Forum for Macroeconomics and Macroeconomic Policies

IMK Macroeconomic Policy Institute

The IMK is an institute of the Hans-Böckler-Stiftung

FMM WORKING PAPER

No. 41 · January, 2019 · Hans-Böckler-Stiftung

WELFARE MODELS AND DEMAND-LED GROWTH REGIMES BEFORE AND AFTER THE FINANCIAL AND ECONOMIC CRISIS

Eckhard Hein[1], Walter Paternesi Meloni[2] and Pasquale Tridico[3]

ABSTRACT

Recently, several interesting attempts have been made at connecting comparative political economy (CPE) approaches, as the Varieties of Capitalism (VoC) theory, with post-Keynesian (PK) research on different demand-led growth regimes in modern capitalism, and for the period of finance-dominated capitalism since the early 1980s in particular. However, we find several problems in the way Kaleckian and PK approaches are interpreted and integrated in modern CPE approaches. Therefore, we first clarify several ambiguities and misunderstandings of PK demand-led growth regimes and their empirical indicators in the recent CPE literature, and, following the recent PK literature, we provide a theoretically consistent and empirically applicable classification of demand and growth regimes under the conditions of finance-dominate capitalism. Second, instead of using the traditional VoC dual classification, we link and confront the PK demand and growth regimes with the recent evolution of Esping-Andersen's (1990) taxonomy which considers five welfare models. Third, we examine the relationships between demand-led growth regimes and welfare models, both before and after the 2007-9 global crisis. For this purpose, we share the qualitative taxonomy suggested by Hay and Wincott (2012), and additionally we quantitatively assess the degree of welfare of each country and its evolution by means of a 'principal component analysis' (PCA), which allows us to synthesize four socio-economic indicators in a multidimensional measure of welfare.

[1] Berlin School of Economics and Law, eckhard.hein@hwr-berlin.de.
[2] Roma Tre University, Department of Economics, walter.paternesi@uniroma3.it.
[3] Roma Tre University, Department of Economics, pasquale.tridico@uniroma3.it.

Welfare models and demand-led growth regimes before and after the financial and economic crisis*

Eckhard Hein[#], Walter Paternesi Meloni[~] and Pasquale Tridico[~]
[#] Berlin School of Economics and Law
[~] Roma Tre University, Department of Economics

Abstract
Recently, several interesting attempts have been made at connecting comparative political economy (CPE) approaches, as the Varieties of Capitalism (VoC) theory, with post-Keynesian (PK) research on different demand-led growth regimes in modern capitalism, and for the period of finance-dominated capitalism since the early 1980s in particular. However, we find several problems in the way Kaleckian and PK approaches are interpreted and integrated in modern CPE approaches. Therefore, we first clarify several ambiguities and misunderstandings of PK demand-led growth regimes and their empirical indicators in the recent CPE literature, and, following the recent PK literature, we provide a theoretically consistent and empirically applicable classification of demand and growth regimes under the conditions of finance-dominate capitalism. Second, instead of using the traditional VoC dual classification, we link and confront the PK demand and growth regimes with the recent evolution of Esping-Andersen's (1990) taxonomy which considers five welfare models. Third, we examine the relationships between demand-led growth regimes and welfare models, both before and after the 2007-9 global crisis. For this purpose, we share the qualitative taxonomy suggested by Hay and Wincott (2012), and additionally we quantitatively assess the degree of welfare of each country and its evolution by means of a 'principal component analysis' (PCA), which allows us to synthesize four socio-economic indicators in a multidimensional measure of welfare.

Keywords: Demand-led growth, welfare models, comparative political economy, post-Keynesian economics, Varieties of Capitalism.

JEL classification: E02, P16, P51

Contact:
Eckhard Hein: eckhard.hein@hwr-berlin.de
Walter Paternesi Meloni: walter.paternesi@uniroma3.it
Pasquale Tridico: pasquale.tridico@uniroma3.it

* For helpful research assistance we would like to thank Riccardo Pariboni and Ryan Woodgate, and for editing assistance we are grateful to Sophie-Dorothee Rotermund.

1. Introduction

Recently, several interesting attempts have been made at connecting comparative political economy (CPE) approaches, as the Varieties of Capitalism (VoC) theory, with post-Keynesian (PK) research on different demand-led growth regimes in modern capitalism, and for the period of finance-dominated capitalism since the early 1980s in particular.

On the one hand, CPE authors have tried to enrich and dynamise their structural supply-side, mainly microeconomic analysis and to overcome the rather static categories of the VoC approach, in particular the dualism of 'coordinated market economies' (CME) and 'liberal market economies' (LME) (Hall and Soskice 2001), by means of explicitly introducing distribution and aggregate demand considerations in the tradition of Michal Kalecki and in line with PK theories. In particular the contribution by Baccaro and Pontusson (2016) has been praised in this respect (Martin 2016; Piore 2016; Streeck 2016), arguing that the PK distinction between profit- and wage-led demand and growth regimes, on the one hand, and between consumption-driven and export-driven regimes, on the other, questions the relevance of the VoC distinction between CMEs and LMEs for the period prior to the 2007-9 financial and economic crisis.

On the other hand, PK authors, like Behringer and van Treeck (2017), have recently made use of the VoC approach in order to explain the different dynamics of macro-variables (consumption and net exports), which have generated debt-led consumption-driven and export-driven regimes before the recent crises. However, for this purpose they take the CME and LME distinction contained in the VoC theory for granted.

We appreciate this recent line of research and the implied cross-fertilisation of different research traditions in social sciences, here CPE and PK, and we hold that this is the future way to go in order to provide a coherent alternative to orthodox mainstream economics (Hein 2017a). However, carefully scrutinizing the recent contributions, we find several problems in the way Kaleckian and PK approaches are interpreted and integrated in modern CPE approaches, as in Baccaro and Pontusson (2016) and in the internal critique by Hope and Soskice (2016). Furthermore, also the uncritical integration of the VoC regimes (CME and LME) into modern PK work, as in Behringer and van Treeck (2017) for example, poses some problems, if we take the internal CPE critique seriously, at least in principle. Finally, the recent contributions have focused exclusively on the pre-crisis developments and we think it is time to take the crisis and post-crisis evolvements of regimes into account, too.[1]

The contribution of our paper is thus threefold. First, we clarify several ambiguities and misunderstandings of PK demand-led growth regimes and their empirical indicators in the recent CPE literature, and, following the recent PK literature (Dodig et al. 2016; Hein 2012; Hein et al. 2016), we provide a theoretically consistent and empirically applicable classification of demand and growth regimes under the conditions of finance-dominated

[1] An exception is the work by Stockhammer and Ali (2018), which has investigated feasible similarities between VoC and PK explanations of the Eurozone crisis. However, they conclude to have found "profound analytical differences" (Stockhammer and Ali 2018, p. 364). Finally, for these authors "the Euro crisis has laid bare the weak macroeconomic foundations of VoC and its lack of an adequate treatment of finance" (Stockhammer and Ali 2018, p. 365).

capitalism. We distinguish four regimes, i.e. 1) an export-led mercantilist regime, 2) a weakly export-led regime, 3) a domestic demand-led regime, and 4) a debt-led private demand boom regime.

Second, instead of using the traditional VoC classification which considers only two regimes (CME and LME), we link and confront the PK demand and growth regimes with the recent evolution of Esping-Andersen's (1990) taxonomy. Specifically, our analysis involves the taxonomy stemming from Hay and Wincott (2012) which considers five welfare models: 1) the Anglo-Saxon/Liberal model, 2) the Continental European/Corporative model, 3) the Mediterranean model, 4) the Scandinavian model, and 5) the Central and Eastern European (CEEC) model.

Third, we examine the relationships between demand-led growth regimes and welfare models, both before and after the recent crisis, i.e. for the 2000-2008 and the 2009-2016 period. In particular, we are interested in the changes and dynamics of regimes that can be observed in the post-crisis as compared to the pre-crisis period. Here, in addition to share the qualitative classification based on Hay and Wincott (2012), we set forth an original quantitative analysis: specifically, for each country in our panel we analyse four variables representing particular aspects of welfare (trade union density, labour market flexibility, public social spending, income redistribution effectiveness) and we synthesize them by means of a 'principal component analysis' (PCA) with a view to compute a composite measure of welfare. This juxtaposition brings out some interesting implications, theoretically and conceptually for the analysis of different welfare systems and their interaction with demand-led growth regimes and macro-economically and politically for the potential instabilities of these regimes.

The paper is organised as follows. In Section 2 we review some of the recent contributions in the area of linking CPE with PK approaches and point out the achievements but also the shortcomings. Then we outline our alternative conceptual foundation both with respect to the welfare models in Section 3 and with respect to the demand-led growth regimes under the conditions of finance-dominated capitalism in Section 4. Thereafter in Section 5 we examine the relationships between the demand-led growth regimes and the welfare models both before and after the recent crisis for a set of 30 OECD countries. With respect to the welfare models we consider both the qualitative clusters analysis advanced by Hay and Wincott (2012) as well as our quantitative measure of welfare. Section 6 contains a summary and some conclusions.

2. Some achievements and shortcomings of the current debate

Recently, Baccaro and Pontusson (2016) have tried to introduce the PK notion of macroeconomic demand-led growth regimes into the CPE debate, which has usually been concerned with microeconomic, structural supply side characteristics of the economy when it comes to deriving different regimes.[2] Applying the PK distinction between profit- and wage-led demand and growth regimes, on the one hand, and between debt-financed

[2] For a summary, see also the more recent Baccaro and Pontusson (2018) overview paper, which contains the same problems as Baccaro and Pontusson (2016). We will thus focus here on the original paper.

consumption-driven and export-driven regimes, on the other hand, they have questioned and qualified the applicability of the dualism of CME and LME regimes in the VoC theory, in particular for the period prior to the 2007-9 financial and economic crisis.[3] According to their argument, 'wage-led growth' during the Golden Age period (1950s – 1970s) of modern capitalism has been succeeded by different regimes, in particular in the period from the mid-1990s until 2008: export-led growth in Germany, debt-financed consumption-led growth in the UK, and a combination of export-led and debt-financed consumption-led growth in Sweden.[4] For each of these regimes the authors find rising inequality, although to different degrees. Whereas in the UK and Sweden household income inequality, measured by the annual change in the pre-tax 90-10 earnings ratio, has risen only slightly and wage shares in GDP have fallen only modestly, if at all, Germany has witnessed a more dramatic rise in personal income inequality and a considerable fall in the wage share in the period they are considering. Whereas the UK debt-financed and consumption-led performance can be explained by financial liberalisation – and is still in line with the characteristics of a LME in the VoC terminology, the features of the German and Swedish performance are no longer following the characteristics of a CME in the VoC terminology, in particular because of the rise of inequality in Germany and the supposed difference in terms of performance among the two countries. The major reason for the latter is claimed to be found in the different structure and price elasticities of their respective exports, according to Baccaro and Pontusson (2016). The authors claim – and present seemingly convincing econometric evidence – that German exports, mainly consisting of high quality but standardised manufactured goods, have been highly price sensitive, whereas Swedish exports, mainly consisting of high quality services, have been far less price elastic. Therefore, German exports required the suppression of wages and domestic consumption demand, whereas Swedish exports did not. According to Baccaro and Pontusson (2016), the key difference between countries explaining their diverging performance is therefore to be found in the structure and price elasticity of exports.

We appreciate the attempt by Baccaro and Pontusson (2016) to link the CPE literature with the PK research on demand-led growth regimes. However, what they have presented suffers from several shortcomings and ambiguities, both at the theoretical/conceptual and the empirical level. Theoretically, the two authors have failed to distinguish the difference between wage- or profit-led demand and growth regimes from pro-labour or pro-capital distributional policies and the resulting economic developments, which Lavoie and Stockhammer (2013), to which they refer, have pointed out clearly. The wage- or profit-led distinction refers to the structural parameters of an economy determining the response of aggregate demand and growth to distributional changes (mainly saving propensities out of different types of income, responsiveness of investment, exports and imports towards distributional variables). This is different from the actual distributional and economic policies

[3] Piore (2016) also explicitly questions the CME – LME distinction advanced by the VoC approach for the post-World War II 'Golden Age' period of modern capitalism.

