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The Eurozone in Crisis – A Kaleckian Macroeconomic Regime and Policy Perspective

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The Eurozone in Crisis – A Kaleckian Macroeconomic Regime and Policy Perspective*

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Abstract

The current Covid-19 Crisis 2020 has hit the Eurozone in a highly fragile situation, with a weak and asymmetric recovery from the Great Financial Crisis, the Great Recession and the following Eurozone Crisis. These crises have also revealed the weaknesses of the macroeconomic policy institutions and strategies of the Eurozone based on New Consensus Macroeconomics (NCM). Applying a Kaleckian/post-Keynesian analysis of the demand and growth regimes to the EA-12 countries, we show that the internal imbalances within the EA-12 before the Eurozone crisis, with the polarization of current account deficit debt-led private demand boom countries, on the one hand, and of current account surplus export-led mercantilist countries, on the other hand, have been externalized since then. Most of the countries and the EA-12 as a whole have now turned export-led mercantilist. For an economic policy alternative favouring a domestic demand-led regime, we turn towards Kalecki's macroeconomic policy proposals for achieving and maintaining full employment in a capitalist economy by government deficit expenditures, in combination with re-distribution policies in favour of labour and low-income households, assisted by central banks targeting low interest rates. This approach is then applied to the Eurozone, in order to derive a policy mix which should contribute to a more rapid recovery from the Covid-19 Crisis and to a medium- to long-run non-inflationary full employment domestic demand-led regime, on the one hand, and to sustainable catching-up of the periphery of the Eurozone with respect to the more mature centre, on the other hand.

JEL code: E11, E12, E61, E63, E65
Keywords: Eurozone crisis, Kalecki, demand and growth regime, macroeconomic policies

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1. Introduction

After the Great Financial Crisis and the Great Recession 2007-09, the EU and the Eurozone, as well as the world economy, are currently facing the deepest recession since the crisis in the late 1920s, which has led to the Great Depression of the 1930s (European Commission 2020a, IMF 2020). The current Covid-19 Crisis has hit the Eurozone asymmetrically, while it was already in a fragile situation, since it has not fully recovered from the Great Recession and, in particular, the following Eurozone Crisis. This crisis revealed the fundamental problems of the economic policy institutions and the economic policy model of the Eurozone, which has been based on New Consensus Macroeconomics (NCM) (Arestis and Sawyer 2011, 2013, Hein 2013/14, 2018a).

First, in 'normal' times, i.e. in the period before the crisis, there was no mechanism that prevented rising current account imbalances and divergence among member states. With the one and only Eurozone-level macroeconomic policy instrument, the nominal interest rate set by the ECB for the Eurozone as a whole, necessarily guided by Eurozone average inflation, real interest rates diverged. This contributed to even further divergence, with below average real interest rates in booming member countries with above average inflation and rising current account deficits and above average real interest rates in stagnating member states with below average inflation and rising current account surpluses. Furthermore, the introduction of structural reform policies in stagnating countries, in order to reduce the respective NAIRU in line with the NCM, further weakened domestic demand in these countries, and thus contributed to rising current account surpluses due to the dampening effect on imports in these countries.

Second, in the Eurozone crisis, it became clear that nominal interest rate policies from the ECB were insufficient to stabilise aggregate demand and economic activity. The zero lower bound for the nominal short-term ECB lending rate, the main refinancing rate, imposed a downward constraint on interest rate policies. Lowering the short-term policy rate was not sufficient to bring down long-term interest rates when risk and liquidity premia for commercial banks and other financial intermediaries rose. To the extent that long-term interest rates were decreased, i.e. by means of direct intervention in financial markets ('quantitative easing'), this was not sufficient to stimulate investment under the conditions of depressed demand expectations.

Third, and the main reason for the Eurozone Crisis, the role of the ECB as a 'lender of last resort', not only for the banking sector, but also for member state governments, was unclear at the beginning of the crisis. Therefore, when governments went into debt in order to stabilise the financial sector, as well as the real economy when the limits of ECB monetary policies became obvious, some interest rates on member state debt started to rise and put these governments under the pressure of financial markets. As a consequence, the ECB gradually moved towards a lender of last resort and guarantor of government debt of member states. However, Mario Draghi's (2012) statement that '(w)ithin our mandate, the ECB is ready to do whatever it takes to preserve the euro', was later qualified such that the ECB's willingness to intervene in secondary government bond markets, in the context of Outright Monetary Transactions (OMT), was made conditional on the respective countries applying to the EFSF/ESM and introducing macroeconomic adjustment programmes, i.e. austerity policies (ECB 2012). Linking financial rescue measures with austerity policies, however, has been detrimental to recovery (De Grauwe 2012, Hein 2013/14).

The initial responses towards the Covid-19 Crisis in 2020 in the EU and the Eurozone have been quite expansionary. In the area of fiscal policies, the strict budgetary rules (Stability and Growth Pact, Six-Pack, Two-Pack, Fiscal Compact) have been temporarily suspended making use of the budgetary escape clause, and discretionary fiscal expansion of more than 3.5 per cent of EU GDP has been implemented at national and EU levels, associated with liquidity guarantees of more than 25 per cent of EU GDP (European Commission 2020a). New assistant schemes, like the EU funding for short-term work scheme, have been set up and existing institutions have been targeted towards fighting the crisis, like the ESM pandemic crisis support for member states and EIB financing for business (European Commission 2020b). Furthermore, the European Commission (2020c) has presented a recovery plan with expenditures of € 750 billion over several years, financed by debt issued by the European Commission. In addition, the ECB (2020) has announced further expansionary measures, supporting commercial banks with longer-term refinancing operations at negative interest rates and stabilising financial markets with the continuation of its asset purchase programme (APP) and a new pandemic emergency purchase programme (PEPP). The main refinancing interest rate is kept at zero percent, with a corridor of -0.5 to 0.25 percent given by the deposit and the marginal lending facility rates.

Whether these expansionary measures, in particular the fiscal expansion, mark a fundamental change in the EU and Eurozone macroeconomic policy model moving away from the NCM, remains to be seen. It is too early to judge whether these measures are conceived as rather short-run rescue measures, acknowledging the severity of the crisis and the limits of central bank interest rate policies to tackle such a crisis, or a move towards a policy model with an active role for fiscal policies beyond the short run. We will argue that such a change is required in order to stabilise the Eurozone economies in the short run and to deal with inadequate employment performance, asymmetries and imbalances, which have built up over the last two decades, in the medium to long run. Such an alternative policy approach can build on the contributions by Michał Kalecki, particularly those from the 1940s, which have been further developed in post-Keynesian macroeconomics.

In order to underline the problems and the imbalances of the economic development within the Eurozone since its inception, we will start in Section 2 with an analysis of the macroeconomic demand and growth regimes which have dominated the initial member countries (EA-12) up to the Great Financial Crisis and the Great Recession, and then after these crises up to the current Covid-19 Crisis. In Section 3, we will then outline some basic lines of Michał Kalecki's economic policy suggestions for macroeconomic recovery and for the management of full employment in the long run. Based on Kalecki's macroeconomics and economic policy suggestions, we will then outline a post-Keynesian macroeconomic policy alternative for the Eurozone in Section 4. Section 5 will briefly summarise and conclude.

2. Demand and growth regimes in the Eurozone

2.1 Demand and growth regimes in finance-dominated capitalism

From the Kaleckian/post-Keynesian perspective, different macroeconomic demand and growth regimes have emerged under the conditions of financialisation since the early 1980s, when the capitalist economies were exposed to major changes in the financial sectors, including the

liberalisation of financial markets, the development of new financial instruments and an overall increasing role of finance in the operation of the economies (Epstein 2005). From a macroeconomic perspective, these transformations have had important implications for (1) income distribution, (2) investment in capital stock, (3) consumption and the (4) build-up of global and regional (European) current account imbalances (Hein 2012).[1]

With respect to income distribution, financialisation has been associated with increasing profit shares, higher top income shares and rising inequality of household incomes. Moreover, financialisation has coincided with lower investment in the capital stock. This trend emerged as shareholder power vis-à-vis firms and workers increased, shifting firms' objectives from long-run growth to short-term profitability through financial activities. These two first features of financialisation have negatively affected aggregate demand – both directly by decreasing investment, and indirectly by re-distributing income to groups with lower propensities to consume in mostly wage-led economies.[2] Against this background two extreme regimes have developed.

