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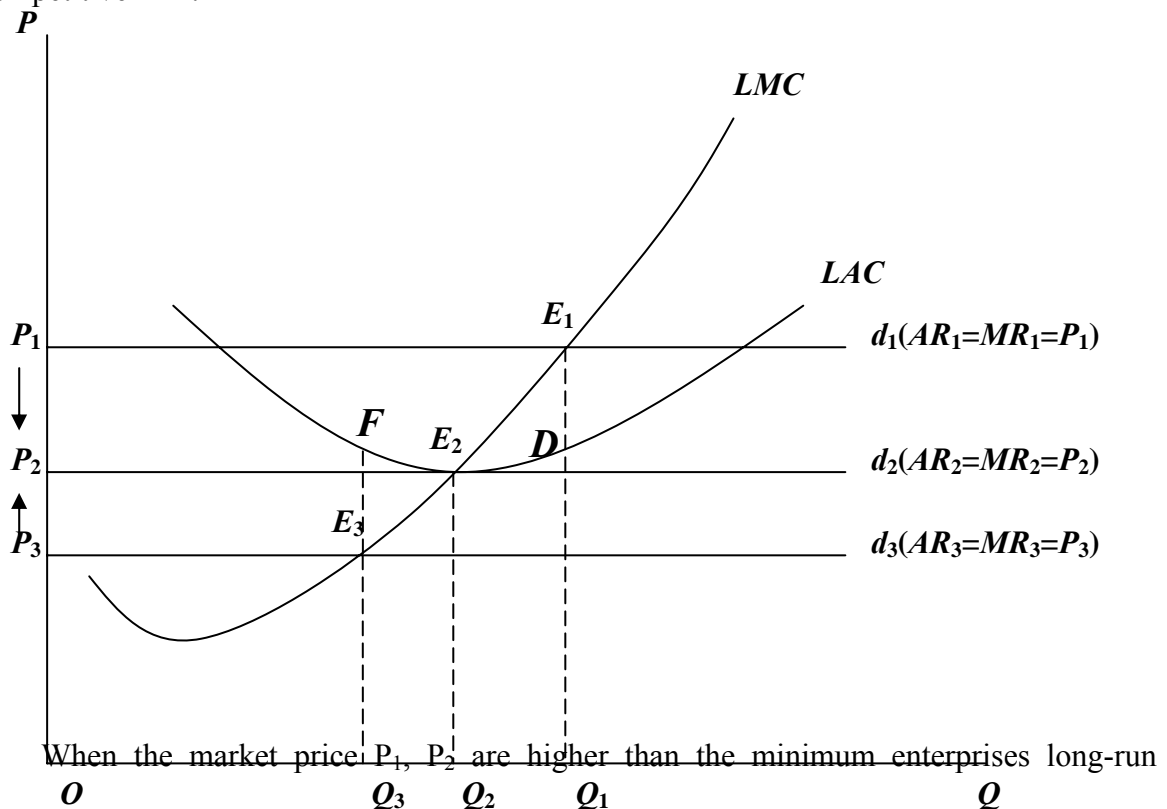
The Comparison between Average Profit Theory and Long-run Equilibrium Theory of the Perfectly Competitive Firm

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Marx' average profits theory and the long-run equilibrium theory of perfectly competitive firm in western economics are both concrete theories in two theoretical systems. They show the similarities in the market economic environment, price elasticity and other aspects, but also have some significant differences in the theoretical foundation, status and role of the theory, the nature of profit rates, and so on.

1. The brief introduction of the two theories

In the perfectly competitive market environment, western economy believes that individual enterprise is the passive recipient of the ready-formed and established market equilibrium price. In a market equilibrium prices, according to the principle of marginal revenue equal to the marginal cost (that is, $MR = MC$), the individual enterprise arranges all factors by choosing the optimal scale of production, as well as the ways of entering or withdrawing an industry, to determine its final production, then achieves the maximum profits. The following graph explains the long-run equilibrium theory of perfectly competitive firm.



average cost $LAC(P_1=E_1Q_1>LAC=DQ_1)$, the enterprises set the output Q_1 in accordance with the principles $MR_1=LMC$, then the average economic profit of the single production is equivalent to E_1D . The enterprises in the industry will expand the scale of production under the stimulation of the profits, and the other companies will enter this industry. Thus, the industry's production capacity will increase, which means the supply will be promoted. The increasing supply industry let the price P_1 decrease to the level of P_2 . When the market price is P_2 , the average revenue is equivalent to an average cost, that is $AR_2=LAC=E_2Q_2$, corporate profits disappear to zero. As a result, the industry will not expand the production scale of enterprises at all and other enterprises will no longer enter this industry. So that individual enterprise achieves the equilibrium, and E_2 point is the enterprise long-run equilibrium.

