AUSTRIAN CAPITAL THEORY

GURIY BORODKIN* AND WALTER E. BLOCK**

Fecha de recepción: 25 de febrero de 2025
Fecha de aceptación: 16 de junio de 2025

Resumen: La teoría del capital se encuentra en el fundamento mismo de la economía austriaca. No es una exageración afirmar que, en tanto constituye el antecedente de la Teoría Austriaca del Ciclo Económico, los tipos de interés y la teoría monetaria, resulta un elemento integral de la perspectiva de esta escuela de pensamiento. El presente artículo tiene como objetivo clarificar esta herramienta de análisis de importancia crucial para la economía austriaca.

Palabras clave: Bienes de capital; homogeneidad; heterogeneidad; estructura de producción; triángulo; Teoría Austriaca del Ciclo Económico; tipos de interés.

Clasificación JEL: E14.

Abstract: Capital theory is at the very foundation of Austrian economics. It is no exaggeration to say that, since it lies as a precursor to the Austrian Business Cycle Theory, interest rates, monetary theory, all integral to the perspective of this school of thought. The present paper is an attempt to clarify this crucially important tool of analysis for Austrian economics.

Keywords: Capital goods; homogeneity; heterogeneity; structure of production; triangle; Austrian Business Cycle Theory; interest rates.

JEL Classification: E14.

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* Loyola University New Orleans 6363 St. Charles Avenue New Orleans LA 70118 gborodkin123@gmail.com

** Harold E. Wirth Eminent Scholar Endowed Chair and Professor of Economics Loyola University New Orleans 6363 St. Charles Avenue, Box 15, Miller Hall 318 New Orleans LA 70118, wblock@loyno.edu, https://walterblock.substack.com/walterblock.net

I.
INTRODUCTION

The Austrian school of economics consists of many different theories and elements, but the one most unique to it is its capital theory[1]. Capital theory deals with examining the nature of all non-consumer goods in the economy, such as machines used in factories, or even stocks of incomplete goods. While this subject has a rich corpus[2], it is the goal of the present paper to add to it. We begin, in section II, with the foundation of Austrian economics: means and ends. The remit of section III is Time Preference; IV is The Definition of Capital; V. The Formation of Capital; VI Specific Factors; VII Stages of production. We conclude in section VIII with a discussion of Time

II.
MEANS AND ENDS

We begin by analyzing the logic of individual action[3]. What any individual does is act. Acting describes a process where the actor consults his goals, or ends, and attempts to find means to fulfill them. Goals/ends here can mean anything which the actor wants to accomplish. It could be something as benign as brushing your teeth in the morning to maintain a routine, or as complicated as

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[1] Some might say, instead, Austrian praxeology better fits this description. See on this Block, 1973, 1980, 1999; Batemarco, 1985; Copi, 1949; Ebeling, 2016; Fox, 1992; Gordon, 2022; Hoppe, 1989, 1991, 1992, 1995, 2011; Huemer, 2021; Hulsmann, 1999; Kant, 1781; Mises, 1969, 1998; Nelson, 2018; Newman, 2017; Nozick, 1977; Pap, 1950; Polleit, 2008, 2011; Rizzo, 1979; Rothbard, 1951, 1957, 1960, 1971, 1973, 1976, 1997a, 1997b, 1997c, 1997d, 1993; Selgin, 1988; Sellars, 1953; Tennant, 1996; Wittgenstein, 1953.. At the very least, praxeology would take second place to capital theory insofar as uniqueness is concerned.

[2] Barnett and Block. 2005A, 2005B, 2006A, 2006B, 2006C, 2006D, 2008; Barnett and Wood. 2002; Block, 2001; Block and Barnett, 2007A, 2007B. 2011; Block and Garschina, 1996; Carilli and Dempster, 2001; Carilli, Dempster and Rohan; Cochran, 2001;Cochran and Call, 2001; Cochran and Glahe, 1994; Callahan and Garrison, 2003; Garrison, 1994, 2001, 2004; Hayek, 1931; Mises, Ludwig von. [1912] 1953, [1949] 1998; Murphy, 2003, 2008; Murphy, Barnett and Block, 2010; Rothbard, [1963] 1975, 1993; Shostak, 2017; Woods, 2009; Young, 2005.

