

The subjectivism of the Austrian School and its influence on the conception of capital

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Abstract: This study aims to investigate the theoretical functioning of capital goods included in production chains. More traditional approaches tend to treat capital in an excessively aggregative way, without making distinctions in relation to the temporal positioning that each capital good occupies within a production chain and, even more so, without taking into account its degree of specificity. The omission of such factors, which is often done within neoclassical economics, not only consists of a lack of realism, but also prevents, or at least limits, the theoretical investigation of the behavior of capital in view of changes in consumer preferences, changes in the direction of monetary policy, or even changes in credit and regulatory policies.

Keywords: Market, Crises, Austrian School of Economics, Capital structure.

Introduction

Capital is perhaps one of the most ambiguous terms in economic theory. Sometimes it is used as a synonym for monetary incumbents and at other times it is used as if it were machinery, plant, tools and equipment. Moreover, the various schools of economic thought define and understand capital differently.

Classical political economy analysed the production process from a predominantly "horizontal" perspective (Skousen, 2011). That is, as a rule, he conceived production as the combination of factors, disregarding the presence of temporally ordered stages of production. The analysis focused on the factors: land, labor, and capital. As well as for their corresponding remunerations (rents, wages, and profits), an inheritance from Smith's perspective. Goods were divided into only two types: capital goods and consumer goods. As Skousen (2011) points out, this horizontal perspective of production was the predominant influence on the contemporary neoclassical approach.

However, there have been cases that have deviated from this rule. Ricardo, Say, and Mill are examples of classical thinkers who contained a seed of what became the Austrian analysis of production, typically done from a temporal perspective.

The Marxist perspective was heavily influenced by classical economics, most notably Ricardian thought. However, there is no attempt to develop explanations for the temporal aspect of the structure of production, and the study of the so-called "capitalist production process" is understood only from the perspective of monetary exchanges, disregarding, almost entirely, the physical process of transforming raw materials into goods of lower orders (Skousen, 2007).

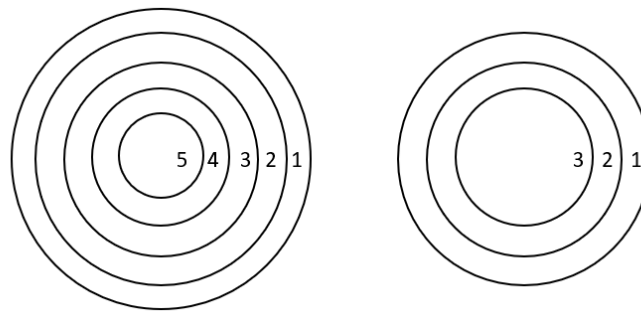
On the other hand, Menger, the founder of the Austrian school, as well as one of the leading economists to create the foundations of microeconomics (by formulating the principle of marginal utility), was also responsible for creating a more complete theory of the capital structure. Rejecting the classical perspective of only two goods, he decided to study the production process through the "principle of the causal connection between goods". In other words, Menger analyzes production chains from a temporal perspective. Separating the types of goods according to their temporal distances to consumption. Consumer goods are first-order goods, second-order goods are those used in the production of these goods, third-order goods are those used in the production of second-order goods, and so on (Skousen, 2007).

Moreover, the principle of the imputation of value, formulated by Menger, is of paramount importance for the current Austrian perspective. This idea is about the evaluative connection between goods of different orders. Menger emphasizes the subjectivity that exists in the idea of the economic good in elaborating his theory of value, utility, and through the principle of imputation, provides an explanation of why production goods are valuable and to what extent they are. The goods of higher orders have a value that depends on the goods of lower orders, that is, the value of capital goods ultimately depends on the value of the corresponding consumer goods.

However, as Iorio (2011) points out, the greatest merit for the creation of a theory of the structure of capital lies with the work of Böhm-Bawerk. He was the pioneer in properly creating a theory of the capital structure. To illustrate this structure, he used a figure consisting of a few concentric circles of increasing

diameters.

