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A Historical Sketch of Profit Theories in Mainstream Economics

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Abstract

In this paper, the main contributions to the development of profit theories are delineated in a chronological order to provide a quick reference guide for the concept of profit and its origins. Relevant theories are cited in reference to their authors and the school of thought they are affiliated with. Profit is traced through its Classical and Marginalist origins into its mainstream form in the literature of the Neo-classical school. As will be seen, the book is still not closed on a concept which may still afford further theoretical refinement.

Keywords: profit theories, historical evolution of profit concepts, shares of income and marginal productivity, critiques of mainstream profit theories

1. Introduction

Despite its commonplace prevalence since ancient times, “whence profit?” i.e., the question of where it comes from, has remained a vexing theoretical question for economists, with loaded political and moral implications, for many centuries. In this paper, the main contributions of different economists to the development of profit theories are delineated in a chronological order. The relevant theories are cited in reference to their authors and the school of thought they are affiliated with. The purpose of this organization of the paper is to trace the concept of profit through its Classical and Marginalist origins, and to show how the mainstream form of the concept was embodied in the literature of the Neo-classical school, hitherto the dominant economic trend of thought in the Western World today. This paper serves both as a quick and handy outline for the historical development of the concept of profit, and a reminder that what is viewed today as profit may be open to further theoretical refinement. Its emphasis is on mainstream theories of profit, or intellectual influences which left their imprint on the mainstream. It does not purport to encompass every single theoretical contribution on profit there is.

2. The Classical Tradition

A–Adam Smith (1723-1790):

Adam Smith had set the pace for the Classical school by laying down a theory of value that considered the labor congealed in a commodity the value that equals the long-term natural price of this commodity for which it exchanges with other goods, i.e., labor is the cause and the measure of this good (Smith, 1910, p. 26).

According to Smith’s volume, the Wealth of Nations, a basic theory of profit rests on the following tenets:

-Profits and wages are inversely proportional since Smith viewed prices as equal to wages plus profits plus rent (prices= wages + profits + rent). Thus, when profits increase, wages decrease, and vice versa, in a zero-sum game.

-Profits emanate from combining fixed with circulating capital. However, interest is considered part of profit, and both are induced by paying wages to workers, to produce goods.

-The level of profit is inversely related to the level of the interest rate, since money won’t be invested if lending is more profitable. Thus, the Rate of Profit=2 (the Rate of Interest), since borrowing should be tempting enough to expect profit after investment.

-Rates of profit would be equalized across industries if resources were mobile enough and responsive to profit opportunities. As one author put it: “…if profit rates in one industry are higher than the average for the economy, capitalists will tend to shift their capital toward that industry. As a result, labor will move as well, and the output of that industry will rise, which tends to reduce prices and profit rates there. Symmetrically, capital will tend to leave industries where profits are lower than the average, leading to higher prices and thus to higher profit rates for the capitalists who remain. In this way competition provides a negative feedback that tends to make profit rates in all sectors equal” (Foley, 2006, p. 23).

-The rate of profit would fall with the progress of capital accumulation. This is not due to diminishing returns, but to the increase in wages as demand for workers rises in the process of capital accumulation, and due to the increase in rent as land becomes increasingly privately owned. Evidently, Smith is implicitly holding technological progress constant in this formulation.

-The receipt of profits by capitalists is a justified reward for their saving and risk-undertaking. This last precept, in fact, was a generally held belief in the Classical tradition, until Karl Marx.

B-David Ricardo (1772-1823):

In his Principles of Political Economy and Taxation, his major contribution to economic theory:

-Ricardo agreed with Adam Smith on notions like profits and wages being inversely proportional, on rates of profit tending to equalize across industries, and on profit falling with increased capital accumulation.

-Nevertheless, Ricardo had a different set of reasons than Smith for believing that the general trend for profits would be falling downwards. Those were the same reasons which led him to his famous theory of a "Stationary State" for the economy. Namely, he held that high profits would lead to high savings, therefore, high investment, leading to a higher supply of capital, therefore a higher wage fund, leading to an increase in population, which causes food to be produced on less and less fertile lands and inducing diminishing returns, leading eventually to higher production costs in terms of wages and rent.

Subsequently, and starting from Smith's premise that prices = wages + profit + rent, it follows from the paragraph above that an increase in wages and rent would cause profits to decrease, which causes investment to decrease, and therefore economic growth.