[4] Initially, they also considered the case of Italy without focussing on it any further, because Italy, in their view, has become a case of stagnation rather than growth.

being followed in a certain time period – what Baccaro and Pontusson (2016) refer to as the wage-led growth post-World War II period. Similarly, they do not consider that the distinction between debt-financed consumption-led growth and export-led growth, which they apply to the period from the mid-1990s until 2008, is not the counterpart to a wage-led growth regime, as discussed in the Kaleckian distribution and growth literature to which they refer (see Hein 2014, chapters 6-11). The distinction between debt-financed consumption-led growth and export-led growth is referring more to the policy level and less to the structural level of the underlying demand-led growth model. In other words, a country can be structurally wage-led, as has been found in most of the empirical literature for Germany, the UK, and Sweden for the here relevant period (Onaran and Obst 2016), and follow either a debt-financed consumption-led demand and growth regime or an export-led regime.[5]

Empirically, the statistics Baccaro and Pontusson (2016) present in order to underline the difference between Germany and Sweden with respect to the drivers of demand growth, on the one hand, and the similarity between Sweden and UK, on the other hand, are dubious, too. They compare growth rates of exports with growth rates of private consumption and find that the former are relatively more important in Germany, whereas the latter are relatively more important in Sweden and the UK. However, this is not how the relative importance of the different demand components for GDP growth should be measured. For this purpose, we have to look at the growth contributions of the demand aggregates, i.e. at the growth contributions of private consumption (dC/Y) and of net exports (dNX/Y) in this case. Furthermore, looking only at exports without considering imports is misleading, because it might just indicate the speed of internationalisation of trade of the respective country but tells us little about the relative importance of the drivers of demand. If we calculate the share of the growth contribution of the two demand aggregates in GDP growth for the respective countries for the same period as the one considered by Baccaro and Pontusson (2016), we obtain the results in Table 1.[6]

Table 1. Relative growth contributions of private consumption and net exports in Germany, Sweden, and the UK, annual average for the period 1994-2007

	Germany	Sweden	UK
(dC/Y)/(dY/Y) = dC/dY	0.38	0.39	0.78
(dNX/Y)/(dY/Y) = dNX/dY	0.44	0.25	-0.09

Source: Our calculations based on European Commission data (AMECO).

[5] Of course, logically, we may also have that a structurally profit-led regime may follow either a debt-financed consumption-led demand and growth regime or an export-led regime. However, in the empirical literature profit-led demand and growth regimes are exceptional cases, usually found for small open economies assuming that distributional changes take place in the single country in isolation (Hein 2014, chapter 7; Onaran and Galanis 2014; Onaran and Obst 2016).

[6] The growth contributions of the demand for private consumption, public consumption, investment, and net exports sum up to GDP growth. The relative growth contributions of these demand aggregates sum up to one (or to 100 percent).

As can clearly be seen, the seeming difference between Germany and Sweden and the seeming similarity between Sweden and the UK regarding the drivers of growth pointed out by Baccaro and Pontusson (2016) both disappear, and we obtain similar patterns for Germany and Sweden, on the one hand, and the UK, on the other. For Germany and Sweden we have similar relative growth contributions of private consumption and considerably positive, in Germany more than in Sweden, growth contribution of net exports. In the UK, on the contrary, the growth contribution of private consumption has double the weight of what we have in Germany and Sweden, and the growth contribution of net exports is negative.

Finally, the econometrics Baccaro and Pontusson (2016) provide in order to make their point of high price elasticity of German exports is full of problems, as also pointed out by Hope and Soskice (2016). They have not included any control variables into their two-variable linear regressions, which also suffer from serious endogeneity problems. Furthermore, they do not acknowledge and discuss the rich recent econometric literature which has found just the opposite of what they claim: a low and probably even decreasing price elasticity of German exports which indicates high product quality and high non-price competitiveness.[7]

Their empirical critique of the attempts by Baccaro and Pontusson (2016) has induced Hope and Soskice (2016) to defend the traditional VoC distinction, acknowledging that there may be gradual differences within groups, i.e. here between Germany and Sweden in the group of CMEs. But generally they hold that the export-led countries belong to the CME group, while the consumption-led countries belong to the LME group. From their critique Hope and Soskice (2016) furthermore conclude that the PK distinction between different demand-led growth regimes is under-complex and inferior to the Carlin and Soskice (2015) macro-model and thus redundant, mainly because the PK approach is lacking a consideration of the supply side and of the macroeconomic policy dimension in their opinion. This view is simplistic and largely biased. The authors should have looked at recent PK (text-)books and academic papers (see for example Hein 2017a; Hein and Stockhammer 2011; Lavoie 2014) which demonstrate that PKs have addressed the short-run supply side constraints in their theories of conflict inflation and inflation barriers (or NAIRUs) and have provided rich conceptions and analyses of macroeconomic policies, both theoretically and empirically; for example, Hein and Truger (2009) have even provided a post-Keynesian/Kaleckian based analysis of the macroeconomic policy regimes in Germany, Sweden, and the UK covering the period from the 1996 until 2006.[8] Apart from this ignorance regarding post-Keynesian/Kaleckian work, the Hope and Soskice (2016) contribution suffers from the same theoretical/conceptual misunderstanding as Baccaro and Pontusson (2016), i.e. not

[7] See the empirical studies referred to in Hope and Soskice (2016), as well as Heinze (2018), Kollmann et al. (2014), Onaran and Galanis (2014), Onaran and Obst (2016), Stockhammer et al. (2011), and Storm and Naastepad (2015).

[8] Although this kind of ignorance with respect to PK work is widespread in the neoclassical and new Keynesian mainstream of the academic discipline, in the case of Hope and Soskice (2016) it is nonetheless somewhat surprising. Soskice, together with Carlin (Carlin and Soskice 2009), has contributed to a book edited by Fontana and Setterfield (2009), which contains several chapters by PK authors which exactly do what Hope and Soskice (2016) claim to be missing from PK analysis.

distinguishing the difference between a wage- or profit-led demand and growth regime determined by structural demand-side parameters of the economy, on the one hand, from economic developments and policy orientations based on these regimes, on the other.

From a PK perspective, Behringer and van Treeck (2017) have recently made use of the VoC approach in order to explain the different dynamics of macro-variables (consumption and net exports), which have generated debt-led consumption-driven and export-driven regimes before the recent crises. In their view, it is the type of redistribution which determines the demand regime in their data set of 18 OECD countries for the period from 1981 until 2007. For countries with a fall in the wage share, but only small increases in household income inequality and only slight increases in top income shares, they find the dominance of an export-led regime with current account surpluses in their panel estimations. In countries with considerable increases in top income shares, and with a more stable functional income distribution, they obtain current account deficits and the dominance of a debt-financed consumption-led regime due to the dominance of relative rather than absolute income concerns for the determination of consumption expenditures.[9] In order to explain the different types of redistribution, they refer to the VoC distinction between CMEs and LMEs. They argue that in CMEs with a high degree of wage bargaining coordination, trade unions have agreed to accept wage moderation in order to improve export performance, but have prevented wage and income dispersion to increase, which then has given rise to the export-led regime with current account surpluses. However, LMEs with weak trade unions have seen a rise in top incomes and top management salaries, which stabilised the wage share in the national accounts but provided the foundations for the relative income hypothesis to take effect, thus generating a credit-financed debt-led consumption regime with current account deficits. Although we see the merits in looking at the type of redistribution in order to explain the different demand regimes and to link this with the social and institutional structures of the economy, we feel that their line of reasoning is somewhat incomplete. For the relative income hypothesis and debt-financed consumption to take effect, we do not only need an increase in income inequality but also the desire of households to go into debt for consumption purposes and thus the related demand for credit, as well as the willingness of the financial sector to supply this hardly creditworthy demand for credit. This means we need a broader institutional analysis in order to identify the conditions for the relative income hypothesis to take effect, both with respect to the development of the different types of redistribution and with respect to the concomitant consumption behaviour. For this purpose, the CME/LME distinction from the VoC approach applied by Behringer and van Treeck (2017) seems to be too simple and thus hardly adequate, as Stockhammer and Ali (2018) have argued.

Apart from the conceptual and empirical shortcomings of the contributions reviewed so far, we have seen that these contributions are all focusing on the pre-crisis period and have not yet looked at regime change in the course of and after the crisis. These are the reasons why in what follows, we will first provide an alternative approach at linking demand-

[9] On the relative income hypothesis see Duesenberry (1949) and recently Frank et al. (2014).

led growth regimes with socio-institutional welfare models for the period of finance-dominated capitalism, and then examine the changes which can be observed comparing pre- and post-crisis periods.

3. Concepts of welfare models

Empirical and theoretical socio-economic studies are often based on the identification of country clusters sharing similar features in terms of welfare, with a view to assess whether the relationships between welfare provision and macroeconomic outcomes vary among different models. In this regard the welfare model taxonomy in the tradition of Esping-Andersen (1990) provides an alternative to the VoC approach. In this approach, originally socio-economic models were divided into three groups, namely the Liberal model (including the Anglo-Saxon countries), the Conservative/Corporative model (comprising Continental European countries), and the Social-Democratic model (principally representing Scandinavian countries). Albeit methodologically still very relevant,[10] this grouping was based on evidence before the 1990s. Then, with a view to include recent trends, Hay and Wincott (2012) made some adjustments and proposed a slightly new classification which takes into consideration the evolution of the models since the 1990s. They extended the Esping-Andersen classification to five models by adding the Mediterranean group[11] and the Central and Eastern European Countries (CEEC) group, claiming that strong differences are observed in these new clusters as compared to the traditional ones. Mediterranean countries tend to concentrate social spending on older people (pensions) and to protect the employment status of workers as a priority over providing unemployment insurance for people who lose their job (Sapir 2006). In CEEC countries, the levels of welfare provision are, in general, significantly lower than in Continental Western Europe.[12] Table 2 allocates the countries of the data set used in the current paper to the five welfare models.

This classification might contribute to overcome some weaknesses of the VoC approach because it provides some specific insights that are not considered in Hall and Soskice (2001). First of all, it takes into consideration not only the firm-level production side of the socio-economic process but also the social outcome side and the socio-economic institutions involved in generating this outcome. As argued by Hague and Harrop (2013), Hall and Soskice (2001) identify *Varieties of Capitalism*, while Hay and Wincott (2012) identify *Varieties of Welfare*. Furthermore, Hay and Wincott's (2012) welfare model approach considers more features than the VoC approach. Obviously, this can be due to the fact that the latter dates back to 2001, while the former explicitly pays attention to new socio-economic patterns related to: i) the process of increasing globalisation (in terms of trade, capital mobility and labour migration) and the related processes of financialisation; ii) the

[10] See Emmenegger et al. (2015) for a review on the various debates spurred by Esping-Andersen's contribution.

[11] The peculiarities about a sort of 'Southern European' model already emerged in Ferrera (1996).

[12] Most Central European countries emphasize social insurance more than social assistance, with the exception of Hungary, according to Nelson (2010). The Czech Republic and Slovenia show a quite generous welfare state (see Feldmann 2006), while Slovakia and Estonia took a clear neoliberal turn. For Slovakia see Šikulová and Frank (2013) and for Estonia see Thorhallsson and Kattel (2013).

importance of European economic integration; iii) the current tendency of welfare state retrenchment; iv) the 2007-9 financial and economic crisis; and v) demographic changes and welfare trajectories.

Table 2. Classification of welfare models

Anglo-Saxon/Liberal	Australia (AU); Canada (CA); Ireland (IE); New Zealand (NZ); United Kingdom (UK); United States (US).
Continental European/Corporative	Austria (AT); Belgium (BE); France (FR); Japan (JP); Korea (KR); Netherlands (NL); Germany (DE); Switzerland (CH); Luxembourg (LU).
Scandinavian	Denmark (DK); Finland (FI); Iceland (IS); Norway (NO); Sweden (SW).
Central and Eastern European	Czech Rep. (CZ); Estonia (EE); Hungary (HU); Poland (PL); Slovakia (SK); Slovenia (SI).
Mediterranean	Greece (GR); Italy (IT); Portugal (PT); Spain (ES).