[3] For a more complete analysis of action see Mises 1998; Rothbard 1993.

wanting to assemble a backyard nuclear reactor. The only criterion for ends is that the actor has some vague conception of what he desires, and believes that the desire is possible to achieve.

These ends are also ordinally ranked. Any rank ordering of 2 or more ends can be represented with a "value scale". A potential value-scale could look as follows:

1. Quench thirst
2. Eat until satiated
3. Give water to dog

Each entry on the value-scale above describes some state of affairs the actor wants to achieve. He wants a state of affairs where he has no thirst; a state of affairs where he is hungry no more; and a state of affairs where his dog is quenched of his thirst. Another important component of the above "value-scale", and of ends in general, is that they are ordinally ranked. What this means is that their ranking, that is, how "important" they are, is only meaningful in comparison to other things he wants to achieve. An implication of this is that we cannot make statements like "I prefer end #1 50% more than I prefer end #2"; such cardinal claims are nonsensical. You can only say that you prefer end #1 to end #2, any quantity attributed to this hierarchy being done so in error.

The necessary corollary to ends is means. Wherever there is an end, there is necessarily a means; if there were no "means" associated with some end then there could be no end, as an actor would not think it possible to accomplish. So what specifically is a means, then? A means is the object, or physical transformation of the world, that the actor thinks would accomplish his goal. A potential means to end #1 on the value-scale provided above could be a glass of water, as it would allow the actor in question to quench his. It is important to clarify that a direct causal connection between means and end is not necessary. It could be the case that the actor is in error, and that the means he is pursuing really will not accomplish his goal, but as long as the actor believes the good is capable of furnishing his end, the object retains its status as a means.

Expanding the value scale to include both ends and means, it now looks like this:

1. Quench thirst --------- Glass of water
2. Eat until satiated ----- Some object perceived as edible
3. Give water to dog ---- Glass of water

The astute reader will readily see that two ends on the value scale share the same means, both end #1 and end #3 require a glass of water to fulfill. Such a decision was not made out of indolence on the part of the authors; rather, it allows us to clarify some potential ambiguities. One such is the supposed problem of indifference. If two ends require the same means, to which end will it go? Will the actor be stuck in a state of indifference[4], unable to allocate the water? The answer is no, the glass of water will be used to satiate the most highly valued end to which it corresponds.

Before explaining this though, it is worth addressing a potential problem some may see in the above value-scale: if two ends require the same means, to which end will it be allocated? Will the actor be stuck in a state of indifference, unable to allocate the water? The answer is no, the glass of water will be used to satiate the most highly valued end to which it corresponds. In this case that end would be to quench the man's own thirst. It is only when the man gets a second glass of water that he will fulfill the goal of giving water to his dog. And that is the principle of diminishing marginal utility: given a homogenous stock of goods[5] and ends which those goods can fulfill, the utility of any unit in that stock will decrease as the size of the stock increases because the end which the goods would be allocated towards would decrease in the actor's ordinal rankings.

III.
TIME PREFERENCE

What was explained above is the foundation for all economic analysis: individual, purposeful behavior. But it is not comprehensive, as it

[4] For Austrian analyses of this concept, see Block, 1980, 2009A, 2009B, 2012, 2024; Block and Barnett, 2010; Block and Sotelo, 2012; Hoppe, 2005, 2009; Machaj, 2007; Rothbard, 2004; Sotelo and Block, 2014; Wysocki, 2016, 2017

[5] i.e. any good in that stock can fulfill all the ends the other goods in the stock can

omits any mention of time as it concerns action. The reason we separate the two is because time, while a necessary part of action and integral to its completion[6], is not the same thing as action. It is instead a category of action, a kind of attribute which affects each end.

