

WORKING PAPER 1809

**Demand regimes, financialisation
and hysteresis. New Keynesian and
post-Keynesian macroeconomic
underpinnings of the Varieties of
Capitalism**

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October 2018



Demand regimes, financialisation and hysteresis. New Keynesian and post-Keynesian macroeconomic underpinnings of the Varieties of Capitalism.

Abstract. The recent integration of post-Keynesian insights into Comparative Political Economy is an exciting development. Post-Keynesian theory differs from neoclassical and Marxist theories in its analysis of the role of income distribution and of finance. It allows for wage-led demand regimes and it regards finance to be endogenously created and a source of instability. The paper contributes to the debate on the integration of demand regimes in the Varieties of Capitalism analyses. It contrasts post-Keynesian theory to the New Keynesian three equation model. It highlights that post-Keynesian theory gives prominence to the role of income distribution and allows for wage-led demand regimes; financial variables play a key role, which gives rise to endogenous instability and financial cycles (Minskyan debt cycles); economic growth is regarded as a path dependent process (with unemployment hysteresis due to wage norms) and is not anchored in a supply side equilibrium. However, PKE has so far mostly provided a normative analysis of government interventions. The ability to generate income and wealth rather than competitiveness is regarded as key criteria for a viable variety of capitalism.

Key words: Varieties of Capitalism, post-Keynesian economics, financialisation

JEL Classifications: E02, E12, P50

Acknowledgements: The paper has benefited from comments by Louis Daumas and James Wood. The usual disclaimers apply.

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Introduction

The recent integration of post-Keynesian insights into Comparative Political Economy (CPE) has opened an interesting debate on the macroeconomic foundations of CPE. Baccaro and Pontusson (2016) argue for basing Comparative Political Economy on a neo-Kaleckian theory of demand regimes. They use the case of Germany, Sweden and the UK to analyse export-led and debt-led demand regimes. They highlight need to analyse social coalitions underpinning demand regimes propose an analysis of such a coalition around export interests. It is noteworthy that mode of the VoC literature only mentions demand issues in passing, typically as a short term issue related to government policy. This is exemplified by Hope and Soskice (2016), who salute the analysis of demand, but argue that there is no need for PK macro. Specifically they argue that “the three-equation model is well placed to shed light on the growth models of advanced economies during the post-Fordist period” (Hope and Soskice 2016, 219). The three equation model they refer to is a reduced form version of the New Keynesian macroeconomics. What is the difference between PK and NK macro, what is VoC/CPE missing by relying on the New Keynesian 3 equations model (NK3eq)?

This paper will pursue this further by contrasting the New Keynesian (NK) and post-Keynesian (PK) approaches. Post-Keynesian (PK) theory differs from neoclassical and Marxist theories in its analysis of the role of income distribution, of finance and of the path dependence of the economic growth process. It allows for wage-led demand regimes and it regards finance to be endogenously created and a source of instability. Next to the (neo-Kaleckian) income distribution, financial variables play a key role, which links to Minskyan theories of debt cycles. Financial cycles are interpreted as endogenous feature of capitalist market economies rather than as a result of exogenous shocks. We summarise some empirical findings. Domestic demand regimes tend to be wage-led, but effects of distributional changes are modest. Effects of financial variables are larger (and differ by country). Financial cycles tend to be longer than business cycles. The analysis of social coalitions and compromises around macroeconomic growth models thus has to have a central place for class relations as well as financial relations. Finance-driven growth model have to be analysed as macroeconomically unstable that need to be stabilised politically. Unlike the New Keynesian models PKE argues that demand developments also matter in the long run. This is because the supply side, and in particular the labour market equilibrium responds to demand growth. Unlike the NK 3eq model, PK models are not rooted in an exogenous NAIRU. The ability to generate income and wealth rather than competitiveness is regarded as key criteria for a viable variety of capitalism.

The New Keynesian three-equation model

The NK3eq model is a reduced form version of the New Keynesian models. NK emerged from the New Classical counterrevolution of the 1970s and has accepted the neoclassical requirement for microfoundations of macroeconomics. Simply put, the New Classical required that macroeconomics be based on optimising behaviour and on market clearing. NK accepted optimising behaviour, but argued that real or nominal rigidities can arise in the face of transaction costs or information asymmetries and thus optimising behaviour need not come with clearing markets. In the 1980s and 90s NK led to variety of partial equilibrium models (Mankiw and Romer 1994, Snowdon et al 1994). Notably some of these did have multiple equilibria or path dependence. In the course of the 2000s NKE became increasingly associated with NK-DSGE models, which are essentially RBC models with

nominal rigidities. They do analyse business cycles as the outcome of exogenous shocks and usually assume unique and stable equilibria. Short, NKE is an attempt to reformulate Keynesian arguments in a neoclassical framework.