In some countries, the shortfall in aggregate demand was compensated by wealth-based and debt-financed consumption, which has been facilitated by financialisation (Hein 2012, chapter 5). Other countries facing rising income inequality and dampened real investment have been relying on net exports to generate growth.[3] As the subsequent analysis will show, these two different growth models have been mirrored by opposed but complementary external account positions of the two country groups. The current account deficits of the debt-financed model have been matched by the current account surpluses of the export-driven growth model. Financialisation contributed to these developments to the extent that the deregulation and liberalisation of international capital markets and capital accounts has allowed current account imbalances to persist and deficits to be financed over longer periods (Hein 2012, chapter 6, Stockhammer 2015).

In what follows, we will cluster the demand and growth regimes of the initial Eurozone member countries, without Luxembourg, and the EA-12 as a whole, following a procedure introduced and applied by Dodig et al. (2016), Hein (2012, chapter 8, 2013/2014, 2019) and Hein et al. (2020). First, we will look at the growth contributions of the main demand aggregates, private and public consumption, investment and net exports, which should sum up to real GDP growth. Second, we will look at the sectoral financial balances of the main macroeconomic sectors, the private household sector, the financial and non-financial corporate sectors, the government sector and the external sector, which should sum up to zero.[4] These two sets of indicators will allow us to

[1] See also Hein (2019), Hein and Mundt (2012), Stockhammer (2010, 2012, 2015), van Treeck and Sturn (2012), the contributions in Hein et al. (2015, 2016), and several others. These macroeconomic features of financialisation have been derived from the broad and extensive literature on changes in the structure, institutions and power relationships in modern capitalism since the early 1980s. Some recent overviews can be found in Guttmann (2016), Palley (2013), Sawyer (2013/2014) and van der Zwan (2014).

[2] Econometric research based on demand-driven post-Kaleckian distribution and growth models has shown that most of the advanced capitalist economies, including the EU-15, tend to be wage-led, that is a falling wage share will dampen aggregate demand and growth (Hartwig 2014, Onaran and Obst 2016, Onaran and Galanis 2014).

[3] For a derivation of these regimes in simulated stock-flow consistent models see Belabed et al. (2018) and Detzer (2018), and for a stylized Kaleckian model see Hein (2018b).

[4] Small deviations might occur due to statistical discrepancies. Besides, growth contributions of private consumption, public consumption, as well as of private and public investment may not sum up to the growth contribution of domestic demand because changes in inventories/stocks are not considered in what follows.

distinguish between (1) a debt-led private demand boom regime, (2) an export-led mercantilist regime, (3) a weakly export-led regime and (4) a domestic demand-led regime:

The *debt-led private demand boom regime* is characterised by deficits of the private domestic sectors as a whole, which are, one the one hand, driven by corporate deficits and, on the other hand, by negative or close to zero financial balances of the private household sectors. The latter implies that major parts of the private household sector have negative saving rates out of current income and finance these deficits by increasing their stock of debt or by decreasing their stock of assets. The deficits of the private domestic sectors are mirrored by positive financial balances of the external sector, i.e. current account deficits. Growth is mainly driven by private domestic demand, to large degree financed by credit, while the balance of goods and services negatively contributes to growth.

The *export-led mercantilist regime* shows positive financial balances of the domestic sector as a whole that are matched by negative financial balances of the external sector, indicating current account surpluses. There are high growth contributions of the positive balance of goods and services, and thus, rising net exports and current account surpluses, and small or even negative growth contributions of domestic demand.

The *weakly export-led regime* either shows positive financial balances of the domestic sector, negative financial balances of the external sector, and hence current account surpluses, but negative growth contributions of the balance of goods and services and thus falling net exports and current account surpluses. Or, alternatively we have negative financial balances of the domestic sectors, positive financial balances of the external sector, and hence current account deficits, but positive growth contributions of the balance of goods and services, and thus improving net exports and falling current account deficits.

The *domestic demand-led regime* is characterised by positive financial balances of the private household sector, while the government and, to some extent, the corporate sector are running deficits. The external sector is roughly balanced, seeing only small deficits or surpluses. Domestic demand contributes positively to growth (without being driven by credit-financed private consumption) and there are slightly negative or positive growth contributions of the balance of goods and services.

Our analysis will distinguish average values over two periods: first, the period from the start of the Eurozone in the considered constellation (EA-12) in 2001[5] until the Great Recession in 2009, and second, the period from the start of the Eurozone Crisis in 2010 until 2019, the most recent available data.

2.2 Demand regimes and imbalances within the Eurozone 2001-09

Between 2001 and 2009, Greece, Ireland and Spain were characterized by the debt-led private demand boom regime, with negative financial balances of the private domestic sector as a whole, mainly driven by high deficits of the private household sector (Table 1). The counterpart to the negative financial balances of the domestic sectors was the positive financial balance of the external sector, indicating current account deficits. The debt-led private demand boom countries showed

[5] The first eleven countries formed the Eurozone in 1999; Greece joined two years later.

the highest real GDP growth rates among the EA-12 countries, which were mainly driven by the growth contributions of domestic demand, and in particular, of private consumption demand, financed by financial deficits of private households to a large degree. Growth contributions of the balance of goods and services contributed negatively to GDP growth in Greece and Spain hence, indicating falling net exports and rising current account deficits. This was not the case for Ireland, where both net exports and the growth contribution of the balance of goods and services were positive. The negative current account has thus to be explained by highly negative net cross-border flows of primary incomes, in particular capital incomes.

In the period 2001-09, the export-led mercantilist regime dominated in Austria, Belgium, Germany and the Netherlands (Table 1). All countries were characterized by negative balances of the external sector and hence by current account surpluses. These deficits were mirrored by positive financial balances of the domestic sector as a whole, mainly the outcome of significant surpluses of the private sector. Compared to the rest of the Eurozone, economies of this regime displayed moderate real GDP growth rates, with positive growth contributions of the balance of goods and services, in particular. In the extreme case of Germany, growth was driven almost exclusively by net exports with a close to zero growth contribution of domestic demand. In the case of Finland, we find a weakly export-led regime, with negative financial balances of the external sector, current account and net export surpluses, but negative growth contributions of net exports.

France, Italy and Portugal, as well as the EA-12 as a whole can be classified as domestic demand-led regimes on average over the period 2001-09 (Table 1). These countries were characterised by positive financial balances of the private household sector, while the public sector – and in Italy and Portugal also the corporate sector – were running deficits. Portugal differs from the other countries of this group insofar as its financial balance of the external sector showed high external surpluses and hence current account deficits. Growth rates were modest and mainly driven by domestic demand with slightly positive (Portugal, EA-12) or negative (Italy, France) growth contributions of the balance of goods and services.