There are two different ways in which time affects action, (excluding the fact that it is a prerequisite for action): time-preference and time-placement.

Both time-preference and time-placement have to do with the explicitly temporal nature of all action. What this means is that action must necessarily take place within time; if there was no time, there could be no action as ends would be immediately accomplished. Baked into any action is a starting point and an ending point. The distance between those two points varies for each action: the differential is shorter in the case of brushing your teeth than in the case of building a car. This gap is known as the "period of production". The law of time preference says that people, when they have an end, always prefer a shorter period of production, ceteris paribus.

A restatement of this law of time-preference is that, when faced with two processes for completing a given action, the actor will, ceteris paribus, choose the one that is fastest. So if the actor's most highly valued end is that of catching 50 fish to eat throughout the next week, he will choose to construct a net and then place it in the river, rather than catching fish individually. This is done because, while catching fish individually would bestow the first few fish to him sooner than with the aid of the net, it fulfills the actual complete end more slowly than constructing the net and securing it in the river.

But does this not sound like undue impatience? No. The point is that if the human actor did not prefer something sooner rather than later right now, and this were his continued preference, this would imply he would choose in the same manner in the next period of time. And the next one after that, into an infinite regress. That is, he would never act at all. But this means he would perish, and not be a human actor at all.

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[6] If we lived in a timeless world all wants would be achieved instantaneously

It is evident that time-preference can never be negative. What this means is that there can be no case where somebody would prefer to achieve something in the future as compared to the present in the case of any given end[7]. If somebody's time-preference was in-fact negative we would see them endlessly delay consumption of an end, and have it thus never be achieved. Since we see that people do, in fact, achieve their ends, we can safely proclaim that time-preference is, in all cases, necessarily positive.

Besides the period of production, the other important concept concerns when that period actually starts and ends. This is of importance because there are certain ends which can only be fulfilled at certain times; e.g. a birthday party is only valuable if the day when it is being celebrated is somebody's birthday. This is known as "time-placement".

IV.
THE DEFINITION OF CAPITAL

To adequately explain and define capital goods, we return to the concept of the "period of production." This is the distance, or "waiting time" between the start and finish points of an end. To define capital goods, we must more granularly analyze this concept. We can do this through the employment of some hypothetical scenarios, the most commonly used of which is that of "Robinson Crusoe".

Robinson Crusoe is a man stranded on an island, isolated from society. Quickly growing hungry, and with a mounting thirst, he sets out to get food and water. His value scale now looks like this:

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[7] Possible counterexamples to this claim may be brought up. What of the case of a wedding anniversary? Would not the person whose anniversary it is want to delay consumption until the actual day of the anniversary? The answer is yes, the person would prefer to delay consumption until that date, but that is because the wedding anniversary only becomes a "good" on that day, and so the period of production for the wedding anniversary only begins on the day when it is actually being celebrated. A similar objection concerns ice and the season, before the advent of refrigeration. It is now winter. The person has a choice between ice right now, and postponed until the summer. He chooses the latter, since ice will be more valuable then; there is plenty of it around right now. But this is not a valid objection either. For, even though chemically identical, ice in winter is an entirely different, and far less valuable good than ice in the summer.

1. Procure food so you do not starve this week
2. Find a source of water so you do not desiccate

Crusoe has a few ideas in mind for how to accomplish those ends. He could go into the island's forest and try to hunt wild game, or instead go along the edge of the beach looking for fruits to pick. To find water, he may try to figure out some way to desalinate the seawater all around him, or he may wander inland in search of a river. The key feature of all of those possible solutions is that they consist of a series of stages. In the case of both finding food and water, Crusoe's solutions all involve him taking a series of steps which he believes will satisfy his needs. Sometimes, those steps produce intermediary goods, sort of halfway points between the start of the production process and its completion.