The three-equation model is a reduced form version of the NK model that is widely used for economic policy, namely for monetary policy discussions. It consists of the following three equations: First, a demand equation, which states that output is, in the short run determined by demand. Demand is a negative function of the interest rate. Second, a Phillips curve which links inflation and output. Higher levels of economic activity come with high inflation. Third, a monetary reaction functions that depicts how central banks react to changes in inflation and output. Central banks are assumed to be either inflation targeting or following a Taylor rule, i.e. responding to inflation (or more precisely: deviation of actual inflation from the CB inflation target) and the output gap.

Four comments are in place. First, while demand plays a key role in these models in the short run, in the long run they are supply-side side determined. In particular, they are based on an exogenous NAIRU (often also referred to as the “natural rate of unemployment”). The Phillips curve gives a short-run trade off between inflation and unemployment, but in the long run, i.e. when expectations are fulfilled the Phillips curve is vertical and there is a unique, exogenous determined unemployment rate, the NAIRU, at which inflation is stable.

Second, in the micro-founded version of the NK models, the reason the IS curve is downward sloping is related to intertemporal utility maximisation and changes in consumption. The old Keynesian (and post-Keynesian) emphasis on the volatility of investment expenditures is not a core part of the NK model, but it can of course be thought of as exogenous shocks to the system.

Third, there is an asymmetry in how economic policies are modelled in the 3eq system. While there is a monetary policy reaction function, there is no explicit modelling of fiscal policy. This corresponds to policy recommendations of NK, which usually assigns primacy to monetary policy.

Forth, one under advertised aspect of NK model is that economic policy, in the form of monetary policy is essential to bringing the economy towards equilibrium. Without proper monetary policy intervention the system is unstable.

The three equation system is a reduced form of these models and therefore does not explicitly invoke the microfoundations of NK theory and each of the equations is empirically plausible.

Post-Keynesian Economics

PKE has its origins in the circle of collaborators of Keynes (Robinson, Kaldor, Kahn etc), who engaged in turning Keynes’ (short-run) theory of effective demand into a theory of growth and distribution. , It emerged as a distinct school of thought in the 1970s, when it rejected the requirement of rational behaviour microfoundations of macroeconomics (King 2002). For the purpose of comparing it to NKE we will highlight three features of PKE. First, income distribution plays a key role PK as wage and profit incomes will have distinct consumption propensities and investment may depend profitability. Second, financial instability is regarded as an intrinsic feature. This is due to the credit-driven endogenous money creation in PKE and the assumption that in a world with fundamental

uncertainty actors will adopt simple behavioural rules (often called heuristics), that are prone to herd behaviour and boom bust cycles in financial asset prices. Third, PKE asserts that demand matters in the short as well as in the long run. Thus growth theory should also be based on a theory of effective demand, and in particular on an independent investment function. Animal spirits in investment also matter for growth. For this to hold, the supply side must adapt, at least to some extent, to demand. This will occur if technological progress or autonomous income claims are endogenous. Both will result in an endogenous NAIRU and PKE specifically reject the notion that economic activity is anchored in the long run in some labour market equilibrium.

While this paper overall strongly advocates the advantages of PKE over NKE, there are two shortcomings of PKE that need to be acknowledged in our context. First, PK discussions of economic policy tend to be strongly normative, but there is little systematic attempt to explain (rather than criticize or suggest) economic policy. Unlike the NK 3 eq model, and somewhat ironically, given that PKE has earlier highlighted that the central banks controls the interest rate rather than the money supply, PK models do not routinely include central bank behaviour; nor do they (routinely) explain or endogenise fiscal policy rule in their models.¹ This clearly is a weakness relative to NK policy discussions. Second, while PK theory, certainly in its Kaleckian version² has a class analytical foundation, however, the sociological and political implications of the implied class analysis have not been spelled out or systematically investigated. Classes play an important role as key behaviour parameters, such as saving propensities, are assumed to be class specific and there is a power asymmetry between labour and capital as capital makes the investment decisions and hires labour. This takes place in a world with involuntary unemployment, where workers will normally not be indifferent between having a job and being unemployed and thus there is power relation between labour and capital. However, how these classes intervene politically and how they would shape, say, economic policy is rarely systematically analysed.

