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The European Economic crisis from 2007 onwards in the context of a global crisis of overproduction of capital – a Marxian monetary theory of value interpretation

Authors: Sascha Gander

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Sascha Gander, Rosa-Luxemburg-Stiftung (RLS)

sascha.gander@rosalux.org

Abstract

This paper attempts to clarify how the European economic crisis from 2007 onwards can be understood from the perspective of a Marxian monetary theory of value that emphasizes intrinsic, structural flaws regarding capitalist reproduction. Chapter two provides an empirical description of the European economic crisis, which to some extent already reflects the structural theoretical framework presented in chapter three. Regarding the theoretical framework Michael Heinrich's interpretation of 'the' Marxian monetary theory of value will be presented. Heinrich identifies connections between production and realization, between profit and interest rate as well as between industrial and fictitious capital, which represent contradictory tendencies for which capitalism does not have simple balancing processes. In the context of a discussion of 'structural logical aspects' of Marx's *Critique of the Political Economy*, explanatory deficits of Heinrich's approach are analyzed. In the following, it is argued that Fred Moseley's view of these 'structural logical aspects' allows empirical 'applications' of Marxian monetary theories of value. It is concluded that a Marxian monetary theory of value, with the characteristics of expansive capital accumulation and its limitations, facilitates a structural analysis of the European economic crisis from 2007 onwards. In this line of argument, expansive production patterns are expressed, among other things, in global restructuring processes, while consumption limitations are mitigated by expansive financial markets and shifts in export destinations.

Keywords: Marxian monetary theory of value, change in plan debate, ideal average, transformation problem, European economic crisis, overproduction, Heinrich, Moseley

JEL-code: B51, B59, D30, D46, E11, E21, E22, E23, E40, E50, F10, F21, F60, G15, G18, G20, N10, N20, O52, P16

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1. Introduction

Ten years after the collapse of the major global investment bank Lehman Brothers, questions arise as to whether the efforts to regulate the financial markets have been successful, or whether the 'Great Recession' could repeat itself. Even countries like Germany, which seem to be better able to cope with the economic crisis, have not yet fully recovered, to say the least (Stiglitz 2017: 13). The Mediterranean European countries which are still suffering from tough austerity programmes, were confronted with political and social consequences that evoke memories of the Great Depression (1929-1939). The economic and humanitarian crisis is particularly severe in Greece: "Its poisonous effects can be traced in everything from suicide rates and homelessness to child poverty and support for political extremes" (The Guardian Online 2015). In Spain, "500,000 families [were] facing eviction and a life crushed under un-payable debts" (Tooze 2018: 375).

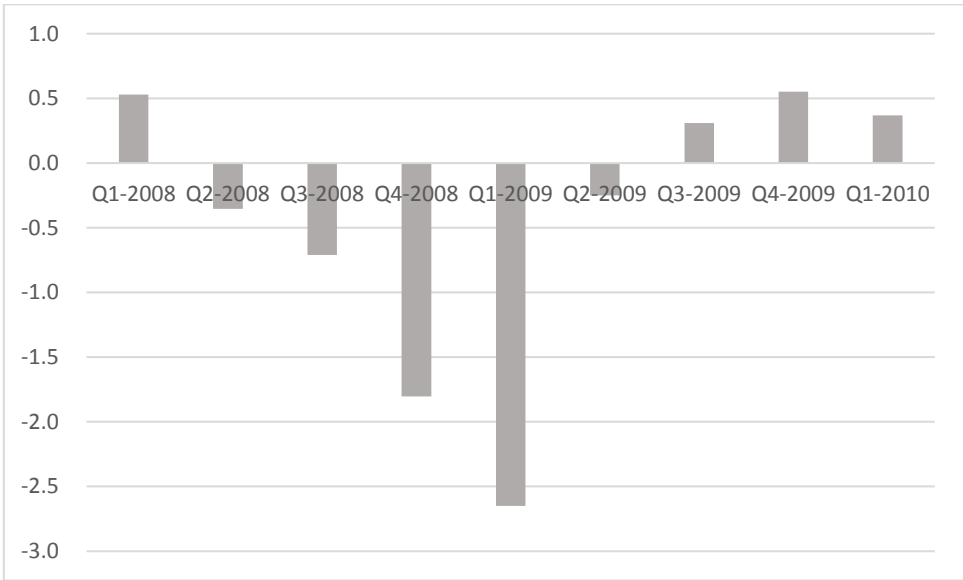
The question "How did economists get it so wrong?" arose as a result of the crisis (Krugman 2009). After the crisis, 'mainstream economics' seemed more open to other economic paradigms, and the latter had the dubious honor of being mentioned in standard economics textbooks (Treeck/Urban 2019). The prevailing paradigm in economics is the neoclassical approach, according to which efficient market organization is the norm, and an economic crisis is an exogenous exception (Read 2013: 104 ff.). Based on stylized models, only external factors such as a wrong economic policy can disrupt the markets. The Keynesian approach which proved its advantages in the 1960s but had no answer to 'stagflation' in the 1970s (Heinrich 2011: 53) analyzes economic crises not as exogenous coincidences but as an inherent feature of capitalism. In this argumentation, the state is supposed to compensate a lack of private investments and therefore, mitigate the shortcomings of the markets. Another explanatory approach that assumes intrinsic flaws regarding the capitalist reproduction is that of Marxian authors.

This paper attempts to clarify how the European economic crisis from 2007 onwards can be understood from the perspective of a Marxian monetary theory of value. In other words, is the analysis of 'inherent contradictions' of the capitalist mode of production helpful to understand the crisis? In order to clarify these questions, an empirical account of the European economic crisis is first given on the base of a literature review. The latter is also the chosen methodology for the overview of Marxian approaches to crisis and the comparative analysis in chapter three. The final empirical analysis is a transnational case study of how the crisis can be explained from a Marxian monetary theory of value point of view.

Whereas it appears obvious that aspects such as risky mortgage origination and the securitization of 'subprime loans' play a decisive role for the development of the world economic crisis, it is not so clear how exactly it could spread to the EU (Evans 2011: 99). These aspects are presented in chapter two. Further, there is no consensus on the 'origins' of the crisis. Some economists see the problem in a certain "type of thinking" (Yellen 2017), others emphasize

the role of monetary policy (Hannoun/Dittus 2017), still others include post-Fordist or neoliberal developments since 1975 (e.g. McNally 2011; Heinrich 2011) and are therefore more structural in nature. Stützle (2013: 305) refers to two perspectives on the European economic crisis. The first perspective considers the crisis of the EU as a regional crisis of the world economy. Whereas the second perspective deals with the contradictions within the EU itself – for example the imbalances regarding the current accounts of the European countries (Altvater 2010: 103). The latter will be addressed in this thesis insofar as it is linked to the former perspective. Beyond the scope of this thesis is the European ‘sovereign debt crisis’ since 2009/10 and the following austerity policies. In how far the ‘sovereign debt crisis’ is just an expression of the financial crisis (e.g. Altvater 2010: 90; McNally 2011: 4; Stützle 2013: 317) is not addressed. With the focus on the first recession in the EU (figure one) and the exclusion of the second recession in 2011/2012, it is assumed that particularly the first ‘dip’ is suitable for analyzing structural causes of the crisis.

Figure 1: First ‘dip’ of EU's (28 countries) ‘double-dip recession’



Note: quarterly growth rate of real GDP (expenditure approach), change over previous quarter; seasonally adjusted. Source: OECD (2019)

A general overview of Marxian approaches to crisis is supposed to facilitate the introduction to the theoretical framework of this thesis, which is Heinrich’s (2014) Marxian monetary theory of value interpretation. This theory enables analysis of the structural causes of the crisis. Heinrich (2001: 172) identifies connections between production and realization, between profit and interest rate as well as between industrial and fictitious capital, which represent contradictory tendencies for which capitalism does not have simple balancing processes. In order to better understand the structural character of Heinrich’s approach, it seems helpful to include a debate on the ‘structural logic’ of Marx’s *Capital Volume I-III* (1982; 1992; 1991) in chapter three. It goes beyond the scope of this work to develop its own approach to these ‘philosophical-economic’ questions, but Heinrich’s approach is presented, discussed and compared with approaches that seem more ‘practice-oriented’. Explanatory deficits with regard

to the application of Heinrich's approach lead to the introduction of another Marxian monetary approach in chapter four. In addition, characteristics of other approaches are taken into account, as it is difficult, for example, to capture state interventions in Heinrich's theoretical concept. Finally, how the European economic crisis can be explained with Heinrich's modified approach is clarified.

2. European economic crisis

This chapter aims to provide a general understanding of the European economic crisis from 2007 onwards. It is the basis for the application of the theoretical framework in subchapter 4.3. To a certain degree this chapter already mirrors characteristics of the theoretical framework. The build-up of overcapacities and overspeculation are emphasized in the discussion.

An analysis of the postwar 'Fordist model of accumulation' that was based on mass production, a stable income situation and mass consumption regulated by the monetary system of Bretton Woods (Heinrich 2011: 67) is beyond the scope of this work. Moreover, the 'neoliberal post-Fordist model of accumulation' from 1975 onwards with its characteristics such as privatization, redistribution, deregulation, financialization and internationalization cannot be analyzed in detail at this point. Instead main developments in the 2000s in the run-up to the crisis are outlined. The focus is on the crisis of the EU as a regional crisis of the world economic crisis and not so much on contradictions within the EU itself², although inner-European dynamics such as the outsourcing processes of the automotive industry to the 'eastern periphery' of Europe are considered. Further, the so-called 'European sovereign debt crisis' since 2009/2010 and the following austerity policies are beyond the scope of this thesis.

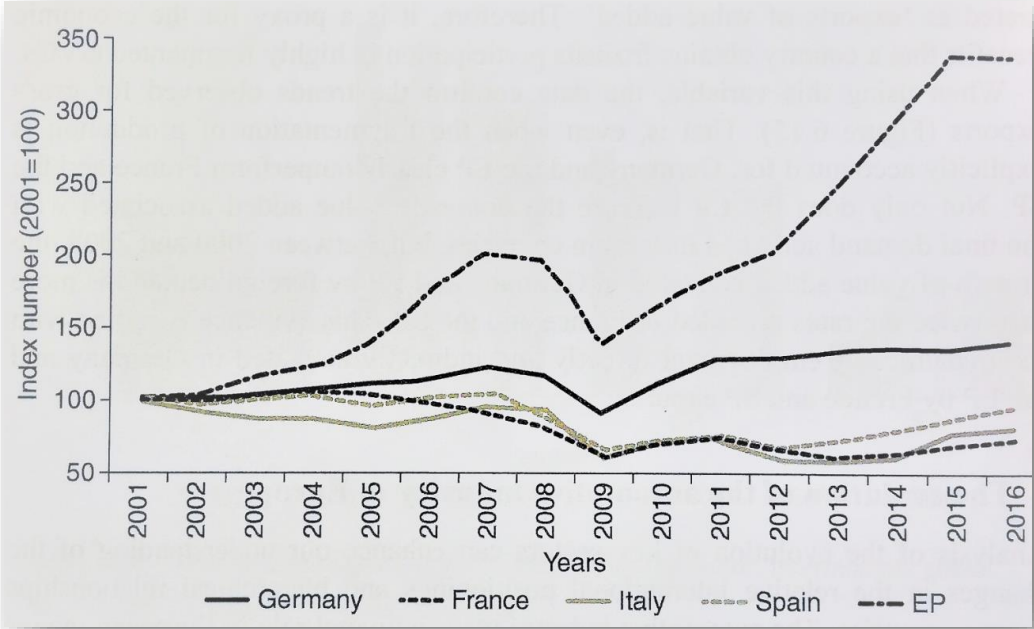
2.1 Run-up in the 2000s

The 1990s were a decade of economic crises for the 'emerging countries', which experienced the questionable effects of the free movement of capital (Tooze 2018: 32-33). In the early 2000s, Germany of all countries was described by some authors as the 'sick man of Europe'. But the largest European economy seems to have managed to transform itself from a 'sick man of Europe' to an "engine of growth" (Romei 2017). It is too simplistic to reduce Germany's progress in competitiveness to low wages due to the decentralization of wage negotiations in the 1990s (Spitz-Oener 2017). In addition, the 'Agenda 2010' should not be regarded as the sole reason for the German upswing, but factors such as the after-effects of reunification and statistical and economic effects should also be taken into account (Bofinger 2017: 404-405). Therefore, the expression 'sick man of Europe' with regard to the situation in Germany in the early 2000s seems debatable to say the least. Celli et al. (2018: 59) identify six reasons for Germany's export boom after 2005. Beyond the arguments already mentioned, they emphasize Germany's links to high-growth markets and the effects of outsourcing. The latter is apparent in the eastward expansion of Germany, which is driven by labor cost differentials (Celli

² See Stützle 2013: 305 on the distinction between these two perspectives.

et al. 2018: 183; Krzywdzinski 2018: 527). Figure 2 shows the extraordinary growth of the automotive industry in the eastern periphery, which was mainly caused by the restructuring of the German automotive industry.

