Towards a Theory of Business Capital

Kumulative Habilitationsschrift
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Content

1. Introduction

1.1 The institutional framework of capitalism

It would be helpful if the term "capitalism" were only the name for a positive economic order. Economists could then proceed to try their best in describing and analyzing it. Unfortunately, the term "capitalism" means much more than that, and, above all, it is not value-free. For some people capitalism is an ideal, a hypothetical economic order where pure private property and the non-aggression-principle have been implemented. For others, capitalism is rather the opposite. They link capitalism to the exploitation of men by men. For them, capitalism is evil.

In other words, the term "capitalism" is the focal point of two opposing ideologies. For many, among them many intellectuals, capitalism is not a positive economic order, but either a utopia or a dystopia. Therefore, the term seems to be very inapt for use in scientific inquiries. It is unlikely that any analysis of this term could be kept free of ideological influence.

Still, it would be a loss if the term "capitalism" were abandoned by economists. Its purpose is to remind us of a crucial feature of our present economic order – to remind us of "capital." There is a good reason why Karl Marx and his followers used the term "capitalism" to describe the economic order that is based on private property and the market. In this economic order, the production of goods and services is accomplished within enterprises, and the purpose of enterprises is to generate profit based on the capital that has been invested in them. Marx expressed this idea, the circulation of capital in the pursuit of profit, in his famous formula **Money – Commodity – Money'**. The valorization of capital, the making of money by investing money in business, is behind almost all goods and services that we consume, including our homes and cars, food and clothes, toys and tools, vacations and high-tech gadgets. All these goods and services are produced because enterprises try to employ their capital profitably. Capital is a necessary element of the economic order we live in, and it is more than justified to recognize this fact by calling this order "capitalism."

Given that capital is a central element in our economic order, one would expect that economists are highly interested in analyzing and debating this matter and that the role of capital in capitalism is the number one topic in economic science. But far from it! Already John Stuart Mill (1848: 89) famously cautioned economists against the alleged mistake of attending "only to the outward mechanism of paying and spending." They should instead focus on the "realities of the phenomena." That is, they should pay attention to the tangible elements of wealth production, particularly to the factors of production: land, labor, and the produced means of production. According to Mill, the mechanism of paying and spending blocks our view on the more relevant events and relationships.

To describe the nature and scope of the mechanism of paying and spending, however, is of course the central purpose of the formula Money – Commodity – Money'. This formula is not concerned with technical and tangible details of the production process, but with the organization of production in capitalism by means of the circulation of capital. What Mill did is to ask economists not to focus on capital.

Most economists follow Mill's advice to the present day. True, in the history of economic thought, capital has been at the core of three major debates. The first controversy took place in the last decade of the 19th and the first decade of the 20th century, the second one in the 1930s, and the last one in the 1950s and 1960s. But none of these debates revolved around the actual role of capital in the actual economic order of capitalism. All sides in these debates defended definitions of capital that fitted their respective economic models.

Economists of the Austrian School use the term "capital" in their analysis of a time-consuming production process. Therefore, they fought for a respective definition in the first two controversies. They defined capital as a conglomerate of producer goods that, heterogeneous in principle, still have one thing in common, namely that they have a time dimension as they are all placed at different stages of the production process. Neoclassical economists – who participated in all three debates – treat capital as an easily measurable production factor in their equilibrium models. Therefore, they opted for a definition of capital as an aggregate of homogenous producer goods. The Neo-Ricardians, who participated only in the last controversy, deny the possibility to define capital in these two other ways. For them, there is no method to quantify capital at all. Their models focus on individual producer goods, not on the characteristics that these good have in common. They avoid the term "capital" as far as possible (e.g. Sraffa 1960: 9) and did not try to establish an alternative definition of capital in the controversy.

After the last debate, the question of capital was abandoned by almost all schools of economic thought. In other words, one of the most important issues of economics, the role of capital in capitalism, was covered only cursorily, if at all, in the three main capital controversies, and for the last 50 years there has not even been a basis for bringing it back on the agenda. Economists simply avoid the theory of capital. They do not define capital in any great detail, nor do they discuss the circulation of capital, described by the formula Money – Commodity – Money’, although it is central to our economic order.

It is important to emphasize one specific aspect of Mill’s advice for economists to stick to the realities of the phenomena. This amounts to the advice to ignore institutions. Institutions, of course, are not tangible realities like consumer goods, production factors, or people. They are, in the definition of Hodgson (2003: 163),

> durable systems of established and embedded social rules and conventions that structure social interactions. Language, money, law, systems of weights and measures, table manners, firms (and other organizations) are all institutions.

Not all economists abide by Mill’s recommendation and ignore institutions, of course. For more than a century the old and new institutionalists have been fighting for a more important role of institutions in economic science. Yet, the institutions that allow for the circulation of capital are not at the center of their attention, especially since the end of the last debate on capital. Even Williamson (1985), who has done very important steps towards the integration of the institutions of capitalism into economic science, does not discuss the role of capital in capitalism at any length. He does not refer, in his analysis of capitalistic institutions, to their relationship with the circulation of capital. Yet capital is the element of capitalism that gives meaning, or at least a specific, capitalistic meaning, to many institutions in the first place.