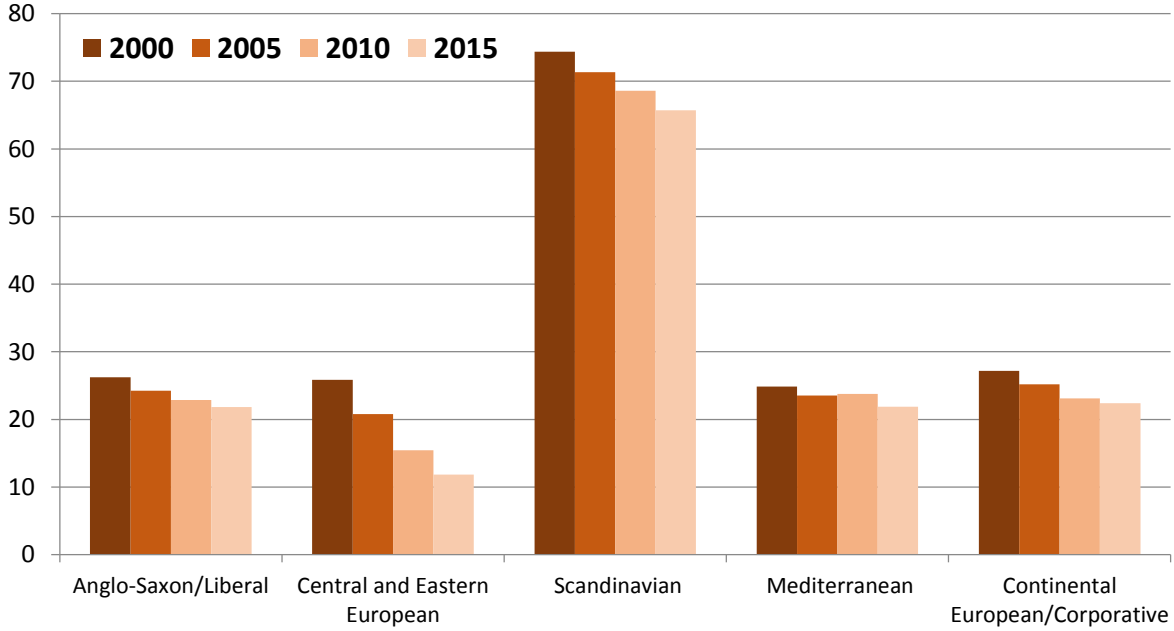
Note: Welfare model classification following Hay and Wincott (2012).

In the spirit of the welfare model approach, we will apply a multidimensional empirical perspective here. Intuitively, according to this approach countries can be clustered in different welfare models by combining public social spending and redistributive policies along with socio-economic indicators. To this purpose, we focus on four specific indicators, namely:

- trade union density;
- employment protection legislation (EPL);
- public social spending (as a share of GDP);
- redistribution effectiveness.

Trade union density has exhibited a constant decline in all welfare models under the pressure of globalisation and financialisation in the period from 2000 until 2015 considered here. However, unionization rates are still much higher in the Scandinavian model than in the others, for which they are roughly at the same level (see Figure 1). The decline in unionisation has worsened the bargaining power of workers, leading wages to stagnate, has contributed to the problems of low-pay, in-work poverty, and income inequality (Coats 2013), yet to different degrees in different welfare models, as we will see below.

Figure 1. Unionisation rate by welfare model

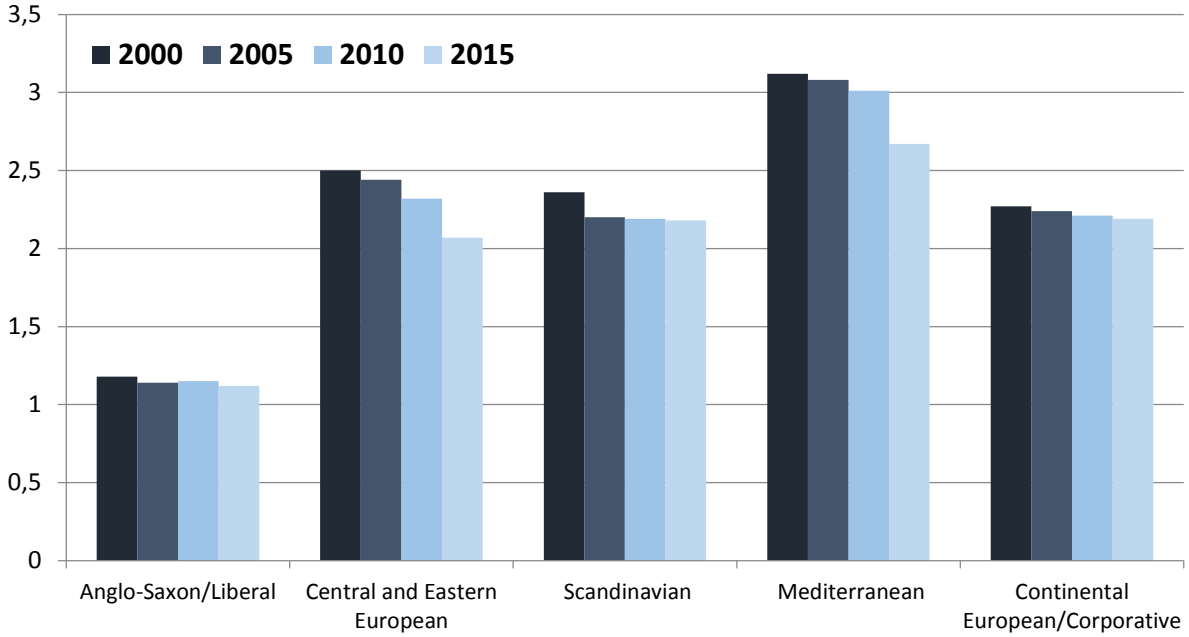


Note: The figure depicts the average trade union density computed on a panel of 30 countries clustered by welfare model at different times. Trade union density corresponds to the ratio of wage and salary earners that are trade union members, divided by the total number of wage and salary earners.

Source: Our elaborations based on OECD.Stat.

Next we consider the index for employment protection legislation (EPL). This index is an indicator of the extent to which national legislation controls employment and collective dismissal, reflecting the degree to which employers are free to fire and hire workers at will (OECD 2004). The countries of the Mediterranean model show the highest index of EPL, however, with the strongest decline from 2000 until 2015. Anglo-Saxon/Liberal countries display the lowest index of EPL, with a slight tendency to decline, and thus the highest labour flexibility. Countries belonging to the other welfare models, the CEEC, Continental European/Corporative, and Scandinavian model, are on a similar intermediate level, with a strong decline of the EPL index in CEEC countries and somewhat more modest reductions in the other two models. Generally, globalisation and financialisation have thus led to higher labour market flexibility in all welfare models, however, to considerably different degrees in different models.

Figure 2. Employment protection by welfare model



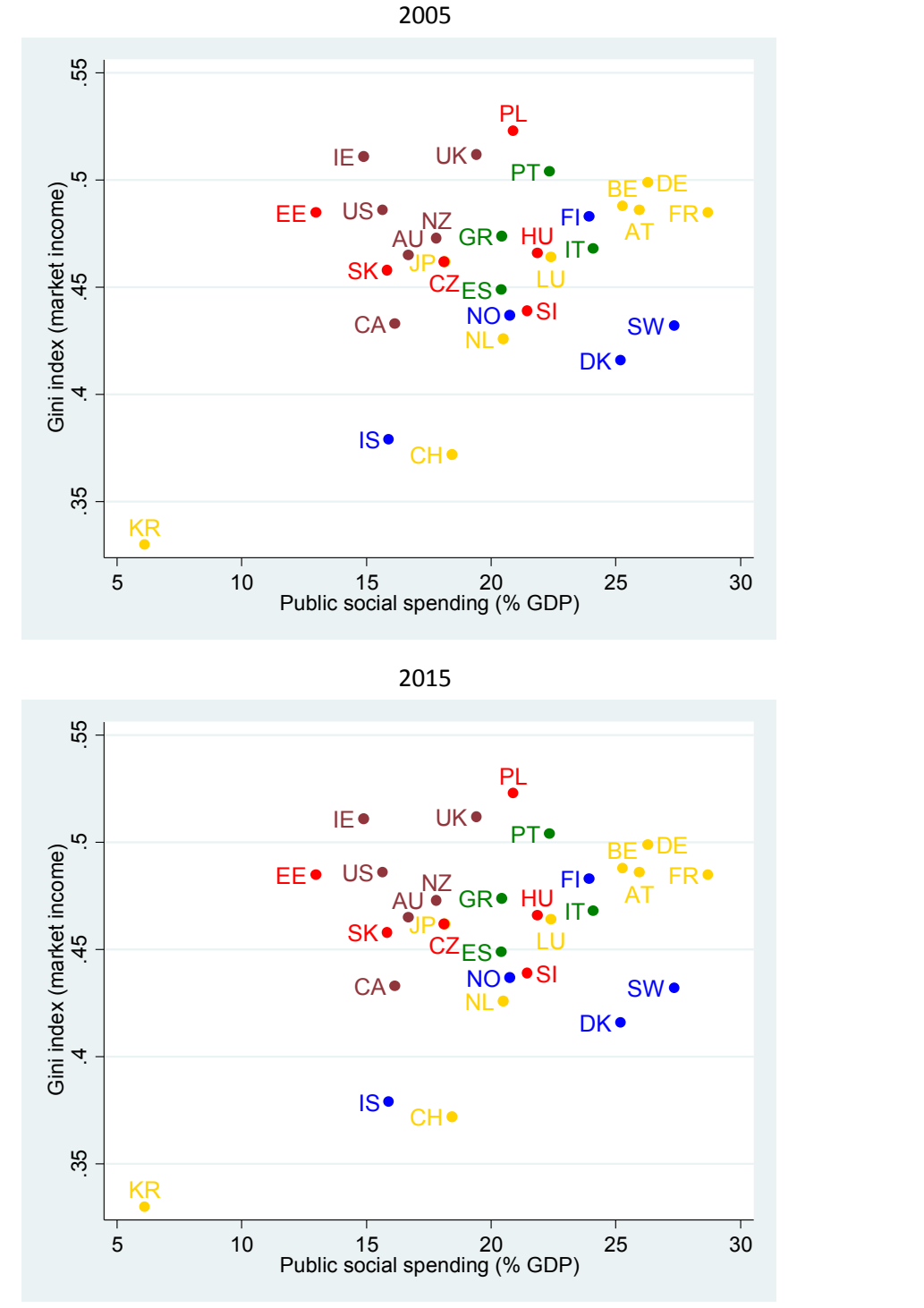
Note: The figure depicts the average EPL index computed on a panel of 30 countries clustered by welfare model at different times. The EPL ranges from 0 (very low protection) to 6 (very high protection).

Source: Our elaborations based on OECD.Stat.

The challenges that globalisation and financialisation pose to employment and income distribution have also seen different responses in terms of redistributive policies and social expenditures. Some evidence for this is provided by Figure 3, where we plot public social spending (in per cent of GDP) against the degree of market income inequality, i.e. the Gini index before taxes and transfers.[13] Generally, Continental European/Corporative (except Korea) and Scandinavian countries exhibit higher welfare spending, while Anglo-Saxon/Liberal countries lower. This pattern seems to be stable over time.

[13] Basically, the higher is the Gini index, the higher is income polarisation: with a Gini equal to zero, we have perfect equality, with a Gini equal to one we have maximum inequality.

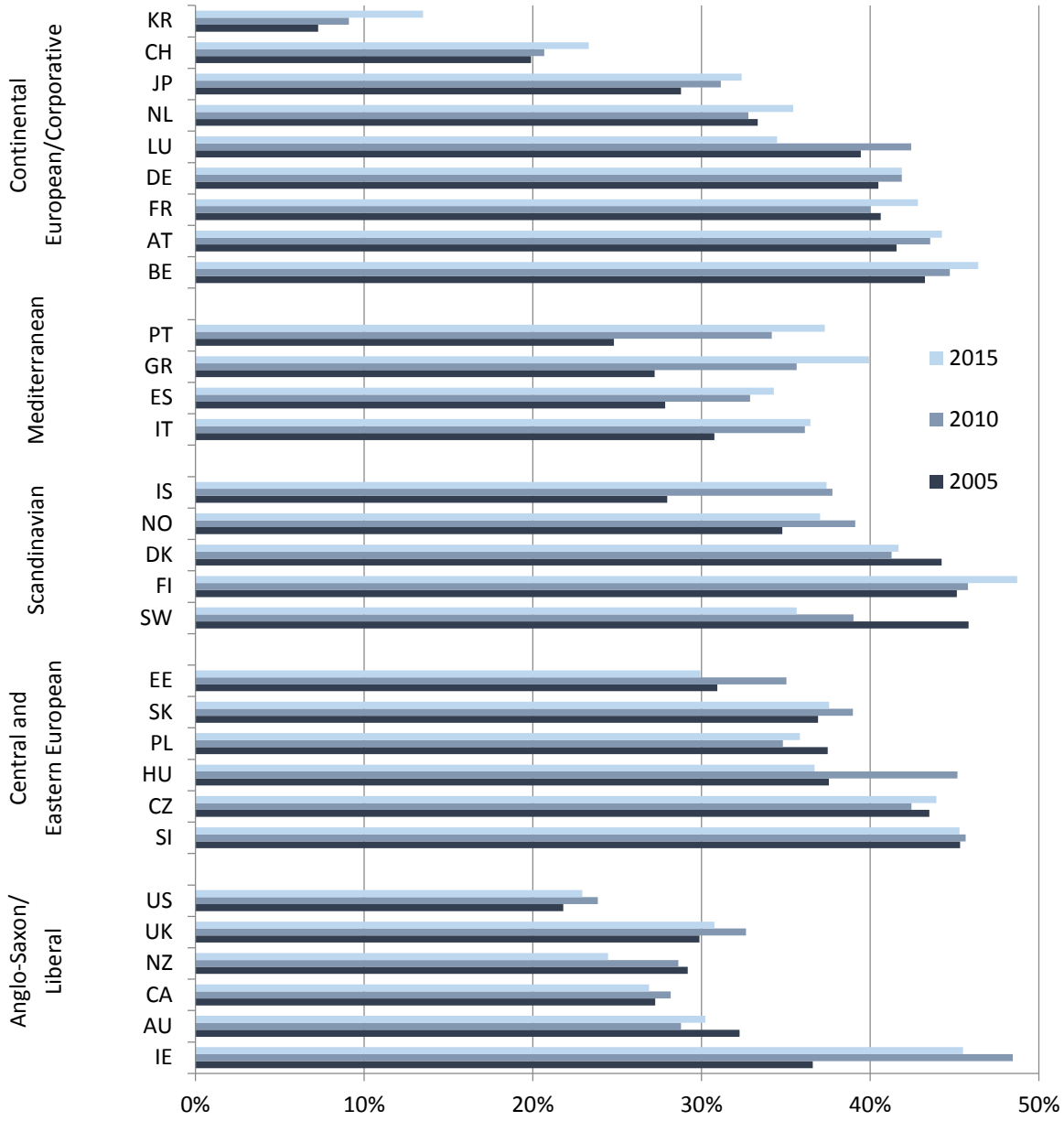
Figure 3. Welfare and market inequality



Note: For our panel of 30 OECD countries, the scatters depict public social spending (share of GDP) and the Gini Index based on market income (before taxes and transfers), where higher concentration of income is represented by higher levels of this index. Correlation is 0.387 in 2005 and 0.549 in 2015. For easy comparison and interpretation, colours refer to the welfare taxonomy reported in Table 2.