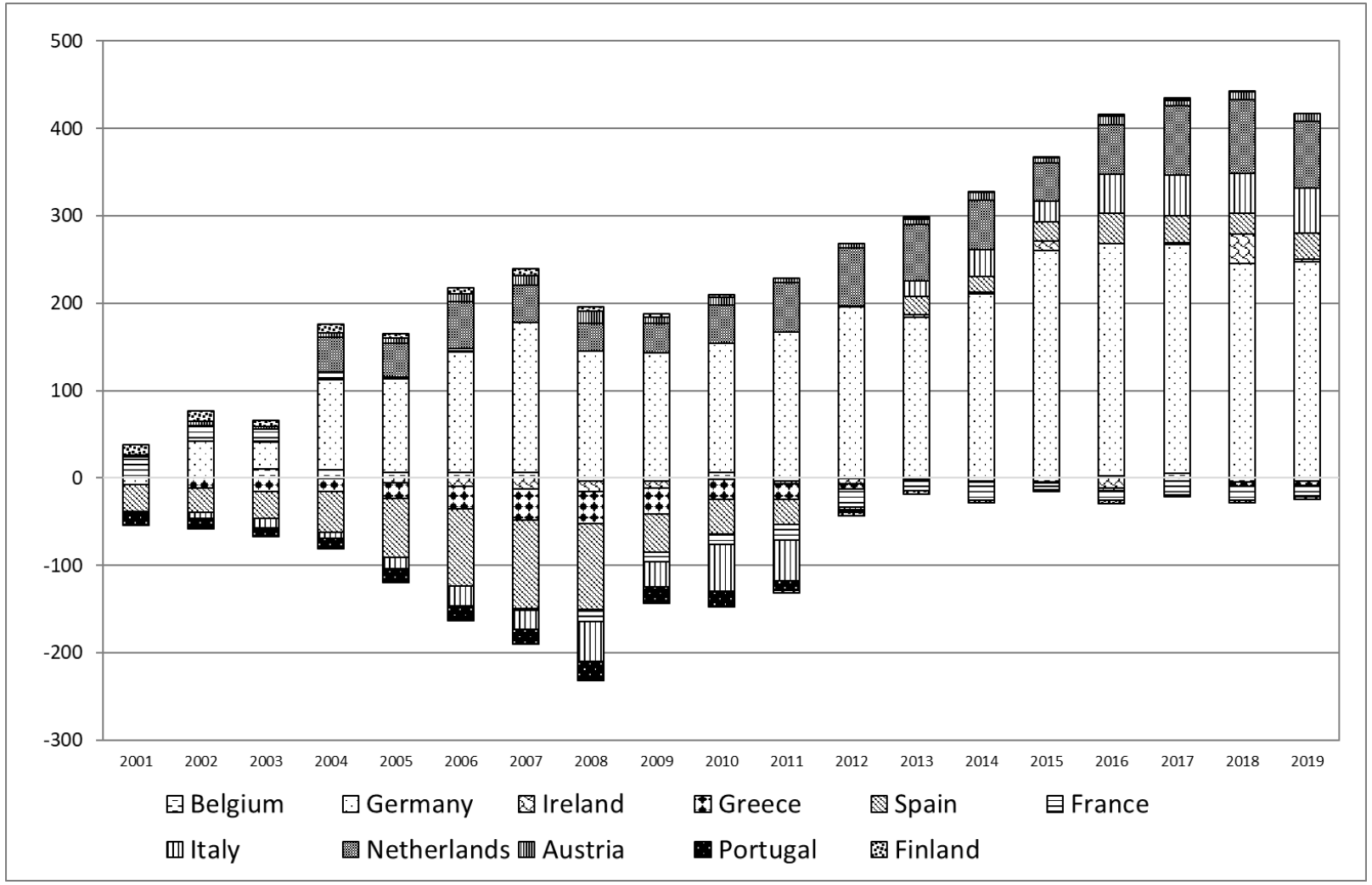
The emergence of the two extreme macroeconomic growth regimes under financialisation, the debt-led private demand boom regime and the export-led mercantilist regime, implied large current account imbalances at the global as well as Eurozone level, as shown in Figure 1 (see also Hein 2012, chapters 6 and 8, 2019). These imbalances were driven, on the one hand, by high growth contributions of domestic demand, fuelled in particular by increasing indebtedness of the private household sector in debt-led private demand boom countries, providing expanding markets for the export-led mercantilist economies. On the other hand, stagnating unit labour cost growth and low inflation rates in the export-led mercantilist countries depressed domestic demand and improved price competitiveness of these countries (Hein 2012, chapter 8).

Table 1. *Key macroeconomic variables for the economies of the core Eurozone, average annual values for the period 2001-2009*

	Export-led mercantilist				Weakly export-led	Domestic demand-led				Debt-led private demand boom		
	Austria	**Belgium**	**Germany**	**Nether-lands**	**Finland**	**France**	**Italy**	**Portugal**	**EA-12**	**Greece**	**Ireland**	**Spain**
Financial balances of external sector as a share of nominal GDP, per cent	–2.05	–4.20	–4.00	–5.55	–4.91	–0.42	1.04	7.96	–0.63	10.08	2.60	5.61
Financial balances of public sector as a share of nominal GDP, per cent	–2.43	–1.21	–2.44	–1.43	3.01	–3.45	–3.28	–5.19	–2.63	–8.03	–1.58	–1.32
Financial balances of private sector as a share of nominal GDP, per cent	4.47	5.40	6.43	6.98	1.90	3.87	2.24	–2.77	3.22	–2.04	–3.23	–4.29
– Financial balance of private household sector as a share of nominal GDP, per cent	4.87	4.58	5.52	–1.39	–2.32	2.78	2.47	2.00	2.21	–6.77	–6.06	–2.73
– Financial balance of the corporate sector as a share of nominal GDP, per cent	–0.40	0.82	0.91	8.36	4.21	1.08	–0.23	–4.77	1.01	4.73	2.83	–1.56
Real GDP growth, per cent	1.52	1.60	0.53	1.39	1.68	1.19	0.18	0.63	1.04	2.64	3.05	2.36
Growth contribution of domestic demand including stocks, percentage points	1.16	1.44	0.02	1.21	1.60	1.43	0.36	0.51	0.96	2.96	2.66	2.61
– Growth contribution of private consumption, percentage points	0.79	0.60	0.19	0.30	1.23	0.97	0.23	0.64	0.62	2.09	1.49	1.34
– Growth contribution of public consumption, percentage points	0.34	0.42	0.25	0.78	0.35	0.38	0.22	0.38	0.40	0.66	0.62	0.87
– Growth contribution of gross fixed capital formation, percentage points	0.02	0.38	–0.18	0.19	0.22	0.24	0.00	–0.40	0.09	0.59	0.69	0.47
Growth contribution of the balance of goods and services, percentage points	0.35	0.18	0.51	0.17	–0.10	–0.20	–0.18	0.07	0.09	–0.31	0.87	–0.25
Net exports of goods and services as a share of nominal GDP, per cent	3.34	3.85	4.81	7.56	5.52	0.35	0.05	–8.14	1.82	–10.44	12.40	–3.56

Source: European Commission (2019), authors' calculations.

Figure 1. *Current account balance in core Eurozone countries, 2001-2019 (in bn euros)*



Source: European Commission (2019), authors' representation.

When the Great Financial Crisis and then the Great Recession hit 2007-09 – first in the USA and then in the European debt-led private demand boom countries – these crises were quickly transmitted to the export-led mercantilist economies, and also to the domestic demand-led economies, through the international trade and the financial contagion channel. Initially, expansionary fiscal policy measures were applied, also in the Eurozone. But when the crisis turned into a Eurozone Crisis in 2010, starting in Greece and then affecting Ireland, Portugal and Spain, the Eurozone responded by turning towards austerity policies. The necessary financial rescue packages for these countries, as well as a gradual extension of the ECB towards a guarantor of government debt of Eurozone member countries, were linked with the enforcement of 'structural reforms' in the labour market and fiscal expenditure cuts. Furthermore, new agreements to contain government deficits and debt for all Eurozone member countries were established (De Grauwe 2012, Dodig and Herr 2015, Hein 2013/14).[6]

2.3 Demand regimes, 'rebalancing' and stagnation à la Eurozone 2010-2019

The restrictive economic policy responses towards the Eurozone crisis have contributed to another recession in the EA-12 in 2012/13 and to a weak recovery in international comparison (Figure 2). EA-12 growth has been lagging behind other non-Eurozone developed capitalist economies, for which the recovery has also been weak in historical perspective.[7] In particular, growth contributions of investment, which had been very modest already in the period 2001-09, even declined turning negative in some countries (Spain, Italy, Greece, Portugal) on average over the period 2010-19 (Table 2). Financial balances of the corporate sectors turned positive in all the countries we are examining. Corporate saving thus exceeded corporate investment – a phenomenon of finance-dominated capitalism (Hein 2012, Chapter 3).[8]

Furthermore, the weak recovery of the EA-12 has been highly asymmetric, with Germany growing at a well above average rate and the crisis countries in the periphery, Greece, Italy and Portugal at considerably below average rates (Table 2).[9] Additionally, this period has been associated with a considerable shift in demand and growth regimes.