The institutions behind the formula Money – Commodity – Money’ are, in particular, money, (profit-oriented) enterprises, and financial accounting. It is only possible to understand their specific, capitalistic meaning if it is kept in mind that they bear a direct relationship to capital and its circulation.

It goes without saying that financial accounting is directly connected to the valorization of capital. Financial accounting accomplishes the calculatory separation of a firm’s capital from the rest of the wealth of its stakeholders. As Werner Sombart (1919: 119) explained, it is one of the main purposes of double-entry bookkeeping to create a separate fictional actor, i.e., the enterprise. Financial accounting determines the relationship between expenses and revenues of the accounting enterprise, or, in the terms of the Marxian formula, between Money and Money’. Without efficient accounting methods, there would hardly be a rational way to constitute enterprises as separate agents and to distinguish successful business actions from unsuccessful ones.

That there is a necessary relationship between capital and the enterprise has been emphasized by Max Weber. Weber (1922: 91) even defined the (profit-oriented) enterprise as being directly related to capital, and capital as being directly related to the enterprise. Capital, according to him, is “the money value of the means of profit-making available to the enterprise,” and the enterprise is “autonomous action capable of orientation to capital accounting.” Capital and the enterprise belong together and cannot be separated. Capital grants enterprises the power to dispose over the production factors, and it is the purpose of enterprises to use them profitably.

A good case can be made for money as well. True, if there was no possibility for money to become capital in a business, money would still be a means of exchange. However, it would cease to pervade the whole production process because it would lose its central role in the organization of production within enterprises (Ritschl 1948: 123). It is in the form of capital that money is used to pay wages and rents to the production factors. Without capital, there would be no enterprise, and without enterprise, there would be hardly any free wageworkers or hired land – except perhaps as personal servants and copious hunting grounds in noble or wealthy households. The relationship between those who direct the production process and those who execute it would be similar to the relationship between feudal lords and peasants throughout large parts of the middle-ages (Lütge 1966: 297).

Next to property rights and markets, these institutions, which are necessary to explain the formula Money – Commodity – Money’, constitute what one may call the institutional framework of capitalism. They are behind the organization of the production process under capitalism. Therefore, they must be part of any theory of capital that claims to be realistic, i.e., that is oriented towards the reality of economic life.

1.2 Reform of capitalistic institutions without a theory of capital?

What are the implications of the present state of affairs where capital theory is neglected? It is well known that the economics profession at large did not see the financial crisis coming that we witnessed a decade ago. This crisis is called a "financial" crisis because it originated in the financial sphere. It started with banks going bankrupt and the stock market collapsing. But later on the real economy was affected as well. Investment declined and unemployment rates in the U.S. and Europe soared. The financial crisis became an economic crisis.

In order to understand the emergence of economic crises, it is necessary to clarify the relationship between the financial sphere and the real economy. A realistic concept of the circulation of capital would help immensely in this regard. After all, each enterprise of the real economy is part of this circulation. Capital is usually provided to them by the capital market, that is, by banks, the securities market, or both, and the enterprises try to produce profit in order to satisfy investors. Enterprises depend on the capital market for finance, and the capital market depends on enterprises and the real economy for profitable investment outlets. Capital, in other words, connects the financial sphere to the real economy. In some way, therefore, it must be at the core of what happened during the financial crisis and the following recession. It must be a part of any attempt to explain how the financial sphere and the real economy intertwine in good days and how a crisis spreads from one sphere to the other in bad days. Without understanding the role of capital in both the financial sphere and the real economy, it seems difficult to come to a reasonable interpretation of the financial crisis.

Yet, since the theory of capital has been lying idle for half a century, there are hardly any tools in economics that would help us to explain how the capital market and the real economy interact. The real economy is supposed to stand on its own. Have a look at standard microeconomics textbooks. Microeconomics is supposed to explain how the market economy works, i.e., how the price system organizes the production process in order to satisfy consumer demand. If microeconomics were really to describe how production is organized in the market economy, capital and the enterprise would be the first and most important terms in those textbooks. Instead, however, if capital is mentioned at all, it is in subsidiary chapters. You sometimes find sections where the price of assets is explained as the capital value of future cash-flows. More often, intertemporal choices are covered at some length, with consumers either saving or borrowing on the capital market at the market interest rate. Mainly, however, capital is treated as a production factor that plays a similar role in the production process as labor. It is not a constituting element of enterprises, but one factor among several in the production function where each can be handled with the standard optimization tools.