On the contrary, the enterprises set the output in accordance with the principles $MR_3=LMC$ when the market price of P_3 below the minimum enterprises long-run average cost $LAC(LAC=FQ_3>AR_3=E_3Q_3)$. Enterprises suffer losses under the production Q_3 , the average loss of a single production volume is FE_3 . The losses will result in the shrinkage of the production scale or the withdrawal of the enterprises from this industry, which will cause the supply reduction and the market price increase. After the market price rises to P_2 , the losses of the enterprises disappear to zero. Thus, the industry will not reduce the scale of production and the enterprises no longer withdraw, then the individual enterprise and the entire industries achieve an equilibrium. At this time, the individual enterprises and the whole industry economic profits come to zero¹.

Marx believed that, when the capitalists take the surplus value as the increase quantum of the consumed cost and all using capital (that is the increase mount of the imprest capital),

1 Campbell R.McConnell and Stanley L.Brue, Economics: Principles, Problems and Policies(fourteenth edition) the 23th chapter, Complete Competition, Beijing University press, Kewen(Hongkong) press limited company,2000(first edition)

the surplus value is translated into profits through the transformation from the surplus value rate to the profit rates. As the surplus value is brought about by the variable capital, and organic composition of capital is different in various social economic sectors, the profit rates are different. The value-added capital nature makes different production sectors launch a competition in order to attain favorable investment venues. Competition among the departments undergo through the capital flow from the low profitable sectors to the high profitable sectors, and the capital transference in the inter-departments affects the changes of the supply-demand relationship among different goods. Capital flowing to high profitable sectors will lead to the increasing supply of these sectors, falling commodity prices, and lower profit rate. At the same time, capital outflow the low profitable sectors will result in the decreasing supply of these sectors, rise commodity prices, and higher profit rate. The capital transference, supply-demand changes and price changes, which caused by different profit rate, will be held on until the average profit rate of all sectors generally tend to the average and form an average profit rate of the whole society. The imprest capital of every department gets average profit based on the average profit rate and equal capital gain equal profit ultimately.¹

2. The similarities between the two theories

Firstly, the market economic environment of the theoretical analysis is the same. Two theories place their own analysis in the market economic environment. Supply, demand, and price are the important factors in the market: supply and demand relationship forms the market price and the market price impact on the supply and demand relationship. Two are related to the supply-demand and price analysis, and the price is set in the supply and

¹ Wu Shuqing, Wei Xinghua, Hong Wenda, Political Economics(capitalism part), the 5th chapter, Chinese Economy Press, 1993.8

demand relationship. The established market price imposes positive affection to the enterprises production and the market or industry supply and demand. Marx' analysis of capitalism average profit rate is under a market economy framework, which describes the formation and affection of the average profit rate on the basis of the market adjustment. The equilibrium prices, as well as the average profit rate and the average profit, are formed in the competition. Therefore, both theoretical analyses are under a competitive market environment, which belong to the market economic theory.

Secondly, enterprises are passive recipients of the market price. In the long-run equilibrium theory analysis, the market equilibrium price that the individual enterprise is facing is the result of market supply and demand, which the individual enterprise can only accept and not influence. In the established market prices, enterprises can change the production scale and decide to enter or withdraw from an industry. Following the principle of marginal revenue equal to the marginal costs, enterprises determine the production, which ultimately impact on firm profit or loss. Similarly, the average profit theory also demonstrates that individual enterprise in different industries invests labor and capital goods according to the market prices and driven by profit rate, while the market price play the key role. Of course, the enterprises that both theories referring to include the ones from the inside and outside industries.