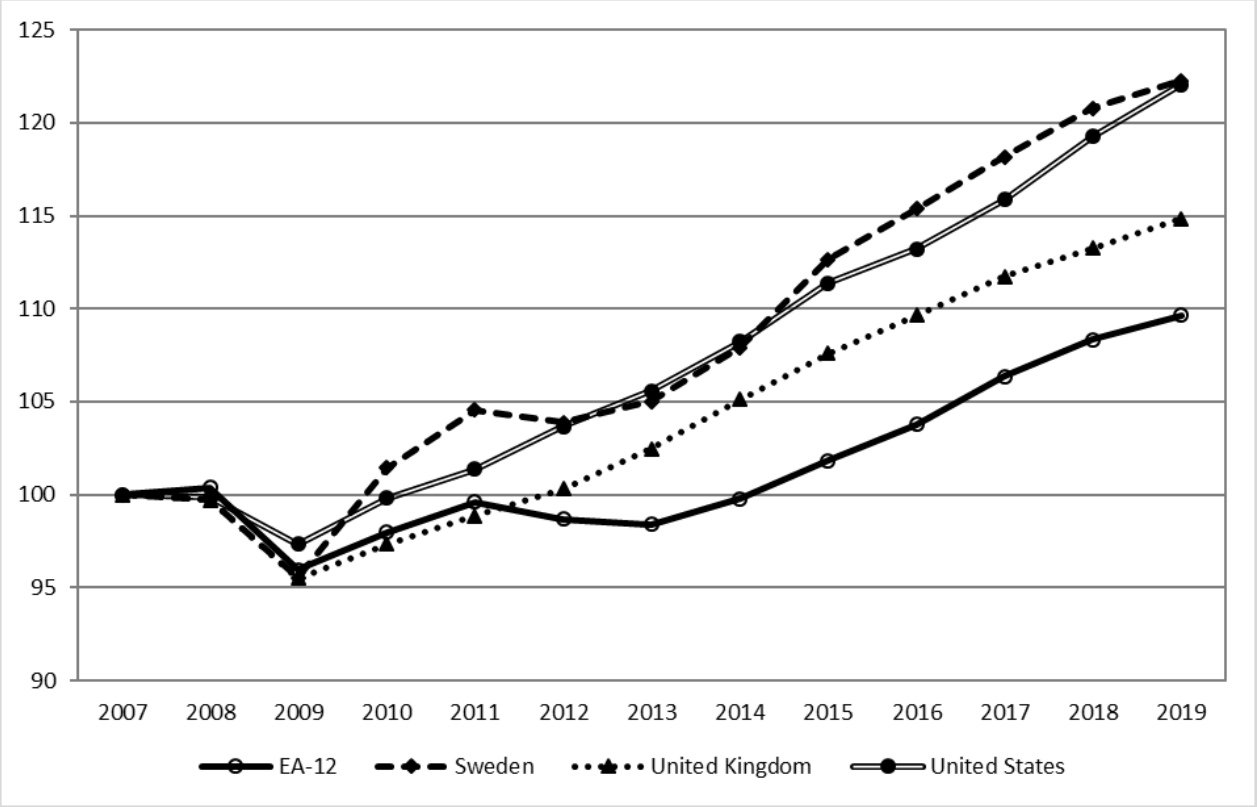
[6] For detailed analysis of the crisis processes in individual countries, see for example the contributions in Arestis and Sawyer (2012) and in Hein et al. (2016).

[7] It should also be noticed that even in the first period we are considering, the financial balances of the corporate sectors had been positive in several Eurozone countries.

[8] The phenomenon of weak investment and growth has given rise to re-emergence of a debate on 'secular stagnation' (Summers 2014, 2015, Hein 2016).

[9] The extremely high growth rates for Ireland seem to be driven by severe accounting problems in a country with a high relevance of foreign owned companies (Joebges 2017).

Figure 2. *Real GDP in selected OECD countries and the Eurozone (EA-12), 2007-2019, 2007 = 100*



Source: European Commission (2019), authors' representation.

The former debt-led private demand boom countries with high external deficits have undergone substantial transformations and have turned towards export-led mercantilist or weakly export-led regimes. Spain and Greece significantly improved their current accounts. On average over the period 2010-19, Spain saw negative and Greece only slightly positive financial balances of the respective external sectors. Ireland continued with positive financial balances of the external sector, i.e. current account deficits, again driven by the deficit in the cross-border flows of primary incomes. The reduction of the external deficits was the result of the substantial deleveraging of the private sectors, whose financial balances turned positive in each of the countries, associated with a collapse in consumption and investment demand. While public sector deficits stabilised the economies up to 2012/13, austerity measures implemented in response to the Eurozone Crisis then forced Ireland, Spain and Greece to decrease their public deficit considerably, turning them even into surpluses in Ireland and Greece. On average over the period 2010-19, however, the public financial balances remained deeply negative in each of the countries. The impact of the financial and economic crisis, and in particular the austerity measures implemented when the Eurozone crisis hit, caused negative growth in Greece and only very weak positive growth in Spain on average over 2010-19 (Table 2). Growth contributions of domestic demand collapsed, and turned deeply negative in Greece, and growth was exclusively driven by the balance of goods and services. Ireland saw much higher growth in the statistics, almost entirely due to accounting conventions and the activities of multinationals, which was driven to large extent by net exports. Summing up, therefore, Spain and, with some

reservations because of the accounting problems, Ireland shifted towards export-led mercantilist regimes during the period 2010-19. Greece, on average over the period, turned to weakly export-led, combining a negative current account with positive growth contributions of net exports, with a tendency towards export-led mercantilist towards the end of this period.

From the domestic demand-led economies in the first period, also Italy and Portugal moved towards an export-led regime, export-led mercantilist in the case of Italy and weakly export-led for Portugal with a tendency towards export-led mercantilist in the second half of the period 2010-19. Both countries generated high private sector financial surpluses, in particular driven by the corporate sector, indicating weak investment (Table 2). The public sector could exert its stabilising function, accepting higher deficits, only until 2009/10; then the public deficit started shrinking. The foreign sector balances decreased significantly, turning negative in Italy, and remaining only slightly positive in Portugal on average over the period. Nevertheless, both countries have seen positive current accounts since 2013. Overall, Portugal and Italy witnessed below EA-12 average growth in the period 2010-19, due to the crisis and the following austerity policies. Growth was mainly driven by the balance of goods and services with weakly positive, in the case of Portugal, or even negative growth contributions of domestic demand in the case of Italy.

France, the third domestic demand-led economy in the period 2001-09, remained so also in the period 2010-19, with slightly positive external sector financial balances, financial surpluses of the private (household) sector, and negative financial balances of the public sector (Table 2). In the 2007-09 crisis, high public deficits contributed to stabilise the economy relatively quickly, so that France could reach EA-12 average growth in the 2010-19 period. Growth continued being mainly driven by domestic demand with small negative growth contributions of the balance of goods and services.

The initial export-led mercantilist economies Austria, Germany and the Netherlands remained so in the period 2010-19. The financial deficit of their external sectors, hence current account surpluses, rather increased on average over the period, and allowed the private sector surpluses to rise – partly also due to weak private investment – and the government sector to consolidate and to move towards financial surpluses, too (Table 2). On average over the period, however, government financial balances remained slightly negative in Austria and the Netherlands and became positive only in Germany. These economies recovered relatively quickly from the 2007-09 crisis, initially benefiting from the recovery of the world economy through the external trade channel, and achieved above average EA-12 growth on average over the period 2010-19. Relative growth contributions of net exports remained considerable.