Figure 1: Böhm-Bawerk's capital structure



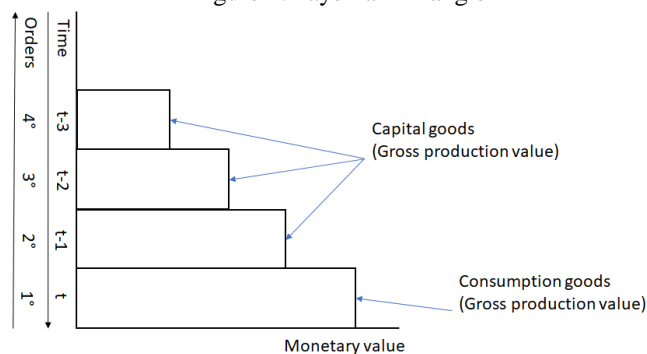
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The first and smallest circumference represents the first stage of production in which the agent utilizes the simplest set of factors of production (also called the original means): natural resources and labor. And the circumferences represent the next stages of production (maturation classes).

The more circumferences, the greater the number of processes done before final consumption. The area between each circle can be called order or class, with the outermost being the most recent and also called the lowest (closest to the final consumption). The higher the class or order of the good, the farther away from final consumption it is. On the other hand, it is important to note that durable production goods can act in all classes.

In order to get the production chain "moving", work is necessary. Work transforms goods of higher orders into goods of lower orders, that is, it brings them closer to their destination temporarily.

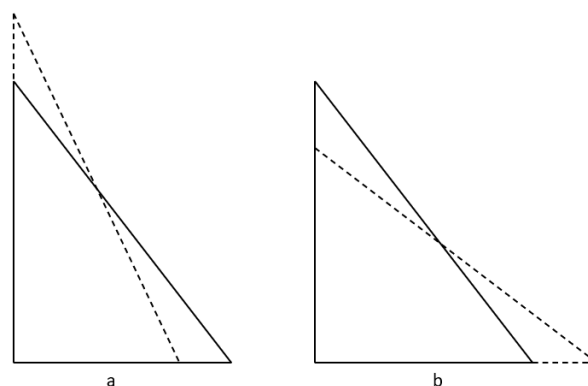
Figure 2: Hayekian Triangle



Source: prepared by the authors

Friedrich A. Hayek later continued the study of the capital structure created by Böhm-Bawerk. However, he adopted a different form of representation that became known as the Hayekian triangle (figure 2). This new approach consists of a set of rectangles arranged on a temporal axis. The height of each rectangle represents the value of the good at each stage of production. Since this value is increasing, one can draw an ascending line through all the stages forming a triangle. This representation of the capital structure can be used to demonstrate how a production chain behaves when there are variations in intertemporal preferences.

Figure 3: The Interest Rate and Capital Structure



Source: prepared by the authors

Figure 3 shows two situations, in the first (a) there is an increase in the marginal propensity to save of economic agents, which triggers a deepening of the capital structure, that is, production has become more indirect, with more resources no longer being allocated in the final stages of the production chain to be allocated to higher orders. In the second situation (b), when the marginal propensity to save falls, the opposite occurs, there is a redirection of resources from the first stages of production to the final stages. Thus, production becomes less indirect, i.e. the production chain becomes shorter and loses some stages.

Capital and Intertemporal Preferences

To understand what capital, consumption, and savings are in essence, it is necessary to realize that human beings, even in their natural state of poverty, face a trade-off between consuming and saving. The income generated by the process of production can be directed to consumption, i.e., to immediately satisfy the agent's desires, or it can be directed to savings, to satisfy his desires mediately, i.e., indirectly. In short, man has the choice to consume the fruits of his labor now or in the future.

Of course, neither savings nor consumption usually represent 100% of income, it is common to consume part and save what is left. The motivation to save is not only in protecting against uncertainty (times of scarcity, for example). In reality, when you save, you seek something in return, after all, waiting is a disutility. This is the role of investment, to increase the productivity of labor through indirect production, that is, the production of capital goods, in order to remunerate savings. And the increase in productivity generated by the choice to save and invest is precisely the source that remunerates such activities. Without this remuneration of savings and without uncertainty, agents would not be interested in keeping part of their resources since, in general, there is a greater preference for goods in the present in relation to goods in the future. From this reasoning emerges the idea of intertemporal preferences.

