial expansion of capital although, not surprisingly, he failed to provide a satisfactory account of the process"¹⁷.

Chapter 31 of Ricardo's "Principles", added in the 3rd edition (1821), offers in a few lines many ideas on the "machinery question". Ricardo starting chapter 31 un-

15. Smith. A. Vol I, page 252.

16. Hollander, S: "The Development of Ricardo's Position on Machinery", History of Political Economy, 1971, pp. 105-135; see also, Tozer, J.E: "Mathematical Investigation of the Effect of Machinery", two papers presented in 1838 and 1840, edited with an introduction by D.A.Collard, 1968; Professor D.A.Collard in this edition in fact provides a comprehensive illustration on the machinery question, covering the period from Classical writers to Tozer.

17. Hollander, S. page 112.

derlines the importance of machinery in economic life and after the announcement of his reconsideration on machinery question states: "I have in other ways given my support to doctrines which I now think erroneous". Ricardo had originally separated three different effects following the employment of machinery in productive activity. Firstly, the landlords and capitalists would benefit themselves buying commodities in reduced price, supposing that they continue to enjoy the same money revenue; Ricardo had assumed that prices fall as a result of the new methods of production as compared with the old ones. Secondly, the workmen who were temporarily damaged by improved machinery would find employment in some other sector of the economy, so that the general level of employment could remain unchanged. Thirdly, since the wage level would be constant and the price level lower, the purchasing power of labour class could increase so improving its social status.

Ricardo, before demonstrating his new position on machinery question, declares that "these were my opinions, and they continue unaltered, as far as regards the landlord and the capitalist, but I am convinced that the substitution of machinery for human labour is often very injurious to the interests of the class of labourers. My mistake arose from the supposition that whenever the net income of a society increased, its gross income would also increase..."¹⁸. He next introduces a simple numerical example to show that the gradual discovery and production of new machines will worsen the position of the labouring class and will also cause a reduction of gross produce. We can derive the decisive conclusion that machinery and labour are competitive in Ricardian economics, in the sense that the gradual improvement of machinery determines the employment level of the working class. Ricardo inserts the law of diminishing labour intensity, in that the substitution of labour for capital is not proportional but diminishing; "the demand for labour will continue to increase with an increase of capital, but not in proportion to its increase; the ratio will necessarily be a diminishing ratio"¹⁹.

On the other hand, Ricardo mentions a number of positive effects which could follow the application of improved machinery. Namely, the net produce of the country will rise notwithstanding gross produce may decrease; the derived conclusion of an injured labouring class is conformable to the principles of political economy; if the increase of the net produce is quite large, the gross produce would then rise, so that all social classes including the labour class could be benefited; assuming that the gross produce would not diminish, the rate of savings could then tend to increase; the price level would be lower, since the cost of production could decline; broadly speaking, the introduction of improved machinery could ameliorate the general level of social weal. A basic difference between Ricardian and Bartonian positions on machinery is that Ricardo deemed a flexible population, while Barton's concern was

18. Ricardo, D. page 264.

19. Ricardo, D. page 270.

a constant population. In this event, Ricardo was consistent with the principles of Classical economics, and endeavoured to incorporate the principle of population in his analysis of the "machinery effect".



As for John S. Mill's theory of economic growth Prof. J. Spengler observes that "his (J.S. Mill) approach to economic development, though less overtly historical in his Principles than was Smith's approach, upon which it was patterned, is essentially a culmination of that mode of economic analysis which Smith had foreshadowed, and Ricardo had structured"²⁰.

Mill emphasized a lot of economic factors which can affect economic development of a country, such as natural resources, the division of labour, conditions of production, accumulation of capital, population, technological improvements, trade, education, enlargement of market, co-operation, etc. In Mill's view, non-economic factors can also influence economic growth, for example laws, institutions, cultures, etc. He considered that in some backward parts of Asia, the prevailing institutions set barriers to their economic development, so that the improvement of their economic conditions depends on the betterment of their institutional structure. According to Mill "under the rule of individual property, the division of the produce is the result of two determining agencies: Competition and Custom.....so far as rents, profits, wages, prices, are determined by competition, laws be assigned for them"²¹. We may accept the opinion of some writers that Mill sometimes underscored excessively the influence of customs on economic life. As a real fact, habits, institutions, and customs affect greatly human behaviour and economic well-being, given the socioeconomic structure of the society.