Less economic growth would lead to even lower profits, causing investment to come to a standstill, curbing any growth whatsoever in the wage fund, which reduces population growth to zero, as the whole economy slips into this Ricardian "Stationary State".

-The conversion of circulating capital into fixed capital increases productive efficiency. This will be brought about by a rise in real wages which leads to a preference of capital-intensive over labor-intensive production techniques. Under conditions of free competition, therefore, the amount of capital per unit of labor will decrease in money terms. As Pierro Sraffa put it: "…measured in money of constant purchasing power, a rise in wages would raise the price of labour-intensive goods relative to the price of capital-intensive goods or, to put it differently, lower the relative price of capital-intensive goods. Since average prices are being held constant, it is true by definition of an arithmetic average that a commodity produced with an average ratio of capital to labour and so ad infinitum, will not alter in price as a consequence of an increase in wage rates" (Blaug, 1977, p. 97). Thus, this conversion into capital-intensive production methods will lengthen the average period of production (the so-called Ricardo Effect). Capitalists, henceforth, would have to be compensated for the elapse of a longer period before their investment gives yield.

-Implicit in all of the above, still, is a theoretically more sophisticated version of the Labor Theory of Value.

C–Nassau Senior (1790-1864):

Nassau Senior's major contribution to economic theory was his Outline of the Science of Political Economy. His theory of profit can be gleaned from that volume as follows:

-The third of Nassau's four postulates for economics lays the basis for his theory on capital and investment. This third postulate states "that the power of labour, and of the other instruments of production which produce wealth, may be indefinitely increased by using their products as means of further production" (Senior, 1872, p. 22). The implication here is that more capital could be obtained by refraining from consumption in the present to obtain more goods and services to consume in the future. Such an exercise necessarily involves abstinence, and elongates the span of the process of production.

-Although Nassau Senior is not as well-known as Smith or Ricardo, he had two major contributions on the theory of capital:

a–the relationship between capital and abstinence is one of mutual dependence: abstinence creates capital according to Senior, and capital remunerates abstinence with profit. It is noteworthy that while this theory is still cost-oriented, it considers capital a distinct factor of production, in and of itself, which incurs a distinct cost element.

b-a new idea in economics is the productivity of waiting. Return on capital, i.e., profit, is related as well as the productivity of waiting and to the real cost or disutility of waiting, thus providing a base for explaining the demand for capital.

-One problem that arises with Senior's contributions, however, is that if profit is to be viewed as a reward for savings (abstinence), the latter does not necessarily imply disutility for individuals in very high-income groups whence a great deal of savings emanate. Still, an analogy for the disutility of abstinence for individuals can be drawn for corporations having to choose between distributing and retaining profits, where more distributed profits per share contribute to increasing market demand for company stock, which implies a measure of financial disutility in the present.

D–John Stuart Mill (1806-73):

-In his Principles of Political Economy, Mill agreed with Senior that profit is the remuneration of abstinence (Mill, 1923, p. 171). Yet, he did not consider capital a separate factor of production. To Mill, it merely sets labor into motion.

- Mill's basic contribution to the theory of profit was his differentiation between net profit and interest as returns on two distinct activities.

-Mill believed that rates of profit are equalized among sectors of the economy under competition, that they are dependent on the size of sales and the wage rate. However, he disregarded the role of capital in improving the efficiency of labor.

-Mill embraced Ricardo's belief that profit rates would fall in the long-run, and for the same Ricardian reasons: population growth, high rent, and the "Stationary State".

E–Karl Marx (1818 – 1883):

-In Marx's Das Capital, profit emanates from the concept of "surplus value":

a- in keeping with the Classical tradition, the value of any commodity equals the value of labor power congealed in it, to be termed (v).

b-the value of labor as a commodity equals the value of subsistence goods necessary to reproduce it (see volume 1 of Capital, p. 171).

c-laborers receive in wages only the value of subsistence. The rest goes to the capitalist. Thus, the total value of a commodity is Total Value $TV = c' + v + s$, where c' is depreciation, v is variable capital, i.e., the wage fund in classical terminology, and s is surplus value. Since depreciation c' only adds to total value an increment equivalent to the fixed capital used up in the production process, surplus value is equal to the difference between the value a laborer contributes in the production process, i.e., the value of a commodity, and the cost of producing labor power. As Marx puts it in Chapter Eight of Volume One of Das Capital: "The labourer adds fresh value to the subject of his labour by expending upon it a given amount of additional labour, no matter what the specific character and utility of that labour may be. On the other hand, the values of the means of production used up in the process are preserved, and present themselves afresh as constituent parts of the value of the product; the values of the cotton and the spindle, for instance, re-appear again in the value of the yarn. The value of the means of production is therefore preserved, by being transferred to the product".