Distribution and demand regimes

The Bhaduri and Marglin (1990) model analyses the interaction of income distribution and demand formation. This builds on a long tradition in political economy that highlights the importance of income distribution, in particular between profits and wages. Distribution lost centre stage with the shift from political economy to modern economics (at the end of the 19th/early 20th century) and post world war II mainstream macroeconomics has until recently not considered income distribution as an important factor (but was concerned with the effect of interest rates or prices on demand). The contribution of Bhaduri and Marglin (1990) is that they proposed a general framework that can give rise to wage-led as well as to profit-led demand regimes. The purpose of the exercise is mostly a theoretical one. An increase in wages (for a given labour productivity and income) is likely to have expansionary effect on consumption (as workers typically will have higher marginal propensities to consume), but it may have negative effects on investment (as profit margins get squeezed) and on

¹ There is a much quoted paper by Kalecki (1943) that argues that while governments can generate full employment through expansionary fiscal policy they are unlikely to do so over extended periods as sustained full employment would erode the class power of capitalist, who would thus object to such policies. However, PKs have by large not tried to formalise this argument (see Boddy and Crotty (1975) as an exception).

² One could argue that there also is more liberal tradition in PKE, which does not employ class analysis.

net exports (as higher wages negatively impact on competitiveness). The sum of these different effects will determine whether demand is wage or profit led.

By now the Bhaduri Marglin model has become a benchmark model in the PK debates and, in particular, it has inspired several empirical studies to identify demand regimes in different countries (xxx). These studies differ in econometric methodology and whether they estimate behavioural equations or reduced form demand equations (Blecker 2017, Stockhammer 2017). Our reading of the findings is that most studies tend to find wage-led domestic demand regimes,³ but net exports may turn total demand profit led, in particular for small open economies. The size of these effects are modest. A one percentage point increase in the wage share may raise consumption by say 0.4% of GDP. Stockhammer and Wildauer (2017) report that effects of financial variables have been orders of magnitude larger.

The fact that demand effects of changes in income distribution are modest in size, does however not mean that they are theoretically insignificant. First, even a modestly wage-led demand regime has important implications for the labour market equilibrium. If demand is wage led, the effective labour demand curve will not be downward sloping. This had been discussed by Keynes in chapter 19 of the *General Theory* (Keynes discussed changes in nominal wages, Bhaduri and Marglin analyse changes in the wage share, but the core argument is the same). In a recession with unemployment rising, there will be downward pressure on wages. The question is what effect will that have on employment. Keynes argues forcefully that the decline in wages will lower consumption expenditures and thus aggregate demand. This can be offset if the fall in prices (which is likely to come with a fall in wages) has an expansionary effect, but there is no general reason (in a closed economy) to expect deflation to have expansionary effects. This means that in a recession the effective labour demand curve will in general not be downward sloping and a cut in wages will not increase employment. Therefore labour market will not have self-healing properties of a stable equilibrium.

Second, there is an important distinction between open and closed economy effects. While individual countries can have profit-led demand regimes because of exports, for the world economy overall the export effects will cancel out. This has important policy implications: while individual countries may be able to export their way out of a crisis via wage cuts (or internal devaluation as it is euphemistically called these days), but the world economy overall cannot. Stockhammer et al (2009) have argued with respect to the Euro area that many of its member states have profit-led demand because of exports. However, most of their trade is within Europe, the overall demand is wage-led. This is useful for understanding demand developments since the Euro crisis, where Troika policy recommendations were biased towards internal devaluation and wage cuts. This has resulted in rising European export surpluses, but weak domestic demand. Overall it has contributed to a weak performance of the Euro area.

How does the argument of wage led growth fit with NK econ and NK3eq? In particular, is it correct as Hope and Soskice write that “the three-equation model is perfectly consistent with the income distribution being a determinant of consumer expenditure” (219). While the statement technically is

³ There is mixed evidence for the demand regime of the USA, with some studies, in particular those employing reduced form demand equations, reporting profit led demand regime.

correct, it is misleading in our context. Indeed, the wage share can have a positive effect on consumption, but a wage-led demand regime fits uneasily with the NK3eq model. First, distribution is not identified as key variable of the system. Second, NK3eq assumes that, at least under normal circumstances, the interest rate effect dominates distributional effects. Otherwise the model would turn unstable in a wage led demand regime. NK3eq is ill designed to illustrate Keynes' chapter 19 perverse effects of wage cuts in a recession, where the Bhaduri-Marglin model can readily illustrate the contractionary effects of wage cuts in a wage led economy.

Since the global financial crisis, various NK authors have tried to analyse why the self-healing properties of the market system seems paralyzed. Key to that has been the notion of the zero lower bound on nominal interest rates. They imply that the central bank cannot stimulate the economy in a recession because it cannot sufficiently lower the interest rate. This mechanism plays the key role for example in de Long and Summers (2012) and Carlin and Soskice (2018).