Mill's view on "statics" and "dynamics" of economics is worthy of note. In this point, he was influenced by Comte's distinction between "dynamics" and "statics". On the one hand, "statics" of political economy refer to the economic stability of a social system; on the other hand, we receive the concept of "dynamics" of political economy by adding a theory of motion to our theory of equilibrium. In this event, the examination of progressive changes in the aggregate wealth of a country constitutes the essential task of economic inquiry.

Mill perceives that the increase of production depends on the properties of Labour, Capital, and Land. In Chapter X of Book One as well as in some other parts of his "Principles", he examines the influence of population explosion on the labour force. The human species tends to grow indefinitely, so that population for several generations will double itself approximately every twenty years; in other

20. Spengler, J: "John Stuart Mill on Economic Development", printed in "Theories of Economic Growth", 1960, edited by B.F. Hoselitz, page 115.

21. Mill, J.S: "Principles of Political Economy", edited by W. Ashley, 1909, page 242.

words, Mill accepts the Malthusian law of geometrical progression. He believed that the Mankind, learning the Malthusian lessons, will prevent in the future any grim situation which could emerge after a population explosion. In advanced societies, "the fear of want" will teach the human race how to curb population expansion. On the other hand, in backward societies like many areas of Asia, actual starvation will keep the level of population down. Thus, the main target of humanity must be birth limitation, incited by "prudent or conscientious selfrestraint.....and a great degree of voluntary prudence"²²; he mentioned that in Norway and many parts of Switzerland these motives had been satisfied. In such a case, improvements in education, in legislation, in customs and manners, etc. could conduce to a gradual birth control.

Mill, analysing the law of capital increase and that of diminishing returns to land, follows the Ricardian process of analysis. The amount of savings chiefly determines the rate of capital increase. The quantity of net produce above the subsistence wages²³, on the other hand, determines the amount of savings. The motive for accumulation rests on "the varieties of individual character.....the general state of society and civilization"²⁴. Mill's view on the returns of land is that land differs from the other scarce resources, labour and capital, in that her limited quantity and limited productivity set barriers to the increase of production. Agricultural produce does not rise uniformly following the successive increments of both labour and capital. More and more increasing supply of labour is a consequence of the growing population. The productivity of land can rise temporarily by technological improvements in agriculture. The properties of the soil, given the level of technological knowledge, constitute the basic obstacle to the expansion of agricultural produce. Mill, influenced by Ricardo, states: "This general law of agricultural industry is the most important proposition in political economy"²⁵.

According to Mill the profit rate tends to a minimum level due to the law of diminishing returns to land, so setting limits to the capital formation. Mill devotes some pages of his "Principles" to show that the State may exert influence on capital formation, for instance, by imposing taxes on income, expenditure, etc. so supporting investment plans by using these revenues. The minimum rate of profits depends on the particular circumstances of a country. In Mill's view, when the rate of profits approached the minimum, population is stable, and capital accumulation approximating zero, the economy has then reached the stationary state position. The richer a coun-

22. Mill, J.S. pp 159, 160.

23. The well-known "wages - fund doctrine" was thoroughly elaborated in Mill's hands. By saying "wages fund" it is meant the sum of wealth which is transferred to labouring class under the form of wages. Mill's opinion on wages was that "wages, like other things, may be regulated either by competition or by custom.....wages depend mainly upon the demand and supply of labour; or as it is often expressed, on the proportion between population and capital", Mill, J.S., "Principles of Political Economy", page 343.

24. Mill, J.S. page 165.

25. Mill, J.S. page 177.

try is, the sooner the stationary state condition would be fulfilled. Mill refers to a number of cases which can counteract provisionally the falling rate of profits consequently retarding the advent of the stationary state. Namely, improvements in production, new directions of international trade, and the overflow of capital towards colonies or foreign countries seeking higher profits than at home. He rejected Torrens's and Wakefield's argument that accumulation may take place even if the rate of profits approaches its lowest levels.