Capital and capital goods

More precisely, one can define capital goods as a set of intermediate stages in the production process and ready-to-consume products that allow the agent to replace shorter temporal processes with longer processes without the need to go through moments of deprivation. That is, capital goods are tools, machines and facilities, as defined by the neoclassicals. However, Mises (2010) also understands unfinished products as capital goods, following the tradition started by Menger (2007), and the consumer goods necessary to keep agents healthy during indirect production processes.

To elucidate this question, we can employ the imaginary construction of autistic economics, that is, the economy of only one individual. In this context, there are no interpersonal exchanges, only so-called autistic exchanges, i.e., conflicting choices for the use of scarce resources, tradeoffs that do not incorporate social cooperation, and the individual is responsible for all the work activities necessary to achieve his or her goals. The example of Robinson Crusoe, extremely common in microeconomics textbooks, is especially useful in exemplifying this situation. Crusoe has the need to choose certain activities in order to survive and increase his well-being on the island where he finds himself. Initially, you need to collect simple resources to survive. However, it is reasonable to think that his dissatisfaction with the low productivity characteristic of non-capital-intensive production processes will make him look for more efficient methods of production. The invention and construction of tools is usually the way to solve this issue, but the better the new production method is, the more time must be spent in planning the use of this new technology. In other words, in addition to the average production time of the consumer good, which is usually shorter when more efficient methods are used, there is

also the planning, production and installation time of the new technology that separates the beginning of the production process from access to the consumer good. It is reasonable to imagine that Crusoe, before employing the new methods of production, did not produce much more per day than he needs to be satisfied, and therefore, when he begins the process of transition to the implementation of the new technology, he will have to look for ways to deal with the fact that part of his working hours will be spent on a process that will only bear fruit in the more distant future. Thus, either you will have to increase the number of daily hours of work during this transition period or prior to the period, but in any case you will have to work more hours than those that correspond to consumption in order to be able to complete your goal.

With this process in mind, let's say Crusoe seeks to make a fishing boat and a set of equipment intended for this activity. In this example, according to Mises' (2010) definition, if Crusoe decided to increase the number of working hours before the transition, that is, if he decided to stock up on goods and services in advance to survive during the days of those who worked on the boat and on the equipment, this accumulation of consumer goods are savings and also capital goods. As they are previous stages of production necessary to achieve the final goal. In addition, logically, the boat and fishing equipment are also capital goods.

Looking at a different example, a manufacturing industry, both the machines, equipment and tools, as well as the parts, unfinished products, that are incorporated into the final product are capital goods. Skousen (2010) proposes the classification of capital goods into the categories: "working capital" and "fixed capital". From this perspective, unfinished goods would be, in Portuguese, capital worked (or circulating) and machinery, facilities, equipment and tools would be fixed capital. These terms will be further explained below.

Since the concept of capital good was introduced, it is important to distinguish it from capital. While the first effectively concerns the goods that participate in the process of operation of a company, capital, as Mises (2010) conceptualizes, is the monetary value of these, the assets, minus the debts, the liabilities. In this way, it is equivalent to shareholders' equity.

The concept of capital, therefore, only makes sense in a market economy, where one can actually assign values to goods and services. Because of this ability to assign monetary value to the assets invested, entrepreneurs are now able to represent the health of their businesses in numerical terms.

Through this process, entrepreneurs can monetarily represent the variations in the total amount invested, called income and capital consumption.

Interest and intertemporal preferences

As previously shown, the male agent (homo agents) in the business context employs factors of production to obtain consumer goods. However, until now, an important component of the production process has been left out: time.

In addition to the wear and tear of physical capital, the transformation of the capital worked, and the energy expenditure that human labor represents, the entrepreneur also has to wait for the production period to end. Thus, in addition to taking into account the amount of each factor of production of each possible use of these, you must also keep in mind the time over which these resources will be employed in this process.

As Mises (2010) points out, economics owes the theory of time preferences to two authors: William Stanley Jevons, and Eugen von Böhm-Bawerk. Especially the latter, which, in Mises's view, was responsible for correctly formulating the problem, refuting and discarding several errors made by previous attempts to explain the economic nature of interest.