Figure 2: Production in the automotive industry, index of production (2001 = 100)



Source: Celli et al. 2018: 182

Note: EP = Eastern periphery; calendar and seasonally adjusted data

Heinrich (2011: 68) points to the emergence of overcapacities in the automotive industry, the steel industry and certain sectors of the semiconductor industry before the world economic crisis, which go beyond the cyclical up and down. Despite obvious structural difficulties (OECD 2015), the analysis of structural overcapacities or long-term excess capacities is difficult. The pre-crisis global automotive assembly capacity utilization does not indicate a state of overproduction³, and the same applies to the global steel industry (OECD 2015: 2). It cannot be denied that there was a massive global decline in auto mobile production from 2008 to 2009 (Wolf 2009: 52). However, new passenger cars registrations or sales worldwide recovered quickly (OICA 2017), while there was a heterogeneous development at the national level. In the ‘industrialized countries’, registrations or sales slumped after 2007 (without the effect of economic stimulus packages), while in China sales have jumped. As a result, the overcapacities of the automotive industry in the ‘global north’ after 2007 were mitigated partly by China (ibid.).

Following the stock market crash in 2000, the US Federal Reserve lowered the interest rate from 6.5 to 1 percent in a short period of time. As a result, mortgage rates became extremely low and demand for mortgages tripled between 2000 and 2005 (Heinrich 2008a). Property

³ In 2007 the global automotive assembly capacity utilization was 82.7% (PwC 2009: 3), which is a relatively high level (PwC 2013: 6 ff.).

prices rose, making lenders feel secure, because if a debtor went bankrupt, the foreclosure of the house would still earn enough money not to suffer losses. This false sense of security led, among other things, to mortgages being granted to people who could not afford them – ‘sub-prime’ mortgages. The issuance of the ‘new financial instruments’ did not help to recognize the risks, either.

In the following, the focus is on the business of mortgage-backed securities (MBS) or collateralized mortgage obligations (CMO).⁴ In these forms the mortgages were also collateral for securities sold to investors. One could argue that the government-sponsored enterprises (GSE) Fannie Mae and Freddie Mac facilitated the “originate-to-distribute mortgage lending system and securitization” (Tooze 2018: 48). The commercial banks originated the mortgages and distributed them to the GSEs, in turn the banks could make more loans. This was the breeding ground of securitization. The first historical step in securitization was the creation of “pass-through MBS” by the GSEs in the 1970s, followed by CMOs in the 1980s, which are essentially MBSs divided into different risk levels (Tooze 2018: 48-49). Together with the interest rate cuts in the early 2000s, the restrictions on the GSEs to raise new capital and reduce their portfolios brought more and more private actors onto the stage (Tooze 2018: 55-56; Poole 2013: 605).

It is already mentioned above that risks were disguised when granting mortgages. As part of the securitization process, the downplaying of risks also took place. Too much trust in rating agencies that rated the securities and were paid by the banks that issued exactly these securities was a reason for disregarding the risk (Heinrich 2008b). Further, structured investment vehicles (SIV) operating abroad as subsidiaries, held CMOs but also other financial instruments from the parent companies’ balance sheets, making risk management even more difficult. The purchases of CMOs by the banks or the SIVs were financed with short-term loans from the “money market cash pools” (Tooze 2018: 60). The banks issued so-called asset-backed commercial paper (ABCP) to get the short-term loans. It should be noted that we started with mortgages that were first securitized (MBS), then divided into different risk levels (CMO) and finally bought with short-term loans through the issuance of ABCPs, the main mechanism for financing mortgage portfolios (Tooze 2018: 60; Kaufmann 2018: 18-19).⁵ The Managers of the cash pools bought the short-term ABCPs and the banks got the spread between the usually lower interest for the cash pool managers (owners of the ABCPs) and the higher interest for owning the actual securities (Tooze 2018: 61). The banks that granted the mortgages to the households financed this lending by securitizing the mortgages and selling them on the money markets. That means they have received loans to grant loans.

The GSEs were never involved in the ‘subprime business’. They did not securitize ‘subprime mortgages’, but they were still the most important securitizing financial actor. By 2006 this changed and “70 percent of new mortgages were subprime or other unconventional loans

⁴ For a more comprehensive approach to ‘structured finance’, see e.g. Fender/Mitchell 2005 or Mitchell 2004.

⁵ Another way to finance business with CMOs was through “repurchase agreements, or repo” (Tooze 2018: 61).

destined for securitization not by the GSE” (Tooze 2018: 63). Table 1 shows the increase of ‘subprime’ and the participation of European banks (shaded rows).⁶ The European banks not only participated passively in the ‘subprime market’ but they even securitized mortgages through their US securities affiliates.

Table 1: Banks’ underwriting of subprime MBS deals

	1997–2001	2002	2003	2004	2005	2006	2007	Total
Greenwich (RBS)	17	10	16	28	30	30	17	148
Lehman Brothers	10	8	16	20	31	31	14	130
Bear Stearns	5	1	6	23	34	27	16	112
Morgan Stanley	3	4	12	29	29	20	13	110
Credit Suisse	10	10	13	23	25	13	6	100
Merrill Lynch	3	0	4	12	31	34	9	93
Deutsche Bank	4	7	13	15	20	24	8	91
Goldman Sachs	0	3	5	17	20	22	9	76
Bank of America	5	8	14	18	11	6	5	67
Citigroup	0	2	6	9	16	17	14	64
JPMorgan	5	7	7	4	8	21	8	60
UBS	0	1	8	13	15	20	3	60
Barclays	0	0	0	8	15	19	8	50
Countrywide	0	4	8	14	5	0	0	31
HSBC	0	0	0	0	4	13	6	23
Others	13	5	6	2	10	27	2	65
Total	75	70	134	235	304	324	138	1.280

Source: McCauley 2018: 47; author’s adjustment

Note: The European banks (shaded rows) operated through their US securities affiliates

As early as 2004, the Federal Reserve began to raise the interest rate, precipitating the wider problems. In the following years, it became undeniable that many of the mortgage holders were not able to repay their mortgages and contractual details like variable interest rates reinforced this process (Heinrich 2008b). The supply of houses increased due to foreclosures and house prices fell, weakening the function of houses as collateral for banks. Various financial actors involved in the securities business ran into difficulties in their own specific way (Kaufmann 2018: 20), not to mention the devastating social consequences for many households who lost their homes.

⁶ Table 1 shows pools of MBS. For an impression of these figures in US dollars see e.g. McCauley 2018: 50.

2.2 Critical Phase and the Seeming Recovery

The global economic crisis became widely apparent in August 2007, when the partly naïve confidence turned mistrust into panic in the interbank money market. It was not clear who was holding how much of the toxic MBSs (Evans 2011: 98). The distrust was expressed not only in the lack of liquidity on the interbank market, but also in the demand for underlying collateral from anxious lenders: J.P. Morgan requested collateral from Lehman Brothers and Goldman Sachs demanded it from the American International Group (Tooze 2018: 149, 151). Moreover, banks began to distrust private borrowers. The amount of new mortgages granted declined and more and more borrowers were in arrears with debt servicing. As already mentioned in the previous subchapter, the successive increase in interest rates through the Federal Reserve contributed to this development. The 'delinquency rate' for residential real estate loans (Fed 2018) and especially for loans in the subprime segment (Kaufmann 2018: 15) increased significantly beginning in 2007.

In subchapter 2.1, table 1 gives an impression on the involvement of European banks. Between 2007 and 2010 they lost \$630 billion, while US banks lost \$878 billion (Evans 2011: 99). Evans (2011: 100) identifies two main factors for the sharp downturn of the euro zone in 2008: the euro area's dependence on international trade in connection with a fall of around 20 percent of trade credits, and secondly, the general meltdown of lending in the eurozone (see also Tooze 2018: 155). In addition, the real estate price bubble collapsed in Ireland and Spain, similar to the dynamics of the US real estate market described above. It is not the case that the so-called 'real economy' was left out or was only later affected by the crisis. The (global) export-oriented industry was hit hard in 2008, e.g. Germany's exports fell 34 percent between the second quarter of 2008 and 2009 (Tooze 2018: 159). Figure two (subchapter 2.1) shows that growth in the European automotive industry began to decline already in 2007.

Following the critical situation in August 2007, the Federal Reserve and the European Central Bank immediately increased liquidity and prevented a collapse, but this did not significantly mitigate the situation of the New York investment bank Lehman Brothers, which collapsed in September 2008. The latter collapse triggered a number of financial failures, including that of American International Group, which had insured many of the securities held by banks (Tooze 2018: 150-151).⁷ Further, the national governments engaged with fiscal stimuli. In September 2008, the US Treasury and Federal Reserve put together a \$700 billion rescue package that was sufficient to stop the panic and stabilize the financial system (Scherrer 2011: 166). In the euro area the total sum of rescue funds amounted to €2.1 trillion, which means that 28 percent of the area's gross domestic product was used to stabilize the economy; all in all, the US spent 26 percent of its GDP on rescue programs (Evans 2011: 99). The (first) recession in the euro area ended in mid-2009.

⁷ For a timeline with information on the developments of the individual financial actors, see Kaufmann 2018: 21-25; Kaufmann's timeline has about the same time span that is relevant for this thesis.

3. A Marxian monetary theory of value interpretation

Before explaining the monetary value background of this work, the general framework of Marxian approaches to crisis is presented in subchapter 3.1. It is shown that Heinrich's monetary reconstruction of Marxian crisis theory refers to overproduction of capital. Afterwards, the expansive feature of Marxian crisis theory in Heinrich's interpretation is depicted. In this argumentation the production (of surplus-value) and the credit system are inherently expansive. Then the central contradiction of a limited realization of what was previously produced is explained. Finally, questions concerning the 'logical structure' of Marx's work are addressed in order to deepen the understanding of Heinrich's approach. In this context explanatory deficits are identified.