Mill introduced a different conception regarding the character of the stationary state. He broke with the Ricardian and Smithian tradition of a progressive state, leading to the grim situation of a stationary equilibrium. Mill's stationary state is not dismal but hopeful, where the main criteria for social prosperity are individual happiness, welfare, and betterment. In this sense, a stationary state might be a better and more anthropic society, based on moral values and principles. Mill declares that the establishment of the stationary state is a "necessary stage in the progress of civilization" and observes: "I cannot, therefore, regard the stationary state of capital and wealth with the unaffected aversion so generally manifested towards it by political economists of the Old School. I am inclined to believe that it would be, on the whole, a very considerable improvement on our present condition....it is an incident of growth, not a mark of decline, for it is not necessarily destructive of the higher aspirations and the heroic virtues.....it is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living, and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on"²⁶. A common characteristic in Smith's, Ricardo's, and Mill's theories of growth is that an increasing social wealth implies higher wages and rents but lower profits.



The general outline of the following analysis is in the spirit of Smith's, Ricardo's, and Mill's theories of growth. In this subsection, our purpose is to present a global theory of economic evolution as it appeared in the Classical economics. In the classical model of economic development, the original propositions refer to a supposed form of society from which the course of economic evolution is going to commence. Division of labour, exchange, customs and manners, etc. constitute the motive forces of economic behaviour, operating within the given institutional conditions of capitalist society. The variables, which are involved in the classical model of economic growth, follow deductive train of reasoning. In other words, the classical

26. Mill, J.S. pp 748-751.

synthesis of economic growth is a corollary of deductive methodology. Prof. A. Lowe confirms that the Classical authors incorporated in the theory of growth variables and magnitudes which illustrate the relationship between "economic theory" and "socioeconomic reality".

"Landowners", "workmen", and "capitalists" represent the famous triad of participants in the distribution of income, acting together in the course of economic progress. "Rents", "wages", and "profits" correspond respectively to the preceding agents of production and constitute three different categories of income. The schemata of both agents of production and categories of income link up perfectly with the classical model of economic evolution. As a result, our purpose is to explore how the above schemata hang together in a logical sequence of concepts and relations. By accumulation is meant the additional capital arising from the difference between total production and consumption expenditure. The rate of accumulation depends, in a high degree, on the profit level which is given by the difference between total product and wages. From a different standpoint, the ratio "profits/wages" determines the rate of capital accumulation. This becomes obvious if we bear in mind the classical view that profits and wages affect the employed capital. In this event, if the "profits/wages" ratio increases the rate of capital accumulation also increases, and vice versa. The classical theory of wages is based on the Malthusian population theory.

The marginal and average productivity of labour fall as the population grows, since more and more workers are employed on a given quantity of land. This is the law of diminishing returns to land which gives an historical tendency to the classical synthesis of economic expansion, in that its influential effects will become clear during the growth process of economic system. The historical tendency has indeed appeared in the Classical mechanism of growth, in the sense that the future emergence of the stationary state provides a long run tendency in the classical system. Although the Classical writers made no use of the "historical method", it is interesting that by combining deductive logic with a few very simple axioms (e.g. diminishing returns to land, subsistence wages, etc.), they managed to produce a long run historical tendency of a very dramatic kind, the tendency to a stationary state.

We will now clear up how the preceding variables would lead the economic system to a stationary equilibrium. As the economy grows both labour force and profits of capitalists increase together, which means that the difference between income and wages increases. The capital supply will continue to expand, as long as the capitalists save more by more money. The dynamic expansion of the economy will cease, if the rate of saving would not support more investments. In such a case, the rate of investment would tend to zero causing the presupposition for a "stationary economy". The standstill of the economic system is characterised by high rents, low profits, stoppage of capital accumulation, wages approaching the subsistence level, and cessation of population expansion.