However, Böhm-Bawerk, despite being responsible for initiating a more coherent explanation of interest, ended up falling into some traps. As Murphy (2015) states, despite having the merit of refuting the erroneous explanation that the interest rate paid on borrowed monetary funds would result from the productivity of physical capital, Böhm-Bawerk ended up committing a contradiction in his own explanation, which also had the technical productivity of capital, which he called the "roundabout production process".

This led another economist, Frank Fetter, to develop a theory that would explain the phenomenon of interest purely through time preferences. However, Mises was the first to exclude purely psychological aspects of the explanation and to ground the theory of temporal preferences in praxeology.

In the light of the general theory of human action, it is evident that men value temporal fragments of the same duration differently in relation to how far apart they are temporally from the moment of decision.

So, from his point of view, the theory of time preference is valid for any human action. The agent man will always prefer goods in the present to goods in the future in view of the same conditions. As he himself points out, waiting is a "disutility". On this basis, Mises (2010, p. 605) defines interest as "the ratio between the value attributed to the satisfaction of a need in the immediate future and the value attributed to its satisfaction in more distant periods in time." Thus, it is not a question of a price per se, but of a relationship between prices. The higher the time preference, the higher the value given to present consumption relative to future consumption.

The Intertemporal Structure of Capital

As Skousen (2007) states, there are two main perspectives from which one can study the structure of an economy as a whole. The first is called the horizontal perspective, in which the catalytic categories (profits, losses, prices, wages, interest, among others) are studied, absents the role of time. This methodology is commonly used by neoclassical schools. Such a perspective is countered by the vertical perspective of the economy, which emphasizes the role of time in the production process.

Economic activity seen in a disaggregated way

Contrary to what is practiced in a typically neoclassical view that makes a simple distinction between production goods and consumer goods, Skousen (2007) points out that in order to adopt the vertical perspective, one must view the market as a series of production processes that are in various stages of realization. That is, at every instant of time there are capital goods in every order of the production chain that over time are directed towards their destination, consumption.

When an enterprising agent is looking for an activity to perform, he must decide which sector he should enter and at what stage of production. And it does so according to its judgment regarding risk and expected profitability. In this way, it is positioned in some part of the production process.

As Skousen (2007) points out, when they start their operations, entrepreneurial agents from different sectors and orders must go through three common stages that would form a basic model of processing. First, they buy factors of production. Second, they transform the inputs into a new product. Third, they sell the new product to agents in the next stage.

Regardless of what the entrepreneurial agent has to acquire, whether it is a simple or complex process, the value for which the new product will be sold must be greater than the unit cost of production (otherwise agents would not enter this activity). In reality, logically, the costs could be higher than the turnover, which would cause the firm to incur losses. And depending on the firm's plans, short-term losses may not be much of a problem. However, in order to initially construct a simple model, let's assume that the production chain operates in a uniformly circular economy, so there would be no pure business profits and losses. But it's important to be aware that this kind of simplification has its limitations.

Keeping in mind the behavior of the entrepreneurial agent, the role of time becomes evident. The entrepreneur must worry about the time it takes to buy the factors of production, produce the new product, and receive payments for his sales. As Skousen (2007) emphasizes, waiting is an essential part of the production process.

Another important issue is that the objective of the entire productive structure is to supply the demand for consumer goods. Thus, as Mises (2010) points out, the prices of production goods are closely linked to the prices of consumer goods that derive from them. The prices of the inputs necessary for the production of a consumer good in a uniformly circular economy must be determined by the discounted present value of that consumer good and alternative consumer goods, since many capital goods have utility in the production of other commodities.