3.1 Marxian theories of economic crisis

As already mentioned in the introduction, the Marxian strand of economic crisis theory assumes structural contradictions in the capitalist mode of production. Frictionless capital accumulation on the base of the "economic law of motion of modern society" (Marx 1982: 92) would therefore not be possible. This is where the similarities of Marxian approaches stop. Marx's work on (economic) crisis theory does not offer a consistent, completed theory (Hoff 2009: 291), but a multitude of possible approaches that are more or less elaborated and can be found in very different parts of his work. Consequently, scholars refer to different parts of Marx's crisis theoretical work. To put it positively, there is a plurality of Marxian crisis theories (Sablowski 2012: 1). Itoh and Lapavitsas (1999: 126) propose a useful structure: they differentiate between "excess supply theories" and "excess capital theories". The latter stress the importance of excess capital that cannot be accumulated profitably in times of crisis. On the other hand, excess supply theories deal with excess aggregate supply relative to (effective) demand. A concept that consists of elements of both strands presented here is 'overproduction'. One can distinguish between 'overproduction of capital' and 'overproduction of individual commodities' (Heinrich 2014: 361). The former can be regarded as an excess capital theory and the latter is more to be understood as an excess supply theory (excess supply of individual commodities).⁸

Especially against the background of the theoretical approach of this thesis (see chapter 3.2), it would be reasonable to present an overview that includes monetary phenomena as structuring characteristics. Hoff (2009: 292) assumes that even in general the category of money is to be emphasized as the central moment of crisis theory, although the credit system cannot be seen as the sole cause of crisis (Heinrich 2014: 368). The author of this work is not aware

⁸ It is questionable whether it makes sense to make a difference between these two types of overproduction: "In the framework of Marxist economic theory, crises of overproduction are simultaneously crises of overaccumulation of capital and crises of overproduction of commodities" (Mandel 1991: 42). Friedrich Engels' overproduction approach makes no distinction in this respect either (Sablowski 2012: 10-11). See also Marx 1991: 359. It goes beyond the scope of this work to participate in the debate on overproduction theory, but at least it should be introduced, since 'overproduction of capital' is relevant to the monetary theory of value approach (see the explanations on 'excess capital theories' in this chapter).

of any explicit 'monetary overviews of Marxian crisis theories', which probably has something to do with the circumstance that it is above all a modern tendency to incorporate money and credit theory into the Marxian framework (Hein 1998: 139; Hoff 2009: 292). Therefore, it is outside the scope of this work to incorporate monetary aspects as a structural element of the overview. Instead, two further statements on money and credit are intended to deepen the connection between monetary phenomena and crisis theories. First, Marx contradicts 'Say's law' by pointing out the possibility that money can be stored and withdrawn from the circulation process (Marx 1982: 208-209). Hence, the possibility of crisis must be a reality of a monetary economy. Second, there is a similar dynamic when capitalists have to decide whether to invest their money in 'productive capital' or in financial spheres (cf. chapter 3.2.3). Capital flows to financial markets can slow accumulation in the industrial sector.

Excess supply theories are based on Marx's 'reproduction schemes', which represent a balanced capitalist mode of production against the background of a process of exchange between two departments. More specifically, the first department is responsible for the production of constant capital such as machines, while the second department is responsible for the reproduction of variable capital or, to put it more simply, for the production of consumption goods. The "accumulation and reproduction on an expanded scale" (Marx 1992: 158, 565 ff.) represents the possibility of economic prosperity on a national or even global level (Krätke 2013: 58). The reproduction schemes require growth of all different economic components in both departments, variable capital included. The growth of variable capital implies a rising effective demand for consumer goods and proponents of the underconsumptionist position question where this demand should come from (Luxemburg 1975: 103). Another position that questions frictionless accumulation on an expanded scale is the disproportionality position. Given the possibility of different growth rates, the two departments would be likely to grow disproportionally. The anarchical market organization (Shaik 1978: 18) would cause an uneven accumulation and thus a crisis-prone accumulation.

Excess capital theories or overaccumulation theories mainly encompass approaches that refer to "the law of the tendential fall in the rate of profit" (Marx 1991: 317 ff.). In order to distinguish between approaches that refer to "the law", and approaches that do not refer to "the law" but are based on aspects related to overaccumulation, it appears reasonable to introduce the term 'overproduction of capital' for the latter. First, the former approach is presented. In the third volume of *Capital* Marx (ibid) explains why increasing productivity in the form of mechanization is followed by a fall in the rate of profit. Competition forces the capitalists to reduce costs in any possible way including an increase of productivity of fixed capital. "This means that as accumulation proceeds, the proportion of capital that is advanced for the elements of constant capital (plant, equipment, raw materials) tends to rise, and the proportion advanced to employ living labour tends to fall" (Evans 2004: 55). Marx's theory of surplus-value says that living labor is the 'source' of profit (for an explanation see subchapter 3.2.1). Hence, 'mechanization' would cause a tendential fall in the rate of profit.

Second, 'overproduction of capital' approaches refer generally to excess capital and overaccumulation, but not to "the law". Philologically, Heinrich's (2014: 327-340) approach refers to Marx's reflections 'right after' the chapter dealing with "the law" (Marx 1991: 349-368).⁹ Heinrich (ibid.) argues that the sphere of production is expansive and tends to an overproduction of capital. His approach is the basis for the analysis of the economic crisis of the EU in this work and will therefore be explained in more detail in the following subchapters. Further, the profit squeeze position argues that 'too much capital' can lead to a strengthening of the bargaining power of the workers by reducing unemployment due to investments. This would increase the labor share but reduce profits which could lead to an economic downturn (Sablowski 2012: 17-18).

It remains to be said, that the debate about overproduction with its overlapping aspects outlined above points to the existence of approaches that combine features of the strands mentioned (Evans 2004: 57). For example, the French Regulation School emphasizes that both "the law of the tendential fall in the rate of profit" and also underconsumptionist argumentations could be suitable explanations; the historically specific background would be decisive (Sablowsky 2012: 29).

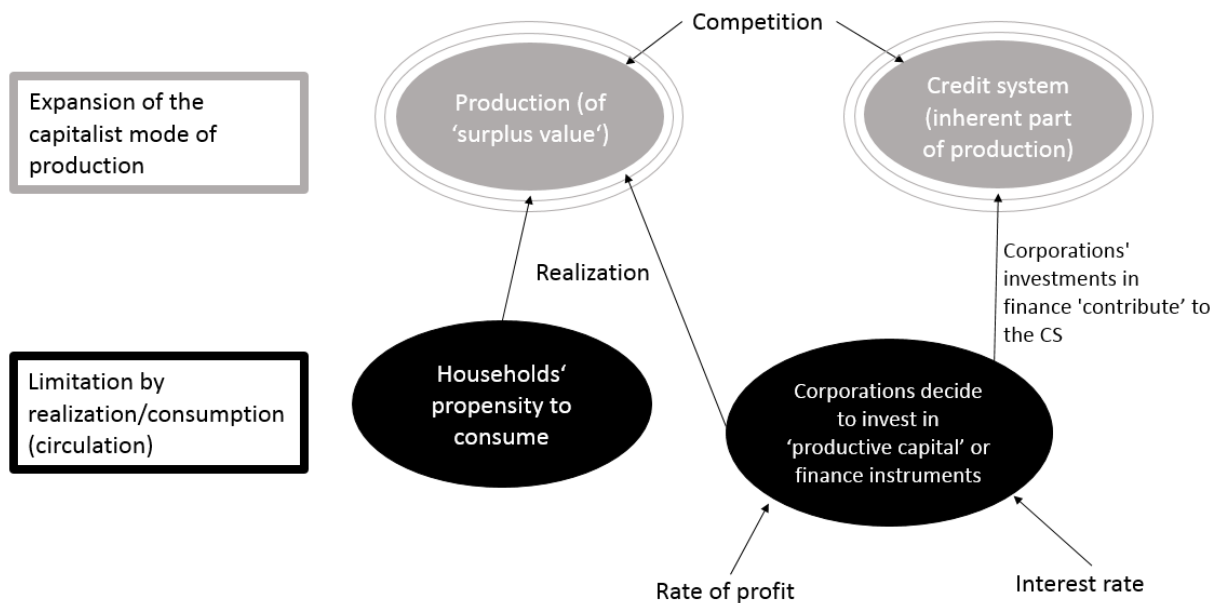
3.2 Heinrich's monetary reconstruction of Marx's approach to crisis

The following subchapters focus on Heinrich's approach. The inherent contradictory character of the capitalist mode of production in Heinrich's interpretation is presented. The interaction of the two main aspects is shown in simplified form in figure three. Following an analysis of the expansive nature of production and the credit system, it is made clear that the realization of what has been produced depends not only on households, but also on the investment decisions of companies.

In subchapter 3.2.4 the 'logical structure' of Marx's work according to Heinrich is presented and criticized. The deepening of the understanding of Heinrich's approach leads to shortcomings in need of clarification, which make access to empirical analysis more difficult. Especially the qualitative transformation from a value level to a price system seems vague. It goes beyond the scope of this work to decide which solution is appropriate for the 'transformation problem' or whether a solution is necessary at all, but it is made clear that difficulties exist.

⁹ According to Engels' editorial work on volume III of *Capital* – the third volume was published in 1894, 11 years after Marx's death – the chapters to which Heinrich refers are part of "the law" (Marx 1991: 349-368). Heinrich criticizes this and postulates that Marx's considerations in the respective chapters are different approaches. Engels' editing would suggest that Marx crisis theory is mainly about "the law" or directly related to it (Heinrich 2014: 358). For this work, Heinrich's (2014: 365-368) monetary reconstruction based on the first subchapter of chapter 15 (Marx 1991: 349-355) is of interest, which, according to Heinrich, is *not* connected to "the law".

Figure 3: Heinrich's monetary theory of value approach to crisis



Source: Heinrich 2014, author's representation

3.2.1 Expansion of the production of surplus-value

As already mentioned, value theoretical dimensions are part of the theoretical reference of this work. Therefore, the expansion of production, as explained here, involves 'value related aspects'. In the Marxian framework the production process is characterized by the production and accumulation of surplus-value respectively profit. The more surplus-value, the better, as explained above.

Marx's general formula of (money) capital $M - C - M'$ (Marx 1982: 247 ff.) depicts the difference between money capital advanced M and money capital returned M' which has no inherent limitation (Heinrich 2011: 63). M' can be understood as $M + \Delta M$ and ΔM is defined as surplus-value (Moseley 2016: 8-9) at this point. Thus, the most important elements are mentioned, but how is it that the circulation in the general formula of capital ends with an increment to M ? Given the exchange of equivalents neither the first exchange M (money) – C (commodity), nor the second exchange $C - M'$ can explain the 'appearance' of surplus-value. C must have some influence on this process. In order to approach the question of where the surplus-value originates, it is helpful to look at the "formula for the circuit of money capital" (Marx 1992: 109 ff.):

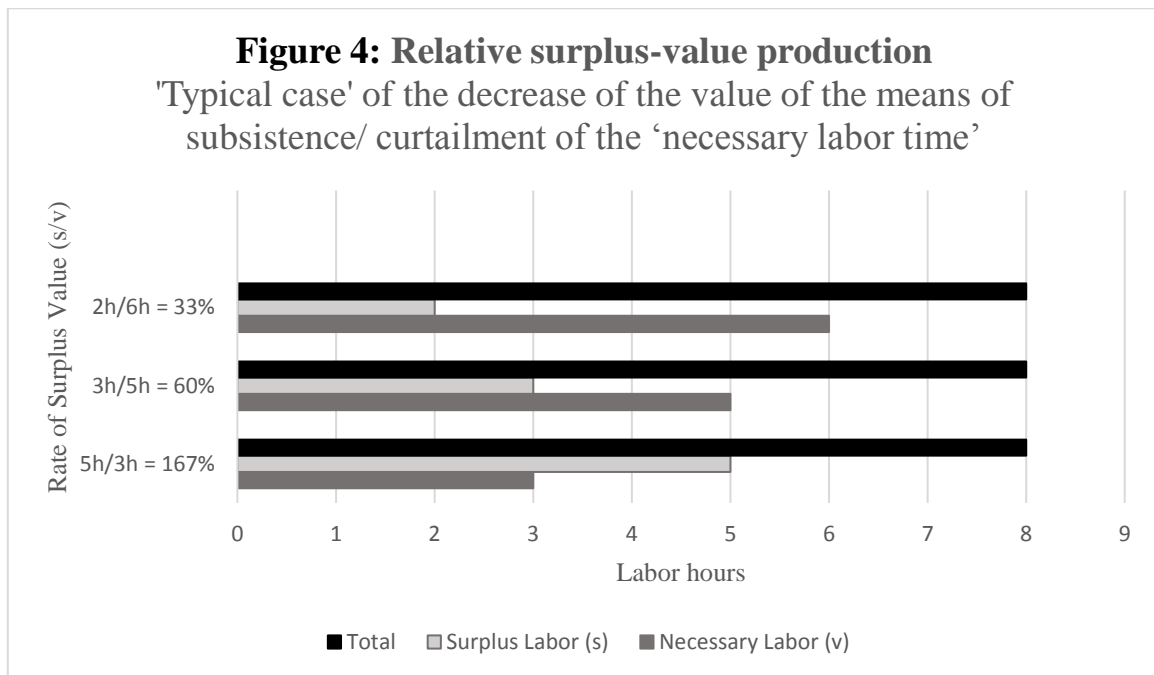
$$M - C < \frac{L}{mp} \dots P \dots C' - M^{10}$$

According to Marx it can only be the use-value of a special commodity that produces surplus-value – the commodity labor-power (L) (Heinrich 2005: 87; Marx 1982: 301). The total working hours of a worker or total value created by a worker go beyond the ‘necessary labor time’ or value – in this necessary labor time the workers create the value which is necessary for their reproduction. This necessary labor value ‘normally’ matches their actual wages. Consequently, the workers create surplus-value which is the difference between total labor hours or total value created by the workers and necessary labor (Marx 1982: 324). For the sake of simplicity, profits are described here as the ‘empirical expression’ of surplus-value.