From the export-led mercantilist countries of our first period, Finland and Belgium have moved towards a domestic demand-led regime in the period 2010-19. However, Belgium is still classified as weakly export-led, because the financial balance of the external sector remained negative on average, whereas in Finland it turned positive (Table 2). Growth contributions of net exports were negative in both countries, and growth was exclusively driven by domestic demand. In Belgium GDP growth was slightly above EA-12 average, and in Finland it was slightly below.

Table 2. *Key macroeconomic variables for the economies of the core Eurozone, average annual values for the period 2010-2019*

	Export-led mercantilist							Weakly export-led			Domestic demand-led	
	Ireland	**Spain**	**Austria**	**Germany**	**Nether-lands**	**Italy**	**EA-12**	**Belgium**	**Greece**	**Portugal**	**France**	**Finland**
Financial balances of external sector as a share of nominal GDP, per cent	3.77	–1.41	–2.15	–7.24	–8.82	–0.94	–2.75	–0.76	1.74	0.20	0.81	1.08
Financial balances of public sector as a share of nominal GDP, per cent	–6.55	–6.03	–1.65	0.18	–1.65	–2.83	–2.53	–2.69	–4.92	–4.76	–4.06	–1.80
Financial balances of private sector as a share of nominal GDP, per cent	3.88	7.44	3.80	7.05	10.46	3.77	5.31	3.44	3.18	4.56	3.25	0.72
– Financial balance of private household sector as a share of nominal GDP, per cent	1.77	0.89	2.50	5.27	2.80	1.24	2.77	1.90	–5.53	2.68	3.09	–2.83
– Financial balance of the corporate sector as a share of nominal GDP, per cent	2.10	6.55	1.31	1.78	7.66	2.53	2.54	1.55	8.72	1.88	0.16	3.55
Real GDP growth, per cent	6.31	1.03	1.57	1.96	1.45	0.22	1.34	1.54	–1.98	0.76	1.35	1.23
Growth contribution of domestic demand including stocks, percentage points	3.62	0.34	1.25	1.74	0.92	–0.16	1.01	1.57	–3.01	0.25	1.36	1.61
– Growth contribution of private consumption, percentage points	0.64	0.27	0.49	0.73	0.33	0.05	0.43	0.79	–1.67	0.44	0.55	0.75
– Growth contribution of public consumption, percentage points	0.12	0.04	0.14	0.38	0.13	–0.09	0.18	0.1	–0.52	–0.17	0.29	0.18
– Growth contribution of gross fixed capital formation, percentage points	2.65	–0.05	0.53	0.56	0.36	–0.12	0.32	0.57	–1.16	–0.11	0.39	0.37
Growth contribution of the balance of goods and services, percentage points	3.10	0.69	0.20	0.21	0.53	0.39	0.34	–0.03	1.03	0.50	–0.01	–0.26
Net exports of goods and services as a share of nominal GDP, per cent	21.38	2.48	3.33	6.25	9.73	1.78	3.53	0.71	–2.75	–0.88	–1.03	–0.65

Source: European Commission (2019), authors' calculations

Summing up, with the exception of Belgium and Finland, we have seen a shift of regimes towards export-led mercantilist or weakly export-led regimes in the core Eurozone. This has also meant that the regime of the EA-12 as a whole has moved from domestic demand-led towards export-led mercantilist (Table 2). Financial balances of the external sector have turned negative, financial balances of the public sector are still negative on average over 2010-19, but with a tendency to be balanced, and the private sector, both households and corporate, generated high surpluses. Growth was driven to a considerable degree by net exports.

This shift towards export-led mercantilism and the 'rebalancing à la Eurozone' can also be seen in Figure 1. Whereas the current account of the EA-12 as a whole had been roughly balanced before the start of the Eurozone crisis, such that we only had internal current account imbalances, these imbalances have now been externalised. Most of the EA-12 countries have been running current surpluses during the recent years, with the exception of Belgium, Finland, France and Greece with slight deficits. Therefore, the core Eurozone, as one of the largest economic and monetary areas in the world, has become a free rider of aggregate demand generated in the rest of the world. On the one hand, this lack of internal demand generation has contributed to stagnation tendencies in the developed capitalist world as a whole. On the other hand, this export-led mercantilist regime has generated global imbalances and the related tendencies towards over-indebtedness in those economies providing the counterpart current account deficits. This is a problem in particular for those countries that are unable to finance these deficits by issuing debt in their own currencies, in particular the relatively faster growing emerging market economies. For countries that are able to go into debt in their own currency, the current account deficits may nonetheless face political limits, as recently observed in the case of the USA.

The export-led mercantilist regime has thus not only been harmful for the EA-12, since it has meant weak recovery after the crises 2007-09, low growth and the associated unemployment problems, in particular in the Eurozone periphery. It also faces serious external risks related to the implied global imbalances. Therefore, what is required is the return towards a domestic demand-led regime, which will need an alternative approach towards macroeconomic management and policies, in a situation of a deep recession, like the current Covid-19 Crisis, but also in the medium to long run. For this purpose, we will first go back to the basic ideas proposed by Michał Kalecki in order to achieve and maintain full employment in the mid-1940s at the end of World War II, and then we will explain how these considerations have been further developed and applied to the problems of the Eurozone by modern post-Keynesians/Kaleckians.

3. Kalecki's economic policy suggestions for achieving and maintaining full employment

Michał Kalecki (1954, 1971), one of the founding fathers of post-Keynesian economics (Hein and Lavoie 2019), is well known as the co-inventor of the 'principle of effective demand' in macroeconomics, together with John Maynard Keynes (1936).[10] In fact, Kalecki (1933) had

[10] See Hein (2018c) for a recent comparison of Kalecki's and Keynes's – as well as Marx's – principle of effective demand. For a recent intellectual biography of Kalecki, see Toporowski (2013, 2018). For a still excellent

proposed his 'principle of effective demand' even earlier than Keynes, however, initially published in Polish. Different from Keynes, Kalecki included the role of income distribution into the very basics of his principle of effective demand, with the profit share being mainly determined by mark-up pricing in oligopolistic or monopolistic markets dominating the industrial and service sectors of the advanced capitalist economies. Firms usually hold excess capacity, and changes in demand will rather lead to changes in the rate of capacity utilisation than to changes in prices, which tend to remain constant because of constant unit variable costs and constant mark-ups in pricing. Aggregate demand is mainly determined by investment, which can be financed independently of prior saving by means of credit generated endogenously by the banking and financial sector, which does not have to obtain reserves or deposits before lending. Investment is mainly affected by expected demand and by firms' internal means of finance, which will impact their creditworthiness in incompletely competitive financial markets – Kalecki's (1937) 'principle of increasing risk'. Equilibrium domestic demand tends to be 'wage-led', i.e. raising the profit share will depress domestic demand, because the propensity to consume out of wages is higher than out of profits, and investment is mainly determined by sales and not by real unit wage costs. Government deficit expenditures as well as domestic export surpluses each raise equilibrium aggregate demand and the volume of profits.

According to Sawyer (2015), against this theoretical background, Kalecki presented a clear and compelling macroeconomic policy strategy to reach and maintain full employment between 1943-46, when he was based at the Oxford University Institute of Statistics, and then at the International Labour Office in Montreal. In 'Three ways to full employment', Kalecki (1944) assumes a closed economy with elastic labour supply. The three ways to full employment that he discusses are:

1. Government deficit spending on public investment (schools, hospitals, highways) or on subsidies to mass consumption (family allowances, reduction of indirect taxes, subsidies to keep down prices of necessities).
2. Stimulating private investment through reductions in the interest rate or through lowering income taxes.
3. Redistribution of income from higher to lower income classes

Kalecki (1944, 1945) does not consider the second way—namely, relying on the stimulation of private investment by means of interest rate and tax cuts—very promising and abandons it for two reasons. First, it is an indirect method that relies on positive responses of entrepreneurs, which may be blocked by depressed expectations in an economic recession. Second, even if lowering interest rates and/or tax rates stimulates investment and thus aggregate demand in the very short run, the capacity effect will then dampen investment again if there is no increase in autonomous demand. Therefore, further interest rate and tax cuts will be required to sustain investment at a higher level, which, obviously, faces serious

introduction into Kalecki's economics, see Sawyer (1985), and for macroeconomic textbooks based on Kalecki's economics, see Bhaduri (1986) and Łaski (2019). For further references on Kaleckian economics, including further intellectual biographies, see Hein (2014, Chapter 5).

limits. Consequently, Kalecki (1944) proposes a combination of the first and the third way, i.e. government deficit spending and progressive income re-distribution.