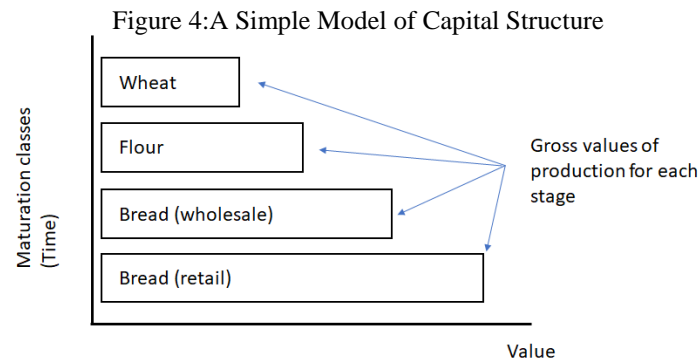
A simple model for the production structure

In this section we will return to the concepts of physical capital and working capital presented in section 2.1. It is important to note that, in addition to the distinction made above, these concepts can also be seen in another way. Skousen (2007) points out that while circulating capital, along its path, gains value, physical capital, from the moment it is installed, begins to lose value. This distinction is due to the fact that we are comparing unfinished goods with finished goods.

Keeping this distinction in mind, it's important to think about how to add both classes of capital goods to a conceptual model. The Hayekian triangle allows us to visualize well how the structure of production behaves. However, before presenting your most complete version, it is important to show some simpler ones to present your elements little by little. For this reason, Skousen (2007) initially presents a simple model with the following assumptions:

1. Each stage of production has the same duration;
2. The total production period is equal to or less than one year;
3. there is only one producer at each stage of production;
4. there is no fixed capital, only worked capital;
5. there are no durable capital goods;
6. there are no durable consumer goods;
7. there are no stocks;
8. The production structure works in a uniformly circular economy.

So we can take the production of bread as an example. Let's divide this chain into four maturation classes, as is geometrically represented in figure 6. On the basis of such a structure, it is then possible to investigate the introduction of a fixed capital good and other components necessary for production.

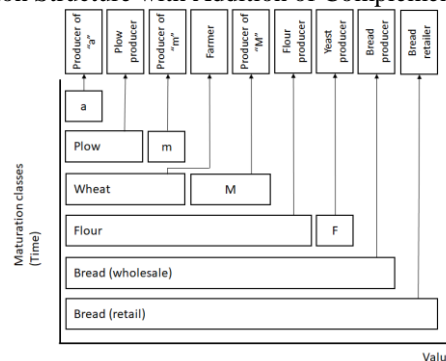


Source: prepared by the authors

In this case, just like Skousen (2007) we will add the plough, the mill and the yeast. However, we will assume that these first two capital goods require two stages of production. Since the material "a" used to make the plough is a cost to the plough producer, and the material "m" needed to make the mill "M" is a cost to the mill producer, they must be added at the earlier stage.

And the same reasoning applies to ploughs, moin, and yeast, because, although they are used in the production of wheat, flour, and bread, they represent costs for the producers of these products. These additions to the model can be seen in figure 5. There we can also see the monetary outputs being directed to the owners of the original means by the arrows pointed upwards. Thus, at each stage of production it is possible to verify the value that remunerates the capital goods of the previous stage and the remuneration of the labor and time spent in the process.

Figure 5: Production Structure with Addition of Complementary Capital Goods



Source: prepared by the authors

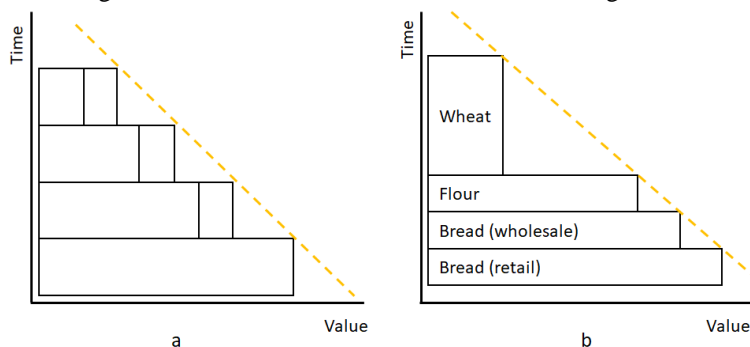
In a uniformly circular economy, i.e. in equilibrium, the profit margin of each producer at each stage is identical. This seems reasonable, since any difference in the profitability of one stage in relation to the other raises the opportunity cost of some producers, promoting the transfer of resources from one maturation class to another. In view of this condition, we can define a smooth "profit margin line" along the production structure, as shown in Figure 6-a.