To be more specific Marx (1982: 281 ff., 427 ff.) introduces the production of “absolute surplus-value” and “relative surplus-value”. The former is characterized by the extension of the working day but also includes the intensification of the working day (Heinrich 2005: 102-103). Whereas relative surplus-value production includes cooperation, the division of labor and machinery. An increase of surplus-value through the extension of the working day (absolute surplus-value production) means that the ‘necessary labor time’ remains the same but the surplus labor (difference between total labor hours or total value created by the workers and necessary labor) increases and therefore, the surplus-value increases. Harvey (2011: 165) draws attention to the relevance of absolute surplus-value production also for the modern labor market by, among other things, mentioning the (modern) Japanese term for death by overwork: *Karōshi*. An intensification takes place when the work process is accelerated. For instance, work procedures that used to be part of the ‘normal’ working day, such as putting on work clothes, are no longer paid for. Workers would have to integrate this activity into the ‘normal’ working day, which would increase labor intensity. The more intensive working day leads to an increase in the value product, which corresponds to the result of the extension of the working day (Heinrich 2005: 103).

According to Marx the increase of surplus-value by a curtailment of the ‘necessary labor time’ is the production of relative surplus-value. Figure 4 shows see the decrease of ‘necessary labor’ and the increase of surplus labor from top to bottom, while the total working hours remain constant. Relative surplus-value production consists mainly of two cases: the “typical case” (Heinrich 2005: 103) is the reduction of the value of the means of subsistence which can be achieved by productivity increases in branches of industry that supply the necessary means of subsistence or the means by which they are produced.

¹⁰ L = labor-power; mp = means of production; the dots represent the interruption of the circulation process; P = process of production; C' = an increase in C as a result of surplus-value



Source: Marx (1982), author's representation

The untypical case according to Heinrich (2005: 103) is the curtailment of the 'necessary labor time' through the decrease of the 'standard of living' of the working class. This decrease of the 'standard of living' expresses the decrease of the means of subsistence, which are considered necessary for the reproduction of the employees. Thus, in both cases there is an increase in surplus-value by a curtailment of the 'necessary labor time'. What is different is the reason for the curtailment. In the 'typical case' it is caused by a productivity increase in the relevant branches. In the second case, on the other hand, the increase in surplus-value by a curtailment of the 'necessary labor time' is due to a reduction in the 'standard of living' of the working class.

Harvey (2011: 193) emphasizes that the term 'relative surplus-value production' consists of two aspects: first (the 'typical case'), productivity increases in industries that are relevant for the reproduction of the employees (all capitalists benefit from the reduction of variable capital or labor costs) and second, productivity increases for single entrepreneurs which result in extra-profit for the single entrepreneur. How far *general increases* in productivity are part of *relative surplus-value production* seems questionable: Marx (1982: 432) points out the necessity of the "curtailment of the necessary labor-time" for relative surplus-value production, which takes not place when productivity only increases "in those branches of industry which supply neither the necessary means of subsistence nor the means by which they are produced" (ibid.).

Against the background of the *general increase* in productivity and not restricted to industries that are linked to the production of means of subsistence, Heinrich (2005: 104-107) analyzes why capitalists are forced to keep up with the competition – Marx (1982: 433) calls the reason

the “coercive laws of competition”¹¹. Interestingly, Heinrich (2005: 114) concludes that productivity gains would not lead to shorter working days, but on the contrary would lead to an extension of working time. Capitalists are interested in the possibility of realizing extra surplus-value as long as their machines are at a higher level of productivity. In general, the faster a machine transfers its value to the products it produces, the lower the risk that it is replaced by a new machine before transferring its total value (ibid.).

In terms of absolute and relative surplus-value production, Marx concentrates on the variables related to the rate of surplus-value (s/v) and does not at this stage consider the organization of constant capital (c).¹² In connection with the rate of profit ($s / c + v$) Heinrich (2005: 142-143) analyzes aspects that seemingly go beyond absolute and relative surplus production. Efficiency improvements regarding the constant capital can decrease the value of c and therefore, increase the rate of profit. For example, the introduction of night shifts can lead to a more effective usage of production buildings and facilities. Further, the acceleration of the turnover times of capital can increase the production of surplus-value.

3.2.2 Expansion of the credit system

Heinrich (2011: 59) hints at Marx’s considerations in the second volume of *Capital* where Marx elaborates on the necessity of a developed credit system. In the theoretical framework of Marx’s value theory, it is logically not possible that the capital advanced, which includes constant and variable capital ($c + v$), can realize commodities with the total value of constant capital, variable capital and surplus-value ($c + v + \Delta M$) without credit relations.

Regarding Marx’s method of presentation, it is not clear whether the credit system is part of Marx’s attempt to analyze the ‘essential features’ of the capitalist mode of production, or whether it is the beginning of Marx’s analysis of concrete historic configurations of capitalism (Breda 2015: 105; Heinrich 2014: 290). To simplify matters, the first step here is to begin with the more general term of “interest-bearing capital” (Marx 1991: 459). The qualitative argumentation is that money can only become interest-bearing capital because it is possible to use that money as capital. Money is also part of the accumulation process in the form of interest-bearing capital, which can be represented as follows: $M - M - C - M' - M'$ (Marx 1991: 461). The interest-bearing capital ($M - M'$) is added to the general formula. Of course, money can be lent at interest without using it as capital (usury), but that is not the specific determination

¹¹ In how far and in what way ‘competition’ is part of Marx’s three volumes of *Capital* and in particular of the third volume does not seem so clear (see Bischoff/Lieber 2011). In his “Wissenschaft vom Wert” [‘The Science of Value’] Heinrich (2014: 365 ff.) does not mention competition in the context of the expansive character of (relative) surplus production, whereas in other contributions he involves the concept of competition (e.g. Heinrich 2011: 63). This problem is addressed ‘to a certain extent’ in the following chapters 3.2.4 and 4.1.

¹² Constant capital (c) denotes means of production such as machines, which are referred to as ‘mp’ in the formula for the circuit of money capital (above). c should not be confused with C (commodity). Variable capital (v) represents the capital used for wages, referred to above as L ; s stands for surplus-value.

of the form of interest-bearing capital in capitalism. The quantitative argumentation is that the interest rate usually has to be lower than the average profit rate (Heinrich 2014: 288) because interest is just a slice of surplus-value (Stützle 2013: 62).

When addressing the terms credit and “fictitious capital” (Marx 1991: 597 ff.) the question of level of abstraction the analysis is located remains (Heinrich 2014: 290-296). Therefore, the gradual approach to more concrete forms is described, but cannot always be sufficiently reflected within the limits of this work. Heinrich’s ‘reconstruction approach’ regarding the granting of credit includes the multiplying money supply of banks and for that reason can consider consequences derived from credit money creation ‘out of nothing’ (Heinrich 2014: 295; Heinrich 2005: 159-160). The credit system with its restrictive and expansive impact on the ‘real’ capitalist mode of production, would have a steering effect on the economy (Heinrich 2014: 301). Stützle (2013: 63-64) emphasizes the centralization of control over money and Breda (2015: 113-114) describes the power of the capital markets to decide which production processes to finance. In addition, Heinrich (2014: 298-299) postulates the possibility of a trustworthy bank that can mitigate economic crises as a ‘lender of last resort’ in the Marxian framework, despite conflicting statements from Marx on this matter.

These elaborations underline Heinrich’s position that a credit system on the basis of fiat money meets the demands of a developed capitalism better and they hint at the coherence with the Marxian value theoretical framework (Heinrich 2014: 304), although Marx and other heterodox economists insisted that crises transform “multi-layered credit relations to simple monetary relations” (Ganssmann 2013: 10).

Further, the approach includes fictitious capital that is independent from the movement of the actual capital (e.g. shares or securities such as promissory notes). The market ‘value’ of a promissory note changes dependent on the difference between the interest rate of the specific share and the general interest rate. The maturity of the promissory note is important, too (Heinrich 2014: 296). It is similar with shares, with the difference that the future profits of the companies are decisive (Heinrich 2005: 163). On the one hand ‘real capital’ is transferred from the money owner to the company, and on the other hand there are entitlements to interest payments with which further transactions may be conducted (Heinrich 2005: 163). These securities and shares can be the basis for further ‘derived’ financial products. Hence, the credit system cannot be reduced to its function as intermediary of the capitalist reproduction mode. In this context the Formula notation of $M - M'$ becomes more important. Even the general formula $M - C - M'$ doesn’t reveal much about the production of surplus value which is explained above but the simple transaction of money capital (M) – ‘more money capital’ (M') veils the process of surplus production even more (Stützle 2013: 61-62) and “capital obtains its pure fetish form” (Marx 1991: 517).

The formula $M - M - C - M' - M'$ is not only helpful to understand that interest-bearing capital is an inherent part of the reproduction of capitalism, it also suggests that similar effect mechanisms of competition take place as with ‘producing capital’ as explained above. The actors of

the credit system do not have the goal to provide firms with credit but to make profit (Stützle 2013: 63). New financial instruments that emerge against the backdrop of these profit interests can also deepen the conflict between industrial and fictitious capital (Heinrich 2001: 174-175) by redirecting capital flows from 'productive' spheres to the new financial instruments because of the prospect of higher profits. For these reasons, the expansive nature of the credit system not only facilitates the expansive nature of the production of surplus value, but, on the contrary, can even prevent investments in the 'productive' sphere. Subchapter 4.3 elaborates on the decision of the individual capitalist whether to invest in 'productive' or fictitious capital.

With regard to the expansive nature of the credit system, one might think in particular of the 'subprime' business in the USA, which reached an enormous dimension shortly before the outbreak of the crisis. The extent of securitization of mortgages indicates the expansion of financial products. In the EU there is reason to believe that the indebtedness of non-financial companies and accordingly, the increasing importance of banks and capital markets played an important role in preventing "zombie companies" from going bankrupt (Kader 2018: 40).

3.2.3 Limitations of circulation

After the surplus-value is appropriated by the owners of the means of production in the production process (cf. subchapter 3.2.1), the surplus-value has to be realized (Heinrich 2014: 365).¹³ The last part of the formula for the circuit of money capital $C' - M'$ must be completed so that the entrepreneurs can obtain their profits. Despite the need for both production and circulation to take place, there are significant differences between these two moments of the process of capitalist production as a whole: "The conditions for immediate exploitation [production of surplus-value – S.G.] and for the realization of that exploitation are not identical. Not only are they separate in time and space, they are also separate in theory. The former is restricted only by the society's productive forces, the latter by the proportionality between the different branches of production and by the society's power of consumption" (Marx 1991: 352).

Heinrich (2014: 366) emphasizes that the limited consumer power of society cannot be understood only in terms of the demand of the working class but must also include the "[...] drive for accumulation, the drive to expand capital and produce surplus-value on a larger scale" (Marx 1991: 352-353). Therefore, Heinrich's monetary reconstruction of Marx's crisis theory

¹³ According to a *monetary* theory of value interpretation, value is not immediately created in the production process. The product must be sold, otherwise the "exploitation is not realized" (Marx 1991: 352). This has to do with Marx's identification of a "dual character" of labor, which he regards as the "Springpunkt" (Marx 1962: 56 ff.; Marx 1982: 131 ff.) or as one of the most significant aspects of his approach.