In macroeconomics, the place of capital seems to be a little bit more central. As Braun and Erlei (2014: 157-159) show, the Keynesian short-term solution for economic crises clearly accepts the central role of enterprises for the economy. If enterprises do not earn profit on their capital, they stop producing commodities and employing workers. It is for this reason that low interest rates and government investments are propagated as stabilization policy. They are supposed to maintain or boost enterprise profits. These tools aim directly at the core of capitalism, that is, at the profit considerations of capital-based enterprises. Capital itself, however, is not analyzed in short-term macroeconomics. The interest rate is supposed to influence the amount of aggregate investment in the economy, but the institutional foundations of the way capital-based enterprises organize the production process is hardly mentioned. When it comes to long-term macroeconomics, the term "capital" plays a rather prominent role. Yet, like in microeconomics, capital is treated as one production factor among several, neither more nor less important, in general, than labor or land. That capital *defines* the way capitalistic production is organized in the first place, does not enter the analysis.

In both micro- and macroeconomics as it is taught to economics students, capital is more or less only a production factor. There is no adequate allowance in standard economics for the fact that the term "capital" originated from business practice, or that it stems from the economic calculations of capital-based enterprises. Economists assume that the problems that are dealt with in actual business life by "capital accounting" (Weber 1922) have been solved already. They tacitly assume that the institutional framework of capitalism guides the market process well enough so that they can focus on the equilibrium relationships between the more tangible items, like consumer goods, producer goods, and production factors.

What I have said in the last paragraphs must not be misunderstood as a fundamental criticism of standard micro and macro theory. There are good arguments for ignoring the institutional framework of market processes and focusing on equilibria instead. The tools of comparative statics are very helpful when it comes to analyzing the impact of certain changes and shocks on the economy, for instance, how an increase of the income tax rate influences wages and employment. So far as these tools go, it would only complicate the analysis if they were undergirded by reflections on money, capital, and monetary calculation.

A major problem arises, however, when the tools and methods of standard economics are applied to a reform of the institutions that they themselves tacitly assume as given. In these cases, it must be feared that the reforms destroy the institutional foundations of the economic order that they are meant to improve. It is important to point out that this is not only a hypothetical problem. In the area of capital and its circulation, such reforms have actually been implemented before the outbreak of the financial crisis. The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) have replaced the traditional, historically evolved accounting principles by new ones, and in doing so, they leaned onto what is usually called neoclassical economics (Bromwich et al. 2010).

Now, heterodox economists are inclined to scapegoat neoclassical economics for numerous things that go wrong in economic policy-making. This is not my intention. Still, it is hard to deny that neoclassical economics, however defined, does not focus on the analysis of institutions. Institutions are taken for granted. And so is the institutional framework of capitalism. By implementing new accounting principles, especially the fair-value principle, the standard boards have relied on the assumption that market processes work well under any circumstances and did not realize therefore that they interfered strongly with the institutions that guarantee the working of the market process in the first place.

According to the traditional historical-cost principle, financial accounting is supposed to inform the stakeholders of an enterprise on its financial performance. Its purpose is to provide new and necessary information to the stakeholders and the market. The institutions of capital accounting are acknowledged as a necessary condition for the market process to work. According to the fair-value approach endorsed by the standard setters, the market does not need to be informed. The institution of financial accounting is not recognized as a precondition of the market process. The market is supposed to work perfectly already. Even to the contrary, the market is to inform the enterprise, not the other way around.

Standard setters came up with their reform because they followed neoclassical economics in ignoring the role of institutions. As a consequence, they implemented the fair-value principle that is often recognized as having accelerated the boom phase and exacerbated the bust of the recent financial crisis (Schildbach 2015). Ironically enough, the standard setters had to suspend the fair-value principle during the crisis when they realized that it jeopardizes the equity base of banks.

In the area of financial accounting, the lack of an economic theory that does not ignore the institutional framework of capitalism is particularly obvious. So far, those accounting theorists who opposed the implementation of fair-value accounting were not able to refer to a consistent theory about the place and function of the capital-based and profit-oriented enterprise in the economy. They often claim that the traditional accounting principles – conservatism and the historical cost principle – are a matter of prudence. But this is not enough when it comes to challenge the widely accepted and logically consistent arguments in favor of fair value that are backed by neoclassical economics. There is a strong need for an alternative approach based on a realistic notion of capital.

1.3 The realistic notion of capital in the history of economic thought

A more realistic notion of capital has been endorsed by numerous German-speaking economists and social scientists since the 19th century. Among them, I will only mention Richard Hildebrand, Carl Menger, Rudolf Stolzmann, Robert Liefmann, Max Weber, Werner Sombart, Joseph Schumpeter, Alfred Amonn, Wolfgang Heller, Richard Passow, Erich Preiser, Ludwig von Mises, Hans Ritschl, Otto von Zwiedineck-Südenhorst, and Wilhelm Andreae. In most of these cases, however, the endorsement of the realistic approach to capital was not systematic. It is for this reason that I consider it to be futile to provide an extensive literature overview. As a general remark, I would only like to mention that the realistic notion of capital goes by several different names in the history of economic thought. It has been called “business” capital because it is directly linked to enterprises and their business. It has been called, by others, "financial" capital because its fundamental form is the money by which enterprises are financed. Last not least, some have called it "private" capital – as against "social" capital. "Social" capital is capital from the viewpoint of society, which includes, among other things, public utilities like streets, schools, universities, hospitals etc., even if those are not profit-oriented. "Private" capital, in contrast, only encompasses assets of private, profit-oriented enterprises. "Business capital," "financial capital," and "private capital" are all expressions that have been used to describe the realistic notion of capital in the past. In this thesis, I usually employ the term "business capital," and as far as the other two are mentioned, they are used as synonyms.