In the case of hunting wild game, Crusoe might think it best to first find some sticks and twine with which to make a bow and arrow, and only then to hunt game. In that case, the bow and arrow would be a capital good. That is, it would be an intermediary good created to lead to the possession of finished goods which are actually able to satisfy the ends he has. That is the definition of "capital good", any good which is used to create a consumer good; i.e., a good which the actor believes has the indirect causal power to satisfy his ends.

All goods in the economy, then, can be sorted into one of those two groups. They are either a capital good, or a consumer good, and there is no in-between.

Goods are not the only thing in an economy, and nothing of value can be made with intermediate goods alone. You cannot make a bicycle by just gathering the pure weight of raw material needed for its eventual production, you must also employ the services of land and labor to produce that eventual bicycle. That it is necessary to have multiple factors work in conjunction across many periods in time is the fact that enables the analysis of the capital structure.

Many authors make the mistake of separating labor and land completely, and acting like there exists some unbridgeable gulf twixt the two; this is not the case. Labor and land, in fact, occupy very similar roles in the market process, and are typically referred to as the "original factors of production" because of this fact, while capital, in sharp contrast, is a "produced factor of production".

V.
THE FORMATION OF CAPITAL

To understand the nature of capital, and to easily explain certain tenets of capital theory, it is again necessary to employ the Robinson Crusoe hypothetical:

Mr. Crusoe, yet again, finds himself stranded on a desert island. Upon being placed into this scenario, he finds himself lacking any sort of capital goods or consumers goods. He has absolutely nothing besides the sweat of his own brow and the virgin land of the island. The only things available to Crusoe are those things which have the shortest periods of production; i.e. the items which are most easily and quickly attainable. Such things in this case could be naturally occurring berries, sitting ripe on a bush, which our man can collect almost instantaneously. As well, there is water in a running stream which he can scoop with his hands. Let us say Mr. Crusoe can collect 10 berries an hour, and needs 50 per day to survive. Given such facts, if Mr. Crusoe wants to live he will labor for 5 hours each day, collecting enough berries to survive and then spending the remaining 19 hours in leisure[8].

However, maybe this immigrant is not content with that state of affairs. He dreams of getting off the island through the construction of a wondrous boat, and wants to live in the meantime on a diet more sumptuous than the mere 50 berries a day he now consumes. There are only two ways Crusoe can go about accomplishing at least one of those two things:

He can:

1. devote more time to labor, specifically foraging
2. accumulate capital (getting a stick with which he will forage for food so as to attain more variety)

The first option is only beneficial to Crusoe insofar as he is actually able to increase the supply of labor he provides. In the

[8] Leisure is a naturally occurring consumers good and the one with the shortest period of production (Fegley and Israel, 2020)

scenario outlined above, that is definitely possible. For example, he is able to forage for 8 hours a day rather than 5, and thus enjoy 80 berries as compared to 50. But this scenario is also not very alluring to the tired and isolated Mr. Crusoe. It would not only force him to exert more of his energies, but would also cut back his consumption of the good "leisure". It is also not very enticing because its gains are very limited. In this case, along with all other such cases[9], an increase of labor input will increase consumer good output only linearly, and clearly Mr. Crusoe wants more than that.

The second case then, is definitely the more interesting of the two. An increase in capital would do more for Crusoe than merely increase his production linearly, since it would make the very labor this man engages in more productive. Say the procurement of the stick raises his hourly berry production from 10 to 20, that would mean that the 5 hours a day he spends laboring would net him 100 berries rather than the 50 he previously picked. Unfortunately for him however, despite all the benefits of capital, and of the stick specifically, there is still a cost to it: Crusoe would have to temporarily lower his consumption and/or work harder, and thus save to get the capital.

In the case of the stick, this cost might manifest in a two day period of production. Crusoe would have to spend one day foraging to find the right stick, then another day sharpening it, tweaking it, until it is made suitable for the task of picking berries. Every piece of capital has this cost in the form of time, capital, everywhere and always, requires time to produce. This means that if this economic actor wants to experience the boon of greater production which the stick brings him, he will have to work more and save some of his product for a few days to have enough berries to keep him going for the two day period of production which the stick requires.