Source: Our elaborations based on OECD.Stat.

Figure 4. Redistribution effectiveness



Note: This metric of relative redistribution is computed as the percentage difference between the Gini index pre-taxes and transfers (measuring the market income inequality) and the Gini index post-taxes and transfers (considering disposable income inequality).

Source: Our elaborations on OECD.Stat.

To better investigate to what extent states effectively redistribute incomes, following OECD (2008), we can consider the relative redistribution effectiveness of government tax and social policies by the percentage difference between the Gini index pre-taxes and transfers (measuring the market income inequality) and the Gini index post-taxes and transfers (considering disposable incomes).[14] The bigger this indicator, the greater is the effort made

[14] For further details about data and sources, see Appendix A.

by the state in intervening to reduce income inequality generated by market forces. As depicted in Figure 4, it can be generally stated that, on average, higher income redistribution holds in Scandinavian (40%) and CEEC (39%) countries, milder in Continental European/Corporative countries (37%, excluding Japan and Korea which show very low levels of redistribution although moderately increasing over time), while lower in Mediterranean (33%) and Anglo-Saxon (30%) countries. For the trend from 2005 to 2015, we observe a moderate increase in redistribution in Scandinavian and Mediterranean countries, while a slight decrease took place in Anglo-Saxon countries (with the only exception of Ireland).

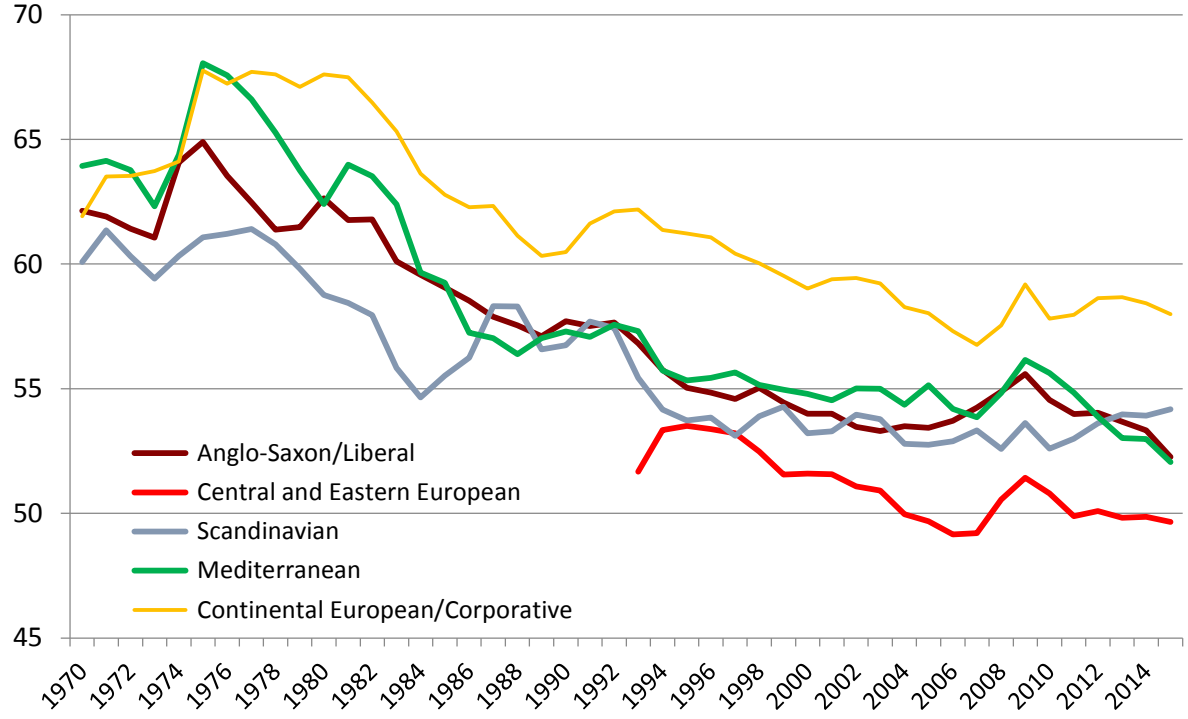
Summarising our empirical indicators from Figures 1-4 for the welfare taxonomy based on Esping-Andersen (1990) and further developed by Hay and Wincott (2012) in Table 3, we see that the Anglo-Saxon/Liberal model gains the lowest scores for each indicator. The highest scores can be found in the Scandinavian and Continental European/Corporative model. The CEEC and the Mediterranean models obtain average scores, with the former being slightly below average and the latter slightly above.

Table 3. Welfare models, socio-institutional factors and social spending

	Union density	**Employment protection**	**Social spending (% of GDP)**	**Redistribution effectiveness**
Anglo-Saxon/Liberal	low	low	low	low
Continental European/ Corporative	low	average	high	high
Scandinavian	high	average	high	high
Central and Eastern European (CEEC)	low	average	average	low
Mediterranean	low	high	average	average

The changes in some of the elements of welfare models, in particular falling union density and weakened labour market institutions, have contributed to the decrease in wage shares (see Figure 5), which has already taken place since the mid/late 1970s (Stockhammer 2009, 2017). As to be expected, this decrease has been less pronounced, on average, in Continental European/Corporative and in Scandinavian countries, and it has been somewhat more pronounced in Mediterranean and Anglo-Saxon/Liberal countries – due to weaker levels of labour market institutions and also less redistributive social benefit systems.

Figure 5. Labour income shares by welfare model (1970-2015)



Note: Labour income share ratios (adjusted wage shares) clustered by welfare model. Based on simple average value of labour income share for each group, calculated annually. Because of lacking historical data, the CEEC group starts from 1993. For easy comparison and interpretation, colours refer to the welfare taxonomy reported in Table 2.

Source: Our elaboration based on ILO.

4. Macroeconomic demand and growth regimes under financialisation

In this section we specify and define the demand and growth regimes which have emerged since the early 1980s in the advanced capitalist world under the conditions of the increasing dominance of finance, i.e. financialisation. From a post-Keynesian/Kaleckian macroeconomic perspective, finance-dominated capitalism or financialisation has been described by four characteristics (Hein 2012; 2014, chapter 10; Hein and van Treeck 2010). The country-specific stances of these characteristics can then give rise to different macroeconomic demand and growth regimes under the dominance of financialisation, as we will explain further below.

1. With regard to distribution, financialisation has been conducive to a rising gross profit share, including retained profits, dividends, and interest payments, and thus a falling labour income share (Figure 5), on the one hand, and to increasing inequality of wages and top management salaries and thus of personal or household incomes, on the other hand. Hein (2015) has reviewed the evidence for a set of developed capitalist economies since the early 1980s and finds ample empirical support for (i) falling labour income shares and increasing inequality in the personal/household distribution of market incomes with only a few exceptions, (ii) increasing inequality in the personal/household distribution of disposable income in most of the countries, and (iii) an increase in the income share of the very top incomes particularly in the US and the UK, but also in several other countries for

which data is available, with rising top management salaries as one of the major driving forces. Reviewing the empirical literature on the determinants of functional income distribution against the background of the Kaleckian theory of income distribution, it is argued that features of finance-dominated capitalism have contributed to the falling labour income share since the early 1980s through three main channels: the falling bargaining power of trade unions, rising profit claims imposed in particular by increasingly powerful rentiers, and a change in the sectoral composition of the economy in favour of the financial corporate sector and at the expense of the non-financial corporate sector or the public sector with higher labour income shares. In Hein et al. (2017a; 2017b; 2018) the relative importance of these factors has been analysed for six countries: France, Germany, Spain, Sweden, the UK, and the US.

2. Regarding investment in the capital stock, financialisation has meant increasing shareholder power vis-à-vis firms and workers, the demand for an increasing rate of return on equity held by rentiers, and an alignment of management with shareholder interests through short-run performance related pay schemes, such as bonuses, stock option programmes, and so on. On the one hand, this has imposed short-termism on management and has caused a decrease in management's animal spirits with respect to real investment in the capital stock and long-run growth of the firm and an increasing preference for financial investment, generating high profits in the short run. On the other hand, it has drained internal means of finance available for real investment purposes from non-financial corporations through increasing dividend payments and share buybacks in order to boost stock prices and thus shareholder value. These 'preference' and 'internal means of finance' channels should each have partially negative effects on firms' real investment in the capital stock. Econometric evidence for these two channels has been supplied by Davis (2018), Onaran et al. (2011), Orhangazi (2008), Stockhammer (2004), Tori and Onaran (2017a; 2017b; 2018), and van Treeck (2008), confirming a depressing effect of increasing shareholder value orientation on investment in capital stock, in particular for the US but also for other economies, like the UK, France and other Western European and some emerging market and developing economies.

3. Regarding consumption, financialisation has generated an increasing potential for wealth-based and debt-financed consumption in some countries, thus creating the potential to compensate for the depressing demand effects of financialisation, which have been imposed on the economy via re-distribution of income and the depressing impact of shareholder value orientation on real investment. Stock market and housing price booms have each increased notional wealth against which households were willing to borrow. Changing financial norms, new financial instruments (credit card debt, home equity lending), deterioration of creditworthiness standards, triggered by securitisation of mortgage debt and 'originate and distribute' strategies of commercial banks, made credit increasingly available to low income, low wealth households, in particular. In some countries this allowed for consumption to rise faster than the median income and thus to stabilise aggregate demand. But it also generated increasing debt-income ratios of private households. Several studies have shown that financial and housing wealth were significant determinants of

consumption, particularly in the US but also in countries like the UK, France, Italy, Japan, and Canada (Boone and Girouard 2002; Ludvigson and Steindl 1999; Mehra 2001; Onaran et al. 2011). Furthermore, Barba and Pivetti (2009), Cynamon and Fazzari (2008; 2013), Guttmann and Plihon (2010), van Treeck (2014), and van Treeck and Sturn (2012) have presented extensive case studies on wealth-based and debt-financed consumption, with a focus on the US. However, Kim (2013; 2016) in two studies on the US has found that although new credit to households will boost aggregate demand and output in the short run, the effects of household debt variables on output and growth turn negative in the long run. This indicates contradictory effects of the flow of new credit and the stock of debt on consumption.

4. The liberalisation of international capital markets and capital accounts has allowed for rising and persistent current account imbalances at the global but also at regional levels, in particular within the Eurozone, as has been analysed by several authors including Dodig et al. (2016), Hein (2012, chapter 6; 2014, chapter 10), Hein and Mundt (2012), Horn et al. (2009), Stockhammer (2010; 2012; 2015), UNCTAD (2009), and van Treeck and Sturn (2012).