Thirdly, price has elasticity. On the basis of ready-formed market price assumption, two theories analyze the impact of this price on the market supply and demand. Furthermore, changes of the whole market supply and demand create a new market price, and this process will recycle. Obviously, both theories take supply and demand and price as an interactive integer. The market price changes continuously, which causes the adjustment of enterprises and are affected by the supply and demand of enterprises and market. Eventually, with elasticity, price promotes the realization of the enterprise long-run equilibrium or the social average rate.

Fourthly, both theories analyze the economic resource flow among the departments. Long-run equilibrium believes that as long as the market price is higher than the enterprises minimum long-run average cost, the enterprises in this industry will expand the production scale or the others from outside will enter, then the economic resource will flow into this industry. On the contrary, under the condition that the market price being lower than the enterprise minimum long-run average cost, the enterprises in this industry will shrink the production scale or withdraw from this industry and the economic resource outflow from this industry—the economic profit come to zero in the long-run equilibrium by the resource inflow and outflow from a certain industry. The average profit rate analyzed by the average profit theory is also formed by the labor and production goods flow among the departments.

3. The differences between the two theories

Firstly, the theoretical bases are different. Average profit theory is based on the Marxist labor value theory. The average profit rate can be gradually traced back to the surplus value theory, the law of value theory, the formation and composition of commodity value and so forth, and the average profit theory taking the theory value theory as a solid foundation is an inevitable result. The basis of long-run equilibrium theory is the theory of supply and demand, utility theory, production theory and cost theory. The maximum profits of the main economic activity participants are embodied by the demand curve, the revenue curve, the cost curve and the like in a long-run equilibrium analysis. The enterprise long-run equilibrium bears on the inevitably logical relationship with its own theory basis. The supply and demand theory and utility theory are totally different with the Marxist labor value theory. Different theories have a different basis of the theory, so there are differences between the nature of the long-run equilibrium theory and the average profit theory.

Secondly, status and function of these two theories are different. Adam Smith proposed the idea of “invisible hand” in “An Inquiry Into The Nature and Causes of The Wealth of Nations”, and the long-term equilibrium theory demonstrates the idea of “invisible hand”. The long-run equilibrium theory shows that market regulation enables enterprises to produce the greatest quantity of product at the lowest cost, and the consumers also can purchase sufficient consumable needed at the lowest price. This means the market clear, and producers and consumers both have realized the maximal benefit. Thus, the long-run equilibrium theory has proved the efficiency of market, which is an important component argued the principle of “invisible hand”. The average profit theory established on the basis of labor value theory explains that equal amount of capital can get equal amount of profit and solved “the Ricardo Problem”. More importantly, Marx analyzed the formation of production price based on the average profit theory, established the production price theory which bears the important theoretical and practical significance, and proved the benefit conflict between the proletariat and the bourgeoisie.

Thirdly, the endowed price attributes are different. The price used in average profit theory at first is taken as the price expressed by the monetary value, then is the price which has value basis and reflects the supply and demand relationship. The production price derived from the average profit theory also has the basis of social value. On the relation of value and price, western economics has incomplete value theory, and do not analyze the essence and the constitution of value. Consequently, the price theory of western economics has no value theory foundation. The price used in the long-run equilibrium theory is only taken as the result of market supply and demand, and established market price excluding the value element is merely the commodity price. From this, it can be seen that the analysis of long-run equilibrium theory only limits to the surface of economic phenomena, while the average profit theory pays attention to the essence of economical things.

Fourthly, the assumptions of technical difference are different. The long-run equilibrium theory takes production theory and cost theory as its theoretical basis, and invariable technical level is the analysis premise of production theory and cost theory. When the firm gains economic profit, the firms in the industry will expand production scale on the former technology foundation, and the outside firms entering also do not change the technical level. As a result, the long-run equilibrium theory established on the foundation of technical rigid hypothesis, and each firm in the industry equalizes the technical level which do not make the technology difference. In the opposite condition, the mean rate of profits analyzed by the average profit theory is an average tendency. The average profit rate does not eliminate the excess profit of a few advanced enterprises, which means do not exclude the difference of profit rate caused by the different organic composition of capital among the same industry enterprises¹. The different technical levels of enterprises can produce different labor productivity, and capitalists “can obtain a kind of extra profit by using the extra labor productivity, namely the profit which excess average profit.”² It implies that the average profit theory does not reject the different technical levels among the enterprises.