Carl Menger, the founder of the Austrian School, is probably the most important economist who realized that it is necessary to have a look at the institutional framework of capitalism, and especially at the role of capital. As a young man, he defined capital, in his *Principles of Economics* (Menger 1871), in a way that fit best into his model of the time-consuming production process. In doing so, he did not pay attention to the role that capital actually played in everyday business life. Later on, however, he changed his view. In Menger (1888: 2), he called it "a mistake that cannot be disapproved of enough" when economists use words in a different sense than common parlance. Instead, if economists want to describe and analyze reality, they have to pay attention to the concepts that are used in everyday life. When it comes to capital, the important question is what business people and lawyers understand by the term. According to Menger (1888: 37 ff.), the realistic notion of capital comprises *all assets of a business in so far as they constitute, in the calculations of the business, sums of money that are dedicated to the acquisition of income.*

Capital, understood in this way, presupposes the existence of private property, money, enterprises, and the methods of monetary calculation. It is a term that is necessarily and directly connected to capitalism as an economic order where production is accomplished by private enterprise. It is a historically specific term that does not make sense in other economic orders where production is not organized to be profit-oriented – for example by a national planning board.

Although Carl Menger might be the most important economist in the history of economic thought who pleaded for a realistic definition of capital as an element of the institutional framework of capitalism, he was definitely not the first one – nor was he particularly influential when it came to spreading this idea. He wrote his 1888 essay defending the realistic capital concept, but did not make any further contributions to a corresponding, positive theory of capital.

In this lack to provide a positive approach, he was similar to the economists of the German Historical School of Economics and the old American Institutionalists. Those schools had stressed the realistic concept of capital long before Carl Menger and with much more vigor. However, like Menger, they were unable to elaborate on the realistic notion of capital so as to achieve a generally acceptable theory of capital that could enter economics textbooks. It was very difficult for them, so it seems, to conceptualize business capital in a way that made it fit into the normal models used by economists.

Still, these economists were able to improve our understanding of capitalism by analyzing its institutional framework. Bruno Hildebrand (1848) and especially Albert Schäffle (1870), for example, were able to clarify the essential role of capital and monetary calculation for the organization of the worldwide division of labor. Many decades before Mises (1920) and, even more remarkably, many years before there was any real-life experience with large-scale socialism, economists of the German Historical School demonstrated that socialistic regimes would have severe difficulties when it comes to allocate resources in the economy rationally. The only known method to do so, they argued, is the organization of production by capital-based and profit-oriented enterprises in a market economy.

Over the years, there have been several attempts to integrate the business capital concept into the system of economic theory. Two of the most elaborate ones were made by Robert Liefmann, in his *Grundsätze der Volkswirtschaftslehre* (Liefmann 1922/23), and Ludwig von Mises in his opus magnum *Human Action* (Mises 1949). After his death, Liefmann was soon forgotten, but Mises remains to be an important figure in economics.

Almost all other economists of the Austrian School thought and think that the object of capital theory is the roundabout, time-consuming production process. Wherever people produce goods – and be it Robinson Crusoe catching fish on his desert island – Austrian economists speak of capital-using or even capitalistic production. Mises clearly and explicitly rejected this approach, arguing that capital is a term that cannot be separated from the context of monetary calculation by enterprises in the market economy. However, Mises was not consistent in this rejection. He included a whole chapter in Mises (1949) where he stuck to the less realistic capital concept of his fellow-Austrian economists. His attempt to conceptualize capital as a necessary element of rational economic calculation under capitalism remained rather unnoticed despite his otherwise wide sphere of influence.

The current situation is the following. Economic theory, both mainstream and heterodox, ignores important elements of the institutional framework of capitalism, and particularly a realistic concept of capital. In so far as economists deal with business capital, it is not as part of any theory or system. Geoffrey Hodgson, for instance, who inspired several arguments contained in the present thesis, covers many important aspects of the institutional framework of capitalism in Hodgson (2015). However, he does not clarify the relationship between the capitalistic institutions and economic theory. The goal of Hodgson and other institutionalist authors is rather to demonstrate to economists that there are important gaps in their theories and systems that should be covered up. There is no direct link between economic theory on the one hand and the discussion of historical institutions on the other.

In short, when it comes to capital, economists is divided. Theoretical economists make use of mainly mathematical tools in order to construct testable scientific models. They do not employ the term capital, or if they do, they mean something different by it than the capital concept of actual business life. Historical and institutionalist economists, in contrast, deny that it is possible to build generally applicable models. Therefore, they concentrate on the description of the institutions underlying capitalism, among them business capital. Between those two groups, there are not many connections that go beyond mutual criticism.