Under the conditions of the dominance of finance, income re-distribution at the expense of labour and low income households, and weak investment in the capital stock, different demand and growth regimes may emerge, as has been analysed by the authors mentioned in the previous paragraph using different terminologies. Considering the growth contributions of the main demand aggregates (private consumption, public consumption, investment, net exports) and the sectoral financial balances of the main macroeconomic sectors (private household sector, financial and non-financial corporate sectors, government sector, external sector), we shall distinguish four broad types of regimes in this contribution: a) the export-led mercantilist regime, b) the weakly export-led regime, c) the domestic demand-led regime, and d) the debt-led private demand boom regime.

a) The export-led mercantilist regime is characterised by positive financial balances of the domestic sectors as a whole, hence negative financial balances of the external sector, and thus current account surpluses. The growth contributions of domestic demand are relatively small or even negative in certain years and growth is mainly driven by positive contributions of the balance of goods and services and hence rising net exports.

b) Hein and Mundt (2012) have also considered a weakly export-led type. It is characterised by positive financial balances of the domestic sectors as a whole, negative financial balances of the external sector, and hence current account surpluses, positive growth contributions of domestic demand but negative growth contributions of external demand, and hence falling export surpluses. In the current paper we will also consider countries with positive growth contributions of the balance of goods and services but still negative net exports and negative current accounts, i.e. positive financial balances of their respective external sectors, to be weakly export led, because they are moving towards export and current account surpluses.

c) The domestic demand-led regime is characterised by positive financial balances of the private household sector. Here it is usually the government and, to a certain degree, the corporate sector running deficits. The external sector is roughly balanced or in surplus. The domestic demand-led countries are thus usually running balanced or negative current

accounts in the medium to long run. We have positive growth contributions of domestic demand without a clear dominance of private consumption, and of credit-financed consumption in particular, and slightly negative or positive growth contributions of the balance of goods and services on average over some medium run.

d) The debt-led private demand boom regime is characterized by negative financial balances of the private sector as a whole. The private household sector in this regime shows only slightly positive or even negative financial balances. This means that major parts of the private household sector have negative saving rates out of current income, are hence running current deficits, financed by increasing their stock of debt and/or reducing their stock of assets. These private household deficits are accelerated by corporate deficits in several countries and thus we have deficits of the private domestic sectors as a whole. The external sector has positive financial balances, which means that debt-led private demand boom countries are usually running current account deficits. We have high growth contributions of private domestic demand, financed by credit to a considerable extent, and negative growth contributions of the balance of goods and services, driving the current account into deficit in the medium to long run. The extreme form of the debt-led private demand boom regime is the debt-led consumption boom regime, in which the private household sector is running deficits and private consumption demand is the main contributor to GDP growth (Hein 2012, chapter 6). However, the broader concept of a debt-led private demand boom regime also includes deficit financed expenditures by the non-corporate and the corporate business sectors for private investment purposes. This broader category also takes into account that in the national accounts the private household sector contains non-corporate business, and thus, depending on the institutional structure of the respective economy, private household deficits to a larger extent may in fact be business deficits.

Empirically, the demand and growth regimes can be distinguished by considering first the financial balances of the main macroeconomic sectors: the private sector, with the private household sector; the financial and non-financial corporate sectors as sub-sectors; the government sector; and the external sector. Second, the growth contributions of the main demand aggregates are of interest. These are the growth contributions of private consumption, public consumption as well as private and public investment, which sum up to the growth contribution of domestic demand, and finally the growth contribution of the balance of goods and services, i.e. of net exports. On the one hand, this provides some information about the main drivers of growth and, on the other hand, on how demand is financed. The sectoral financial balances of a country should sum up to zero, apart from statistical discrepancies, because a positive financial balance of one sector needs a respective negative financial balance of another sector – a creditor needs a debtor and vice versa. And the growth contributions of the demand aggregates should sum up to real GDP growth of the respective country. Table 4 summarises how we have operationalised the respective criteria for our four potential demand and growth regimes.

Table 4. Classification of demand and growth regimes under financialisation

Export-led mercantilist	• Positive financial balances of the private sector and the private household sector (with a few exceptions, i.e. NL), • negative financial balances of the external sector, • positive balance of goods and services, • positive growth contributions of net exports (more than 5 per cent of GDP growth).
Weakly export-led	Either • positive financial balances of the private sector, and the private household sector in particular, • negative financial balances of the external sector, • positive balance of goods and services, • negative growth contributions of net exports; or • negative but improving financial balances of domestic sectors, • positive but declining financial balances of the external sector, • negative but improving net exports, • positive growth contributions of net exports (more than 5 per cent of GDP growth).
Domestic demand-led	• Positive financial balances of the private household sector and positive or balanced financial balances of the private sector as a whole, • balanced or positive financial balances of the external sector, • growth is almost exclusively driven by domestic demand, • around zero growth contribution of net exports.
Debt-led private demand boom	• Negative or close to balance financial balances of the private sector, • positive financial balances of the external sector, • significant growth contributions of domestic demand, and private consumption demand in particular (more than 40 per cent of GDP growth), • negative growth contributions of net exports.

5. Welfare models and demand-led growth regimes before and after the Great Financial Crisis and the Great Recession

5.1 Demand regimes and welfare models

Applying the criteria for welfare models and demand-led growth regimes to a set of 30 OECD countries, we arrive at the clusters presented in Table 5 for the pre-crisis period from 2000 until 2008. In this period, the Continental European/Corporative welfare model, with the exception of France, and the Scandinavian models generated export-led mercantilist or weakly export-led demand and growth regimes. In the Anglo-Saxon/Liberal and the Mediterranean welfare models, with the exception of Italy, however, we had the debt-led private demand boom regime. The CEEC welfare model generated either weakly export-led or debt-led private demand boom regimes, or, like Poland a domestic demand-led regime.

Table 5. Welfare state and demand and growth regimes 2000-2008

	Export-led mercantilist	**Weakly export-led**	**Domestic demand-led**	**Debt-led private demand boom**
Anglo-Saxon/ Liberal model		Canada		Australia Ireland New Zealand United Kingdom United States
Continental European/ Corporative model	Austria Belgium Germany Luxembourg Netherlands Switzerland Japan Korea		France	
Mediterranean model			Italy	Greece Portugal Spain
Scandinavian model	Finland Sweden	Denmark Iceland Norway		
Central and Eastern European (CEEC) model		Czech Republic Slovenia	Poland	Estonia Hungary Slovakia

Generally speaking, it can be argued that since export-led mercantilist countries experienced redistribution at the expense of labour and low income households, this has led to low domestic demand dynamics and rising external competitiveness. However, falling wage shares did not foster personal income inequality to the same degree in all countries, since it has remained lower in Scandinavian and Continental European countries compared to other welfare models (Tridico and Paternesi Meloni 2018). Furthermore, in these models the redistribution had little relative income effects on consumption. Financialisation was less extreme, banking systems remained more prudent, and credit-financed consumption was hence less relevant.

In this regard, it can be argued that export-led countries belonging to Continental European/Corporative and Scandinavian models approached globalisation following the so-called 'compensation thesis'. These countries opted for not severely cutting welfare expenditures in order to compensate the domestic 'losers' of the globalisation process. Since globalisation and financialisation contribute to increasing income inequality, according to the 'compensation thesis', welfare states are maintained to mitigate vulnerability. In this perspective, governments maintain welfare support in order to compensate those who are damaged by such pressures, which will then through several channels even stabilise economic development (Brady et al. 2005; Rodrik 1998; Swank 2002; Tridico and Paternesi Meloni 2018). On the contrary, countries belonging to Anglo-Saxon/Liberal, Mediterranean, and partly also the CEEC model opted for lower levels of welfare, following the so-called 'efficiency thesis'. The 'efficiency thesis' basically argues that globalisation and financialisation have forced states to retrench social spending in order to achieve a market-friendly environment, to increasingly attract international capital and to foster external competitiveness (Allan and Scruggs 2004; Blackmon 2006; Castells 2004). Consequently, most of these countries thus generated debt-led private demand boom regimes since falling wage shares went hand in hand with increasing income polarisation, and, with a weaker welfare state, purchasing power of workers and low-income households decreased. This was then (partially) compensated by credit-financed consumption, which was in turn facilitated by the deregulation of the financial sector. These tendencies are supported by our empirical data on the different welfare models: Although before the crisis union density as well as employment protection declined in all welfare models (Figure 1 and Figure 2), public social spending as a share of GDP and also the redistribution effectiveness was much higher in the countries of the Continental European/Corporative and the Scandinavian model than in the other three models (Figure 3 and Figure 4).

Looking at the crisis and post-crisis period from 2009 until 2016, we observe some remarkable shifts, as can be seen in Table 6. When the crisis hit, private sectors in the debt-led private demand boom economies in particular were forced to improve their balance sheets and domestic private demand collapsed. As a response, the demand regime in the countries of the Anglo-Saxon/Liberal welfare model turned towards a domestic demand-led regime mainly stabilised by government deficits. The exception here is Ireland, which under the conditions of the Eurozone crisis and the enforced austerity policies moved towards an export-led mercantilist regime. A similar shift can be observed in the countries of the Mediterranean welfare model where, under the dominance of austerity and deflationary stagnation policies in the Eurozone (Dodig and Herr 2015; Hein 2013; 2014; 2018), a shift towards a weakly export-led demand and growth regime has been enforced. Likewise, for the countries of the CEEC welfare model a shift towards an export-led mercantilist or a weakly export-led demand and growth regime in the post-crisis period has emerged because of similar reasons. Finally, the countries of the Continental European/Corporative and the Scandinavian welfare model have basically maintained their demand and growth regime, either following the export-led mercantilist or the weakly export-led regime. The only exceptions here are Finland, which has turned towards a domestic demand-led regime, and

France, which has kept this type of regime. As a general pattern for the crisis/post-crisis period we thus have a tendency towards export-led mercantilist or weakly export-led regimes, on the one hand, and as counterparts the domestic demand-led regimes stabilised by government deficits, on the other hand.[15]

Table 6. Welfare state and demand and growth regimes 2009-2016

	Export-led mercantilist	**Weakly export-led**	**Domestic demand-led**	**Debt-led private demand boom**
Anglo-Saxon/ Liberal model	Ireland	Australia	Canada New Zealand United Kingdom United States	
Continental European/ Corporative model	Belgium Germany Luxembourg Netherlands Switzerland Korea	Austria Japan	France	
Mediterranean model		Italy Greece Portugal Spain		
Scandinavian model	Denmark	Iceland Norway Sweden	Finland	
Central and Eastern European (CEEC) model	Estonia Hungary Slovenia	Czech Republic Poland Slovakia		

These shifts in demand and growth regimes in the course of and after the crisis have been associated with changes within the welfare models. The most important changes concern the Mediterranean and the CEEC models, which moved further towards a more liberal model through essentially a decline in unionisation, rising labour market flexibility, some welfare retrenchment, and the ensuing rise in inequality, as can be seen in Figures 1–4. As a

[15] For global risks and economic policy challenges of such trends see Hein (2017b).

consequence, most of the countries of the Mediterranean and the CEEC models turned towards export-led regimes. Labour market flexibility increased dramatically, structural adjustments increased constraints on public budgets, and policies to foster external competitiveness were introduced – particularly wage deflation in the context of Eurozone economic policy regime (Paternesi Meloni 2017). On the contrary, the Anglo-Saxon group moved from the former debt-led private demand boom group to the domestic demand-led group: These countries did not face the fiscal constraints which were imposed on EU countries and thus pushed the Mediterranean and CEEC countries towards export-led regimes. Rather, the Anglo-Saxon countries have been able to introduce expansionary fiscal policies to sustain aggregate demand with a view to face the negative effects of the financial turmoil and the Great Recession. None of the countries that after the 2007-9 crisis transited from the debt-led private demand boom regime towards the domestic demand-led regime were subject to the Eurozone constraints.

5.2 Demand regimes and the degree of welfare

As an additional exercise to confirm the changes within the welfare models detected above which have accompanied the changes in demand and growth regimes after the 2007-9 crisis, we are calculating a numerical value for the 'degree of welfare' in each country based on the four dimensions we have already referred to above: the unionisation rate and the degree of employment protection as indicators for labour market institutions as well as public social spending (in per cent of GDP) and the government redistribution effectiveness as indicators for 'direct' state intervention into the economy.

In line with the multidimensional approach based on Hay and Wincott (2012), we indicate the degree of welfare of each country by calculating its scores in a (co)variance-based model. Methodologically, the scores of this composite index are calculated as a weighted combination of the four abovementioned indicators using the 'principal component analysis' (PCA) introduced by Pearson (1901) and further developed by Hotelling (1933; 1936) – see also Jolliffe and Cadima (2016) for its recent developments.[16] Therefore, we infer the degree of welfare from four observed variables – public social spending (as share of GDP), redistribution effectiveness, EPL index, and trade union density – for our panel of 30 countries at three different points in time (2005, 2010, and 2015), and we create a single index out of these through the PCA[17] with a view to assess the evolution of welfare systems before and after the 2007-9 financial and economic crisis. Our findings are reported in Table 7, which shows the ranking of countries according to the estimated scores of our degree of welfare.