Finance

A second important difference between PKE and the NK3eq is with regards to the role of finance. PK views the financial system as a source of instability. This is for two reasons: first, fundamental uncertainty implies that investors cannot be globally rational. Expectations about the future are social conventions rather than based on fundamentals as the relevant fundamentals and facts are not yet existing. Fundamental uncertainty has several important implications for macroeconomic analysis. Money will be held, in part, as an insurance to deal with uncertainty and in times of financial crises there will thus be a sudden increase in demand for liquid assets. People will thus resort to simple behavioural rules (heuristics), will be driven by what Keynes called animal spirits.⁴ Importantly these behavioural rules will include social norms and comparisons. This can give rise to herding behaviour as people copy each others' behaviour. Another important convention is to assume that the past will be similar to the future, which can result in momentum trading strategies. Franke and Westerhoff (2017) give a survey of analytical models of animal spirits.

Second, money is regarded as created endogenously by commercial banks as a side effect of their lending decisions. Therefore, loans create deposits.⁵ This gives monetary production economies a high degree of flexibility as banks are able as long as their animal spirits suggest that this is profitable (and safe). Investment is thus not constrained by saving, but rather the availability of credit. However credit for investment (or more broadly: production-related activities) is only one option. Banks can also channel credit towards financial asset and real estate transactions, which can amplify financial bubbles.

⁴ There are similarities and differences between a PK understanding of animal spirits and that of behavioural economics. For example Akerlof and Shiller (2009) prominently feature animal spirits. They use the term to describe waves of synchronised irrational (e.g. exuberant) behaviour. Rational behaviour serves as the yardstick. In contrast, PKE rational behaviour is regarded as impossible as probability distributions for future outcomes are not known. Thus non-rational (rather than irrational) behaviour is pervasive. This complements different NK and PK views on the long-run properties of the economy, with PKE emphasising path dependence (see section 7).

⁵ This view is now also supported by the Bank of England (e.g. Jakab and Kumhof, 2015; McLeay et al., 2014a, 2014b).

PK theory thus regards financial instability and the emergence of financial cycles as a core feature of monetary production economies (an important pioneer of this was Hyman Minsky). There are two core mechanisms that can give rise to financial cycles, which will both be in operation in actual economies (see Nikolaidi and Stockhammer 2017 for a survey of Minsky models). First, there is a debt cycle. In the course of a tranquil period, firms will become more optimistic. They will increase investment and start to accept higher leverage. In Minsky's terminology an increasing number of firms move from hedge to speculative financial structures. As debt has to be serviced out of the current cash flow this increases the fragility of the economy. Demand shocks that impact on firms' cashflows or increases in the interest rate may push firms towards bankruptcy. At the core the cycle mechanism consists of a procyclical leverage (firms need more external finance during a boom) and a negative effect of debt on demand. This cycle mechanism puts non-financial businesses at the centre of the story. A second mechanism is around asset prices and speculative behaviour on financial markets. As investors follow simple behavioural rules (as global optimisation is not feasible in an uncertain world), specifically at least some investors will form expectations about capital gains based on past performance, setting in motion bubble dynamics. During a boom these investors will make higher profits than more conservative investors, which encourages emulation by other investors. An asset price boom also will to a recomposition of portfolios towards more risky assets (liquidity preference and the demand for money declines), which puts a downward pressure on interest rates. The asset price boom, however, is fragile as it is built on the expectation of capital gains. Once the bubble bursts there will be a flight to liquidity, i.e. an abrupt increase in the demand for money and safe assets, which drives up interest rates.

These two financial cycle mechanisms differ in that the debt cycle are about business investment and expected future cash flows, whereas the speculative cycles about financial asset prices and expected capital gains. Importantly, both mechanisms, which are complementary, share that they conceive of financial cycles as endogenous cycles that emerge spontaneous without the need for an exogenous shocks. To be clear, similar mechanisms have also been discussed by New Keynesians, in particular the noise trader models (Shleifer and Summers, 1990) analysed the interaction of noise traders (or momentum traders) and fundamentalists.⁶ But they are not part of NK3eq or the NK DSGE model, which treat financial bubbles, if at all, as the outcome of exogenous shocks.

An implication of endogenous money theory is that the central bank can set interest rates, but is not in control of the money supply. That is also the case in NK3eq or NK DSGE models. While in PK this follows directly from the theory of money, in NK it is the choice of central banks that they rather use interest rates rather than money supply targets.

NK has extensively modelled different interest rule and routinely includes them in their models. PK, on the other hand, tend to treat interest rates as exogenous and often have a normative take on monetary policy, arguing that monetary policy should be subordinated to the overarching goal of full employment. The fact that PK rarely include monetary policy rules in their models clearly is a

⁶ De Grauwe, who sits somewhere between New Keynesian models and Behavioural Economics, has developed speculative models in a series of papers. (de Grauwe and Macchiarelli 2015 which model animals spirits as self-fulfilling movements of optimism and pessimism in a heterogeneous agent setting include a banking sector and debt. They do not refer to Minsky.

shortcoming in a world where central banks do, with various imperfections, follow policy rules and in particular have some inflation target as their ultimate goal.