Regarding government deficit spending, Kalecki (1944) explains that there will not be any crowding out if there are unemployed resources and if interest rates are kept low. First, any initial deficit will partly finance itself through higher incomes and higher tax revenues. Second, also the remaining budget deficit will 'finance itself' because it generates additional saving of an equal amount through the income effect. From the national income accounting identities for a closed economy:

(1) $$G + I + C_{\Pi} + C_W = T_{\Pi} + \Pi + T_W + W = T_{\Pi} + C_{\Pi} + S_{\Pi} + T_W + C_W + S_W ,$$

with G representing government expenditures, I private investment, C_{Π} and C_W private consumption out of profits and wages, T_{Π} and T_W taxes on profits and on wages, W wages net of taxes, Π profits net of taxes, and S_{Π} and S_W private saving out of profits and wages, it follows:

(2) $$S = I + G - T ,$$

with $S = S_{\Pi} + S_W$ as private saving and $T = T_{\Pi} + T_W$ as total taxes. Gross (net) private saving is thus always equal to the government deficit plus gross (net) investment:

> "(W)hatever is the general economic situation, whatever the level of prices, wages or the rate of interest, any level of private investment and Budget deficit will always produce an equal amount of saving to finance these two items." (Kalecki 1944, p. 41)

If this additional saving by the private sector is not creating demand for government bonds but rather for liquidity, imposing upward pressure on interest rates in government bonds markets, central banks have to step in and prevent interest rates from rising. They can do so by supplying the extra amount of liquidity by buying government bonds: "… the rate of interest may be maintained at a stable level however large the Budget deficit, given proper banking policy" (Kalecki 1944, p. 42).

Permanent government deficits raise the issue of a potential burden of government debt. However, Kalecki (1944) argues that national debt cannot be a burden to society as a whole, because it only constitutes internal transfers between those holding government debt and those paying taxes – who can be the same economic units. Furthermore, in an expanding economy, interest payments will not rise out of proportion with tax revenues at given tax rates. Therefore, there is no need for raising tax rates to service government debt. And should taxes be needed, Kalecki (1943a, 1944) proposes taxes on wealth, both on financial and real assets, equivalent to the interest payments of the government.

Government deficit expenditures find a limit when scarcity of labour and/or capital stock will emerge and a full employment or full utilisation inflation barrier is reached:

> "In order to avoid inflation the Government must, therefore, be careful not to push their deficit spending beyond the mark indicated by full utilization of labour and equipment." (Kalecki 1944, p. 43)

If the capital stock is too low for full employment, as it may occur in backward countries, however, the focus of government activities should also be on expanding productive capacities.

When full employment is reached, nominal wages should not rise faster than productivity, in order to avoid rising inflation. Real wages should thus rise with labour productivity.

Government deficit spending within the outlined limits will also stabilise private investment and prevent violent cyclical fluctuations. Besides, private investment should be regulated by tax rates with the following target:

> "Private investment must be at a level adequate to expand the capacity of equipment pari passu with the increase in working population and productivity of labour, i.e. proportionately to full employment output." (Kalecki 1944, p. 47)

Regarding the type of government expenditure, Kalecki (1944) argues that it should be guided by social priorities and hence not exclusively be focused on public investment, but also include public consumption and subsidies to private consumption. Of course, government investment is possible and useful, too, and state-owned enterprises should invest in desired areas where there is a lack of private investment, i.e. social housing.

Government deficit expenditure should be complemented by the third way to full employment, the redistribution of income, according to Kalecki (1944), shifting income to low income households with a higher propensity to consume. For this purpose, he advocates progressive taxation. In order to avoid negative effects on investment, he proposes a 'modified income tax', exempting re-invested profits from (progressive) taxation (Kalecki 1943a) or a wealth tax on financial and real assets. Furthermore, redistribution can be achieved by real wages growing faster than productivity, or nominal wage growth exceeding productivity growth plus the inflation rate. At full employment, however, attempting re-distribution by wage policies would require higher taxes on profit income in order to prevent inflation due to excess demand. Alternatively, or in combination with tax increases, Kalecki suggests price controls in order to squeeze profits when wages are rising.

While a combination of government deficit expenditures and re-distribution may generate and sustain full employment, Kalecki (1943a) in 'Political aspects of full employment' is well aware of the potential resistance from 'economic experts' closely connected with banking and industry against such a policy, although higher government deficits raise capitalists profits after taxes, as can be derived from the accounting equation (1) (see also Kalecki 1954, Chapter 3, 1971, Chapter 7):

(3) $$\Pi = I + C_{\Pi} + G - T - S_W .$$

> "The reasons for the opposition of 'industrial leaders' to full employment achieved by government spending may be subdivided into three categories: (i) dislike of government interference in the problem of employment as such; (ii) dislike of the direction of government spending (public investment and subsidizing consumption),

> (iii) dislike of the social and political changes resulting from the *maintenance* of full employment." (Kalecki 1943b, pp. 349-350, emphasis in the original)

The first motive is related to the social function of 'sound finance': Avoiding government deficits for full employment makes the level of employment dependent on business confidence – and gives capitalists political power. The second motive means that public investment should be strictly confined to areas that do not compete with private investment. This implies resistance against nationalization of transport and public utilities. Subsidizing consumption is rejected, because it contradicts the rule that 'you should earn your bread in sweat' (Kalecki 1943a, p. 351). The third motive means that "the 'sack' would cease to play its role as a disciplinary measure" (Kalecki 1943b, p. 351). Workers will become more self-conscious and the power of capitalists would be undermined. Capitalists would favour discipline in the factories and 'political stability' over profits.

Kalecki (1943a) concedes that in post-war economies, or in deep recessions, governments' responsibility for full employment may be acknowledged, also by capitalists and their 'experts'. But still conflict will prevail over what type of government deficit expenditure should be applied and for how long. First, capitalists would prefer indirect stimuli for private investment (interest rate and tax cuts) over government expenditure. And if government expenditure is accepted, the focus should be on investment, not subsidizing consumption. Second, capitalists would insist that measures should be confined to the slump and would resist permanent public deficit spending to sustain full employment. From this a 'stop and go policy' and a 'political business cycle' would emerge:

> "The regime of the political business cycle would be an artificial restoration of the position as it existed in nineteenth century capitalism. Full employment would be reached only at the top of the boom, but slumps would be relatively mild and short-lived." (Kalecki 1943a, p. 355)

Of course, Kalecki rejects the regime of the political business cycle and rather advocates the combination of long-term government deficit expenditures for public investment, public consumption and subsidizing private consumption in combination with progressive income taxation, wealth taxes and other measures of redistribution. In order to achieve this beyond the short run, he holds that full employment capitalism will have to develop new social and political institutions which reflect the increased power of the working class and requires 'fundamental reform' without specifying what exactly this implies in his writing in the 1940s. Kowalik (2004, p. 48) explains that the late "Kalecki would most probably say, that the essence of 'crucial reform' was successful governance of overall demand", as it happened in the period of what is now called the 'golden age' of capitalism in the third quarter of the 20th century. Kalecki and Kowalik (1971) had argued that "(t)here will then be a paradoxical situation: a 'crucial reform' imposed on the ruling class may stabilise the system, temporarily at least". Of course, when the 'crucial reform' is reversed, as in the late 1970s, early 1980s, with the liberalization of labour and financial markets and the monetarist turn of macroeconomic policies, stagnation tendencies and high unemployment are back on the agenda – and they

have stayed since then. Extending Kalecki's (1943a) notion of a 'political business cycle', Steindl (1979) then called this 'stagnation policy' or 'stagnation as a political trend'.[11]

4. A Kaleckian/post-Keynesian policy mix for the Eurozone

Kalecki's full employment policy proposal from the 1940s implies a macroeconomic policy mix, which has inspired modern post-Keynesian macroeconomics, both in general (i.e. Arestis 2013, Hein and Stockhammer 2010, Hein 2017) and more specifically in its application to the Eurozone (Arestis and Sawyer 2013, Hein 2018a, Hein and Detzer 2015a, 2015b, Hein et al. 2012).