By making the hypothesis that each stage has the same duration more flexible, it is possible to verify what influence this change exerts on the Hayekian triangle present in figure 6 - b. Using the previous example of bread production, it is easy to see that the planting stage takes much longer than the later stages. By including this element in the model, we can see that the fact that wheat production takes longer implies the need for the gross value of production to be relatively lower than it would be if it were a shorter stage.

Another hypothesis that was adopted in the simplest version of the production structure model was the time constraint for the total duration of production. However, this is not a necessary condition for studying the structure of production. Much has been debated about the duration of a production process. Some economists, as stated by Skousen (2007), have left aside the analysis of the production structure in stages, arguing that it is not

possible to define the beginning of a production chain well. They argued that one could regress temporally indefinitely, since each factor of production may have been the result of a previous process. Keeping this in mind, many have tried to solve this problem, including Böhm-Bawerk himself. However, the resolution of this debate occurs when we treat the beginning of a capital structure as the beginning of a new venture. That is, all the factors of production that existed before do not need to have their own additional production structures.

Figure 6: The Production Structure and Profit Margin Line



Source: prepared by the authors

In addition to the question about the limits of the chain, Skousen (2007) points out that there was also a debate about the specificity of capital goods. They argued that it was impossible to say to what stage of production a given capital good actually belonged. Critics claimed that the analysis of the structure of production was fruitless, because a certain type of capital good could be used in several classes of maturation. Although "non-specific" capital goods are, in fact, a complicating factor, Hayek (2017) had already given a solution: no matter at how many stages of production a given capital good is employed, it belongs to all these orders of production. Strictly speaking, the binary division between specific goods and non-specific goods is not adequate. It is more interesting to keep in mind that each factor of production has a degree of specificity. And ultimately, if all goods were perfectly non-specific, there would be no need for a capital structure to exist, and so the neoclassical treatment of capital (K), as a homogeneous aggregate, would be perfectly adequate. However, in the real world, this is not the case, so, as Skousen (2007) argues, rather than leaving aside the treatment of capital as a temporal structure, it is better to identify in general a position for these non-specific goods.

Finally, it is worth mentioning the problem of durability. Originally, Hayek (2017) had not included durable capital goods, i.e., fixed capital, in his model of production structure. There have been criticisms of the absence of durable goods in Hayek's model, however, it is worth noting that the structure of production is a fundamentally heuristic, as Bellante and Garrison (1988) say, it does not seek to be a perfectly faithful representation of reality, because this would probably not be possible. In addition, Rothbard (2009) solves this issue by rejecting such dualism between the categories (durable and non-durable goods) and opting for a view that highlights the continuity of the problem, that is, analyzing goods according to their degree of durability. Thus we may say that every good renders, to a certain degree, a service to production. A good that can be used only once provides a service whose value is its own value. On the other hand, a good that can be used several times provides services whose value corresponds to the present value discounted from its marginal productivity.

Dividing national production into four main categories

Until now, we have been investigating a structure of production corresponding to only one economic activity. Now we will use a more comprehensive model called APS, aggregate production structure, or, in Portuguese, EPA, aggregate production structure.

The structure of aggregate production is a theoretical model that seeks to represent the productive structure of an economy. Skousen (2007) adopts a classification of economic activities into four general categories:

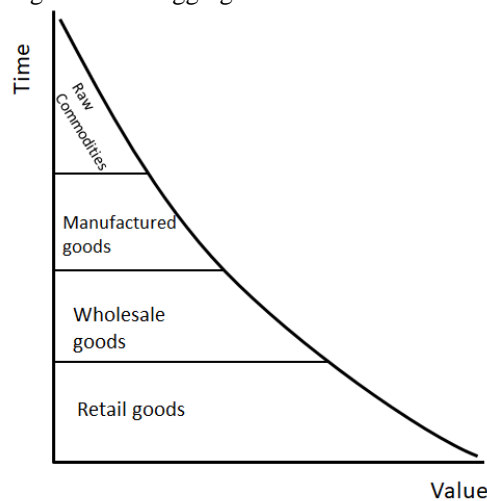
1. raw resources;
2. manufactured goods;
3. wholesale products;
4. products for sale at retail.