This gap in the literature has been noticed in recent years not only by myself, but also by Peter Lewin and Nicolás Cachanosky. They have worked on an up-to-date theory of capital in several articles – one of them is included in the appendix of the present thesis – and have summarized their efforts in a recent book (Lewin and Cachanosky 2019). Our respective works complement each other. Whereas they concentrate on the problem as to how the time element can be implemented in a more realistic theory of capital, I focus on the institutional aspects of such a theory.

1.4 Overview of the thesis

It is the purpose of the present thesis to provide a link between economic theory and the institutional framework of capitalism. It demonstrates how far economic theory depends on and presupposes the existence of capitalistic institutions, and it shows how this dependence can be made visible by means of a realistic theory of capital. The theory of capital as developed in this thesis is then applied to the issue of financial accounting, specifically to the debate between the adherents of the fair-value principle and those of the historical-cost principle. Based on the realistic approach to capital, it is possible to make a theoretically substantiated case for the traditional historical-cost principle.

The broader context of the articles collected in this thesis is the relationship between equilibrium on the one hand and the processes that take place between two equilibrium points on the other. These processes must not be ignored. Quite the reverse, only the market processes that elapse during disequilibrium can explain why there is a tendency towards equilibrium in the first place. This idea has always been stressed by the Austrian School of Economics. This school focuses explicitly on disequilibria, that is, on the way the resources in the economy are coordinated and allocated by entrepreneurs in dynamic market processes. Especially my discussion of the role of financial accounting benefits from the contributions by Friedrich von Hayek (1945) and Israel Kirzner (1997) on the role of information in the market process.

When it comes to the institutions behind the market processes, however, the Austrian School has remained rather silent. Private property and free markets are of course strongly endorsed as fundamental requirements of a functioning price system. But the circulation of capital and the corresponding institutional framework of capitalism is not the focus of this school of thought. Despite the fact that the Austrian School is well-known for its theory of capital, the realistic notion of capital can only be found in Menger (1888) and Mises (1949), and both were not able to inspire later generations. It is the first contribution of this thesis to dig out those two approaches and to evaluate their importance for an up-to-date version of a realistic theory of capital.

Usually, the production process is conceptualized as a production function that associates production factors with production output. Building from

Menger (1888) and Mises (1949), and with strong borrowings from the historical and institutionalist schools, especially Hodgson (2015), the present thesis links the production process with the institutions that actually organize production in capitalism. It fleshes out the Marxian formula Money – Commodity – Money’.

The graph that inspired my discussion of this relationship can be found in Zwiedineck-Südenhorst (1930) and is reproduced below as Figure 1. Otto von Zwiedineck-Südenhorst argued that the transformation of land (Boden), labor (Arbeit) and produced means of production (produzierte Produktionsmittel) into products (Produkte) via production is embedded in the circulation of capital. The reason why enterprises combine production factors at all is that they hope and plan that their money revenue (Gelderlös) surpasses their money expenses (Geldeinſatz).

Figure 1: The circulation of capital according to Zwiedineck-Südenhorst (1930: 1069)

If we want to understand how the production process works under capitalism, we must find a way to integrate the circulation of capital in our analysis. It is the second contribution of this thesis to provide a theory of capital that is, at the same time, a theory of how production is organized under capitalism.

The third contribution consists in the application of this realistic theory of capital to the question of financial accounting. Figure 1 shows that money revenue (Gelderlös) and money expenses (Geldeinſatz) are directly linked to the combination of production factors. They are the reason why enterprises produce in the first place, and they are also the relevant magnitudes in financial accounting. Once the relationship between financial accounting and the production process has been clarified, it is possible to make clear statements concerning the sense and nonsense of fair-value accounting. In the context of dynamic market processes, characterized by capitalistic institutions, fair-value accounting does not allow for a tendency towards equilibrium. Therefore, its adoption by the two big standard setters must be rated as a dangerous step for the stability of the market economy.

2. Articles contributed to this thesis

2.1 Overview of the articles

The appendix of the present thesis contains seven articles. Each of them covers a different aspect of the theory of business capital. The following list provides the authors' names, the title, the year, and the place of publication of each article. Section 2.2 provides a summary of each of these articles and a classification with regard to the general topic of this thesis as outlined in the introduction.