This principle of capital always requiring some stock of savings and time to produce is very important. No matter how complex the

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[9] That is, proportionately. This follows from the law of returns. For an elaboration, see: Mises 1949; Rothbard 1962

analysis becomes, that dictum will remain true and will be the guiding force of all our investigation.

VI.
A WORLD OF SPECIFIC FACTORS

Up to this point capital has only been discussed in the case of an individual acquirer. Now collaborative production must be tackled, along with the concept of "specificity".

Specificity, as it applies to factors, refers to how broadly applicable they are in production. A perfectly specific good is one which is only possible to be used in one line of production, while a perfectly non-specific good is one which is applicable in all lines of production[10]. The great majority of factors in the real world are ones which are partially non-specific, meaning they are applicable in some lines of production but not all.

Given the impossibility of production in a world with exclusively non-specific factors, the only hypothetical scenario which can be considered in this domain is that of a world with perfectly specific factors. What would such a world look like?

First, and most important, in such a world, there is no "economic problem". What this means is that there is no need to compare the value of, and therefore choose between, different methods of production. This is because there are no conflicts over what capital goods, land factors, or labor factors can produce what, as every factor is, again, unique regarding the consumer good it makes. Contrast this to the real world, where we need to, through profit/loss tests, figure out what the most value-productive investments are; i.e. which consumer goods should we produce with which resources in order to ensure it and all other valued consumer goods are still being optimally produced.

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[10] It is worth clarifying that there can be no such thing as a "perfectly non-specific good". This is because if a good were truly perfectly non-specific, and thus applicable to all lines of production, it would cease being a good and would instead become a general condition of welfare. (Rothbard, 1993) Air, for example, is an example of this phenomenon.

This, unsurprisingly, makes the resulting capital structure incredibly simple.

The structure of production in a world with only specific factors would resemble Figure 1. In this diagram[11], many different, and perfectly specific, factors coordinate to produce consumer good "A". The graph begins at the top, with land and labor factors coordinating to produce the initial capital goods (PG) necessary for production. Those capital goods are then further transformed with the help of additional land and labor factors (now labeled OF, for Original Factors) and are now closer to the final consumer good. Finally, in the 2nd stage, the two capital goods are again transformed with the help of the original factors and converted into the final consumer good.

FIGURE 1.
A PERFECTLY SPECIFIC STRUCTURE OF PRODUCTION

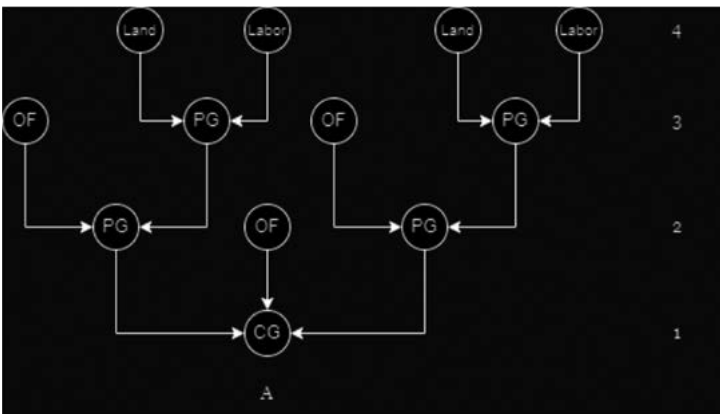

Figure 1, and its analysis, reveal an important fact about production in the economy: it is the process of repeated transformation of

[11] It is important to note the remarkable difference between this, the Austrian perspective on capital, and that of the mainstream. Here, capital is broken down into its constituent elements. In the former case, capital is homogeneous, and is depicted, typically, as follows: k

nature-given goods along with the use of our labor and capital. In all cases, across all lines of production, physically occurring objects in our world are transformed and, across a series of many cumulative stages, transformed into goods which are ready for final consumption.