Financialisation

At the core of the VoC approach is the notion of institutional competitive advantage. The role of finance has been analysed in this context as the financial system as financing business investment and its impact on training and labour relations. The core distinction VoC has drawn on is between (arms length) market based financial systems and (relationship based) bank-based financial systems. These correspond to and complement other institutions in the liberal and coordinated market economies, respectively. In particular, the bank based financial system allowed forms of long-term finance to firms, which enabled firms to provide long-term contracts with and training for its workers. In contrast, the market-based financial systems in Anglo-Saxon countries created finance with shorter time horizons and financial instruments that are frequently valued at markets. Overall this has resulted in a functionalist treatment of finance, in relation to achieving competitiveness rather than a systematic engagement with current activities of financial institutions. Financial institutions are mostly analysed as financing business investment and how the complement (or not) labour relations institutions. In particular the analysis of financial instability has long played a secondary role in VoC analyses. Hancke et al (2009) give a twelve item list of shortcomings of VoC, but the treatment of the financial sector and the absence of financial instability concerns is not mentioned. We argue that the functionalist approach towards achieving competitiveness is unsuited for understanding the impact of financialisation.

The process of financialisation brought numerous changes to firms, households, the financial sector and, ultimately, the role of the state. For our purposes, we will highlight changes within the financial sector, where we notice a shift away from financing business to mortgage finance, a shift towards fee generating activities ('securitisation') and a rise of non-bank financial institutions (shadow banking). Simply put, banking in the era of financialisation has not been about financing business.

Financialisation brought several changes for the financial sector. At the core of these changes in the financing of financial asset transactions and real estate transactions rather than financing business. There has been a pronounced shift, reflected in bank balance sheets, from lending to business towards mortgage lending and financial engineering (investment banking) (Erturk and Solari 2007, for a longer perspective see Jorda et al 2016). This is important macroeconomically for two reasons. First, these developments give a prominent role to the organisation of housing. Household debt, which has been found to be linked to the severity of recession, is predominately mortgage debt. Real estate is widely accepted as collateral thus provides a power lever for real estate bubbles and the price growth also leads to credit growth. But housing also has an important ideological function (Watson 2010, Wood 2018). Seabrooke and Schwartz (2008) propose an analysis of varieties of residential capitalism where they highlight links between political preferences around housing and social policy, but they do not analyse the macroeconomic implications of the central role of housing and boom bust cycles.

Second, financialisation has resulted of a return of financial cycles. Historically financial cycles have played an important role for economic stability and the Keynesian/Fordist period of tight financial regulation has been rather exceptional in that financial crises (banking crises and exchange rate

crises) have been rare (Kindleberger 1978, Reinhart and Rogoff 2008, Goodhart 2016). With the financial deregulation that ushered in financialisation has been the return of financial cycles. For an analysis of the varieties of capitalism this implies that financial institutions and their borrowers, financial regulation and the policies to deal with financial crisis ought to have a prominent space. This is arguably not the case for present VoC theory.

How suited is NK3eq for allow VoC analyses to incorporate financial instability? In our view, it isn't. the NK3eq is essentially an update of the synthesis ISLM and ASAD, where the central bank takes on the key role that once was played by the LM curve, that is setting the interest rate. NK3eq is at the core a real model of the economy with cost push inflation and a policy rule-determined interest rate. Financial variables, such as debt or asset prices do not form the core of the model nor does it put portfolio decisions or speculative dynamics into central place: financial markets are absent. This reflected in Carlin and Soskice (2006), the pre-crisis version of their textbook, where only a single, short section⁷ is devoted to bank runs (due to asymmetric information and panics) and discussed largely as a historical phenomenon.⁸ This reflects the limited attention that this approach has given to financial issues. The Carlin and Soskice (2015) post-crisis textbook, which features instability and the financial system in the title (aimed at a more undergrad audience than the 2006 textbook), devotes three full chapters to the financial sector and financial instability and summarises the recent New Keynesian literature on financial instability, briefly mentioning Minsky (but hardly any other post-Keynesians). These chapters cover many of themes mentioned above, in particular they note the importance of investment banking and mortgage lending, and they highlight momentum trading and the financial accelerator as key mechanisms. They claim that those financial mechanisms can readily be integrated into the NK3eq, but that is a somewhat hollow claim because essentially they integrate it as an exogenous shift variable to the IS curve.⁹ The only financial variable of the model itself is the interest rate set by central banks, but private debt or real estate prices are not tracked and, crucially, financial crises are understood exogenous shocks for the NK3eq analysis.

