NEOCLASSICAL ECONOMICS: SOME MARSHALLIAN INSIGHTS

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Abstract

In this paper are going to be analyzed the theories of supply, demand and equilibrium. It is about a neoclassical economics, Nobel laureate economist Alfred Marshall who is the inventor of the analyzed theories. And of course that these theories which that are subject to elaboration remain valid till today in the modern market economy conditions. Marshall also was the first who introduced the term "economics", which is in mass use. He studied, primarily the problems of production, distribution, exchange and consumption in terms of individuals, households, enterprises. With its total work appears as the founder of macroeconomics. I personally believe, that understanding the different approaches and perspectives on the economy, the reasons for these differences and how they evolved over time, provides a historical and philosophical context that encourages most economists to use critical analysis of current economic tools and their application.

Keywords: *demand, supply, production, competition, distribution.*

Classification JEL: B0, B1, B3

1. Introduction

Alfred Marshall (1842-1924) is one of the biggest, best and most respected English economists of his time. After finishing his studies in Cambridge, ten years working as a math teacher, then a few years president of the University of Bristol, and finally, more than twenty years, until his retirement, head of the Department of Political Economy at the University of Cambridge. In 1970 he resided the United States to study economics. According to him, the task of the economic science lies in its contribution to solving the problems of the economy and society. During his long life, Marshall wrote many books. The first economic work as a coordinated work with his wife, was the "Economics of Industry, 1879". Of the remaining works are known, "Industry and Trade, 1919", "Money, credit and commerce1923". Historically, the greatest and most famous of his works is the classic work "principles of economics" which was first published in 1890.

This work of Marshall for a long period of time has been translated into many languages and become a model for the entire European and American university science. Also Alfred Marshall is the first economic thinker who introduced the term "economics", which will come into widespread use, expelling the previous term "political economy." His work "Principles of economics" is divided in six books. In the first book has been developed new definition of the new term of economic science "economics" and the second processed basic economic categories, such as wealth, production, consumption, labor income, capital and the like. In the third book needs and their satisfaction are treated as well as the demand, a fourth factor of production, i.e. land, labor, capital and organization. In the fifth, in his opinion the most important book analyzes the economic balance, i.e. "Ratio of demand, supply and value" In this fifth book, which is in his consideration the most important book, Marshall divides the costs into primary or special and additional costs. Alfred Marshall emphasized that the entrepreneur, in circumstances where it is possible to replace expensive factor of production or costly method of work with cheaper, and then it comes to the principle of substitution. While his theory of distribution Marshall presents in his latest, in the sixth book.

His method of study's characteristic is the microeconomic analysis. He studied and analyzed the problems of production, distribution, exchange and consumption in terms of individuals, households and firms. Alfred Marshall laid the foundations of a partial analysis, and its total work appears as the founder of macroeconomics. Therefore, his teaching comes to the basics of macroeconomics and neoclassical (neoliberal) school.

Although Marshall made his contributions to economic thought more than one hundred years ago, he still interests many historians of economic thought.

2. Methodology

Marshall (1920) had two reasons for regarding the study of an economy as complex and difficult. On the one hand, everything seems to depend upon everything else: there is a complex and often subtle relationship among all the parts of the system. On the other hand, "time is a chief cause of those difficulties in economic investigations which make it necessary for man with his limited powers to go step by step." Causes do not instantaneously bring final effects; they work themselves out over time. But as one cause, such as an increase in demand, is making its influence felt, other variables in the economy may independently change (e.g., supply may increase), so it is often difficult to isolate a single cause and be certain of its effects. If the laboratory technique of the physical sciences (whereby it is possible to hold constant all influences except one and then observe the results of repeated experiments) were available to the economist, this problem would not exist. But because the methodology of the laboratory is not available to economists, an alternative must be used. Marshall provided this alternative when he carefully developed his basic thought system.

According to this system, because economists cannot hold constant all the variables that might influence the outcome of a given cause, they must do so on the theoretical level by assumption. In order to make some headway in analyzing the complex interrelationships in an economy, we hypothesize that changes in certain elements occur ceteris paribus, "with other things being equal." At the start of any analysis, many elements are held constant; but as the analysis proceeds, more elements can be allowed to vary, so that greater realism is achieved. The ceteris paribus technique permits the handling of complex problems, at the cost of a certain loss of realism.