Figure 7 contains a structure of production that reflects these four classes of goods in their proper stages of production. One thing that should be clear about the positions where these products should be found is that

they are determined by the time it takes for these capital goods to reach the final consumer. Thus, even if both iron ore and corn, soybeans or other products can be considered as raw resources, if iron ore is two years away from final consumption and corn is one year away from consumption, the former must be positioned as a good of a higher order than the latter.

It is important to highlight the convexity that is now present in the capital structure. Since profitability is a value that corresponds to the ratio between profit and costs incurred, when the values of intermediate goods are progressively accumulated at each new stage of production, profits, in absolute values, must be higher for the ratio to be maintained. On the other hand, although in reality the capital structure has a convex profit margin line, it is often more convenient to represent it as a simple line. The fact that the interest rate influences the production structure of an economy was mentioned in section 1, however, this phenomenon was not properly explained since it was only a presentation of some elements of the theory. On the other hand, in this section, the reasons will be explained in more depth.

Figure 7: The Aggregate Production Structure

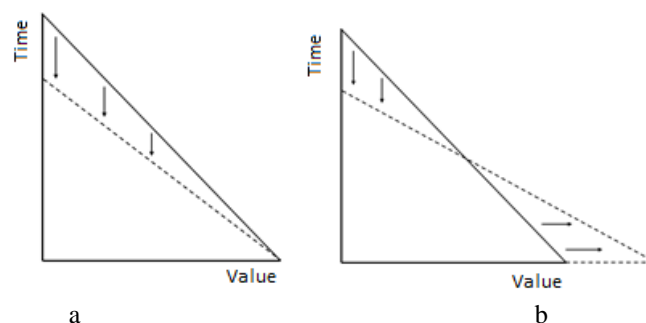


Source: prepared by the authors

It is important to realize that, as presented in the previous sections, the profitability of each stage of production must be the same, since the hypothesis of a uniformly circular economy has been adopted. Of course, time, as has already been said, is part of the resources spent during any economic activity and therefore must be remunerated.

In this way, we can identify a relationship between profitability and, consequently, the net rate of return, and the "price of time" the interest rate. Thus, it can be analyzed as follows: when the interest rate increases, the net profitability of the entrepreneurs' investments must rise, because otherwise the time spent in the production process would not be fully remunerated, making it more attractive to lend resources in the market of loanable funds. In this scenario, the economy would be unbalanced, which is incompatible with the assumption of a uniformly circular economy. Thus, an increase in the interest rate modifies the net profitability of the production chain. In this context, assuming that there are no changes in the level of consumption, the EPA would behave as shown in figure 8-a.

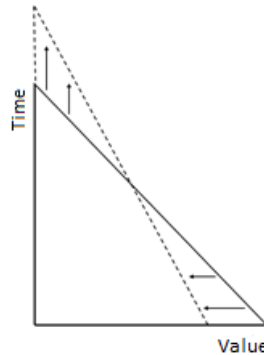
Figure 8: The behavior of the EPA given an elevation of intertemporal preferences



Source: prepared by the authors

However, assuming that the increase in the interest rate was caused by an increase in time preference, i.e., economic agents increased their marginal propensity to consume, the result is shown in figure 8 - b.

Figure 9: The EPA's Behavior Given a Drop in Intertemporal Preferences



Source: prepared by the authors

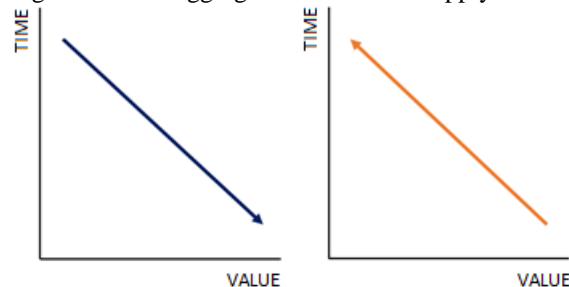
As shown in figure 8 - b, there is a drop in the production of higher orders, as the value of their products has fallen, given the drop in the discounted present value of final consumer goods. The lower slope of the Hayekian triangle indicates that products are now gaining value at a higher rate on their way towards lower orders. Similarly, when economic agents decrease their time preferences, the interest rate falls. The increase in the marginal propensity to save modifies the rate of interest causing the present value of high-order goods to rise and, concomitantly, the value of consumption to fall. Thus, the production structure fits the new data set as shown in Figure 9.