Accordingly, "concrete labor" (Marx 1982: 137) is 'particular labor' that produces the use-value and can be observed in the actual production process. In contrast, "abstract human labor" (Marx 1982: 142) can only exist after the abstraction from concrete labor in the process of exchange of commodities (after selling) – see also Heinrich 2005: 45 ff. In contrast, a "substantialist conceptualization" (Elbe 2010: 217, author's translation) assumes that 'abstract labor', regardless of exchange, immediately constitutes value, which is contradicted by a monetary theory of value approach.

focuses not only on working class demand but also includes investment decisions or the demand of capital¹⁴. Since Marx does not elaborate on the 'drive for accumulation', Heinrich (2001: 171-172) introduces two main points. First, the "coercive laws of competition" (Marx 1982: 433), to which reference is also made in subchapter 3.2.1. These 'laws' would force the owners of the means of production to increase productivity.¹⁵ In particular, this can result in an accelerated renewal and expansion of fixed capital, which in turn can lead to further investments. On the other hand, a situation in which the fixed capital has just been renewed may lead to overcapacity and stagnation (Heinrich 2014: 171-172).

Second, the individual capitalist has to make decisions that depend on profit expectations and interest rates. Based on this simplified presentation, there are four different possible cases: (1) low interest rates and high profit expectations; (2) high interest rates and low profit expectations; (3) low interest rates and low profit expectations; (4) high interest rates and high profit expectations. Especially the first two cases are decisive regarding capital's 'drive for accumulation'. In the first case, capital is more likely to flow into industrial investment opportunities than into financial instruments. In addition, accumulation in the industrial sectors is probably accompanied by credit raising, which can even lead to excess demand (Heinrich 2001: 172). In the second case, high interest rates slow down accumulation in the industrial sphere and rechannel the 'drive for accumulation' into the financial sphere. 'Fictitious capital' accumulates and the lack of demand in industrial production grows. Here, too, a leverage effect through loans can lead to excess demand, but in this case for financial instruments. Heinrich (ibid.) emphasizes that the general possibility of crisis at the level of simple circulation, the interruption of $M - C - M$ by the hoarding of money, takes concrete shape against the background of the credit system. Capital previously invested in the production of goods is no longer reinvested in means of production and labor, but in forms of 'fictitious capital'.

After focusing on the demand caused by the 'drive for accumulation' it should be mentioned that Heinrich (2014: 366) also identifies a destabilizing factor regarding the level of wages. He presents parts of Marx's work that say that a high wage level is a warning sign for a crisis: "It thus appears that capitalist production involves certain conditions independent of people's good or bad intentions, which permit the relative prosperity of the working class only temporarily, and moreover always as a harbinger of crisis" (Marx 1992: 487). This aspect is central to the profit squeeze approach discussed in subchapter 3.1. High wage levels therefore have contradictory effects. If it increases the working class' propensity to consume, a high wage level is helpful for the realization of profits. On the other hand, a high wage level – with a given capital intensity and productivity – is decisive for the rate of profit (Altvater 2010: 85). Thus, a high wage level can lower the profit expectations.

¹⁴ This 'drive for accumulation' must be on another level of abstraction than the expansive character of surplus-production (cf. subchapter 3.2.1) although it shares similarities with the latter. Heinrich does not explicitly clarify that.

¹⁵ Again, the question is, how far competition is and can be part of Heinrich's approach.

In summary, it can be said that the realization of profits in the circulation process of capital is limited by the consumer power of society. The consumer power consists of the demand of the working class with its contradictory implications *and* the ‘drive for accumulation’. The latter is characterized by competitive pressure to increase productivity and decision-making in the context of profit expectations and interest rates.

3.2.4 Abstraction levels, ‘ideal average’ and associated explanatory deficits

Heinrich himself does not seem to see any fundamental problems regarding the application of his approach. He may not have a detailed elaboration on specific empirical indicators, but he presents the possibility of applying his approach on several occasions (e.g. Heinrich 2010; Heinrich 2011). Nevertheless, Heinrich (2001: 174; 2011: 66) does mention that it is not possible to only insert only some data in a theoretical framework that has the demand to be on an abstraction level of an “ideal average” (Marx 1991: 970). Consequently, the transition to empirical phenomena turns out to be difficult. The sequence of the subchapters 3.2.1 – 3.2.4 and the following chapter 4 of this thesis is a reflection of Heinrich’s presentation method. He introduces first the ‘expansion/limitation-approach’ (corresponding to subchapters 3.2.1 – 3.2.3), then the ‘ideal average’ (corresponding to this subchapter), and only then does he introduce the empirical peculiarities (which correspond to chapter 4) (Heinrich 2011: 63-68). Against the background of this structural approach, the explanatory deficits presented in this subchapter concentrate on the ‘ideal average’. The reason why questions concerning the level of abstraction are the focus of this subchapter, not only reflects Heinrich's emphasis, but also allows us to obtain a better impression of how empirical observations can be part of his monetary reconstruction.

Heinrich (2014: 342) stresses that the difficulties regarding Marxian crisis theories are not only caused by different approaches in terms of content in the various manuscripts of Marx (see subchapter 3.1), but also by what Heinrich (ibid.) considers as the changing of the “theoretical status” of, *inter alia*, crisis theory in the general framework of Marx’s work. Heinrich offers an interpretation of the change of Marx’s plan regarding the ‘structural logic’ of his *Critique of Political Economy*. This is referred to in Heinrich as the ‘change in plan problem’, and is important in his interpretation alongside the ‘ideal average’ and the ‘transformation problem’. It should be clear that it is not possible within the framework of this thesis to develop a position of one’s own on these various topics, which have been discussed by scholars since the end of the 19th century. Instead, Heinrich’s position on these topics should become clear in order to facilitate the transition from theory to practice in chapter four.

3.2.4.1 'Change in plan problem' and 'ideal average'

According to Heinrich's philological work on Marx's plans for his *Critique of the Political Economy*, Marx developed a structure after finishing his *Grundrisse* (Marx 1986: 49 ff.) in 1858, which consists of six books (see table 2).

Table 2: Marx's six books plan and the substructure of book one ('about capital')

Book 1	About capital <ul style="list-style-type: none"> 1. Capital in general <ul style="list-style-type: none"> a. Value b. Money c. Capital in general <ul style="list-style-type: none"> i. Production process ii. Circulation process iii. Unity of both or capital and profit, interest 2. The competition or the praxis of the many capitals among each other
Book 2	Property
Book 3	Wage labor
Book 4	State
Book 5	International trade
Book 6	World market

Source: Heinrich (2014): 180, author's translation

This division into 'capital in general' (part one of book one) and 'competition of the many capitals' (part two of book one) would reflect Marx's intention to first present his *Critique* on an abstract level – on a level that presents the "immanent laws of capital" (e.g. Marx 1982: 433) – then to become more concrete with the analysis of competition and the credit system, and finally to arrive at the "most complete form" of capital – share capital (Rosdolsky 1973: 45). Competition would mean that there are many capitals and that the 'real movement' of actual capital is addressed in the second part of book one (Rosdolsky 1973: 61). Rosdolsky (1973: 73) has the opinion that this structure is the key to understanding Marx's *Capital*; volumes one and two would be on the abstract level of 'capital in general' and the methodological difference would begin in volume III, where the analysis of the actual movement of capital begins (Rosdolsky 1973: 71 ff.).¹⁶

Heinrich contradicts Rosdolsky's interpretation and states that Marx had 'conceptual' difficulties to develop his categories on the logical base of 'capital in general' and 'competition of the

¹⁶ Rosdolsky's interpretation is similar to Moseley's opinion of the structural logic of Marx's *Capital*. See subchapter 4.1. For a debate between Heinrich and Moseley regarding the 'change in plan problem' see Heinrich 1989 and Moseley 1995. For an introduction and a summary of the debate see e.g. Hoff 2009: 253-275.

many capitals' (Heinrich 2014: 186-189), besides Heinrich (2014: 180-181) mentions 'philological' arguments why Marx abandoned the original plan of 1858/59. The abstraction from the 'many capitals' in the category 'capital in general' (first part of the first book) would not be possible (Heinrich 2014: 192) because with 'capital in general' Marx wanted to thematize, among other things, the representation of reproduction and circulation (see table 2, subchapters i and ii). And according to Marx, this representation needs different departments that include different forms of capital. Therefore, the 'many capitals' must be included in what Marx initially wanted to discuss with the concept of 'capital in general' (Heinrich 2014: 186-187). In order to solve this problem, the terms "individual capital" and "constitution of the social total capital" (Heinrich 2014: 193) became structural categories. Accordingly, Heinrich (ibid.) states that 'individual capital' and 'constitution of the social total capital' are presented on three different abstraction levels that build on each other: the direct production process (volume I of *Capital*), circulation process (volume II) and the overall process (volume III). In the first volume of *Capital* the production of surplus-value and capital would abstract from interaction with other capitals until chapter 25. Up to this point, 'individual capital' is therefore decisive. In chapter 25 "The General Law of Capitalist Accumulation" (Marx 1982: 762 ff.) the analysis of the 'constitution of the social total capital' begins. In Heinrich's (2014: 193-194) interpretation a similar pattern follows in volumes two and three.

In consequence, the conception of the 'many capitals' – after Marx supposedly switched to the new plan – is, according to Heinrich, at least partly constitutive of the more abstract 'immanent laws' of the capitalist mode of production. This also means that the 'many capitals' are not similar to the 'real movement' of capital anymore because in the new conception, the 'many capitals' are part of the 'immanent laws' which have nothing to do with the 'real movement'. Thus, there would remain a conceptual part of 'many capitals' that is not part of the 'immanent laws' – the 'real movement-part' of the 'many capitals'. This 'real movement of the competition' *would not be part of Marx's Capital* (Heinrich 2014: 195).

Although Heinrich's structural interpretation is now clearer, the transition to empirical phenomena has not been addressed yet. In his interpretation the categories 'individual capital' and 'constitution of the social total capital' and their conceptual development characterize the 'ideal average', that abstracts from "[...]the form and manner in which these connections [the inner connections of the 'ideal average' – S.G.] appear to them as overwhelming natural laws, governing them irrespective of their will, in the form that the world market and its conjectures, the movement of market prices, the cycles of industry and trade and the alternation of prosperity and crisis prevails on them as blind necessity" (Marx 1991: 969-970). So far, there is the 'ideal average' which comprises the three volumes of Marx's *Capital* and on the other hand, a hint at another treatise by Marx that should deal with the 'actual movement of competition' (Heinrich 2014: 195) – which was obviously not written. Further, Heinrich (ibid.) mentions that in the context of the analysis of crisis and credit in volume III, it is not clear whether Marx is already on the abstraction level of the 'real movement of competition'.

3.2.4.2 The transformation problem

After realizing in the previous subchapter that Heinrich's interpretation of the structural logic of Marx's *Capital* is only helpful in a negating way – the 'real movement of competition' is not addressed in the three volumes, and against the background of crisis and credit the abstraction level is not clear – the discussion of the 'transformation problem' in this chapter should bring more clarity. After all, this 'problem' is about the transformation of values, which are undisputedly a central category for the 'immanent laws' of capital, into (production) prices that at least represent a further approximation to empirical phenomena.

Without a transformation "the general rate of profit (and hence also the production price of the commodity) remains a meaningless and irrational conception" (Marx 1991: 257). This might be the reason why already in Friedrich Engels' lifetime the 'problem' was getting some attention (Krätke 2006: 147-150). Heinrich (2014: 268) stresses that transformation is necessary because exchange in value terms would not be logically compatible with Marx's approach.¹⁷ And Moseley (2016: 374) emphasizes that Marx's alleged mistake regarding this problem is "the main reason the labour theory of value has been abandoned". Thus, the transformation appears necessary and of importance.