What has just been analyzed are the technical facts about production in a world of specific factors. What are the economic facts of this world? While production flows downward, value and money moves upward[12]. First the question of value flows must be considered, and from that, the question of monetary income.

What is meant by "value flows" has nothing to do with any physical substrate of "value" which applies to all goods. Rather, it refers to the question of how the buyers value consumer and capital goods. In the case of the former, the answer is quite apparent: consumers value them because they are able to directly satisfy their ends. But what about capital goods? How can they be valued if they do not yet have the causal power to satisfy anyone ends directly? The answer to this question lies in the concept of 'imputation'. Capital goods are valuable because they may eventually bring about consumer goods. Their value and thus their price is not determined, despite what some authors say (Marshall), by some "cost" inherent in them[13], or the amount of "labor" (Marx, Cockshott) they embody, but rather by the expected utility of the consumer good which they cooperate to eventually produce.

Monetary income, like value, can also be said to flow "upwards" through the structure. At the bottom of the diagram, consumers buy a certain stock of goods (the amount and price of which is dictated by their preferences). The money they spend is then given over to the lowest-order producers, that is, those closest to the

[12] This placement of time on the vertical axis stems from Hayek (). Garrison () was instrumental in placing it on the horizontal axis. What is the benefit of so doing? It makes it far easier for mainstream economists to comprehend the triangle, to which we are on the way to introducing, since this is the prevailing system for most dismal scientists.

[13] Goods and services have value not due to their chemical properties or any other such characteristic. They do so based on the evaluation of them by the purchaser. The classical example is water in the arid dessert, or when desperately need to put out a fire, and then under ordinary circumstances. It is the same substance in all three cases, but the evaluator sees them very differently in the two instances.

consumer[14]. Those companies then allocate a certain amount of the money received to buying goods from the producers in the stage above them, and the rest is paid to the original factor owners who transform these purchased goods.

VII.
STAGES OF PRODUCTION

The final element present in all Austrian analyses of capital concerns the money flows between these "stages of production." While Figure 1 may accurately describe the workings of a rudimentary capital structure, it says nothing about the functioning of an economy with money, as such a development would only be applicable in a world of non-specific factors. In order to fully understand the importance of Austrian capital theory, then, a new model must be created to reflect the non-specificity of factors and presence of money.

That model can clarify the analysis of capital and savings from a praxeological point of view. In a perfectly specific structure, there can be no analysis of any individual roles or economic functions, nor can any laws be derived[15]. Money allows for us to analyze capital and its pricing in the context of a wider market economy, however, and thus permits us to analyze economic functions.

Within Austrian literature, this advanced model is known as the "structure of production."

Figure 2 depicts this structure of production model. It begins at the bottom, where consumers spend 100 Monetary Units (MU) on the final good produced. Progressing up to the first stage, we see a split between 80 and 20. What do these numbers represent? First, we must keep in mind that while this is labeled as the "1st" stage, in terms of technical production it is really last. The numbers on the side represent how close the stage is to final consumption, and

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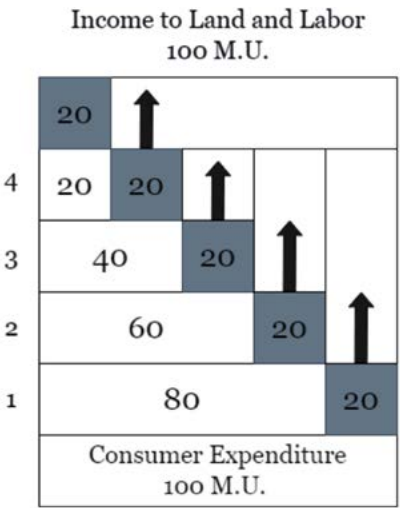
[14] If the triangle is turned over on its side, so that time is depicted on the horizontal axis, this would be, instead, the earliest producer.