Fifthly, the range of departments is different. Pointing to an assumed specific sector, long-run equilibrium theory analyzes the inflow and outflow of economic resource by taking this specific sector as an example, and eventually realizes the maximal profit of the individual enterprise. While the average profit theory does not analyze specific departments, but includes all sectors in the analysis scope. It analyzes the whole social economy and economic resource flow in a wider area, and then the average profit theory formed. The analysis of average profit theory shows that the inflow of economic resources in a department is the outflow of economic resources in another, "the capital will be taken out

1 Marx. Capital. Vol.3. People Press. 1975.p182

2 Marx. Capital. Vol.3. People Press. 1975.p220

from the low profitable sectors and brought into the high profitable ones"¹. Economic resource flow shows the relationship of the departments.

Sixthly, the competition scopes are different. The competition among the departments analyzed by the average profit theory has a basis on the competition within internal department, because the internal department competition determines the commodity value which contains surplus value. As a part of commodity value, surplus value transform to profit, then the rate of surplus value turn into profit rate. Finally, the profit rate is converted to average profit rate through the competition among the departments. The average profit rate is realized by the competition among the departments superficially, but the internal department competition which makes the commodity value formation exists firstly. It is a process which is from the concrete analysis on internal department competition to the competition among the departments. For the lack of scientific foundation of the value theory, there is no need to say much about it that the long-run equilibrium theory only analyses the firms' scale alteration and in and out of industry activities on the foundation of market equilibrium price, and rejects the extensional analysis of departments competition. The equilibrium result is only achieved through internal department competition among each firm.

Seventhly, the attributes of equilibrium are different. As long-run equilibrium theory assumes that all firm' conditions of the industry are the same, the whole industry will achieve an equilibrium after the individual firm achieves equilibrium. However, the equilibrium of an industry and firms of it do not mean that the other industries and of their firms achieve equilibrium either. Differently, the average profit theory analysis shows that all industries and enterprises are given an average profit after the average profit rate realized, the resource flow among the industries is suspended, and then the entire community realizes general equilibrium except for the condition that the high technological

1 Marx. Capital. Vol.3. People Press. 1975.p218

level enterprises may reap excess profits.

Eighthly, the natures of profit rates at the equilibrium are different. The total economic cost used by long-run equilibrium theory is the sum of the accounting cost and the opportunity cost. Therefore, the economic profit is zero when enterprises achieve long-run equilibrium, which means the total revenue minus the total economic cost is zero, or the accounting profit minus opportunity cost is zero. The cost used by average profit theory is the accounting cost, which is total revenue minus accounting costs, and eventually the realized social average profit rate is greater than zero. In comparison, for the total economic cost is greater than the accounting cost and the opportunity cost is the highest income which is abandoned by the enterprise by using the same economic resources in other ways, the economic profit calculated by total revenue minus the total economic cost is less than the accounting profit which were obtained by total revenue minus the accounting cost under the assumption of equal total revenue. Therefore, using different costs on different occasions, the final economic profits and accounting profits are different in nature and amount.

Certainly, without the consideration of the profit nature in the two theories, the final profit is the same by bringing the two theories into the same accounting system and using cost, profit and other guidelines in the same sense only in terms of numbers: the economic profit is zero, or the accounting profit is greater than zero.

We must pointed out that, because of the use of opportunity cost, once the effect of economic profit lying in the decision-making of investment direction or investment products is brought into the production process, the profit rate acting as a guideline for measuring the effect of economic activity is better than the economic profit.

The above comparison shows that Marx' average profit theory, the proletarian revolution theory, embodying the theoretically systematic and rigorous logic nature, reveals the laws of social development. At the same time, average profit theory, accompanying with the economics beauty, accurately describes business activities and the macroeconomic operation in the market economy, and also plays the role as the theoretical foundation for developing the socialist economy. Therefore, the average profit theory is also the socialism construction theory.

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