The transformation takes place with the determination of the production price. The production price can be understood as the "actual long-run equilibrium price" (Moseley 2016: 120, footnote 12). The production price (p) is the sum of the cost price (k) and average profit (kr). The average rate of profit is r (Heinrich 2014: 268):

$$p = k + kr \quad \text{or} \quad p = k(1 + r)$$

At this point, Marx makes two assumptions. First, he inserts the 'average rate of surplus-value of branches' ($\frac{\sum s_i}{\sum(c_i + v_i)}$) into r (the variables s_i , c_i and v_i denote surplus-value, constant and variable capital of the production branch i). Then he inserts $c_i + v_i$ (sum of variable and constant capital that is necessary for the production of the respective commodity in production branch i) for the cost price:

$$p_i = (c_i + v_i) \left(1 + \frac{\sum s_i}{\sum(c_i + v_i)}\right)$$

According to Heinrich (2014: 270) the inserting of the 'average rate of surplus-value for branches' into the rate of profit (r) for the production price and therefore, the equating of both quantities could be right in hindsight, which cannot be analyzed at this point. But to insert values $(c_i + v_i)$ into the cost price has to be wrong because it would assume that capitalists could buy their means of production in 'terms of value' and workers their means of subsistence in 'terms of value'. In this line of argumentation, the cost prices themselves would be

¹⁷ For an explanation see Heinrich 2014: 268, footnote 27. But above all see Marx 1982: 421.

dependent on production prices which we want to ‘generate’ – a circular argument which cannot prove much.

In Heinrich’s (2014: 279-280) view a quantitative solution to the ‘transformation problem’ is not possible, since a transformation from one quantitative system to another would abstract from exchange and money. But according to a monetary theory of value there is no value without exchange and money is the necessary form of appearance of value. Hence, there cannot be a completely independent existence of a value system and a price system. The transformation must be a conceptual, logical one. This line of argumentation resembles Engels’ (1991: 1031) summary of Werner Sombart’s position: “Value is not present at the phenomenal level, in the exchange relationship of capitalistically produced commodities; it does not dwell in the consciousness of the agents of capitalist production; it is not an empirical fact but an ideal or logical one”.

On the abstraction level of the third volume of Marx’s *Capital* the commodities are no longer results of the direct production process (volume I) but they are a unity of the production and circulation processes. The commodities are no longer associated with surplus-value but with average profit (Heinrich 2014: 281). The further development of the ‘form determinations’ of the commodity would be a correct interpretation of transformation. Exchange at production prices means that it is no longer only the relation of individual labor to social total labor (volume I of Marx’s *Capital*) but at the same time the relation of the size of individual capital to social total capital that determines the exchange relations (ibid.). Regarding the relation of individual labor to social total labor (volume I) it is decisive for the exchange relations of commodities that there is demand for the commodities and that socially necessary labor (average productivity) is applied (Heinrich 2005: 49). With the second relation of the size of individual capital to social total capital, Heinrich must refer to the equalization of the general rate of profit (Marx 1991: 273 ff.). Heinrich does not go any further into the transformation topic but introduces new categories like interest-bearing capital and credit (Heinrich 2014: 284) and arrives at the ‘final form’ of the average rate of profit (Heinrich 2014: 284). The latter category does not appear to be preceded by any further considerations regarding the transformation topic (cf. Heinrich 2014: 284-286).

3.2.4.3 Conclusion

Subchapter 3.2.4 extends this work to topics which are fundamentally related to Marxian crisis theory, but how far and in which way these topics must be dealt with in order to understand Marxian crisis theory does not seem clear. The aim of the subchapter 3.2.4 was to clarify Heinrich’s statements regarding the relation of theory and practice in the context of Marx’s *Critique of the Political Economy*. Overall, Heinrich advocates a qualitative solution that states that the further development of the ‘form determinations’ of the commodity is necessary for a categorical transformation. It seems not so clear, how far the qualitative approach is already developed. For example, after rejecting Marx’s transformation approach, it seems questionable to simply proceed with the following categories of Marx’s *Capital* such as the ‘final form’

of the average rate of profit. Against the background of the intention of this subchapter, the qualitative solution and the lack of clarity about the state of its development are not helpful. Whether this qualitative approach that cannot be falsified (Popper 2005) is correct and can be further developed is beyond the scope of this work.

On the other hand, Heinrich makes it clear that quantitative solutions to the ‘transformation problem’ are not compatible with analytical aspects of a monetary theory of value. The problem is therefore that quantitative solutions, which might be more ‘practical’, do not correspond to the approach chosen in this thesis and that the qualitative solution appears too rudimentary or vague in terms of empirical analysis. The approach (Moseley 2016) presented in the following subchapter 4.1 takes into account characteristics of a monetary theory of value and seems to be more applicable to empirical phenomena.

4. Towards the “surface of society”¹⁸

This chapter begins with an introduction of Moseley’s (2016) interpretation of Marx’s *Critique of Political Economy*, which includes two different levels of abstraction in Marx’s work in *Capital* Volume I - III and its meaning for surplus-value production, the rate of profit and production prices. A comparison of Heinrich’s and Moseley’s interpretation suggests a certain compatibility that helps to identify an ‘actual profit rate’. A further approach to the empirical level is facilitated by the application of analytical terms of the ‘regulation school’, which include regulatory aspects like economic policy. At the end it is shown how the European economic crisis can be understood with Heinrich’s monetary theory of value approach. Within the framework of an accumulation regime and a mode of regulation, the expansive character of production and the credit system, and their limited possibilities for realization are presented. Moreover, the ‘drive for accumulation’ and the associated influencing factors are discussed empirically.

4.1 Moseley’s abolition of the transformation problem

Moseley’s ‘macro-monetary’ interpretation of Marx’s theory does not neglect significant monetary characteristics, that are also important for Heinrich’s approach, and Moseley seems to facilitate an ‘immediate transition’ to empirical phenomena. However, there are differences between these approaches (see table 3). Moseley refers to a logical structure of Marx’s *Capital* that is similar to Rosdolsky’s (1973) understanding presented in subchapter 3.2.4 above (e.g. Moseley 2016: 5, 44), while Heinrich assumes that Marx changed his plan (see subchapter 3.2.4 above). As indicated above the original plan of Marx’s *Critique of Political Economy* included two main levels of abstraction: ‘capital in general’ and ‘competition’ (or ‘many capitals’). According to Moseley on both levels actual quantities of money are involved – the same money capital advanced (M), which at the beginning of the circuit of capital is *taken as given*, as *initial data* (Moseley 2016: 15-18), plays a role on both levels.

¹⁸ Marx 1991: 117

“[T]he main goal of the theory is to explain the origin and magnitude of the total ΔM in the economy as a whole [...]” (Moseley 2016: 4). The first level focuses on the production and the determination of surplus-value. The presentation begins with the *production* of the surplus-value.

4.1.1 Surplus-value production and determination at the ‘macro level’

Surplus-value (S , or in terms of the circuit of money capital ΔM) can be depicted as the difference between the ‘value price’ of the commodities produced and sold (P) and the cost price (K).

$$(1) S = P - K$$

The cost price consists of actual consumed quantities of constant capital (C) and variable capital (V) which are explained above. This price expresses the costs for the capitalists (Heinrich 2005: 140-141). Moseley (2016: 28-29) emphasizes that these quantities are equal to the actual long-run equilibrium prices (prices of production, which are explained below) and in order to indicate that they are taken as given, he proposes to use a bar over these variables:

$$(2) K = \bar{C} + \bar{V}$$

After section three (Marx 1982: 138-162) of chapter one of volume I of *Capital*, value would refer to the form of appearance of value in terms of money and prices, that is why Moseley (2016: 30) puts emphasis on the term: “value-price of commodities as products of capital”. The quantity of actual money constant capital advanced (\bar{C}) becomes the first quantity of this ‘value-price’ similar to equation (2). The new-value component of the value-price of commodities (N) is the second quantity. This component reflects the explanation of surplus-value above (subchapter 3.2.1). The new value produced by the current labor (N) recovers the variable capital paid to workers and the rest is the surplus-value (ibid.), so N is ‘more’ than \bar{V} and the whole equation differs from the above equation of the cost price:

$$(3) P = \bar{C} + N$$

N is determined by the product of ‘current socially-necessary labor-time in units of abstract labor-hours’¹⁹, and the “(money) new value produced *per hour* of abstract labour (m)” (Moseley 2016: 31)²⁰:

¹⁹ Moseley (2016: 31, footnote 7) emphasizes that ‘abstract labor’ should be understood as “unskilled labor of average intensity”. For more information regarding this component (‘abstract labor’) of the “Springpunkt” (Marx 1962: 56) of political economy see e.g. Heinrich 2005: 45 ff.

²⁰ How far ‘abstract labor’ can be multiplied with a monetary quantity seems questionable. In Heinrich’s interpretation this would not be possible. Moseley (2016: 31, footnote 8) refers to chapter 8 of his book.

$$(4) N = m L$$

Moseley (ibid.) calls the proportionality of the new value to the “quantity of socially-necessary labour time employed in the economy as a whole” the “key assumption in Marx’s labour theory of value”. In addition, this algebraic expression (N) of abstract labor-hours facilitates the understanding of the production of surplus-value.

In the following equation (2) and (3) are inserted in equation (1) ($S = P - K$):

$$(5) S = (\bar{C} + N) - (\bar{C} + \bar{V})$$

$$(6) S = N - \bar{V}$$

Inserting (4) into (6):

$$(7) S = mL - \bar{V}$$

“Thus, according to this theory, the quantity of surplus-value is determined by the difference between the new value produced by workers and the variable capital they are paid” (Moseley 2016: 33).²¹

After the presentation of the production, the determination of surplus-value is explained (Moseley 2016: 33 ff.). Therefore, the working day of the average worker is divided into two parts: ‘necessary labor’ (NL) and ‘surplus labor’ (SL), which taken together are the ‘current socially-necessary labor-time in units of abstract labor-hours’ (L) as described above. ‘Necessary labor’ (NL) is the “number of hours of abstract labour that it takes the average worker to produce (money) new value that is equal to the average variable capital that is paid to the worker *per day* (V_i)” (Moseley 2016: 33): $NL_i = V_i / m$. Hence, the surplus production of the average worker is algebraically described as follows: $SL_i = L_i - NL_i$. Again, it is referred to equation (7) but this time in the context of an average worker (Moseley 2016: 34):

$$\begin{aligned} (7) S_i &= mL_i - \bar{V}_i \\ &= mL_i - m (NL_i) \\ &= m (L_i - NL_i) \\ S_i &= m (SL_i) \end{aligned}$$

“Thus the quantity of surplus-value produced by the average representative worker per day is proportional to the worker’s surplus labour time, determined in this way” (ibid.). The only remaining aspect is the aggregation of this result. Thus, the total number of workers employed (n) and the average number of working days per year (d) is needed:

$$(8) S = (d n) (m SL_i)$$

²¹ Although Moseley uses the term “determination” at this point, this must be the ‘production’ of surplus-value (cf. Moseley 2016: 34), if Moseley’s differentiation between ‘production’ and ‘determination’ is strict.

“This then is Marx’s ‘surplus labour’ theory of surplus-value. It explains the actual total annual surplus-value produced in the capitalist economy as a whole, and it concludes that the actual total surplus-value is proportional to the total amount of surplus labour of workers, with m as the factor of proportionality (i.e., each hour of surplus labour produces m amount of money surplus-value)” (Moseley 2016: 34).