[15] A world with a perfect specificity of factors, removes the need to economize to make sure goods are being allocated to their most highly valued uses. Since there is no need to economize, there is no

not the place it occupies in the time order of production. Since it is the last stage productively, this means that the firm buys the input produced from the 2nd to last stage productively, which, in turn, purchases the input from the 3rd to last, and so on until we arrive at the beginning of the structure at the very top of the diagram. With this in mind, we can easily see why the expenditure of "80" seen in the 1st stage of the graph corresponds to a purchase of intermediary goods produced by the 2nd stage. The expenditure of 20, then, is the income of the land and labor factors which helped convert the final transformation to the capital good necessary to sell it to the consumer.

FIGURE 2.
THE STRUCTURE OF PRODUCTION



But what of monetary income? To whom does that 80 go? We know that 20 is paid to the owners of land and labor factors--who are the joint owners of the factor being sold--but it is unclear who now claims the 80. Simply put, they are those who own the capital goods being bought by the labor and landowners in the final stage

of production. And just like in the final stage--where the laborers and landowners are joint claimants of the output--that 80 accrues to the laborers and landowners of the 2nd stage who jointly owned their output, which was sold to those in stage 1.

We can imagine that the structure of production above represents the monetary flows of a logging operation. The owners of labor and land in stage 1 purchase cut and sized planks from the owners of labor and land in stage 2 for a total of 80 MU. They then exert their own energies and resources on them to turn those planks into nightstands, beds, and other sorts of furniture, and sell these to the consumer for a total of 100 MU. Those plank-makers in stage 2 who sold their product to owners of labor and land in stage 1 themselves purchase 60 monetary units worth of debarked, dried trees. They then use their energies and resources to transform them into the aforementioned planks. This process again occurs until we reach a point where the laborers and landowners in a stage have no capital goods to purchase, whatsoever, and instead have to create the first initial capital goods which will be sold to the stages below them. In this diagram that would be stage 5, where we see no expenditure on capital goods, and only 20 monetary units worth of expenditure on paying the relevant land and labor factors. For an analogy to the real world, stage 5 could be the act of planting new trees for harvest later.

The fact that eventually the structure reaches a point where no capital goods are employed or purchased carries much significance. It can now be said that capital is not an independently productive factor, and only comes into fruition when combined with labor and land. All the monetary gains made in Figure 1 are shown to resolve back into labor and land, with no independent income accruing to the owners of capital (in this case the joint owners of labor and land). This is of great importance, as it allows us to dispose of the classical tripartition of the factors of production: land, labor and capital. It is not the case that "capital makes interest", "land give rise to rents", and "labor engenders wages", as labor and land in this diagram earn income for the same reason, while capital earns no independent return whatsoever.

Capital registers no independent return because there is no person to whom unique capital income can accrue; in other words,

there is no separate group of owners of capital goods. Instead, all capital goods resolve into land and labor, and even those capital goods which are present throughout the structure are the culmination of the stored efforts of land and labor factors, and thus all incomes resolve, or are imputed, into that.

VIII.
TIME

Our analysis can go deeper still, as a very important aspect of this process has been omitted until now: time. All production takes time, especially capital-intensive production. Furthermore, it is a fact that production with more capital takes more time than with less capital. Obtaining a finished consumer good by employing simple tools like saws and axes takes a shorter amount of time than acquiring a finished consumer good by employing complicated pieces of machinery like feller-bunchers. This is because while greater amounts of capital allow one to get more of a finished consumer good once they are already implemented and created, the time it takes to implement and create them must be counted as part of the process.