-According to Marx, the rate of surplus (profit, exploitation) = $s' = s/v$.

-The rate of profit amongst industries is equalized, $s/(c+v)$, where c is non-labor costs.

-Marx believed that the market will transform values into prices that differ from labor-determined values of goods. This was necessary to explain why surplus values among industries differ, while rates of profit are the same. That is, why $s/v \neq s/(c+v)$.

The rate of profit depends on the rate of surplus value, on one hand, and on the ratio between constant and variable capital on the other hand.

- The general rate of profit in the economy will fall as more variable capital is transformed into fixed capital, leading a drop in $s/(c+v)$ since only variable capital creates surplus value, or profit, while c contributes to total value only additively.

-Marx was a Classicist in the notions he borrowed from Smith and Ricardo. However, he was an anti-Classicist in employing such notions against the capitalist system that Classical economists championed. His theory of surplus value, for example, rests solemnly on the Classicist Labor Theory of Value.

3. The Marginalists' Reaction

Since the beginning of the 1870's, a new method of analysis was being born into the world of economic theory at the hands of the Marginalists. These economists noted that a larger wage fund does not necessarily cause the value of a commodity to increase, never mind an increase in surplus value. To be fair, Marx proposed a generalized labor theory of value, where products attain worth that is socially and historically determined. For him, it is not the amount of physical labor that is expended in each unit of a good that determines its value, but the amount of socially-necessary labor. Still, a labor theory of value lacked generality, according to Marginalists, since it stands deficient in explaining the value of natural endowments such as raw oil and metals, not to mention land, and other resources whose supply curve is perfectly inelastic.

At the onset of their efforts, the Marginalists sought to explain value in terms of the products' utility, not cost of production. Similarly, the value of a factor of production is related to the utility of the final products it helps produce, not the cost of producing this factor, according the Marginalist school of thought.

Along the same lines of thought, the Theory of Imputation was developed by the Austrian School, for example, Carl Menger (1840-1925) and Friedrich von Wieser (1851-1926):

-Menger established a theory of negative imputation (of opportunity costs), where a factor of production is evaluated by deducting the value of the good which is NOT produced due to the absence of this factor of production.

-Wieser reversed the approach and tried to evaluate "higher order" products, i.e., capital goods, by calculating the value of the additional final products created by the addition of one unit of the factor of production.

A-Eugen Böhm Ritter von Bawerk (1851-1914), otherwise known as "Böhm-Bawerk":

-Böhm-Bawerk's contribution lied in his own solution or answer to the Theory of Imputation. He was trying to explain the return on capital, to come up in the process with the Agio Theory of Interest that tackled remuneration to capital relative to other factors of production in terms of preference for present over future consumption which carries a premium that is represented by interest as an equilibrium price.

-Return to capital, according to Böhm-Bawerk, is related to: a- the greater productivity brought about by the method of roundabout production, and b- time, i.e., the delay in consumption inherent in round-about production (Böhm-Bawerk, 1959, pp. 273-89). As Böhm-Bawerk puts it in The Positive Theory of Capital (1889): "The disadvantage connected with the capitalist method of production is its sacrifice of time. The roundabout ways of capital are fruitful but long; they procure us more or better consumption goods, but only at a later period of time" (Book II, Chapter II).

- Profit is proportional to the amount of capital invested. It arises because higher-order goods are future commodities. Future commodities are inferior to present commodities. Thus, profit is the financial return to businessmen for transforming cheaper future goods into more expensive present goods.

-"Profit is therefore a price agio which appears in exchange transactions between capitalists, on one hand, and workers and landlords who own the original means of production, on the other" (Rima, 1978, p. 241).

B–Philip Wicksteed (1884-1927):

-The laws of return on inputs are different when these are variable than when they are fixed (Wicksteed, 1935, p. 529).

-There are increasing returns to scale when an increase in inputs leads to a more than proportionate increase in output, constant returns when output increases in the same proportion as inputs, and decreasing returns when output increases in a lesser proportion than inputs.