Marshall's first and most important use of the ceteris paribus technique was to develop a form of partial equilibrium analysis. To break down a complex problem, we isolate a part of the economy for analysis, ignoring but not denying the interdependence of all parts of the economy. For example, we analyze the actions of a single household or firm isolated from all other influences. We analyze the supply-and-demand conditions that produce particular prices in a given industry, ignoring for the moment the complex substitute and complementary relationships among the products of the industry under analysis and those of other industries. One important use of the partial equilibrium approach is to make a first approximation of the likely effects of a given cause. It is therefore particularly useful for dealing with policy issues-predicting the effect of a tariff on imported watches, for example. Simple supply-and-demand analysis can be used within a partial equilibrium approach to predict the immediate implications of such a policy. Marshall's procedure is first to limit a problem very narrowly in a partial equilibrium framework, keeping most variables constant, and then to broaden the scope of the analysis slowly and carefully by permitting other things to vary. His method has been called, appropriately, the one-thing-at-a-time method [5].

3. The theory of demand

Based on the analysis of demand, Alfred Marshall starts from the theory of marginal (marginal) utility, which before him was exposed by representatives of the Lausanne's and of the Austrian school. According to him, the demand should be taken into consideration due to the following [7]:

- The work of representatives of the classical school, with a few exceptions, it is undervalued and neglected;
- Application of mathematical methods in economics requires the analysis of specific economic issues to take into account several aspects, among which is the demand; and
- Increasingly it is becoming popular question of the impact of consumption to increase people's welfare and so on.

Furthermore, "the overall usefulness of a good thing for a person increases with every increase of the stock of doing well, but not as fast as rising stocks. If inventory increases at a uniform rate, the benefits derived from it is increasing at a reduced rate. That is the essence of the law of falling (saturated) benefit - the additional benefit that a person derives from a given increase in the stock of a good decreases with every increase in inventory, which it already has. In other words, the more increased the consumption of a particular good is – the more increases and the benefit of it, but with a decreasing rate. That part of the benefit which that person is hardly decided to buy it, can be called marginal (border) purchase. Marshall equates marginal buying with the quantity of a good, the consumer- buyer decided to buy, considering that it's needed. The benefits of that good is called marginal utility and the price at which it buys squid called marginal cost of the demand. Marginal usefulness of a good to a person decreases with every increase in the quantity of that good that it already has. Marginal utility of purchase can be called marginal utility. The term individual demand implies the demand for a good while in aggregate demand understands the sum of the

individual demands of the goods. Presenting this terminology in the field of demand, Marshall constructed several new ideas, including the notion of so-called marginal cost of demand, below which the price of the final amount of a fine, which still fits the buyer [4].

Based on the known phenomenon that the requested amount is even greater, as the price is lower. Marshall constructed the famous curve of demand obtained by connecting the points of both the abscissa of the coordinate system indicate different quantities of goods, a ordinate appropriate levels of prices. Increasing demand exists when, for the same price is bought a greater quantity or for increased cost the same amount as earlier. If a greater amount of good that is to be sold, all the lower price at which it offers in order to find a buyer. In other words, the quantity demanded increases with declining prices, and decreases with the increase of the price. It is the famous Marshall general law of demand. Marshall equates marginal buying with the quantity of a good that the buyer decided to buy, considering that it's needed.

So far as demand for services is concerned, Marshall is always careful to insist that marginal productivity is not a complete theory of distribution, and he uses the term marginal productivity sometimes and sometimes "marginal net product." It is very clear that he was quite aware of the joint productive combination in which the technical coefficients were fixed rather than varied [11].

Furthermore, studying the response of demand as a result to changes in price, i.e. taking cost as an independent variable, and the volume of demand as its function, Marshall (1920) defines the term elasticity of demand in these words: "Elasticity market demand is large or small according to whether the required amount grow a little or a lot with a certain decline in price." Elasticity of demand is expressed by the coefficient of elasticity of demand, which can be equal to one, less than one and greater than one. For example, it will be equal to one when rising prices of certain goods for a certain percentage will be a decrease in demand of better for the same rate. Rise in prices of a particular good can cause different stiffness of its consumption, depending on whether they are poor or rich part of the population. He observed that the elasticity of demand decreases with the price reduction, i.e. elasticity is the highest among high prices mean the average prices and low for low prices, and eventually completely disappear. Also, the demand to basic nutrients is far less elastic than demand to industrial products that are not necessary for life.

And to emphasize that in economic terms, Marshall introduced the notion of so-called consumer surplus, and this, according to him, is the excess of the cost that customer would be willing to pay for a good and through the existing cost of doing well in the market. Marshall under the category of consumer surplus implies the excess of the price which the consumer is willing to pay or, in subjective language speaking, excess of pleasure that feels the consumer of a good at a lower price than that he would agree to pay.

4. The theory of production and distribution

Marshall (1920) conceived of four different periods of production. The market period is a period so short that the quantity of output brought to market cannot be altered except by sale or destruction. In the market period, the supply curve is perfectly inelastic. In the short run, some but not all factors of production can be varied. In the long run, all factors of production are variable. In the secular period, even technology and population are variable.

Marshall worked this out for agriculture, following the classical tradition. He understood that the addition of any variable factor to a fixed factor of production leads to diminishing marginal returns, however.