Chapter 13 of Carlin and Soskice (2015) discuss monetary policy and mention criticisms of inflation targeting, discuss quantitative easing and post-crisis changes in financial regulation. However, none of this is reflected in the NK3eq, which is firmly rooted in the inflation targeting (or Taylor rule) approach, which regards the interest rate as the key monetary policy variable. This is misleading in at least two regards. First, it understates the range of policy instruments that central banks have. Since around 1980 the set of policy instruments has been purposefully restricted and central bank try to influence credit volumes through open market transactions. In particular banking regulation and credit guidance can be used to counteract financial bubbles and lending booms. Second, it downplays the significance of the central bank balance sheet. The central bank is a bank, as such it can lend and buy assets. Effectively quantitative easing has been used to indirectly finance

⁷ Section 3.1.5 of Carlin and Soskice (2006). Of a total of 800 pages two pages are devoted to issues of financial instability.

⁸ The index of the book does have entry for 'financial bubble' (referring to section 3.1.5), but none for financial crisis. For debt the only entry in the index is 'debt, government', but there is no entry for private debt or debt cycles. There is no reference to Minsky.

⁹ The issue of whether financial crises are treated as exogenous or endogenous has direct policy correspondence in the question whether financial crises are predictable (from the point of view of policy makers). Barrell et al (2010) make a strong case that leading crisis indicators (in particular bank capital ratios, liquidity ratios and house price growth) and could predict the 2008 crisis.

governments as most of the assets acquired are government bonds (these are bought on the secondary market, thus it does not constitute direct government financing). Central banks could also be used to, say, finance direct transfers to household (“QE for the people”), to directly finance government expenditures (say government investment) or financing a National Investment Bank.

But there are some deeper issues. As Pistor (2013) highlights in her *Legal Theory of Finance*, while during normal times legal commitments have to be honoured, in a world of uncertainty and financial instability in times of crisis the enforcement of all legal obligations might result in the self-destruction of the financial system. Thus in times of acute crisis part of the rules get suspended. Pistor argues that at this point the hierarchical structure of finance and its power foundations become apparent. In times of crises the law is enforced asymmetrically (some units are bailed out, others forced into bankruptcy). It is national sovereigns (and their central banks) that control their own currency and which, in times of crisis, have the power to issue money and thus save (or not) different institutions and actors.

This points to the fact that the Lender of Last Resort (LOLR) role is not only an issue for financial stability, but also a power relation. These power relations are about the stratifications of different players within private financial actors, but it also applies to states. Central banks are now acting as LOLR for private financial institutions. However, historically, they had been founded as funders of the governments (Goodhart 1988). The importance of this can hardly be overstated in context of the Global Financial Crisis and the Euro crisis. While the Fed and the BoE used QE to indirectly finance government expenditures, the ECB initially refused to play this role. It relied on (private) ratings of government and threatened not to accept some member states’ debt. This arguably explains the escalation of the Euro crisis. Among the advanced economies, the Euro area was unique in that the financial crisis turned into a sovereign debt crisis (Stockhammer 2016). This created a situation when southern European governments had to submit to the Troika rescue packages and impose austerity on economies in recession. The sovereign debt crisis ended after the ECB committed to ‘doing whatever it takes’, i.e. buying government debt from states under pressure. There is little in the NK3eq to help understand the centrality of the readiness of central banks to commit to buying government debt.

Path dependence and unemployment hysteresis

A key feature of the NK3eq is that it is rooted in a supply-side determined long-run equilibrium: “the supply side of the economy (...) pins down the equilibrium levels of output and unemployment in the medium run” (Hope and Soskice 2016, p. 219). The model is a version of the NAIRU models, which have informed policies of labour market deregulation over the past thirty years. The NAIRU equilibrium will shift with changes in labour market institutions, but the NAIRU is independent of actual unemployment. In the exogenous NAIRU model government policy can stimulate employment in short run, but this will result in higher inflation. Eventually (because of the central bank increasing interest rates), actual unemployment will return to the NAIRU. If governments want to lower unemployment beyond the short term, there needs to be labour market reform (or increased goods market competition). While this is usually interpreted to mean deregulation of labour markets, weakening social protection (e.g. Krugman 1994), VoC adds a twist by arguing that strong labour

market institutions can lead to lower unemployment if they lead to more coordination among labour unions. This is because in a coordinated wage bargaining system the protected sectors will follow the lead of the exposed sectors, which results in lower wage pressure. As mentioned in section xxx, VoC typically assumes a profit-led demand regime or, more technically a standard downward-sloping labour demand curve.