1) Author: Braun, Eduard
   Title: Carl Menger's Contribution to Capital Theory
   Place: *History of Economic Ideas* 23 (1), pp. 77-99
   Year: 2015

2) Author: Braun, Eduard
   Title: The German Historical School on the Impossibility of Economic Calculation under Socialism
   Place: *Betriebswirtschaftliche Forschung und Praxis* 68 (2), pp. 126-135
   Year: 2016

3) Authors: Braun, Eduard, Lewin, Peter, and Cachanosky, Nicolás
   Title: Ludwig von Mises's approach to capital as a bridge between Austrian and institutional economics
   Place: *Journal of Institutional Economics* 12 (4), pp. 847-866
   Year: 2016

4) Author: Braun, Eduard
   Title: The Theory of Capital as a Theory of Capitalism
   Place: *Journal of Institutional Economics* 13 (2), pp. 305-325
   Year: 2017

5) Author: Braun, Eduard
   Title: Capital as in Capitalism, or Capital as in Capital Goods, or Both?
   Place: *The Review of Austrian Economics* https://doi.org/10.1007/s11138-018-0415-6
   Year: Forthcoming

6) Author: Braun, Eduard
   Title: The Ecological Rationality of Historical Costs and Conservatism
   Place: *Accounting, Economics, and Law. A Convivium* 9 (1), Article 1
   Year: 2019

7) Author: Braun, Eduard
   Title: Accounting for Market Equilibrium – Comparing the Revenue-Expense to the Balance-Sheet Approach
   Place: *Accounting, Economics, and Law. A Convivium*
   Year: Forthcoming

2.2 Summary and classification of the articles contributed to this thesis

2.2.1 Contributions to the history of the business-capital theory

Author: Braun, Eduard
Title: Carl Menger's Contribution to Capital Theory
Place: *History of Economic Ideas* 23 (1), pp. 77-99
Year: 2015

The realistic approach to capital has been endorsed by numerous economists throughout the history of economic thought. Most of them were members of – or at least influenced by – the German Historical School of Economics.

Carl Menger was the leading antagonist of the Historical School. He not only attacked it directly in what is today known as the *Methodenstreit*. Carl Menger is also the intellectual father of the capital theory of the Austrian School which is irreconcilable with the historical approach (Menger 1871). The Austrian approach does not consider the institutional framework of capitalism, but starts from Robinson Crusoe and tries to establish a theory of capital that is not only applicable to capitalism, but wherever men produce goods and employ means of production. Capital is accordingly defined as a physical category, namely as the structure of heterogeneous producer goods.

It is all the more interesting that Carl Menger changed his view on capital later in his life. In Menger (1888), he rejected any attempt by economists to establish definitions of capital that deviate from common parlance. Instead, he demanded that economists follow the business capital concept, employed by business people and lawyers, which he endorsed and presented in his article.

As Menger (1888) has never been translated into English, my article reproduces Menger's arguments against the concepts of capital that were commonly used by other economists and provides his positive definition and description of the business capital concept. My article contains further, in section 6, an outlook on the potential of the business capital concept. This outlook can be understood as an outline of what I do in the other articles contained in the appendix. It argues that the business capital concept, first, underlies the economic calculation argument against socialism, and second, should be developed into a full-blown theory. Based on such a theory, it would be possible to formulate a well-grounded position in the debate between fair-value and historical-cost accounting.

Author: Braun, Eduard
Title: The German Historical School on the Impossibility of Economic Calculation under Socialism
Place: *Betriebswirtschaftliche Forschung und Praxis* 68 (2), pp. 126-135
Year: 2016

This article is part of a journal issue that is dedicated to the relationship between management and the Austrian School of Economics. It can be understood as an appeal to Austrian economists to forget the old animosities against the Historical School, their former adversary in the *Methodenstreit*, and to rediscover its contributions, especially when it comes to the institutional framework of capitalism.

The main contribution of this article is to show that Ludwig von Mises's (1920) calculation argument against socialism had been foreshadowed in the 19^{th} century by Bruno Hildebrand and Albert Schäffle, two members of the Historical School. Mises argued that a rational allocation of the resources in society must be based on a common yardstick. Capitalism had at its ready such a yardstick in the market prices of the means of production. Socialism, on the other hand, does not have this common yardstick. As it abolishes private property in the means of production, no exchanges between any of these goods occur and therefore no exchange relationships – prices – of the means of production exist. Mises claimed that, as a consequence, it is impossible for a socialist central planning authority to determine whether inputs have been employed economically in the production of their output.

The present article demonstrates in detail how close Hildebrand and particularly Schäffle came to actually anticipate Mises's argument. The reason that I give for this astonishing anticipation is the occupation of the Historical School with the actual institutions of capitalism and, following from this occupation, their realistic concept of capital, that is, business capital. Given that this concept has a major importance when it comes to analyze and compare different economic systems, the article pleads for its rehabilitation.

2.2.2 The theory of business capital

Authors:	Braun Eduard, Lewin, Peter, and Cachanosky, Nicholás
Title:	Ludwig von Mises's approach to capital as a bridge between Austrian and institutional economics
Place:	*Journal of Institutional Economics* 12 (4), pp. 847-866
Year:	2016
Partition:	Sections 2-4 stem from myself, sections 5-6 mainly from my co-authors. I am responsible for about 50 percent of the article.

The present article deals with Ludwig von Mises's approach to capital and elaborates on it. In order to better classify Mises's contribution, our article starts with a short history of the Austrian theory of (physical) capital and indicates the problems that this theory is supposed to tackle. It then provides a detailed presentation of Mises's views on capital, which are dispersed throughout Mises (1949) and other sources.