Introducing such a policy mix to the Eurozone with the aim of establishing a stable domestic demand-led regime, avoiding the problems inherent to the debt-led private demand boom and export-led mercantilist regimes dominating up to and after the crises 2007-09, would mean to overcome the limitations and problems of the NCM applied in the Eurozone, as outlined in the introduction.[12] For such a policy along Kaleckian/post-Keynesian lines ex ante 'horizontal coordination' among monetary, fiscal and wage policies is of utmost importance, as is the 'vertical coordination' of decentralised member state policies in the areas of fiscal and wage policies in the case of the Eurozone. Furthermore, these coordinated demand management policies will have to be supplemented by effective regional and industrial policies in order to facilitate the sustainable catch-up of the Eurozone periphery with respect to the core countries and to overcome limitations given by the capital stock in these countries – as suggested by Kalecki (1944).

At the centre of a Kaleckian/post-Keynesian coordinated macroeconomic policy mix are fiscal policies, which should assume responsibility for real stabilisation at non-inflationary full employment levels of economic activity and also for a more equal distribution of disposable income in the short and in the long run. Fiscal policies can also contribute to catching up productivity growth in the periphery and thus to rebalancing the Eurozone internally, if they are targeted towards public investment in these countries improving productivity growth and the capacity to export.

Extending equation (2) to the open economy, adding nominal exports (X) and imports (M), ex post the excess of private saving over private investment at a given level of economic activity and employment has to be absorbed by the excess of nominal exports over nominal imports (including the balance of primary income and the balance of income transfers, thus the current account balance) plus the excess of government spending over tax revenues:

$$(4) \qquad S - I = X - M + G - T .$$

Since the current export-led mercantilist regime has to be overcome, the current accounts of member countries and the Eurozone as a whole should be roughly balanced in the long run

[11] For an elaboration on Steindl's notion of stagnation as a political trend and its application to stagnation policies in the Eurozone, see Hein (2018a).

[12] This section is based on Hein (2018a). For more extensive elaborations of the approach see Hein and Detzer (2015b).

(X-M = 0). Therefore, as recommended by Kalecki (1944) and also by Lerner's (1943) concept of functional finance, government deficits (D) have to permanently take up the excess of private saving over private investment in order to maintain a desired level of economic activity and employment:[13]

$$D = G - T = S - I. \tag{5}$$

Government deficit spending should be on government consumption and investment, guided by social and development priorities in the member countries.

As argued by Kalecki (1944) and shown by Domar (1944), permanent government deficits will not lead to the explosion of public debt. With a long-run constant government deficit-nominal GDP ratio (D/Y^n), the government debt-nominal GDP ratio (B/Y^n) will converge towards a constant value in the long run, given by the ratio of the deficit-GDP ratio and nominal GDP growth:

$$\frac{B}{Y^n} = \frac{\frac{D}{Y}}{\hat{Y}^n} \tag{6}$$

Furthermore, if we distinguish the government deficit in a primary deficit (D') and government interest payments on the stock of debt (iB), equation (6) turns to:

$$\frac{B}{Y^n} = \frac{\frac{D'}{Y^n}}{\hat{Y}^n - i}. \tag{7}$$

Therefore, nominal interest rates below nominal GDP growth will even make a primary deficit consistent with a long-run constant government debt-nominal GDP ratio.[14] It will thus prevent government debt services from redistributing income from the average taxpayer to the rich government bondholders, which would be detrimental to aggregate demand. Government deficit spending will thus need the assistance of the central bank, guaranteeing government debt and keeping interest rates below GDP growth, as will be explained in more detail further below.

Apart from this permanent role of government deficits and debt, which also supplies a safe haven for private saving and thus stabilises financial markets, counter-cyclical fiscal policies – together with automatic stabilisers – should stabilise the economy in the face of (also country-specific) aggregate demand shocks. From these considerations, we get the following requirements for fiscal policies:

[13] Of course, if the private sector is in deficit and the current account is balanced, the government sector has to be in surplus.

[14] For recent derivations of this condition in Kaleckian distribution and growth models driven by autonomous and deficit financed government expenditure growth, see Dutt (2020), Hein (2018d) and Hein and Woodgate (2020).

(8) $$D = D_L + D_S(Y^T - Y), \qquad D_S > 0,$$

with D_L as permanent government deficit (or surplus), which is required to keep output at non-inflationary full employment target (Y^T) in the long run, according to equation (5), and D_S as the reaction parameter in the case of short-run deviations of output from full employment target. Fiscal policies would thus also have to prevent inflationary pressure generated by demand exceeding full employment levels, as recommended by Kalecki (1944).

Furthermore, also following Kalecki (1944), governments should apply progressive income taxes and relevant wealth, property and inheritance taxes, as well as social transfers, which aim at redistribution of income and wealth in favour of low income and low wealth households. On the one hand, this will reduce the excess of private saving over private investment at non-inflationary full employment levels (equation 5) and thus stabilise aggregate demand. On the other hand, redistributive taxes and social policies will improve automatic stabilisers and thus reduce fluctuations in economic activity.

Applying this general approach to the Eurozone could either aim at a relevant federal EU budget with a EU/Eurozone fiscal authority issuing debt, which will then be accepted by the ECB as collateral, as for example proposed by Bibow (2016). However, this would require major institutional changes, which might be difficult to obtain in the short to medium run.[15] Alternatively, a revamped Stability and Growth Pact for the coordination of national fiscal policies should be considered, which should focus on long-run expenditure paths for non-cyclical government spending – a variable which member state government can indeed control, different from government deficits (Hein et al. 2012). The sum of these expenditure paths should be geared towards stabilising aggregate demand in the Eurozone at non-inflationary full employment levels with a roughly balanced current account with the rest of the world. For each Eurozone member state this would mean that, on average over the cycle and with the long-run net tax rate in each member country given, the path for non-cyclical government expenditure should be targeted at generating a long-run or 'structural' government deficit/surplus, balancing the long-run or 'structural' private sector surplus/deficit at high levels of non-inflationary employment and a roughly balanced current account of the member states (equation 5). Automatic stabilisers plus discretionary counter-cyclical fiscal policies could then be applied to fight short-run demand shocks, both aggregate (symmetric) and country-specific (asymmetric) shocks (equation 8).

Instead of the current 'one-size-fits-all' coordination with respect to target or maximum government deficit- and debt-GDP ratios, this new type of coordination of member countries' fiscal policies implies country-specific government deficit-GDP ratios, given by the long-run national private sector financial balances. It would also lead to country-specific long-run government debt-GDP ratios, depending on the respective government deficit-GDP ratios and the nominal GDP growth trends (equation 6). The expenditure paths for non-cyclical

[15] Furthermore, it is not clear, how such an approach should contribute to rebalancing the Eurozone. For a discussion and comparison with what is proposed here, see Hein and Detzer (2015b).

public sector spending of each member country could be coordinated and monitored by the European Commission in the context of the European Semester.