PKE share with the NAIRU theory and NK3eq PK macroeconomics the understanding of inflation as an outcome of conflicting claims over income distribution. This results in a short-run Phillips curve, i.e. higher demand and employment leading to higher inflation, but PK reject the claim that the NAIRU is exogenous. The assertion that demand matters also in the long run is core to PKE. This implies that the supply side of the economy responds to demand developments. There are several mechanisms for this such as productivity growth in part driven by demand growth (via learning by doing and dynamic returns to scale, the so-called Kaldor Verdoorn law) and that wage growth induces labour productivity growth progress (Storm and Naastepad 2013, Vergeer and Kleinknecht 2011; see also Acemoglu 2002). In the context of the NAIRU framework this means that the NAIRU is endogenous to economic performance, as a consequence of that there is unemployment hysteresis. Skott (2005), Stockhammer (2008, 2011) and Michl (2016) have highlighted that wage norms may be endogenous workers and trade unions adapt their wage claims when they fail to reach their wage targets. This assumption is sufficient to lead to an endogenous NAIRU.¹⁰ There are some similarities, but also important differences to the NK discussion of unemployment hysteresis via insider bargaining. Blanchard and Summers (1986) and Lindbeck and Snower (1986) had argued that unions are likely to represent their members, which consist of employed workers. Thus insider bargaining will not take into account of wage setting on the unemployed. In the NK NAIRU theory unemployment hysteresis results only in the extreme case where the long-term unemployed have no effect on wages at all (Nickel 1998).¹¹ In this case a change in actual unemployment corresponds to a change in the NAIRU. In contrast, the social wage norm argument hysteresis is a pervasive feature and there will be different degrees of hysteresis depending adjustment speed of the wage norm and the duration of the demand shock.

PKE, NKE, VoC, concluding thoughts

This paper has contrasted PKE and NK3eq and in particular rejects Hope and Soskice's claim that "the three-equation model is well placed to shed light on the growth models of advanced economies during the post-Fordist period" (Hope and Soskice 2016, 219). I have argued that the PKE approach, in contrast to NKE, allows for the possibility of a wage-led demand regimes, offers a better understanding of the intrinsic instability of monetary production economy and emphasises path dependence, which also implies hysteresis in unemployment and income distribution.

¹⁰ In a simple NAIRU model, the NAIRU will depend on the autonomous wage and profit claims of labour and capital. If those wage or profit claims change in response to actual wage, this is sufficient for the NAIRU to be endogenous.

¹¹ Weaker forms of insider bargaining (i.e. some effect on wages) create some unemployment persistence (sluggish adjustment) without altering the long-run property of the system that the NAIRU only depends on supply side factors (Nickell 1998).

How different are PKE and NKE? Can't most of the PK arguments also be made in a NKE framework? PKE and NKE are estranged cousins. The main theoretical dividing line is the question of whether macroeconomics should be based on rational behaviour microfoundations, which NKE has accepted, but PKE has rejected. As consequence PKE finds itself outside the economics mainstream. NKE has a wide spectrum of analytical models and, correspondingly encompasses a variety of political positions. It is thus not surprising that many of the PK arguments have also been articulated by NKE. In particular in the aftermath of the global financial crisis issues of financial instability (both around debt cycles and around speculative asset price cycles) have featured prominently in NKE and the issue of hysteresis has also received renewed attention. For example de Long and Summers (2012) and Blanchard et al (2016), on hysteresis and path dependence, come very close to PK positions. (At present, NKE has little that corresponds to wage-led growth, but older incarnations such as Malinvaud 1977) had similar regimes¹²). Thus our main point here is not that the PK arguments can't be developed by NKE, they indeed can. Rather the point is that NK3eq is ill designed to do that. It's rooted in a pre-crisis NK world, which is anchored in supply-side equilibrium and analyses financial crises as exogenous shocks. It is thus not a satisfactory macroeconomic basis for an analysis of post-Fordist economic dynamics.

That said, is a healthy dose of PKE all that VoC needs? Or are there shortcomings of PKE? We want to highlight to shortcomings. First, while PKE has a lot to say about what economic policy should do, PKs have done disappointingly little work on incorporating economic policy rules into their models. While there are a few exceptions, like Dafermos (2018) who models fiscal policy rules in a model with financial instability, most PKE models do treat fiscal and monetary policy as exogenous. This is in contrast to NK models, which routinely model monetary policy rules, but typically are rather casual about fiscal policy. This is a shortcoming in terms of the understanding of how economies behave, but it leads to an underlying issue, which is that PKE lacks a positive (as opposed to normative) analysis of the state, which in part reflects that PKE has focussed on economic analysis and done little clarify its institutionalist and class analytic foundations.

If a key distinction between PKE and NKE is that PKE has a sociological and institutional foundation of economic analysis, short: a class analytic rather than methodologically individualist foundation,¹³ the

¹² Malinvaud's Keynesian regime is defined as one where there is involuntary unemployment and a reduction in the nominal wage will not increase employment.