[16] The PCA is a dimension-reduction tool that can be used to reduce a large set of variables to a single indicator that still contains most of the information provided by the larger set.

[17] In brief, PCA seeks a linear combination of manifest variables such that the maximum variance is extracted from them; the principal components are defined as a linear combination of the original variables, and these coefficients are then stored in a 'loading matrix', i.e. a rotation matrix which rotates data such that the projection with greatest variance goes along the first axis (*varimax*). Technically, PCA simplifies the complexity in high-dimensional data while retaining trends and patterns: it does this by transforming data into a single dimension as a summary of features (see the Technical Annex for the complete methodology).

The comparative reading of our synthetic welfare indicator prior to and after the 2007-9 crisis leads to the following results (see Figure 6). Generally, we confirm that Scandinavian[18] and Continental European/Corporative countries exhibit higher degrees of welfare, except for Korea and Switzerland due to their low public social spending and redistribution effectiveness.[19] By contrast, Anglo-Saxon/Liberal countries show a low and even falling degree of welfare particularly due to weak labour market institutions combined with low redistribution.[20]

In the middle we generally find Mediterranean and CEEC countries, where a moderate degree of welfare can be observed. Here the picture is more heterogeneous and some specific cases emerge from our analysis. For instance, a low and decreasing degree of welfare in CEEC countries – particularly in Estonia (Thorhallsson and Kattel 2013), which might be not included in the CEEC model anymore – is due to the recent phase of transition towards a more liberal stance in these countries. However, the opposite reasoning can be advanced for Slovenia, which now appears to meet the specific features of Continental European countries – as also suggested by Tomšič et al. (2008). In the middle of the distribution we find, as expected, countries which combine some traditional traits of the Corporative model with some elements of Anglo-Saxon/Liberal model. In this regard, the most emblematic cases are Italy and Japan, with the latter already addressed by Esping-Andersen (1997). Italy exhibits positive and increasing values of the welfare index and it is the most generous Mediterranean country in terms of welfare; in parallel, in recent times Japan has shown a higher, albeit still negative, value of the index. Finally, according to our synthetic indicator of welfare it can be stated that several Anglo-Saxon/Liberal (particularly Ireland, New Zealand, and the UK) and CEEC countries (particularly Hungary, Estonia, and Slovenia) remarkably reduced their welfare degree after 2005, and this occurred in parallel with a shift towards export-led demand and growth models in the latter group.

[18] Public social spending in Scandinavian countries was, on average (2000-2015), 23.67% GDP, while 18.72% in the rest of the sample.

[19] The low score of welfare in Korea is mainly driven by remarkably low public social spending (only 8.28% GDP in 2010 and 10.11% GDP in 2015). Moreover, Switzerland exhibits a very low redistribution effort (19.8% in 2005 and 20.6% in 2010, second only to Korea) and trade union density.

[20] Redistribution effectiveness is 21% in the US before the crisis, 23% in 2010, and 22% in 2015. By contrast, in Scandinavian countries it is on average 40% throughout the whole period.

Table 7. Degree of welfare (scores and ranking)

Rank	Country	2005	Country	2010	Country	2015
1	SW	1.306	FI	1.183	FI	1.516
2	DK	0.964	BE	1.081	BE	1.190
3	FI	0.915	DK	1.079	DK	1.087
4	BE	0.762	SW	0.878	FR	0.958
5	AT	0.669	AT	0.841	AT	0.894
6	FR	0.657	FR	0.759	SW	0.741
7	DE	0.608	SI	0.648	IT	0.725
8	SI	0.579	IT	0.629	GR	0.613
9	LU	0.360	DE	0.624	DE	0.545
10	CZ	0.235	IE	0.543	NO	0.452
11	NO	0.137	LU	0.476	SI	0.448
12	IT	0.118	PT	0.422	PT	0.353
13	HU	0.013	HU	0.416	CZ	0.232
14	PL	-0.018	NO	0.407	ES	0.108
15	PT	-0.089	CZ	0.245	NL	0.090
16	NL	-0.101	GR	0.236	LU	0.061
17	IS	-0.323	ES	0.154	IE	0.027
18	GR	-0.368	IS	0.075	IS	-0.028
19	SK	-0.378	NL	-0.032	HU	-0.225
20	ES	-0.485	PL	-0.179	JP	-0.232
21	IE	-0.520	SK	-0.180	PL	-0.244
22	UK	-0.556	UK	-0.190	SK	-0.259
23	AU	-0.658	JP	-0.352	UK	-0.408
24	JP	-0.684	EE	-0.458	AU	-0.606
25	NZ	-0.689	NZ	-0.542	EE	-0.801
26	EE	-0.862	AU	-0.799	NZ	-0.823
27	CA	-0.943	CA	-0.801	CH	-0.860
28	CH	-1.072	CH	-1.049	CA	-0.887
29	US	-1.463	US	-1.108	US	-1.183
30	KR	-2.470	KR	-2.233	KR	-1.902

Notes: The table reports the degree of welfare spurring from the PCA, implemented starting from the correlation matrix of four manifest variables, namely:

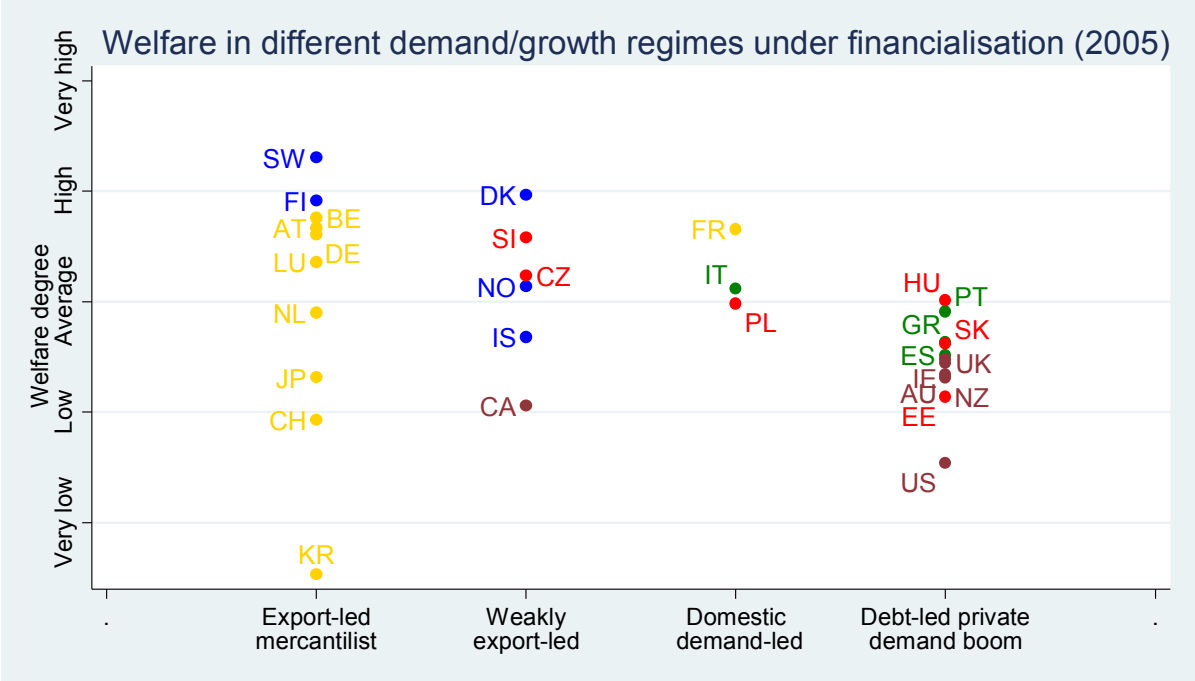
- *public social spending share on GDP (PSS);*
- *redistribution effectiveness (RED);*
- *employment protection (EPL);*
- *trade union density (TUD).*

See the technical annex for complete methodology.

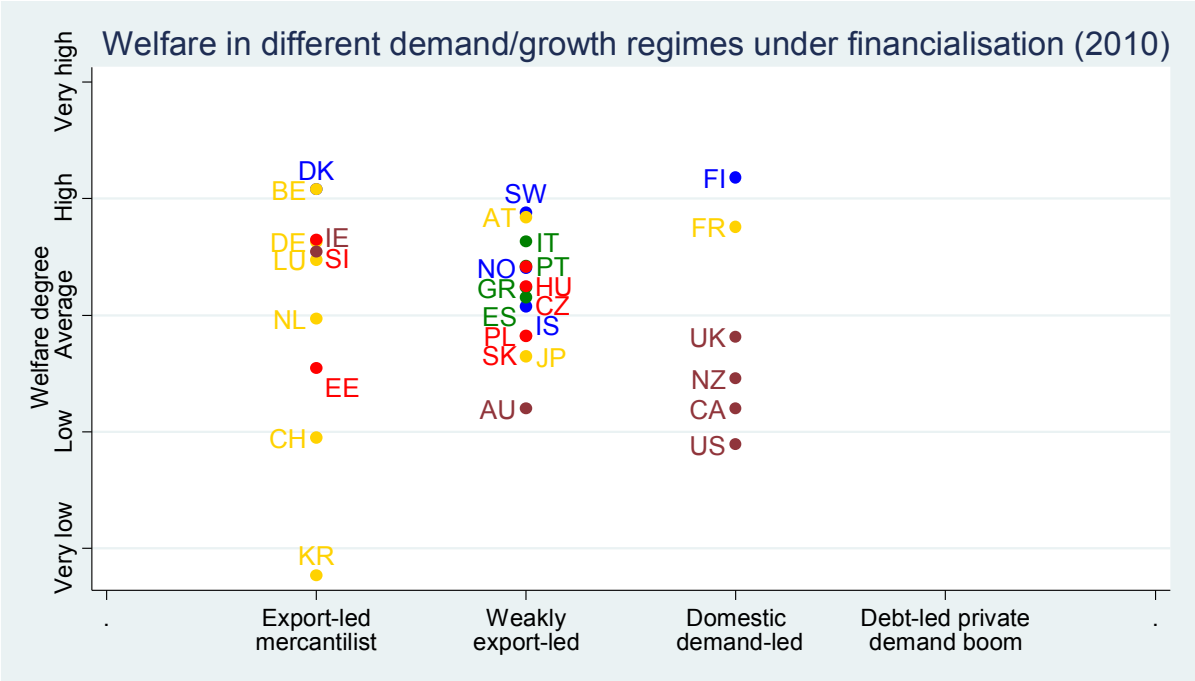
Source: See Figures 1-4.

Figure 6. Demand and growth regimes and welfare models

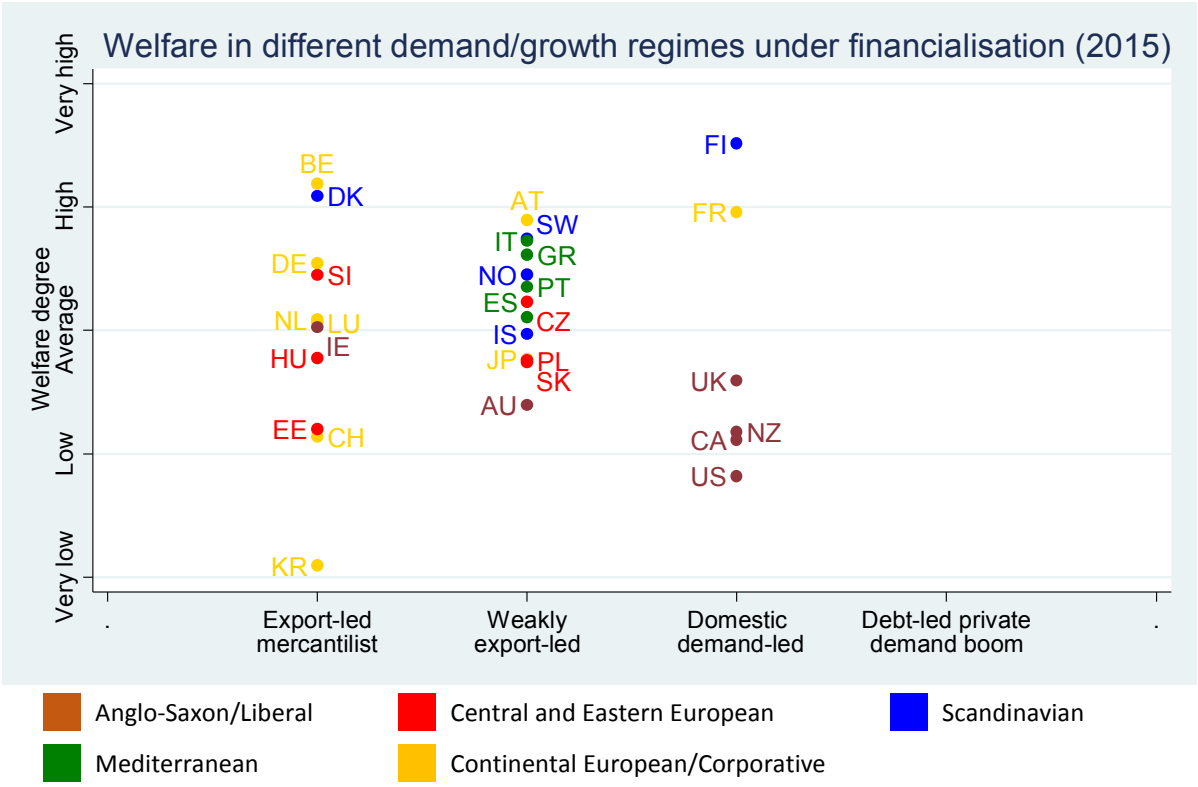
6.1: Demand and growth regimes and welfare models in 2005



6.2: Demand and growth regimes and welfare models in 2010



6.3: Demand and growth regimes and welfare models in 2015



Notes: The figures provide snapshots of the relationship between demand and growth regimes and welfare models in different OECD countries. On the horizontal axis we report the demand and growth regimes (according to Table 5 for 2005, and to Table 6 for 2010 and 2015), while on the vertical axis we plot the degree of welfare (based on the results reported in Table 7). For easy comparison and interpretation, colours refer to the welfare taxonomy reported in Table 2.