Mises links capital to the institutions of capitalism, and particularly to monetary calculation, that is, capital accounting. One could say that Mises's rudimentary theory of capital is a theory of the way monetary calculation based on business capital helps entrepreneurs to organize the production process under capitalism. In other words, Mises's approach comes close to a theory of capitalism.

The present article also suggests a reason why Mises's business approach to capital was neglected by later generations of economists. Mises was clear on the proper definition of capital and its role in capitalism, but he was still inconsistent. He inserted a whole chapter in Mises (1949) where he employed a different, physical definition of capital. He therefore made it possible for his numerous followers to be eclectic about his view on capital.

Sections 5 and 6 demonstrate that the problems that are usually tackled by means of a physical capital concept can be addressed on the basis of the business capital concept as well. Particularly the idea of the period of production, which stresses the importance of time, can easily be transferred to the period of investment. Then the idea makes even much more sense and does not run into contradictions. Whereas it is problematic to even conceptualize the duration of a physical production process, the duration of a financial investment can easily be measured.

Author: Braun, Eduard
Title: The Theory of Capital as a Theory of Capitalism
Place: *Journal of Institutional Economics* 13 (2), pp. 305-325
Year: 2017

In a recent paper, Geoffrey Hodgson (2014) suggested that economists return to the business capital concept. The present article takes up Hodgson's challenge and develops a theory of business capital.

In modern economies, millions of different goods and services have to be combined before the final output is available. What products are produced in the economy, what factor combination are chosen, how are the final products allocated among the factors, etc.? The necessity of coordinating input factors appears of course in all eras of history and in all economic systems. The specific characteristic of capitalism is that in this economic system, the technical production process is embedded in the acquisitive activities of profit-oriented enterprises. The latter do not combine production factors for the sake of producing output, but for the sake of yielding profit on their business capital. There is no central authority that guides the production process, but the plans by the countless enterprises must still be well-matched.

The present article starts from the formula **Money – Commodity – Money'** and develops it further in the spirit of Otto von Zwiedineck-Südenhorst (see figure 1 on p. 13). In doing so, it incorporates the institutional framework of capitalism, particularly money, financial accounting, the market, and the enterprise. The theory demonstrates how money prices and financial accounting direct the allocation of goods and resources in mutual dependency.

Prices provide information about the relative scarcity of inputs and outputs in the economy. Within the individual enterprise, financial accounting determines the expenses and revenues of investments based on these prices and is therefore able to provide information on the profitability of business actions. Monetary profits and losses that are determined in this way serve as a signal as to where business capital should be invested or withdrawn and, therefore, where output should be increased or decreased. The consequent competition between enterprises provides for a tendency towards equilibrium and uniform money prices.

The paper finishes with a critical discussion of the neoclassical approach to capital and some remarks on the issue of fair-value accounting.

Author:	Braun, Eduard
Title:	Capital as in Capitalism, or Capital as in Capital Goods, or Both?
Place:	*The Review of Austrian Economics* https://doi.org/10.1007/s11138-018-0415-6
Year:	Forthcoming

Friedrich von Hayek was awarded the Nobel Memorial Prize in Economics for, among other things, his work on economic fluctuations. In his theory of the business cycle, developed on the basis of the pioneering work by Ludwig von Mises, capital plays a major role. However, the theory does not distinguish clearly between physical capital on the one hand, and business capital on the other. Both concepts are employed, but it is not clear in how far they relate to each other.

It is the purpose of the present article to demonstrate the confusion that besets the so-called Austrian theory of the business cycle owing to the terminological and conceptual undecidedness concerning capital and to make a proposal for improvement.

In a nutshell, the Austrian theory of the business cycle maintains that the manipulation of the interest rate by the banking system causes mal-investments in the capital structure. The term "capital structure," however, is highly ambiguous in this analysis. It relates to both the physical and the business capital concept. Mal-investments in the capital structure mean that capital, in the sense of (physical) production goods, is misallocated because capital, in the sense of business capital, is accounted for incorrectly.

Given this confusing usage of the term "capital," the article concludes that it would be best to stick to the business capital concept and to avoid the physical capital concept altogether. This implies that the term "capital goods," which is a very popular synonym for "production goods" in Austrian-minded works, should be avoided for the sake of terminological and conceptual clarity.

2.2.3 The role of financial accounting in the market economy

Author:	Braun, Eduard
Title:	The Ecological Rationality of Historical Costs and Conservatism
Place:	*Accounting, Economics, and Law. A Convivium* 9 (1), Article 1
Year:	2019

This article discusses the rationale of the institution of financial accounting. Two approaches to financial accounting can be distinguished. The balance-sheet approach has been endorsed by the main financial standards boards (FASB and IASB) since the 1970s. This approach is behind the so-called fair-value principle according to which the balance sheets of firms should state the present value of the cash flows that their assets and liabilities are expected to generate in the future. The balance-sheet approach is based on neoclassical economics and is consistent with rational choice theory, which is why it is not only supported by the standard setters, but also by large parts of the scientific community.