A firm maximizes its profit by minimizing the cost of production of any given output. To minimize costs, the firm should substitute cheaper for more expensive inputs. The optimal input combination represents an application of Gossen's second law to production theory. Combine inputs so that factor demands are derived from the marginal revenue products of factors. The quantity of a factor demanded is determined by equating MRP to the factor price. Marshall's marginal productivity theory was mainly a theory of factor demand; it served as a theory of income distribution only in the short run.

Marshall identified three possible patterns that might result as an industry expands in the long run: constant returns, increasing returns, and diminishing returns. His theory of returns to scale was tied closely to the concepts of external and internal economies. External economies result from "the general progress of the industrial environment" and enable all firms in an expanding industry to experience decreasing costs. Better transportation and marketing systems and improvements in resource-producing industries might produce external economies. Internal economies are gained by a particular firm as it enlarges its size to achieve greater advantages of large-scale production and organization. Increasing returns to scale that are internal in origin can lead to the monopolization of markets, as large firms develop lower cost structures than smaller firms, driving smaller competitors out of business. External economies are not, however, anti-competitive. Marshall believed that limits to internal economies existed, that managerial and organizational problems would eventually lead to internal diseconomies that would increase costs. Therefore, he believed that long-run increasing returns were likely to be caused by external economies [17].

Marshall's explanation of the forces determining the prices of the factors of production and the distribution of income was consistent with the rest of his analysis. Here, as elsewhere, he often generously acknowledged the merits of

criticism of his theories, for example, those attacking his marginal productivity theory of distribution. The same basic supply-and-demand analysis and distinction between short run and long run that are used to explain the prices of final goods are also used to explain rents, wages, profits, and interest. The demand for a factor of production is a derived demand that depends upon the value of the marginal product of the factor. Marginal products are difficult to disentangle, however, because technology usually requires that an increase in one factor be accompanied by more of other factors.

Marshall solved the problem of measuring marginal products by computing what he termed the net product at the margin. If an additional laborer requires a hammer, then the net product of the labor is the laborer's addition to total revenue minus the added cost of the hammer. Marshall then pointed out that it is incorrect to call the theory of factor pricing a marginal productivity theory of distribution, because marginal productivity measures only the demand for a factor, and factor prices are determined by the interaction of demand, supply, and price at the margin [11].

4. The theory of supply

His theory of supply Marshall (1920) outlined in the fourth book of the "Principles". As seen from the title, he distinguishes four factors of production: land, labor, capital and organization. According to it, to three factors, which hitherto operated (particularly in Mill), he added the fourth: the organization. All these factors affect the supply side. As previously operated with an ask price, now introduces the notion of the supply price, that is, according to him, 'the price actuating effort, necessary to produce a given quantity of goods ". In fact, the price of the offer is only another expression for the cost of production. When analyzing the tender, Marshall took into account the company with average equipment with production factors, which calls the representative form. In production, according to him, may apply one of the following three laws:

1. Law for falling revenues, which means that any new venture in equal production factors leads, indeed, to increase revenue, but that extra income is lower; this law applies mainly to agriculture;

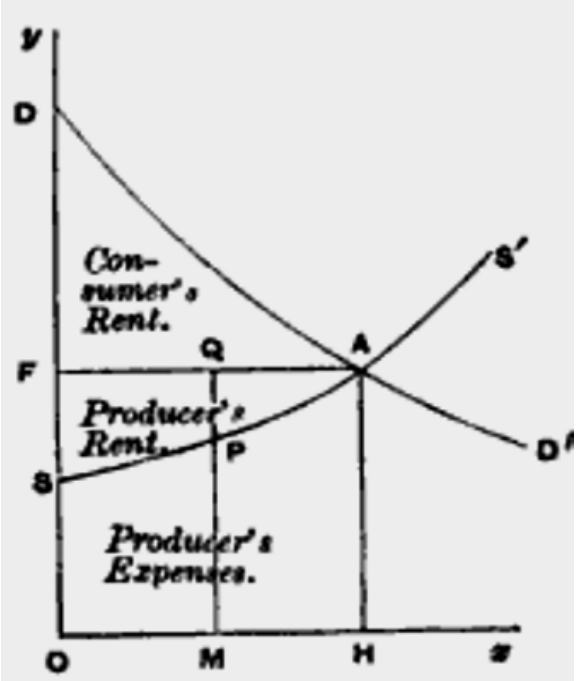
2. The Law on growing revenue, which is the opposite of the first, which means that any new venture equally result in an increase of additional income, and according to Marshall, it happens mainly by improving the organization; This law applies especially to the industry and refers to the additional investments of labor and capital;

3. The law of constant income (often called the law of proportional income), which means that further investment in production factors income growing proportionally; Marshall under this law commonly occurs as a result of the interplay of the first two laws.