6. Conclusions

Starting from the recent attempts at connecting CPE with PK research on demand-led growth regimes in the period of finance-dominated capitalism, which we fully appreciate, our paper has first clarified several ambiguities and misunderstandings of PK demand-led growth regimes and their empirical indicators in the recent CPE literature. We have then provided a theoretically consistent and empirically applicable classification of demand and growth regimes under the conditions of finance-dominated capitalism and have distinguished four regimes, i.e. 1) an export-led mercantilist regime, 2) a weakly export-led regime, 3) a domestic demand-led regime, and 4) a debt-led private demand boom regime.

Second, instead of using the traditional welfare system classification in the VoC theory, we have applied a richer and more complex taxonomy in the tradition of Esping-Anderson (1990), as recently proposed by Hay and Wincott (2012): 1) the Anglo-Saxon/Liberal model, 2) the Continental European/Corporative model, 3) the Mediterranean model, 4) the Scandinavian model, and 5) the Central and Eastern European (CEEC) model.

Third, we have then examined the relationships between demand-led growth regimes and welfare models both before and after the recent crisis, i.e. for the 2000-2008 and the 2009-2016 periods, for a set of 30 OECD countries.

What emerges from our juxtaposition is that in the pre-crisis period 2000-2008 the Continental European/Corporative (with the exception of France) and the Scandinavian welfare models generated export-led mercantilist or weakly export-led demand and growth regimes. In the Anglo-Saxon/Liberal and the Mediterranean welfare models, with the exception of Italy, however, we found the debt-led private demand boom regime. The CEEC welfare model generated either weakly export-led or debt-led private demand boom regimes, or, like Poland a domestic demand-led regime. As a first hypothesis, which may need further research, we have related this pattern to different degrees of financialisation, on the one hand, and to different strategies trying to cope with globalisation, on the other hand.

Looking at the crisis and post-crisis period from 2009 until 2016, we have observed some remarkable shifts. The demand and growth regime in countries of the Anglo-Saxon/Liberal welfare model turned towards a domestic demand-led regime mainly stabilised by government deficits, with the exception of Ireland, which under the conditions of the Eurozone crisis and the enforced austerity policies moved towards an export-led mercantilist regime. In the countries of the Mediterranean welfare model, under the dominance of austerity and deflationary stagnation policies in the Eurozone, also a shift towards a weakly export-led demand and growth regime has been enforced. Likewise for the countries of the CEEC welfare model a shift towards an export-led mercantilist or a weakly export-led demand and growth regime in the post-crisis period has emerged for similar reasons. Finally, the countries of the Continental European/Corporative and the Scandinavian welfare model have basically maintained their demand and growth regime, either following the export-led mercantilist or the weakly export-led regime. The only exceptions here are Finland, which has turned towards a domestic demand-led regime, and France, which has kept this type of regime. As a general pattern for the post-crisis period we thus have a tendency towards export-led mercantilist or weakly export-led regimes, on the one hand, and as counterparts the domestic demand-led regimes stabilised by government deficits, on the other hand.

Finally, we have found that the welfare models in the course and after the crisis have changed somewhat, too, in particular the Mediterranean and the CEEC models. The countries in these models have moved towards a more Anglo-Saxon/Liberal model, essentially through rising labour market flexibility, welfare retrenchment, and the ensuing rise in inequality. We leave the question whether this might require a re-classification of welfare models to further research. What we can claim at this stage is that, although the Mediterranean and the CEEC model countries are likely moving towards the Anglo-Saxon/Liberal model in terms of welfare, they have not been able to follow the domestic demand-led demand and growth regime mainly stabilised by government deficits of the Anglo-Saxon/Liberal countries because of the constraints on fiscal policy imposed on these EU countries by the Maastricht regime and the enforced austerity policies.

Appendix

A. Data and sources

Wage share	Labour income share (adjusted wage share) *Source: ILO.org (database ILOSTAT).*
Public social spending	Public social spending as per cent of GDP. *Source: OECD.Stat, Social Expenditure Database (SOCX).*
Employment protection	Strictness of employment protection – individual and collective dismissals (regular contracts, v1, 1985-2013). For 2015 we used 2013 data. *Source: OECD.Stat, Labour.*
Trade union density	Trade union density (administrative data, survey data when administrative data are not available). *Source: OECD.Stat, Income Distribution and Poverty.*
Income inequality	Gini coefficient (income definition until 2011, new income definition since 2011). - disposable income, post taxes and transfers - market income, before taxes and transfers *Source: OECD.Stat, Income Distribution and Poverty.*
GDP growth and growth contributions, as well as financial balances of the main macroeconomic sectors	*Source: AMECO Database of the European Commission*.

B. Technical annex

Descriptive analyses and correlation matrix of MVs

Variable	Obs.	Mean	Std. Dev.	Min	Max
PSS	90	21.651	4.892	6.115	31.685
RED	90	0.352	0.084	0.073	0.487
EPL	90	2.111	0.715	0.257	4.417
TUD	90	29.536	20.713	4.5	95.2

MVs	PSS	DG	EPL	TU
PSS	1.0000	-	-	-
RED	0.6837	1.0000	-	-
EPL	0.3117	0.2801	1.0000	-
TUD	0.2896	0.3833	0.0224	1.0000

Principal components/correlation Number of obs. = 90
Number of comp. = 5
Trace = 4
Rotation: varimax Rho = 1.0000

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.06793	1.08463	0.5170	0.5170
Comp2	.983302	.3424	0.2458	0.7628
Comp3	.640902	.333038	0.1602	0.9230
Comp4	.307864	-	0.0770	1.0000

*Principal components (eigenvectors)***Standardized variable**	Comp1	Comp2	Comp3	Comp4	Un-explained
PSS	0.5973	0.0644	-0.4294	0.6743	0
RED	0.6119	-0.0636	-0.3020	-0.7282	0
EPL	0.3430	0.7474	0.5688	-0.0130	0
TUD	0.3888	-0.6582	0.6331	0.1216	0

To calculate the degree of welfare reported in Table 7 we implemented a PCA which started from the correlation matrix of manifest variables (MVs) indicated in Figures 1 to 4. From the correlation matrix, we compute the eigenvalues, the highest of which has the one capturing the highest variance, and the ratio between it and the sum of eigenvalues indicates how much variance is explained by the first principal component. Then, for each eigenvalue the respective eigenvector has been calculated. The eigenvector is the vector of coefficients which multiply the original MVs within the linear combination that allows to obtain the 'degree of welfare'. In algebraic terms, we consider a X matrix (with z-standardized values) with n=30 rows representing countries and p=4 columns representing MVs. Mathematically, the PCA transformation is defined by a set of p-dimensional vectors of loadings $\bar{w}_{(k)} = (w_1, \ldots, w_p)_{(k)}$ *that map each row vector* $\bar{x}_{(i)}$ *of X to a new vector of principal component scores* $\bar{t}_{(i)} = (t_1, \ldots, t_l)_{(i)}$*, given by* $t_{k(i)} = \bar{x}_{(i)} \cdot \bar{w}_{(k)}$ *(for i = 1, …, n and k = 1, …, l), in such way that the vector of scores* $\bar{t}$ *considered over the dataset successively inherits the maximum possible variance from* $\bar{x}$*, with each loading vector* $\bar{w}$ *constrained to be a unit vector. In order to maximize the variance, the first loading vector* $\bar{w}_{(1)}$ *thus has to satisfy the following:*

$$\bar{w}_{(1)} = arg\,max_{\|\bar{w}\|=1} \left\{ \sum_i (t_1)^2_{(i)} \right\} = arg\,max_{\|\bar{w}\|=1} \left\{ \sum_i (\bar{x}_{(i)} \cdot \bar{w})^2 \right\}.$$

References

Allan, J.P., Scruggs, L. (2004). Political partisanship and welfare state reform in advanced industrial societies. *American Journal of Political Science*, *48*(3), 496-512.

Baccaro, L., Pontusson, J. (2016). Rethinking comparative political economy: the growth model perspective. *Politics & Society, 44*(2), 175–207.

Baccaro, L., Pontusson, J. (2018). Comparative political economy and varieties of macroeconomics. MPIfG Discussion Paper 18/10. Cologne, Max Planck Institute for the Study of Societies.

Barba, A., Pivetti, M. (2009). Rising household debt: its causes and macroeconomic implications – a long-period analysis. *Cambridge Journal of Economics, 33*, 113-137.

Behringer, J., van Treeck, T. (2017). Varieties of Capitalism and growth regimes: The role of income distribution. Forum Macroeconomomics and Macroeconomic Policies (FMM) Working Papers 9/2017. Düsseldorf, Hans Boeckler Foundation.

Blackmon, P. (2006). The state: back in the center of the globalization debate. *International Studies Review*, *8*(1), 116-119.

Boone, L., Girouard, N. (2002). The stock market, the housing market and consumer behaviour. *OECD Economic Studies, 35*, 175-200.

Brady, D., Beckfield, J., Seeleib-Kaiser, M. (2005). Economic globalization and the welfare state in affluent democracies, 1975–2001. *American Sociological Review*, *70*(6), 921-948.

Carlin, W., Soskice, D.W. (2009). Teaching intermediate macroeconomics using the 3-equation model. In Fontana, G., Setterfield, M. (eds), *Macroeconomic Theory and Macroeconomic Pedagogy* . London, Palgrave Macmillan.

Carlin, W., Soskice, D.W. (2015). *Macroeconomics: Institutions, Instability, and the Financial System*. Oxford, Oxford University Press.

Castells, M. (2004). Global informational capitalism. In: McGrew AG and Held D (eds) *The Global Transformations Reader: An Introduction to the Globalization Debate*. Cambridge, UK, Polity Press.

Coats, D. (2013). *Just deserts: Poverty and income inequality: can workplace democracy make a difference?* London, The Smith Institute and Webb Memorial Trust.

Cynamon, B., Fazzari S. (2008). Household debt in the consumer age: source of growth – risk of collapse. *Capitalism and Society*, *3*(2), 1-30.

Cynamon, B., Fazzari, S. (2013). Inequality and household finance during the consumer age. Working Paper No. 752. Annandale-on-Hudson, NY, Levy Economics Institute of Bard College.

Davis, L. (2018). Financialisation and the nonfinancial corporation: an investigation of firm level investment behavior in the United States. *Metroeconomica*, *69*(1), 270-3017.

Dodig, N., Hein, E., Detzer, D. (2016). Financialisation and the financial and economic crises: Theoretical framework and empirical analysis for 15 countries. In Hein, E., Detzer, D. and Dodig, N. (eds.), *Financialisation and the Financial and Economic Crises: Country Studies.* Cheltenham, Edward Elgar.

Dodig, N., Herr, H. (2015). Current account imbalances in the EMU: an assessment of official policy responses. *Panoeconomicus*, *66*(2): 193-216.

Duesenberry, J.S. (1949). *Income, Saving and the Theory of Consumer Behavior.* Cambridge, MA, Harvard University Press.

Emmenegger, P., Kvist, J., Marx, P., Petersen, K. (2015). Three Worlds of Welfare Capitalism: The making of a classic. *Journal of European Social Policy*, *25*(1), 3-13.

Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism.* Cambridge, UK, Polity Press.