In this case, it is important to realize that there has been an increase in the slope of the profit margin line, that is, the products gain value at a lower rate throughout their journey through the production chain. In view of these three examples, it is important to emphasize that the angle of the profit margin line is the result of the value of the interest rate, as well as the position of the intercept is the result of the value of consumption. Assuming the case that consumption remained constant, an increase in the rate of interest would cause the higher orders to lose much more value than they would if consumption increased along with the rate of interest.

An Introduction to Aggregate Supply Vectors

As defined by Skousen (2007), the vector of aggregate supply can be understood as the flow of economic production. That is, the flow of goods that are transformed until they are sold to consumers. Consequently, it can be represented as an arrow pointing in the direction of the later stages of production. As can be inferred from the exposure made in section 3.3, the slope of such a vector is due to the profitability, or net return on investment, of each stage. In addition, Skousen (2007) points out that its length depends on the technology, indirect methods of production, and the value of savings available for investment.

Figure 10: The aggregate demand and supply vectors



Source: prepared by the authors

On the other hand, Skousen (2007) defines aggregate supply as the money flow that remunerates the factors of production. For this reason, this vector is represented by an arrow that is positioned towards the direction of the initial stages. Figure 10 contains both vectors.

The situation of equilibrium between supply and demand along the capital structure occurs when these vectors overlap. In this condition, pure business profits are zeroed out, because if any stage obtained

extraordinary profits, there would be a flow of resources from the other stages to that one and, with the entry of new firms, this disparity would be extinguished.

This equilibrium exists because of the rate of interest, in section 1 it was emphasized that supply and demand throughout the structure of production are harmonized by the rate of interest, and essentially the point is exactly that. Without the existence of the rate of interest, entrepreneurs have no way of rationally deciding in which part of the time structure of production they should invest their resources, nor do consumers know how much they should keep in saved resources. In short, as Machlup (1935) states, the temporal structure of production must correspond to the temporal structure of consumer spending.

Conclusions

Historically, the study of capital has been an arduous task. Probably the most arid and conflicting subject within the study of the Austrian School of Economics is the theory of capital. And it is no coincidence that the level of complexity that exists, above all, in contemporary economic activity generates the need to formulate ideas in a correspondingly complex way in order to be able to correctly understand the phenomenon.

The Austrian theory of capital structure seeks to bring a certain realism to the analysis of the subject by applying the Mengerian principles of causality and value imputation. Developing, in this way, a theoretical framework that allows us to identify the essential relationships between the various relevant variables. However, at the same time, the possibility of using certain (hypothetical) simplifications that make understanding the problem possible and practical is not ruled out. As long as these hypotheses are correctly chosen, there should be no problems. However, the choice of hypotheses is a delicate and very dangerous task, as Ramos and López (2023) point out, it is very easy to make mistakes in trying to understand the problem.

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Moreover, the construction of a theory of capital also requires a study of entrepreneurial behavior. Man, exercising the entrepreneurial function, seeks to maximize his profit in an environment of genuine uncertainty and scarcity. The entrepreneur is the agent who directs resources to activities that, because they are more profitable, are also the means to satisfy the most urgent needs of society. He uses the techniques of accounting, market prices, and his own judgment to decide what will be done. It seeks profit maximization, however, it does not possess the necessary knowledge to achieve it in a neoclassical sense of the term. Without the study of the entrepreneurial function, the production process cannot be explained in general terms.

Therefore, studying the production process (the production chains) requires a previous theoretical study of the elements that compose it. And not by means of arbitrarily established aggregates, as was done in the eighteenth and nineteenth centuries and rescued from the Keynesian revolution.

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