Such a coordination of national fiscal policies, together with the recently announced efforts at the EU level (see introduction) should contribute to overcoming the Covid-19 Crisis. It should also boost aggregate domestic demand for the Eurozone as a whole in the medium to long run, contribute to overcoming the export-led mercantilist regime and the long-run stagnation tendencies by stimulating also private investment and domestic demand. In order to avoid or to overcome the re-emergence of undesirable internal current account imbalances, non-price competitiveness of catching-up countries within the Eurozone needs to be improved, decreasing the income elasticity of their imports and increasing the income elasticity of their exports, by means of industrial, structural and regional policies. Government expenditures should thus be focussed on public investment and be linked with a European industrial and regional policy strategy aiming at the sustainable catch-up of the periphery with respect to the core. Furthermore, this would have to be integrated into a strategy of ecological modernisation – like the European Green Deal. For such catching-up processes, perfectly balanced current accounts between member states cannot be expected and, therefore, the rules for fiscal policy co-ordination outlined above would have to be modified.[16] Catch-up countries should have a persistent tendency to grow faster than the more mature countries, which, *cet. par.*, will make their imports grow faster than their exports. Therefore, with the Eurozone as a whole running a balanced current account with the rest of the world, internally there would be a tendency for catch-up member countries to run current account deficits, and for more mature countries to run current account surpluses. These current account deficits and surpluses should be tolerated and taken into account in the coordination of fiscal policies. Target long-run public sector financial balances in the catch-up countries can hence be somewhat lower than implied above in equation (5), i.e. allow for higher government deficits (or lower government surpluses).Target long-run public sector financial balances of mature countries can be somewhat higher, i.e. aim at lower government deficits (or higher government surpluses). The pre-condition for this is, of course, that higher growth in the catch-up countries can be sustained – and is not driven by financial or housing market bubbles as prior to the 2007-09 crises. Therefore, the direction and the use of the capital inflows into catch-up current account deficit countries should be part of an integrated European industrial and regional development strategy for the periphery. This should include the efficient regulation of and intervention in capital flows to avoid bubble growth, on the one hand, and the promotion of 'high road' development strategies, on the other hand. These strategies should make use of public investment, both national and European, in infrastructure and education, as well as public development banks and funds (i.e. the European Investment Bank, EIB, and the European Investment Fund, EIF, etc.) to support private investment in the respective countries.

Regarding monetary policy, the ECB should give up targeting inflation and should instead (continue) targeting low real interest rates in financial markets. A slightly positive long-

[16] See Hein and Detzer (2015b) for a more detailed derivation of the conditions.

term real rate of interest, below the long-run real GDP growth, or a nominal long-term interest rate above the rate of inflation but below nominal GDP growth (equation 9), seems to be a reasonable target. Real financial wealth will be protected against inflation, but redistribution of income in favour of the productive sector will be favourable for investment in the capital stock, aggregate demand and employment. Furthermore, the central bank has to act as a 'lender of last resort' during liquidity crises and should stabilise financial markets using other tools than the short-term interest rate. These include the definition of credit standards for refinancing operations with commercial banks, the implementation of reserve requirements for different types of assets, and even credit controls in order to channel credit into desirable areas and to avoid credit-financed bubbles in certain markets. Most importantly, the ECB should not only act as a lender of last resort for the banking system, but also unconditionally guarantee the public debt of Eurozone member states. The ECB as a lender of last resort for member state governments would allow these governments to issue debt in their 'own currency' again, and it would thus reduce the pressure imposed by financial markets, in line with Kalecki's consideration regarding the interest rate stabilising role of the central bank. The ECB could simply announce that it will intervene unconditionally in secondary government bond markets and provide unlimited liquidity, as soon as the nominal rate of interest on government bonds (i_j) shows a tendency to exceed the long-run growth rate of nominal GDP of the respective country j, i.e. the sum of real GDP growth ($\hat{Y}_j$) plus the rate of inflation ($\hat{p}_j$), thus maintaining in the long run:

$$\hat{p}_j \leq i_j \leq \hat{Y}_j + \hat{p}_j. \tag{9}$$

This would imply country-specific caps on nominal interest rates on government bonds in the respective countries, which provides the conditions for fiscal policies of the member states to stimulate aggregate demand in the respective countries and for the Eurozone as a whole without being forced to run primary surpluses with restrictive effects on aggregate demand.

In line with Kalecki's considerations, wage and incomes policies should accept responsibility for nominal stabilisation, in particular when full employment is reached, that is for stable inflation rates, but may also affect income distribution. As an orientation, nominal wages (w) should rise according to the sum of long-run average growth of labour productivity ($\hat{y}_j$) in the national economy j plus the target rate of inflation for the Eurozone as a whole ($\hat{p}^T$):

$$\hat{w}_j = \hat{y}_j + \hat{p}^T. \tag{10}$$

In the case of actual inflation rates being below the target, such a wage norm would also raise the labour income share during the resulting adjustment process. In the long run, implementing such a wage norm in each of the member states would contribute to equal

inflation rates across the Eurozone, and it would prevent mercantilist strategies of individual countries based on nominal wage moderation.

To achieve the nominal wage growth targets, a high degree of wage bargaining co-ordination at the macroeconomic level and organised labour markets with strong trade unions and employer associations seem to be necessary conditions. Government involvement in wage bargaining may be required, too. In particular, Eurozone-wide minimum wage legislation could be helpful for providing a floor to nominal stabilisation at the macroeconomic level, apart from its usefulness in terms of containing wage inequality (Schulten 2012). Furthermore, legal extensions of wage bargaining agreements throughout an entire industry or sector and other extension mechanisms, as well as public sector bargaining setting the pattern for private sectors, could be helpful for effective wage bargaining coordination.

In principle, the European Union and the Eurozone have developed some institutions for the implementation of such a policy mix with the Macroeconomic Dialogue, the European Semester and the financing institutions for regional and industrial policies, such as the EIB and the EIF. In the current Covid-19 Crisis, the establishment of further institutions and plans are on the agenda, as outlined in the introduction to this paper. However, this institutional framework needs to be linked with the Kaleckian/post-Keynesian macroeconomic and development policies outlined above, aiming at establishing stable full employment domestic demand-led regimes in the member states and in the Eurozone as a whole.

5. Conclusions

We have argued that the current Covid-19 Crisis has hit the Eurozone in a highly fragile situation, with a weak and asymmetric recovery from the Great Financial Crisis, the Great Recession and the following Eurozone Crisis. These crises have also revealed the weaknesses of the macroeconomic policy institutions and strategies of the Eurozone based on the NCM. In order to illustrate these weaknesses and the fragilities of macroeconomic development in the core Eurozone, the EA-12, we have applied a Kaleckian/post-Keynesian analysis of the demand and growth regimes to the EA-12 countries, up to and then in the course and after the Eurozone crisis. We have shown that the internal imbalances within the EA-12 in the first period, with the polarization of current account deficit debt-led private demand boom countries, on the one hand, and of current account surplus export-led mercantilist countries, on the other hand, have been externalized in the second period. Most of the countries of the core Eurozone and the EA-12 as a whole have now turned export-led mercantilist. The EA-12 has thus not only seen a weak recovery from the previous crises in international comparison, it has also contributed to sustained global current account imbalances.

Since the neglect of any active and expansionary long-run role of fiscal policy inherent in the NCM and the turn towards austerity policies in the course of the Eurozone crisis have mainly contributed to this development, we have then turned towards Kalecki's macroeconomic policy proposals for achieving and maintaining full employment in a capitalist economy. Kalecki's suggestions of government deficit expenditures, in combination with re-distribution policies in favour of labour and low-income households, assisted by central banks targeting low interest rates, have been applied to the Eurozone by modern Kaleckian/post-

Keynesians. We have outlined such a policy mix, which can be (partly) based on current institutions. It should contribute to a more rapid recovery from the Covid-19 Crisis and to a medium- to long-run non-inflationary full employment domestic demand-led regime, on the one hand, and to sustainable catching-up of the periphery of the Eurozone with respect to the more mature center, on the other hand. Whether the implementation of such a policy mix would be equivalent to a 'crucial reform' in the sense of Kalecki and Kowalik (1971) may need further discussion.

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