-Wicksteed argued that each factor of production is rewarded an amount that is equivalent to its average marginal productivity. Therefore, if each factor is rewarded according to its marginal productivity, the total product would be exhausted.

C–John Bates Clark (1847-1938):

-Marginal physical product (MPP) could be transformed into a marginal revenue product (MRP) by multiplying it with price. This calculation is necessary to determine conditions of maximum profit for firms.

-Under conditions of perfect competition, factors of production will be hired until the MRP of an input unit is equal to the price of hiring this input unit. That is, labor will keep on being hired until the wage rate is equal to the MRP of the last labor-hour hired by the employer.

-Clark's other significant contribution to theory of profit, besides refining the Theory of Marginal Productivity, was his portrayal of profit as a result of disequilibrium in a dynamic economy where changes in supply and demand conditions induce abnormal profits or losses. In his Essentials of Economic Theory (1907), Clark distinguishes between two sets of economic laws, static and dynamic, to argue that it was only under dynamic conditions that pure profits emerge. This set the stage for the later distinction between returns resulting from entrepreneurship, per se, and returns resulting from exogenous factors, including innovation.

D–Knut Wicksell (1851-1926):

-Still concerned with profit-maximization, Wicksell (1934) argued that increasing, constant, and decreasing returns to scale cannot prevail under free competition. He held that firms will achieve optimum size and, therefore, will be operating under conditions of long-term constant cost (Wicksell, 1934, pp. 126-31).

-Thus, increasing, decreasing, and constant returns to scale are merely three stages in the firm's long-run cost curve.

-Maximum profit occurs where the long-run marginal cost curve (LRMC) equals long-run marginal revenue (LRMR). Thus emerges the familiar MR=MC rule for product markets.

4. Neoclassicism

A-Alfred Marshall (1842-1924)

-Marshall was the scholar responsible for synthesizing the Classical and Marginalist traditions methodically. He had offered a general theory of returns. The essence of this theory, that applies to capital and its returns as well, is the integration of the forces of supply and demand, and determining the value and return of capital by the interaction of supply and demand forces.

Behind supply lies the upward-sloping marginal cost (MC) curve. Behind demand lies the downward-sloping marginal revenue product (MRP) per unit of input, which is downward-sloping. The point where this pair of curves intersect for each input determines the wage, rent, or interest rate (Marshall, 1920, p. 577).

-As for profits, Marshall envisaged those as the residuals left over for entrepreneurs after wages, rent, and interest are all paid out. Profit, then, represents the "wages" of managerial servants of enterprises, i.e., entrepreneurs. It is the kind of return associated with that organizational endeavor as a separate factor of production.

-Marshall's originality manifests itself in his ability to intertwine the role of both elements, cost and utility, in the profit-maximization process. Thus, he extended the application of the profit-maximization rule (MR=MC) for input markets.

B–After Alfred Marshall:

-After Marshall, most additions to the concept of profit had to do with the particular conditions of profit-maximization under monopoly and oligopoly for example, or under different institutional arrangements in Managerial Economics, etc... That is, the moral and political justification for profit itself was no longer a problematic issue for mainstream economics. However, the exact sources of profit, especially abnormal profit, remained a vexing question.

-Some economists like Joan Robinson (1903-1983) associated profit with monopoly power. Others like Joseph Schumpeter (1883-1950) associated profit with innovation, which was no longer a force for equilibrium, but disequilibrium with Schumpeter, fomenting what he considered "creative destruction" and re-birth. Other economists, still, associated profit with risk and uncertainty, especially unanticipated uninsurable risk, as a separate form of risk in and of itself. One pioneer of this line of thought was Frank H. Knight (1885-1972). In fact, the jury is still out on the relative weight of each of these factors in profit-making.

-This is not to say, however, that this thorny question has been satisfactorily settled as the issue resurfaced in 2014 with the English translation of Thomas Piketty's book Capital in the Twenty-First Century in which he basically provides overwhelming statistical support from many countries to the historical claim that shares of income change in accordance with the shifting balance of political and social power in society, not some impersonal Neo-Classicist models. Piketty argued that concentration of wealth is an inevitable feature of capitalism resulting from the rate of return on capital growing faster than the rate of economic growth, thus reopening a whole can of worms dating back to the onset of the Industrial Revolution.

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