Esping-Andersen, G. (1997). Hybrid or unique?: The Japanese welfare state between Europe and America, *Journal of European Social Policy*, *7*(3), 179-189.

Feldmann, M. (2006). Emerging varieties of capitalism in transition countries: industrial relations and wage bargaining in Estonia and Slovenia. *Comparative Political Studies*, *39*(7), 829-854.

Ferrera, M. (1996). The "Southern Model" of welfare in social Europe. *Journal of European Social Policy*, *6*, 17-37.

Fontana, G., Setterfield, M. (eds) (2009). *Macroeconomic Theory and Macroeconomic Pedagogy* . London, Palgrave Macmillan.

Frank, R.H., Levine, A.S., Dijk, O. (2014). Expenditure cascades. *Review of Behavioral Economics*, *1*, 55–73.

Guttmann, R., Plihon, D. (2010). Consumer debt and financial fragility. *International Review of Applied Economics*, *24*, 269-283.

Hague, R., Harrop, M. (2013). *Comparative Government and Politics: An Introduction, 9th edition.* London, Palgrave Macmillan.

Hall, P.A., Soskice, D. (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford, Oxford University Press.

Hay C., Wincott, D. (2012). *The Political Economy of European Welfare Capitalism*. London, Palgrave Macmillan.

Hein, E. (2012). *The Macroeconomics of Finance-dominated Capitalism – and its Crisis*. Cheltenham, Edward Elgar.

Hein, E. (2013). The crisis of finance-dominated capitalism in the Euro area, deficiencies in the economic policy architecture and deflationary stagnation policies. *Journal of Post Keynesian Economics*, *36*(2), 325–354.

Hein, E. (2014). *Distribution and Growth after Keynes: A Post-Keynesian Guide.* Cheltenham, Edward Elgar.

Hein, E. (2015). Finance-dominated capitalism and re-distribution of income – a Kaleckian perspective. *Cambridge Journal of Economics*, *39*, 907-934.

Hein, E. (2017a). Post-Keynesian macroeconomics since the mid-1990s – main developments. *European Journal of Economics and Economic Policies: Intervention*, *14*(2), 131-172.

Hein, E. (2017b). *Financialisation and tendencies towards stagnation: the role of macroeconomic regime changes in the course of and after the financial and economic crisis 2007-9.* Institute for International Political Economy (IPE), Working Paper 90/2017. Berlin, Berlin School of Economics and Law.

Hein, E. (2018). Stagnation policy in the Eurozone and economic policy alternatives: A Steindlian/neo-Kaleckian perspective. *Wirtschaft und Gesellschaft*, *44*(3), 315-348.

Hein, E., Detzer, D., Dodig, N. (eds.) (2016). *Financialisation and the Financial and Economic Crises: Country Studies.* Cheltenham, Edward Elgar.

Hein, E., Dünhaupt, P., Alfageme, A., Kulesza, M. (2017a). Financialisation and distribution before and after the crisis: Patterns for six OECD countries. In Arestis, P., Sawyer, M.

(eds.), *Economic Policies since the Global Financial Crisis. International Papers in Political Economy*. London, Palgrave Macmillan.

Hein, E., Dünhaupt, P., Kulesza, M., Alfageme, A. (2017b). Financialisation and distribution from a Kaleckian perspective: the US, the UK and Sweden compared – before and after the crisis. *International Journal of Political Economy*, *46*(4), 233-266.

Hein, E., Dünhaupt, P., Alfageme, A., Kulesza, M., (2018). A Kaleckian perspective on financialisation and distribution in three main Eurozone countries before and after the crisis: France, Germany and Spain. *Review of Political Economy*, *30*(1), 41-71.

Hein, E., Mundt, M. (2012). Financialisation and the requirements and potentials for wage-led recovery – a review focussing on the G20. Conditions of Work and Employment Series No. 3. Geneva, ILO.

Hein, E., Stockhammer, E. (eds.) (2011). *A Modern Guide to Keynesian Macroeconomics and Economic Policies*. Cheltenham, Edward Elgar.

Hein, E., Truger, A. (2009). How to fight (or not to fight) a slowdown. *Challenge*, *52*(2), 52-75.

Hein, E., van Treeck, T. (2010). Financialisation and rising shareholder power in Kaleckian/post-Kaleckian models of distribution and growth. *Review of Political Economy*, *22*(2), 205-233.

Heinze, H. (2018). The determinants of German exports - an analysis of intra- and extra-EMU trade. Institute for International Political Economy (IPE), Working Paper 95/2018. Berlin, Berlin School of Economics and Law.

Hope, D., Soskice, D. (2016). Growth models, varieties of capitalism and macroeconomics. *Politics & Society*, *44*(2), 209-226.

Horn, G., Joebges, H., Zwiener, R. (2009). *From the financial crisis to the world economic crisis (II). Global imbalances: cause of the crisis and solution strategies for Germany.* IMK Policy Brief, December 2009. Duesseldorf, Macroeconomic Policy Institute (IMK) at Hans-Boeckler Foundation.

Hotelling, H. (1933). Analysis of a complex of statistical variables into principal components. *Journal of Educational Psychology*, *24*, 417–441, and 498–520.

Hotelling, H. (1936). Relations between two sets of variates. *Biometrika*, 28 (3/4), 321–377.

Jolliffe, I.T., Cadima, J. (2016). Principal component analysis: a review and recent developments. *Philosophical Transactions of the Royal Society – A mathematical, physical and engineering sciences*, 374(2065): 20150202.

Kim, Y.K. (2013). Household debt, financialization, and macroeconomic performance in the United States, 1951-2009. *Journal of Post Keynesian Economics*, 35, 675–694.

Kim, Y.K. (2016). Macroeconomic effects of household debt: an empirical analysis. *Review of Keynesian Economics. 4*, 127–150.

Kollmann, R., Ratto, M., Roeger, W., in't Veld, J., Vogel, L. (2014). What Drives the German Current Account? And How Does It Affect Other EU Member States? European Economy, Economic Papers, n. 516. Brussels, European Commission, Directorate-General for Economic and Financial Affairs.

Lavoie, M. (2014). *Post-Keynesian Economics: New Foundations*. Cheltenham, Edward Elgar.

Lavoie, M., Stockhammer, E. (2013). Wage-led growth: Concept, theories and policies. In Lavoie, M., Stockhammer, E. (eds.), *Wage-led Growth* . London, Palgrave Macmillan.

Ludvigson, S., Steindel, C. (1999). How important is the stock market effect on consumption? *Federal Reserve Bank of New York Economic Policy Review*, July, 29-51.

Martin, C.J. (2016). Economic prosperity is in high demand. *Politics & Society*, *44*(2), 227-235.

Mehra, Y.P. (2001). The wealth effect in empirical life-cycle aggregate consumption equations. *Federal Reserve Bank of Richmond Economic Quarterly*, *87*(2), 45-68.

Nelson, K. (2010). Social assistance and minimum income benefits in old and new EU democracies. *International Journal of Social Welfare*, *19*(4), 367-378.

OECD (2004). *Employment Outlook, Chapter 2: Employment Protection Regulation and Labour Market Performance*. Paris, OECD.

OECD (2008). *Growing Unequal?: Income Distribution and Poverty in OECD Countries*. Paris, OECD.

Onaran Ö., Galanis, G. (2014). Income distribution and growth: a global model. *Environment and Planning A*, *46*(10), 2489-2513.

Onaran, Ö., Obst, T. (2016). Wage-led growth in the EU15 member-states: the effects of income distribution on growth, investment, trade balance and inflation. *Cambridge Journal of Economics, 40*(6), 1517-1551.

Onaran, Ö., Stockhammer, E., Grafl, L. (2011). Financialisation, income distribution and aggregate demand in the USA. *Cambridge Journal of Economics*, *35*, 637-661.

Orhangazi, Ö. (2008). Financialisation and capital accumulation in the non-financial corporate sector: a theoretical and empirical investigation on the US economy: 1973-2003. *Cambridge Journal of Economics*, *32*, 863-886.

Paternesi Meloni, W. (2017). Austerity & Competitiveness in the Eurozone: a misleading linkage. Departmental Working Papers of Economics University 'Roma Tre', n. 223. Rome, University ‘Roma Tre’.

Pearson, K. (1901). On lines and planes of closest fit to systems of points in space. *Philosophical Magazine,* 2 (11), 559–572.

Piore, M.J. (2016). Varieties of capitalism theory: its considerable limits. *Politics & Society*, *44*(2), 237-241.

Rodrik, D. (1998). Why do more open economies have bigger governments? *Journal of Political Economy*, *106*(5), 997-1032.

Sapir, A. (2006). Globalisation and the reform of European social models. *Journal of Common Market Studies*, *44*(2), 369-390.

Šikulová, I., Frank, K. (2013). The Slovak experience with transition to market economy (No. 49). Ekonomický ústav SAV Working Paper.

Stockhammer, E. (2004). Financialisation and the slowdown of accumulation. *Cambridge Journal of Economics*, *28*, 719-741.

Stockhammer, E. (2009). Determinants of functional income distribution in OECD countries, IMK Studies 05–2009. Düsseldorf, Macroeconomic Policy Institute (IMK) at Hans-Boeckler Foundation.

Stockhammer, E. (2010). Income distribution, the finance-dominated accumulation regime, and the present crisis. In Dullien, S., Hein, E., Truger, A., van Treeck, T. (eds.), *The World Economy in Crisis - the Return of Keynesianism?* Marburg, Metropolis.

Stockhammer, E. (2012). Financialization, income distribution and the crisis. *Investigación Económica*, *71*(279), 39-70.

Stockhammer, E. (2015). Rising inequality as a root cause of the present crisis. *Cambridge Journal of Economics*, *39*, 935–958.

Stockhammer, E. (2017). Determinants of the wage share: a panel analysis of advanced and developing economies. *British Journal of Industrial Relations*, *55* (1), 3–33.

Stockhammer, E., Hein, E., Grafl, L. (2011). Globalization and the effects of changes in functional income distribution on aggregate demand in Germany. *International Review of Applied Economics*, *25*(1), 1-23.

Stockhammer, E., Ali, S. M. (2018). Varieties of Capitalism and post-Keynesian economics on Euro crisis. *Wirtschaft und Gesellschaft*, *44*(3), 349-370.

Storm, S., Naastepad, C.W.M. (2015). Crisis and recovery in the German economy: the real lessons. *Structural Change and Economic Dynamics*, *32*, 11-24.

Streeck, W. (2016). Varieties of varieties: 'VoC' and the growth models. *Politics & Society*, *44*(2), 243-247.

Swank, D. (2002). *Global Capital, Political Institutions, and Policy Change in Developed Welfare States*. Cambridge, UK, Cambridge University Press.

Thorhallsson, B., Kattel, R. (2013). Neo-liberal small states and economic crisis: lessons for democratic corporatism. *Journal of Baltic studies*, *44*(1), 83-103.

Tomšič, M., Kristan, P., Adam, F. (2008). Between neo-liberalism and neo-corporatism: Estonia and Slovenia in the comparative perspective. *Revija za socijalnu politiku*, *15*(2), 135-150.

Tori, D., Onaran, Ö. (2017a). The effects of financialisation and financial development on investment: Evidence from firm-level data for Europe. Greenwich Papers in Political Economy 16089. London, Greenwich Political Economy Research Centre.

Tori, D., Onaran, Ö. (2017b). Financialisation and physical investment: a global race to the bottom in accumulation? Post Keynesian Economics Study Group Working Paper 1707.

Tori, D., Onaran, Ö. (2018). The effects of financialisation on investment: Evidence from firm-level data for the UK. *Cambridge Journal of Economics*, *42*, 1393–1416.

Tridico, P., Paternesi Meloni, W. (2018). Economic growth, welfare models and inequality in the context of globalisation. *The Economic and Labour Relations Review*, *29*(1), 118-139.

UNCTAD (2009). *The Global Economic Crisis. Systemic Failures and Multilateral Remedies*. New York, Geneva, UNCTAD.

van Treeck, T. (2008). Reconsidering the investment-profit nexus in finance-led economies: an ARDL-based approach. *Metroeconomica*, *59*, 371-404.

van Treeck, T. (2014). Did inequality cause the US financial crisis? *Journal of Economic Surveys*, *28*, 421-448.

van Treeck, T., Sturn, S. (2012). *Income inequality as a cause of the Great Recession? A survey of current debates.* Conditions of Work and Employment Series No. 39. Geneva, ILO.

Impressum

Publisher: Hans-Böckler-Stiftung, Hans-Böckler-Straße 39, 40476 Düsseldorf, Germany
Contact: fmm@boeckler.de, www.fmm-macro.net

FMM Working Paper is an online publication series available at:
https://www.boeckler.de/imk_108537.htm

ISSN: 2512-8655