4.1.2 Distribution of surplus-value at ‘micro level’

According to Moseley (2016: 34) the most important part of the distribution is “the equalisation of the rate of profit across industries” which can be realized with the determination of the production prices. This equalization is an important theoretical reconciliation of Marx’s value theory with an empirical trend towards an equal rate of profit in all industries (Heinrich 2014: 268). The price of production in each industry (PP_i) consists of the cost price (K_i), as explained above, and the product of the general rate of profit (R) and the total stock of capital invested in the industry concerned (M_i). RM_i is therefore the average profit:

$$(9) PP_i = \bar{K}_i - R \bar{M}_i$$

This formula was introduced in Heinrich’s notation in subchapter 3.2.4. In Moseley’s interpretation it is not values which are inserted into \bar{K}_i and \bar{M}_i but the “actual quantities of money capital advanced in the real capitalist economy to purchase means of production and labour power” (Moseley 2016: 37). These are the same quantities as the total \bar{K} and \bar{M} which are taken as given in the production of surplus-value as explained above, with the only difference of disaggregation by industries. It can therefore be stated that *there is no ‘transformation problem’ in this interpretation, since there is no need for values at this point.*

The general rate of profit consists of the surplus-value (S) determined above and the “actual total stock of capital invested, which is taken as given” (\bar{M}) (Moseley 2016: 36):

$$(10) R = S / \bar{M}$$

“The rate of profit in Marx’s theory of prices of production is the actual price rate of profit, which is determined by the prior theory of the total surplus-value” (ibid.). Thus, Moseley’s interpretation includes an *empirically applicable rate of profit.*

4.1.3 Conclusion

After the production and determination of surplus-value in subchapter 4.1.1, it is possible to determine the general rate of profit and then the production price which is the key to the equalization of the rate of profit. Marx’s alleged ‘famous mistake’ to insert values into the formula of the production price is no longer an error, according to Moseley’s interpretation,

because actual quantities of money capital advanced are inserted. Further, Moseley’s interpretation includes an empirically applicable rate of profit on the base of the produced and determined surplus-value. Moreover, the “division of the total surplus-value into commercial profit, interest, and rent” (Moseley 2016: 42) seems unproblematic. What does not seem so elaborated is the relation of values, i.e. abstract labor times required to produce the commodities, to the concept depicted above. Moseley (2016: 19) states that “in Volume I, it is provisionally assumed, as a first approximation, that the long-run equilibrium prices of individual commodities are equal to their values”. This is the case for the “value-price of simple commodities” (Moseley 2016: 30) which is not discussed above (discussed above is the “value-price of commodities produced by capital” (ibid.)). The reason why the former value-price is not discussed above is that Moseley himself does not elaborate on this category in his analysis of the ‘transformation problem’. Nevertheless, it has to be mentioned that Moseley is clearly considering ‘value’ in his approach, e.g. with the category L that stands for socially-necessary labor time in units of abstract labor-hours, which is the ‘substance’ of value in the Marxian framework. Whether this inclusion of ‘value’ is valid is not explicitly explained.

In comparison, Moseley’s interpretation is not a qualitative transformation (Heinrich 2014) of a value system into a price system, but a cancellation of the whole problem. Nevertheless, there are similarities between these two approaches. Table 3 summarizes characteristics of three types of approaches. It is noted that despite fundamental differences between Heinrich’s and Moseley’s understanding, such as the interpretation of Marx’s logical structure, there are striking similarities, for example the crucial role of money in the capitalist mode of production.

Table 3: Interpretations of logical structure, the transformation problem, and other features of Marx’s <i>Capital</i>			
Approach	Moseley’s end of the ‘transformation problem’	Heinrich’s qualitative solution	Standard interpretations/quantitative solutions²²
Criterion			
Change in plan regarding the structure of Marx’s <i>Capital</i>; understanding of ‘ideal average’	No change in plan: still ‘capital in general’ and ‘competition’ (or ‘many capitals’)	Change in plan to ‘individual capital’ and ‘constitution of the social total capital’ on three different abstraction levels	
‘Systems’	One system, the actual capitalist econ-	Debatable; one could say two sys-	Two systems: one value system and a

²² For a more detailed presentation of these types of interpretations see e.g. Moseley 2016: 221 ff. or Heinrich 2014: 270 ff.

	omy, but two abstraction levels (macro level and micro level)	tems with a qualitative transformation ‘in between’	separated price system
Marx’s transformation from value system to production price system	Did not fail to transform because it is not appropriate in Marx’s theory to transform ²³	Failed because it is not possible to buy means of production and means of subsistence at value	Failed; similar argumentation to Heinrich’s (but still in favor of a quantitative solution, see below)
Solution approach	Transformation not necessary because inputs of capital are the same actual quantities of money capital advanced in the real capitalist economy for Volume I and II of <i>Capital</i>	Transformation must be conceptual (qualitative); in Volume III commodities are no longer associated with surplus-value but with average profit; further ‘form determinations’ necessary (cf. subchapter 3.2.4)	Transformation from a given quantitative value system to a production price system; but also positions that claim redundancy of value approach (physical quantities ‘replace’ values)
Role of money	Necessary form of appearance of value; initial money capital (M) starting point (cf. circuit of money capital subchapter 3.2.1) taken as given as known data	Necessary form of appearance of value; “non-neutrality” of money; credit money has a steering function for the capitalist mode of production as a whole ²⁴	Pre-monetary approaches for which money is just a tool for exchanging goods (‘neutral’)
‘Applicability’	Exists, e.g. actual quantities of money capital are considered and conclusion: <i>actual price rate of profit</i>	Difficult, cannot be falsified and Heinrich’s qualitative approach not ‘finished’	Exists, but the approach itself seems questionable (especially for purpose of this work not ‘useful’)
Source: Heinrich (2014), Moseley (2016)			

²³ One could argue that Moseley makes a transformation with the fourth formula mentioned above: $N = mL$. The product of ‘current socially-necessary labor-time in units of abstract labor-hours’ (L), and the ‘(money) new value produced per hour of abstract labour’ (m) represents a transition from a ‘more abstract value level’ (abstract labor) to a less abstract level. On this level abstract labor is ‘connected’ to the price system.

²⁴ See Heinrich 2014: 240 ff., 299 ff.

It should be clear by now that, despite open questions about Moseley's approach, it is argued above that Moseley provides a practicable link between value theoretical aspects and the price system. The author of this work argues that it is reasonable to combine Heinrich's crisis theoretical approach of expansion and limitation with Moseley's interpretation of the logical structure of Marx's *Capital*. The great difference concerning the 'change in plan debate' appears to be not decisive in the context of Heinrich's crisis theory because the passages Heinrich refers to in Marx's *Capital* in volume III are part of what Moseley (2016: 44) considers "capital in general".²⁵ Heinrich's understanding of the 'ideal average' is on a 'similar abstract level' (see subchapter 3.2.4). In the following, 'less abstract' categories such as the price rate of profit are 'applied' in Moseley's interpretation.

4.2 Expansion, realization and the European economic crisis

While in the second chapter the developments that led to the European economic crisis from 2007 onwards were presented more in chronological order, this chapter is based on the theoretical framework developed above. It is clarified how the European economic crisis can be understood with Heinrich's monetary theory of value approach. In the previous chapters it became clear that the empirical calculation of profit rates on the base of Moseley's interpretation goes beyond the scope of this work. Therefore it is referred to calculations from authors that consider the Marxian framework but have a different approach to the rate of profit (Moseley 2016: 277). Moreover, Heinrich's approach can only be examined with a certain focus. For example, the significance of competition in the 'drive for accumulation' (see subchapter 3.2.3) is only indirectly taken into account. It remains to be said that the following structure states nothing about a hierarchy of the different aspects. For example, regulatory measures are discussed first, but that does not imply that the author of this work intends to make a statement about the centrality of regulation in the capitalist mode of production. Afterwards, the accumulation regime with its balance between production conditions and consumer conditions, which resembles the contradictory relationship between expansive production and limited realization of Heinrich's approach, is discussed.

4.2.1 'Post-Fordist mode of regulation'²⁶

The mode of regulation encompasses institutional forms and norms that regulate the compatibility of behavior patterns and the accumulation regime. It includes social and economic policy such as fiscal and monetary policy that can be especially important in times of crisis. There was not only wage moderation and social cuts in 'developed countries' but also a global trend towards declining direct taxes and rising indirect taxes (Prasad 2008: 7) which had a significant impact on redistribution in favor of corporations and higher income classes. Further,

²⁵ See table (Moseley 2016: 44), point 1.3.

²⁶ Subchapter 4.3.1 as well as subchapter 4.3.2 make use of analytical terms of the regulation school. Heinrich (2011: 66) himself introduces this possible operationalization.

Krzywdzinski (2018: 527) identifies a competition of deregulation of the European labor markets against the background of the restructuring processes discussed in chapter two. With regard to finance policy, the guiding principle was deregulation: Beginning with the end of Bretton Woods, a series of financial liberalizations took place. The Eurodollar market, which undermined the Bretton Woods regulations in the 1960s, can be seen as an early symptom for unprecedented financial deregulations such as Margaret Thatcher's 'Big Bang'. Specific regulations in the US with regard to government-sponsored enterprises (GSE) contributed to the emergence of financial markets trading with securitized financial products, and as private actors engaged, riskier securities became more important. The international importance of the business with securities is outlined in subchapter 2.1. Against the background of monetary policy, it is difficult to discern a clear trend when looking at the whole period since 1975. The long-term trend shows falling interest rates (figure eight), while a more 'conservative' approach was taken in the late 1970s and 1980s (Bundesbank's anti-inflationary stance and the 'Volcker shock'). Especially in the 2000s, following the crisis of the 'New Economy', interest rates fell. After 2004 they rose again, but overall, they are still at a historically low level.

4.2.2 'Post-Fordist neoliberal accumulation regime'

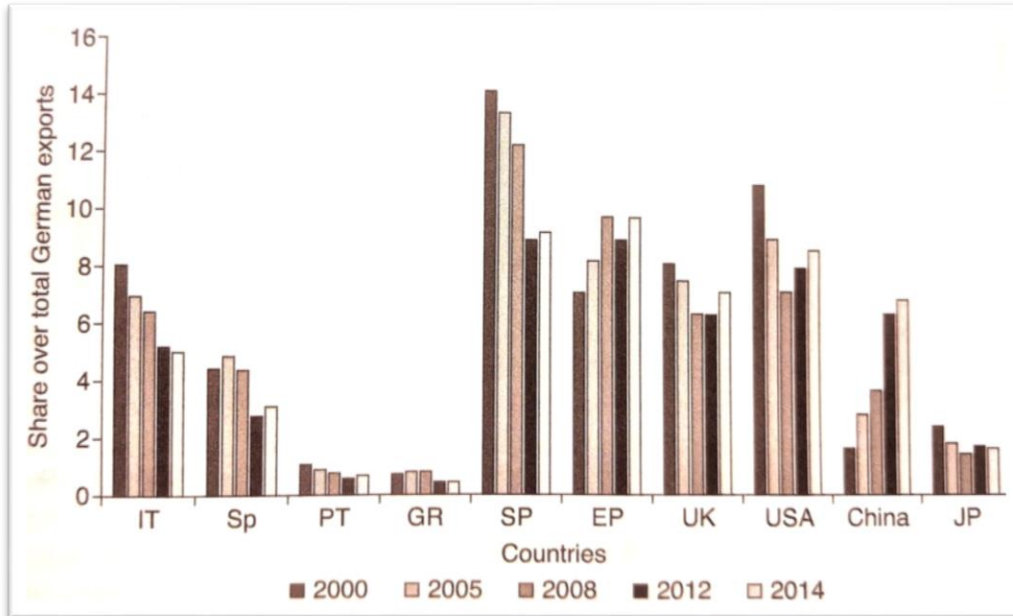
The expansive surplus-value production could be maintained with redistributive measures mentioned above. One could argue that the untypical case of relative surplus production (see subchapter 3.2.1), characterized by a fall in the standard of living of the workforce, has occurred in 'developed countries'. In addition, the industrial restructuring of parts of the European automotive industry towards the 'eastern periphery' of the EU has contributed to profitability. As explained in chapter two, wage differentials, among other things, can play an important role for outsourcing. Whether expansive production in certain central sectors led to overproduction is a difficult empirical discussion which is approached in chapter two. For example, industries such as the steel industry clearly have problems with overcapacities, while growth figures in the automotive industry say otherwise. As regards the realization of profits, it can be said that there is also some kind of restructuring. Measured against the exports of Europe's largest exporting nation, profit realization is increasingly taking place in a multipolar world (figure five). While Europe's 'eastern periphery' (EP)²⁷ and China are becoming increasingly important for the realization of profits, the importance of the 'southern periphery' (SP)²⁸ seems to be dwindling.

In addition to the central industries mentioned above, the construction sector was obviously involved in the expansive production process. With the exception of Spain and Ireland, there were no real estate booms in the EU, whereas the construction sector in the USA had plenty of orders (figure six). The cyclical ups and downs on the graph show that around 2000 the typical downward reaction did not occur, implying that the expansion of the credit system delayed the decline and enabled overproduction.