Let us next illustrate diagrammatically the classical synthesis of economic growth²⁷. In figure 2, along the horizontal and the vertical axes, we measure the level of working population and that of total wage and total product after rent, respectively. The straight line OS depicts the proportional relationship between wages and labour force; for instance, if the whole working population is 100 persons, this means that the subsistence wage payments are 100 times the subsistence wage to one person. Obviously, the slope of the line OS is given by the ratio between whole labour force and total remuneration of labour. The curve OP shows the entire product of

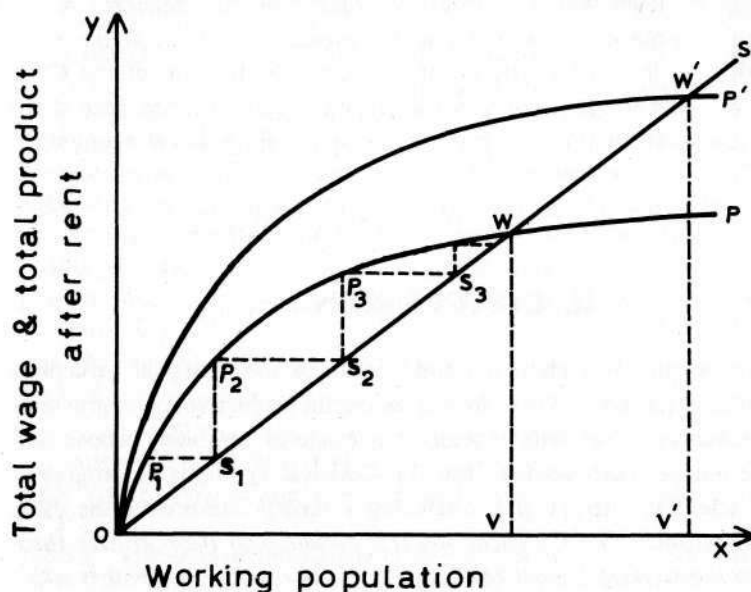


Figure (2)

the economy after rent payments, and its slope is convex upwards due to the principle of diminishing returns to scale, in a sense that every increase in the amount of labour force brings in smaller by smaller increments of total output. In our figure, the stepped line $P_1-S_1-P_2-S_2-P_3$ -etc. represents the dynamic process towards the intersection point W, which indicates the establishment of the stationary state, where profits will be approximately zero, accumulation will cease, population will remain constant, and rents will be excessively high.

Next suppose, some drastic readjustment of the economic system shifts the total income curve OP upwards to the new position OP'. In this case, the intersection point W' would indicate the appearance of a new stationary state. We may adopt Prof. W. Baumol's view that "the Malthusian population principle, the law of

27. We are to follow Baumol's diagrammatic representation, see, W. Baumol, "Economic Dynamics", 3rd ed. 1970.

historical returns, the discussion of the inducement to accumulate, and the analysis of wages are all empirical hypotheses, some of which may only have been valid at the time and some of which may be questioned altogether"²⁸. A rigorous dilemma for many Classical writers was if the progress towards the stationary state will be stable, or it will be accompanied by economic crises.

The crucial question in the foregoing discussion is that the Classicists regarded the stationary state as the inevitable outcome of a long run dynamic course, based on some assumptions from which rigorous generalizations are deduced. As it has been stressed in many places of our analysis, the appearance of the stationary state rests on the deductive logic of analysis which infused the thought of the Classical writers. It is known that the prediction of the stationary position has been the main reason for a considerable number of economists to name "political economy", the "dismal science".

II. CONCLUSION

The evolution of our civilization has not confirmed the Classical perception of the establishment of a stationary state. In this sense, the deductive logic, prevailing in the Classical mechanism of growth, represents a mode of reasoning whose derived conclusions have not yet been verified. But the Classical synthesis of progress constituted the first scientific attempt at constructing a theory interpreting the dynamic movement of capitalism. *"The Classical writers, building up their growth theories, were restricted to the methodological background of their own days, that is why they did not advance testing or predicting the results of their explorations"*. Our view rests on the contention that the level of statistical and mathematical methods in the times of the Classical School was such that "test" and "prediction" for the suitability and applicability of a theoretical model was infeasible. Despite the manifest disadvantages of the Classical system, Classical thought has remained for a long time an unexhausted spring of research and analysis.

28. Baumol, W. page 21.

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