5. Competition and equilibrium in Marshall

The invention of the theory of perfectly competitive equilibrium has been traditionally attributed to Cournot. Cournot developed a notion of partial equilibrium by studying a market isolated from the rest of the economy. He distinguished between two kinds of equilibrium: single-producer markets and many-producer markets—in other words, a monopoly equilibrium and a competitive equilibrium. The competitive equilibrium was seen as a limiting situation, namely as the state of the market that would be realized if none of the economic agents had monopolistic power. The Walrasian system assumes that the agents formulate their own plans and implement their own choices by taking prices as given. Marshall's conception of competition and equilibrium is completely different from that of Walras, and rather nearer to that of Cournot [16].

Figure 1: Alfred Marshall's supply and demand graph



When the price of demand is equal to the supply price, quantity produced no tendency of any increasing or declining; it is in balance. The amount of goods produced in a unit time when demand and supply are in balance, Alfred Marshall called the equilibrium quantity, and price at which it should be sold is going to be called equilibrium price. He is an advocate of a synthetic theory of prices, according to which prices are determined of supply and demand. According to him, the supply or cost of production represent the objective element in the formation of prices, and it represents the prices of the four factors of production: land, labor, capital and organization. In contrast, demand Marshal considers subjective element in pricing and evens the assessment of the consumer of the utility of a well [4].

Therefore, supply and demand (production costs and usefulness) participate in determining the value or price of the goods. The two factors basically have the same meaning, but the time element changes that meaning.

Namely, if the observed time period is shorter, the greater the impact on demand, and if the monitoring period is longer, the greater the significance of the offer. Therefore, according to Marshall, in a sufficiently long-term cost of production (operating on the supply side) is actually the only determinant of the value or price. Prices of longer-term will move, oscillate with the costs of production. Regarding this factor- time can distinguish three periods: very short, short and long term.

In a very short period (Marshall takes as an example one day) demand plays a dominant role, especially in the case of perishable goods, because supply, i.e. quantity of goods is delivered, and can be increased; balance at that moment to form a current balance, and prices corresponding to the period market prices.

The second short period (for example Marshall take a year), it is possible to adjust production to some extent, i.e. offer to the requirements of demand, reduce or increase, but only equal amount of labor and capital; pricing appropriate to this period normal prices for a short period.

During the long period of several years, delivering what it is possible to expand production by increasing all factors; pricing appropriate to this period are normal prices for a long period.

Observing the impact of marginal cost on the price, Marshall comes to the net costs, for each factor of production, as well as for each unit of product. The manufacturer has committed every factor of production only to the limit to which the cost of net product does not exceed the cost of that factor of production. At this point the value of net product is equal to the cost of net product.

Similarly, on the demand side, where Marshall operate with already known marginal utility. So, neither in this part of his work, which mostly meant he did not contribute much to the theoretical side of the values and prices. That contribution is more terminology, notion than substantive. In fact, he made a synthesis of the theory of John Stuart Mill, in which value is determined by the cost of manufacturing and a theory school of psychology, according to which the value is determined by the marginal utility. According to Marshal value is determined by two factors, but even in this regard Marshall was not the first, because before him there were economists who believe that the cost of production and utility factors for determining the value. And Marshall oftentimes highlights Ricardo, praising and

giving priority to some of its concepts, and considered as the creator of the theory of value based on production costs, which is, as we know, inaccurate, because Ricardo was adamant representative the labor theory, and typical of the theory of costs is Mill, not Ricardo.

5. Conclusions

For this school in the West is used the name neoclassical, because it relies somewhat on the study of classical school, especially in John Stuart Mill's version (theory of production costs). It is also called Marshall's by far its most famous representative, the English economist Alfred Marshall. The school called Cambridge's, because he was a professor at the famous University of Cambridge. Marshall was typical professional who had no intention to build some own theory, but only connect and use all the previous results of science and to systematize what better shape.

Coming after the marginal revolution, Marshall concentrated on reconciling the classical labour theory of value, which had concentrated on the supply side of the market, with the new marginalist theory that concentrated on the consumer demand side. Marshall's graphical representation is the famous supply and demand graph, the "Marshallian cross". He insisted it is the intersection of both supply and demand that produce an equilibrium of price in a competitive market. Over the long run, argued Marshall, the costs of production and the price of goods and services tend towards the lowest point consistent with continued production.

To highlight the importance of Marshall, surveys for economic science, J. Schumpeter says it is immortal and that Marshall is not only a great technician, scientist historian, inventor of certain hypotheses, but rather a great economist. He points out that Marshall is "mathematician, philosopher, psychologist, anthropologist, historian, geographer, specialist in politics, the master of literary style, and another person who knows the real life, has practical experience in the field of business and finance course in the state administration and has good knowledge of four to five languages [4].

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