²⁷ Czech Republic, Hungary, Poland, Slovak Republic (Celi et al. 2018: 72)

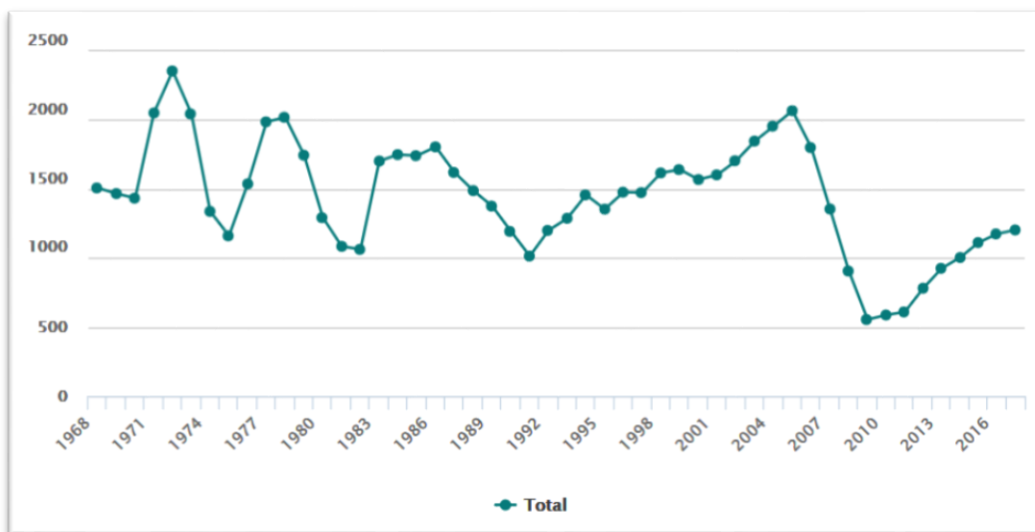
²⁸ Greece, Italy, Spain and Portugal (Celi et al. 2018: 8)

Figure 5: Dynamics of German exports by destination (2000-2014)



Source: Celi et al. 2018: 175

Figure 6: Private housing units permitted (1000s)



Source: USHMC 2018

Chapter two shows that European banks were instrumental in trading in securities and thus in realizing the expansion of the construction sector in the US. The expansionary character of the credit system was an important factor in facilitating the construction boom, which was also relying on the demand of US households (Sablowski 2009:121). Chapter two noted that the granting of mortgages to households was financed by selling the mortgage-backed securities to the money markets. That means the banks received 'loans' to grant loans. This can be interpreted as the inherent expansive character of the credit system. Further, financialization is part of the 'drive for accumulation' discussed below.

If one assumes on the one hand a steering function of the credit system (Heinrich 2014: 299), but on the other hand a deepening of the contradiction between industrial and fictitious capital through the growth of the credit system in the form of ever new financial instruments²⁹ (Heinrich 2001: 174-175), then the question of how these factors interact arises. The steering function is based on but also overlaps with the 'drive for accumulation'. Whereas the determination of the steering function needs further elaboration (Heinrich 2014: 299-301), Heinrich (2001: 172) analyzes the 'drive for accumulation' on a level that makes the incorporation of empirical variables possible. As identified in chapter three, interest rates are the decisive factor in the decision to invest in financial markets. Regarding profit expectations it seems appropriate to approach this variable with data for profit rates.³⁰

As already mentioned, the calculation on the basis of Moseley's interpretation goes beyond the scope of this paper. Consequently, further considerations in this respect depend on the results of other scholars (Duménil/Lévy 2004a; Duménil/Lévy 2004b).

Figure 7: Profit rate (percent): Europe and US, private economy



Source: Duménil/Lévy 2004a: 6

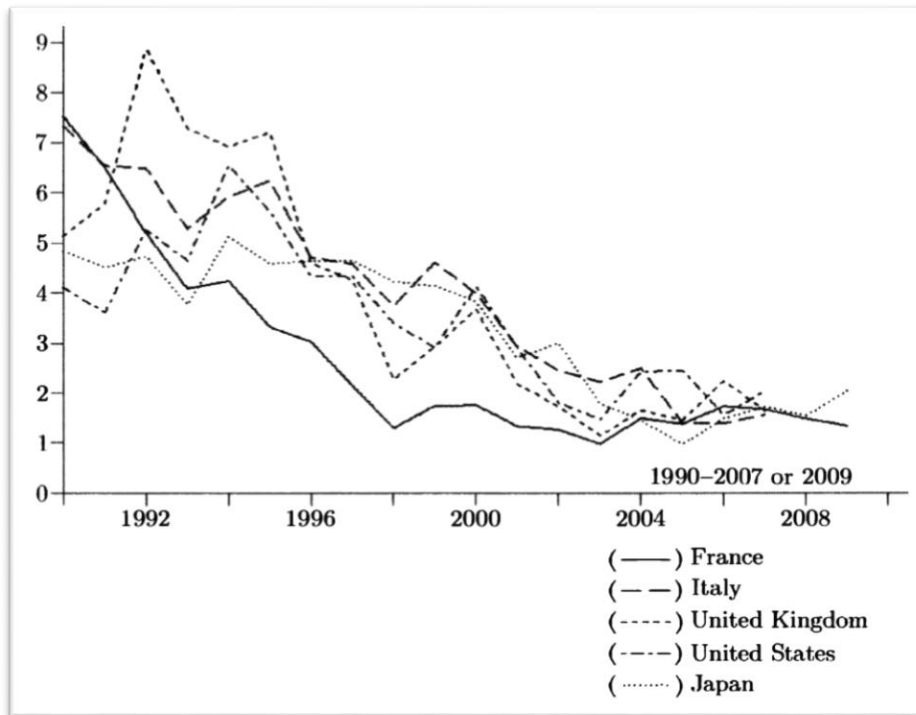
Figure 7 shows a low at the beginning of the 1980s shortly after the 'Volcker shock', and the beginning of an upward trend. Hence, an improvement of the profitability situation can be observed from around 1980 onwards. But it has to be stated that the profit rate is at a historically low level (Duménil/Lévy 2004b: 87). The long-term global trend to lower interest rates is mirrored in figure eight.³¹

²⁹ For example, the asset-backed commercial paper (ABCP) market (see chapter 2)

³⁰ Of course, investment decisions in reality, as well as economic forecasts, depend on many more factors. Rate of profits can only be a simplified orientation.

³¹ See also the downward trend in real interest rates (both, long-term and short-term) for US businesses since the mid-1980s (Duménil/Lévy 2011: 61).

Figure 8: Real interest rates on long-term government bonds (percent, yearly)



Source: Duménil/Lévy 2011: 138

This raises the question of why capitalists should invest in financial markets when the interest rates are that low. On the other hand, profit rates are at historically low levels, but appear to be recovering. In addition, there is a historically low level of investments in the EU, with gross fixed capital formation below 22 percent of GDP in 2015, compared to over 26 percent in the 1970s (World Bank 2018). In order to answer the question at least partially, it seems necessary to involve developments on the stock markets. Non-financial corporations are increasingly involved in the equity market (Celi et al. 2018: 87) and they do so because of “skyrocketing stock prices” (Duménil/Lévy 2011: 64). To conclude this simplified³² analysis of the ‘drive for accumulation’ against the background of the European economic crisis, it can be said that the analysis based on interest rates and profit rates is difficult due to the historically low levels of both variables. On the other hand, stock market growth indicates a clear orientation of capital flows. Therefore, capitalists and banks are not keen to invest in production capacity. A discussion of the significance of the growing stock market cannot be deepened at this point.³³

³² For a comprehensive analysis it would be necessary to go further into detail with specific forms of interest. For example, the importance of the ABCP market could only be hinted at in the context of this work.

³³ The “shareholder value orientation” (Sablowski 2008: 144) does not suggest investments in production capacities.

5. Conclusion

First, the question of how the European economic crisis can be understood from the perspective of a Marxian monetary theory of value is addressed with a general presentation of significant developments that led to the crisis from 2007 onwards. The depiction in chapter two is the basis for the application of the theory in subchapter 4.3. It includes a possible description of the current functioning of societal reproduction – ‘neoliberal post-Fordism’. The interwoven characteristics of internationalization, financialization, deregulation, redistribution and privatization are described. Afterwards, decisive developments in the run-up of the economic crisis such as the industrial restructuring in the EU, overproduction and overspeculation are stressed. At the end of the empirical overview, there followed an outline of the collapse of the European economy in 2007 and 2008.

An overview of Marxian crisis theories is supposed to facilitate the understanding of monetary theory of value approaches and especially Heinrich’s approach. Similarities and differences of this theoretical strand are clarified, and Heinrich’s monetary theory of value approach is specified through the ‘overproduction of capital’. Then Heinrich’s interpretation of the expansive characters of not only (surplus-value) production, but also of the credit system with its steering function is analyzed. It is recognized that his approach differs from some ‘classic’ underconsumptionist positions insofar as it considers corporation’s investment decisions that are part of the realization of surplus-value (‘drive for accumulation’). In the context of the concrete empirical analysis of economic crises from the perspective of the approach described, Heinrich himself does not seem to be aware of difficulties in applying his approach. Although of course Heinrich highlights difficulties in the analysis of abstraction levels of particularly Marx’s Capital volume III (Marx 1991), he seems to conclude that his qualitative solution to the ‘transformation problem’ enables further approximation to the empirical level with the development of further ‘form determinations’. The author of this work cannot follow Heinrich’s argumentation at this point. The range between a structural approach described by an ‘ideal average’ on the one hand and the trivial insertion of data into a monetary Marxian value of theory approach requires reduction. A final positioning on this issue is not possible within the limits of this work. Instead, this explanatory deficit is circumvented with the addition of Moseley’s abolition of the transformation problem in the fourth chapter. This interpretation offers itself due to important similarities with Heinrich’s approach (see table 3).

Moseley has his own interpretation of the connection of empirical quantities and value theoretical considerations. For example, constant and variable capital are value theoretical categories but are also given actual quantities of money capital. Based on these quantities he can determine the surplus-value and then the actual price rate of profit. For the purpose of understanding empirical developments, the two approaches mentioned above are connected. Finally, the question of how the European economic crisis can be explained from the perspective of a Marxian monetary theory of value is clarified.

The regulatory forms of the post-Fordist period are mainly characterized by deregulatory measures. The deregulation of labor markets in connection with processes of internationalization and therefore restructuring of industries led to redistributive tendencies in favor of corporations and higher income classes. Against the background of the financial markets, it seems more appropriate to point out a lack of regulation, as there are many new dynamics that have never been regulated. The crucial point is the facilitating function of the regulatory measures for the expansive characters of production and the credit system.

The increasing multipolarity of global capitalism is on the one hand influencing the production processes (restructuring) and on the other hand changing the patterns of profit realization. The redistributive processes in the global North (and in European 'core countries') reduce those household's possibilities to realize surplus-value with their demand. Therefore, consumer credits but also changing export destinations replace former reproduction patterns. In the US (also Spain and Ireland) the construction sector could realize profits because of the unprecedented increase in new financial instruments. The circulation process of capital is also realized by the 'drive for accumulation'. The indicators used in subchapter 4.3 were initially unable to clarify the investment decisions of capitalists. Profit rates, interest rates as well as investments are all at historically low levels. In order to understand this current 'drive for accumulation', one has to consider the enormous growth of stock markets in recent decades and the participation of companies in the stock markets. At this point connecting factors to approaches that consider stock market developments are mentioned.³⁴

In conclusion, expansive characters of capital accumulation and its limitations were presented. From the Marxian monetary theory of value point of view, it is questionable whether financialization is really an epoch shaping concept. It seems more appropriate to analyze an interplay of the expansive feature of the credit system and the 'drive for accumulation' that is lately oriented on financial investments in the stock market. In this line of argumentation, so-called financialization and the associated (European) economic crises could be a 'natural capitalist development' towards a world market with developed characteristics of the 'ideal average' of the capitalist mode of production.

³⁴ Further work by the author of this thesis is planned to elaborate on the meaning of stock markets for capital accumulation. It is not only the shift of orientation ('shareholder value'), but also the steering function, which is no longer provided only by banks, but also by companies that facilitate capital accumulation in certain sectors through their involvement in the stock markets, seems to require further analysis. Further reflection on other forms of interest rates also seems necessary, and of course further elaboration on the possible link between Marxian terms and national accounts data.

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