The revenue-expense approach, on the other hand, endorses the historical-cost principle, according to which assets and liabilities should be stated on the balance sheet at their original costs. This approach does not have a comparable rational or scientific basis and is usually backed by the claim that it is “prudent” not to appreciate assets.

My article argues, however, that the valuation of assets according to the historical-cost principle and conservatism (“cost or market, whichever is lower”) can be interpreted as *ecologically rational*. That is, the traditional rules of financial accounting may not originate from a distinct event or invention, and their functionality may not be the result of unitary human design. But they may still be rational as they are the outcome of cultural and institutional evolution.

In order to back this claim, the article shows that there is a close parallel between the principles of the revenue-expense approach and established results of behavioral economics, particularly Prospect Theory. The article further demonstrates why, from a long-term, evolutionary perspective, it can be very reasonable for enterprises to act according to Prospect Theory. It also hints at the relevance of the revenue-expense approach in a disequilibrium framework.

Author: Braun, Eduard
Title: Accounting for Market Equilibrium – Comparing the Revenue-Expense to the Balance-Sheet Approach
Place: *Accounting, Economics, and Law. A Convivium*
Year: Forthcoming

The article discusses the role that financial accounting and its norms play in the economic system of capitalism. For this purpose, it combines the market process approach, developed mainly by Friedrich von Hayek, with the theory of business capital.

Hayek is famous for criticizing the economists' focus on equilibria. As long as they concentrate their analysis on the final states of equilibrium, he argued, economists assume that all available knowledge in society has already been processed and condensed into the prevailing prices. Yet, the market processes that appear in disequilibrium should be much more important to economists because they contain the forces behind the tendency towards equilibrium. In a market process framework, the information that is necessary to coordinate the allocation of goods and services is not available, in total, to any one person or organization, but it is dispersed among all market participants. According to Hayek, the problem that economists should study is therefore how the price system manages to collect and condense the decentralized knowledge in society.

The main argument of the article is that the revenue-expense approach helps to process decentralized information and thus to create a tendency towards equilibrium. Profits and losses that are determined via the comparison of historical costs and current revenues of the particular accounting entity provide useful information to the market. They appear in areas of the economy where supply and demand are unbalanced, and they can therefore serve as guideposts for investors as to where to invest (business) capital.

Fair-value accounting, in contrast, is not so much concerned with the actions of the accounting entity, but with actual or modeled market prices. Profits and losses that are determined according to the balance-sheet approach do not add new information, but inform the market only about market data. On its own, the balance-sheet approach would have difficulties to create a tendency towards equilibrium because it rests on the assumption that equilibrium has already been achieved.

3. Concluding Remarks

The present thesis delves into the history of economic thought in order to tie in with the Historical School of Economics and other economists who tried to integrate the institutional framework of capitalism into economic science. However, this tradition had difficulties developing a corresponding theory of business capital and its function in the economy. This thesis elaborates on the existing attempts by providing such a theory of business capital and applying this theory to the field of financial accounting. In this way, it sheds light on the institutional framework of capitalism and, therefore, on the institutional preconditions of economics.

I plan several further steps in future research in order to round out the theory of business capital. The present thesis concentrates on a general theory of business capital and applies it to the area of financial accounting. Money and enterprises are part of the story, but these institutions are not themselves discussed in detail. A complete analysis of business capital and the corresponding institutional framework of capitalism will have to add an in-depth analysis of property rights, money, and enterprises in due consideration of their relationship to business capital.

When it comes to property rights, I have indicated the gap in the current literature briefly in Braun (2019). As long as property rights, and particularly their specific design are not mentioned among the preconditions of economic models, it is difficult to determine the influence that different regulations of property rights have on the market outcome. In Braun (2019), I demonstrate this point by reference to the existence of limited companies. Established legal practice has sanctioned the idea that an enterprise can assume a fictional legal personality. Firms with legal personality are allowed to conclude contracts, to appear in courts, and, importantly, they can own property. In principle, their capital is legally separated from the wealth of their shareholders.

This legal provision is of the utmost importance. Easterbrook and Fischel (1985) have argued that the existence of limited companies is a necessary precondition for the capital market as we know it. Without this institution, big projects and enterprises would hardly be possible on a private basis, with serious implications for economic growth. But others have also argued in the opposite direction. Walter Eucken (1952) and other ordo-liberals warned that it contradicts the fundamental principles of the market economy and distorts the market outcome gravely if some firms are granted the privilege of limited liability.

This issue would take us too far afield, but in any case, it seems to have important consequences that enterprises are able to assume legal personhood and to own property. However, as long as economists do not state the institutional preconditions of their models explicitly, they will tend to sidestep the discussion of important issues like this. They may even arrive at problematic conclusions when it comes to reform current institutions, for example the design of property rights. It is the purpose of the theory of business capital to make the institutional preconditions of the market economy visible and therefore to help economic policy-making understand the implications of institutional reforms.

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