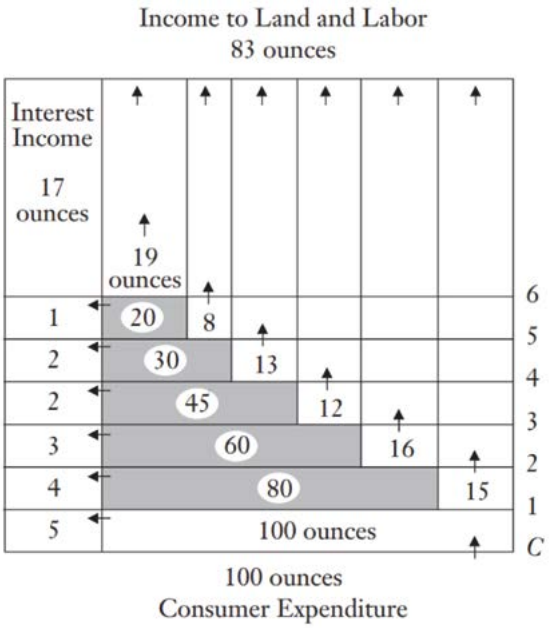
In the case of Figure 1 we may imagine that each stage takes one year to complete. It takes one year to transform debarked trees into planks, and another year still in the stage below to transform planks into various pieces of furniture. This means that, at each stage, the labor and land factors are not being paid for the duration of their production and instead, are only receiving their monetary incomes of 20 MU after the full year has passed and their product has sold. Moreover, despite the lack of income for a full year, the producers at any stage beyond the 5th have to also save and purchase the factors from the preceding stage. So those laborers and landowners in the 1st stage have to first save 80 MU and spend that on purchasing the capital goods produced by the 2nd stage, and then also develop them for another year without any income to eventually sell them to consumers.

Due to the presence of time, then, another actor steps in: the capitalist.

In this new structure everything remains the same besides the addition of "interest" income. Due to the fact people have differing time-preferences, mutually beneficial exchanges across moments in time are possible. This interest income represents the money flowing to people who are providers of time, and they are known as the capitalists. These are the people who are investors and shareholders in our modern day.

Functionally, what they do is simple. They pool some amount of money, and use that money to pay laborers and landowners —the original factor owners— in advance of the product's sale. This sort of arrangement dominates almost every industry. Were it not for the capitalists "advancing" that money, incomes for laborers and landowners would be delayed until the product they are making has actually been sold to consumers. If that arrangement dominated, workers often would not be receiving wages for a multiple of years.

FIGURE 3.
THE CAPITALISTIC STRUCTURE OF PRODUCTION



It should be noted that the greater the interest, or time income, the lesser the incomes for the original factors. In a process known as "discounting," they receive less money the more that is forwarded. This is because capital is not an *independently productive* factor of production. It produces nothing physically, so its income is not tied to whatever output it has, but rather it is time-preference[16] in society which determines the interest rate. Workers wages can be imagined as a non-formal loan between the capitalist and the laborer. One party prefers to receive their money earlier, the other is fine staving off immediate earnings in favor of greater delayed earnings, so one pays the other in the immediate term to garner the long term residual profits[17].

Conflict of interest

The author declares that he has no conflict of interest.

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[16] Is there any such thing as a "rate of time preference"? Not according to Barnett and Block (2011)

[17] Note from Walter Block. I am the co-author of Barnett and Block (2006A). That essay rips into the Austrian triangle "every which way from Sunday." It features no fewer than 17 separate attacks of this diagram, each of which, alone, is devastating to it. Together, they utterly annihilate it. What am I now doing, co-authoring this present essay which is an attempt to present, in a positive light, this foundation of Austrian Business Cycle Theory to which I fully adhere, given these fundamental criticisms? Despite my renunciation of the triangle, I still think in its terms. It has been of great help to me in visualizing and promoting the ABCT. Matters are similar to supply and demand analysis. It, too, has many and serious flaws. Barnett and Block (2010), remarked on the fact that "Mises never used demand curves." Still, true confession here, I think in terms of this basis economic technique, and I warrant a guess to the effect that most praxeological economists do, too, despite their misgivings about this tool of analysis. Ditto for the triangle. Both deserve a positive light treatment, despite their flaws.

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