¹³ While much of the PK class analysis is implicit, it is worth contrasting it to Marxist class theory, which is more established. While Marxist analysis is strongly based in the production sphere and the notion of exploitation, a PK class analysis has a more active role for finance and social norms. PK class analysis shares the power asymmetry between capital and labour. As involuntary unemployment is a pervasive feature in Keynesian economies, capital has power over labour as the firing threat is indeed a threat (it wouldn't be in an instantaneously clearing labour market). Because of the underutilised capacity thus the possibility of wage-led growth the room for class compromise is expanded relative to Marxist theory. As the investment decision plays a more central role in Keynesian economics than in Marxist or neoclassical economics, there is an under-theorised power aspect to investment decisions. The Keynesian notion of fundamental uncertainty and the indeterminacy of the future there is less room for objective class interests, but narratives (be they in the form of Keynes' business sentiments or in the form of political ideologies) play more important role. In an uncertain world ideational factors are potentially powerful factors. It would thus be interesting to explore to what extent PK analysis is closer to a Weberian class concept. PK theory gives a prominent role to finance and money. This has implications, first, for state theory, where some PKs have elaborated on the origin of money in the power of states to tax, which closely resembles the economic sociology argument on the nature of money (Ingham

question arises how the state sector and government policies should be modelled in macroeconomic models. To fully appreciate what is at stake here, we need a brief digression on nature and development of Political Economy. Political Economy started as holistic approach in the 19th century, that aimed at unified analysis of social, economic and political problems. Towards the late 19th early 20th century a disciplinary bifurcation occurred, with economics turning into 'pure economics' and the establishment of political sciences and sociology (Clift 2014, chap. 1). The Political Economy agenda, which runs across academic disciplines, split, and both Political Economy research in economics and social sciences became impoverished as a consequence. In economics the PK and Marxist traditions pursued a political economy approach. However, in the PK tradition, the analysis of the state and of political aspects of power relations remain underdeveloped. While PKE started out within the PKE tradition and still has its foundations, with its formation as a school of thought (in the 1970s) it has narrowed its scope to economic issues. This is to some extent symptomatic of broader developments in non-mainstream economics, which has widened (since the 1970s) and now includes Evolutionary, Complexity and Feminist Economics, but the term Political Economy is less widely used but 'heterodox economics' has gained popularity.¹⁴ Within Politics the fields International Political Economy and Comparative Political Economy formed, which cover a substantial parts of the Political Economy approach. IPE has a good coverage of 19th century economic theory, but typically has an eclectic reading of contemporary heterodox economics.

Short, we suggest that a PK macro analysis offers a richer understanding of macrodynamics than NKE and it is a more natural complement to International and Comparative Political Economy than NKE. There are several issues where PKE suggests a different reading of VoC. First, PKE does not regard the economic equilibrium to be anchored purely in supply side factors in the long run. Thus institutional structures have to be analysed in conjunction with demand developments and history matters. Second, capitalist development is regarded as intrinsically unstable due to the role of the finance. Financialisation and financial deregulation can have dysfunctional effects on economic stability and income distribution. Third, from this perspective more emphasis would be given to highlighting differences between Fordist and neoliberal accumulation regimes in analysing VoC. While there are continuities in coordinated and liberal market economies, currently they have translated into a more industrial (and export-driven) and a financialised (debt-driven) varieties of neoliberalism. Fourth, demand regimes may generate instability as well as periods of growth. Political coalitions will form around growth models and states that stabilise an unstable economy. PKE lacks a substantive treatment of economic policy analysis and the social coalitions underpinning certain policies. It can thus only be one ingredient of comprehensive analysis of VoC and it can substantially benefit from closer cooperation with comparative and international political economy.

2004) and, second, for the understanding of class and power relations. In Keynesian financiers (banks or rentiers) have unique position as the control access to finance, which is essential in the growth process. It would be worth exploring the similarities of Fernand Braudel's analysis of capitalism (where trade and finance sits at the very top of the social pyramid) and PK analysis.

¹⁴ The European Association of Evolutionary Political Economy (EAEPE), Europe's 2nd largest economics association, was founded in the 1980s and proudly uses the term Political Economy.

Conclusion

The paper supports Baccaro and Pontusson's research program of building VoC on post-Keynesian macroeconomics rather than on New Keynesian theory. PK theory offers a theory of demand regimes that allows for wage-led as well as profit-led growth; it has a theory of endogenous money and financial instability, where financial cycles emerge from the intrinsic features of a monetary production economy rather than as exogenous shocks. And it emphasises path dependence, which in particular implies that there is unemployment hysteresis and the medium term growth path of the economy is not anchored in a purely supply side (NAIRU) equilibrium, but that historic demand shocks matter. Rather than global optimising behaviour, PK economies are characterised by fundamental uncertainty and financial instability. Thus, conventions and social norms, which are often underpinned by social institutions play an important part in explaining behaviour. This lends itself to an interpretation of capitalist growth models, which are potentially unstable. Rather than competitiveness, it is their ability to generate growth and sufficient political support for extended periods forms the reference for identifying VoCs.

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