A COHERENT APPROACH TO MACROECONOMIC THEORY AND ECONOMIC POLICIES

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Abstract

The focus of this contribution is on the notion that there is often inadequacy of aggregate demand relative to what would be required for full employment of the factors of production. The level and distribution of productive capacity can often be inadequate to underpin full employment. Distributional effects are paramount and should be seriously taken on board in the analysis; and such effects are actually considered in this contribution. Economic policies are thereby very relevant and important. We briefly summarise the theoretical framework that underpins the relevant economic policies before we turn our attention to the latter themselves. We suggest that in addition to the well-known economic policies, namely fiscal and monetary policies, and co-ordination of them, two new, relevant and important policy dimensions emerge as paramount: distributional effects and financial stability. We also discuss briefly current 'unorthodox' monetary policies.

Keywords: Macroeconomic framework, economic policies, financial stability, distributional effects, 'unorthodox' policies

JEL Classification: D31, E12, E44, E61, E63

1. Introduction

This contribution relies mainly on the notion that there is often inadequacy of aggregate demand relative to what would be required for full employment of the factors of production.[1] The level and distribution of productive capacity can often be inadequate to underpin full employment. Fiscal and monetary policies are of course important and we suggest that co-ordination of them is a way forward. In this contribution we briefly discuss our theoretical framework that underpins the relevant economic policies before we turn our attention to the economic policies themselves. In terms of the latter we argue that two 'new' important policy dimensions, which have been ignored in the past, namely distributional effects and financial stability, should seriously be taken on board in relevant discussions of economic policy. Such economic policies are thereby urgently required to avoid crises similar to the 'Great Financial Crisis' (GFC) of 2007/2008, in the future.[2] We also discuss briefly the current 'unorthodox' monetary policies.

We proceed as follows. After this short introduction, section 1, section 2 deals briefly with our theoretical background that comprises of five blocks.[3] Section 3 proceeds to discuss the 'new' economic policies that emerge from the theoretical framework of this contribution. Section 4 discusses the current 'unorthodox' monetary policies. Finally section 5 summarises and concludes.

2. A Coherent Theoretical Macroeconomic Model

The purpose of this contribution is to briefly discuss our theoretical framework that underpins our proposed economic policies. Clearly, economic policy formulation is heavily conditioned by the underlying theoretical framework that should underpin it. We, thus, begin with the essential elements of such a theoretical framework. The overall focus of economic analysis should be: sustainable and equitable economic development and growth. Full employment should be the objective of economic policy. Achieving such objective requires the maintenance of a high level of aggregate demand and sufficient productive capacity. The general background to this theoretical framework relates to an economy, which has degrees of instability in the sense of having ups and downs of the business cycle and prone to crisis. It also relates to a monetary production economy in which finance and credit play a significant role. This theoretical framework draws on the following main elements, which comprise five blocks as summarised in the appendix. In this section we discuss briefly the main elements of each block. We begin with block I.

Block I (equations 1 to 7 as in the appendix). This is based on the demand-side of the economy, which relates to expenditure, income and employment, and also on the supply-side. The level of economic activity is set by aggregate demand. No market-based mechanism exists to propel the level of aggregate demand to any specific level of output. Distributional effects are paramount and are seriously taken on board in the current contribution. Changes in economic activity affect the rate of change of prices and wages, and consequent changes in the distribution of income between wages and profits emerge. Changes in the distribution of income have effects on the level of aggregate

[1] Relevant contributions include Arestis (2010), Arestis and Sawyer (2010) and Arestis (2013). The current contribution is, however, more extensive in terms of the economic policies, and covers more recent aspects and developments.

[2] It should be noted that this contribution goes well beyond the New Consensus Macroeconomics (NCM) and its policy implication, namely inflation targeting (see also Arestis, 2007, 2009, 2010).

[3] The five blocks briefly discussed in section 2 were originally put forward in the Arestis (2013) approach. The current contribution, though, relies more extensively on the relevant economic policies of such approach.

demand, with the nature of the effects depending on whether there is a wage-led or a profit-led regime. Aggregate demand has a dual characteristic in this model: it is a relatively volatile component; and it is also a creator of productive potential. This establishes interdependence of demand and supply. The supply-side of the economy is viewed in terms of the following characteristics. The interaction between production decisions of firms in the light of the (expected) level of aggregate demand; and the consequent decisions on employment. It is also viewed in terms of the relationship between prices and wages, and their setting. Clearly, this approach denies the validity of the NCM approach that portrays the long run as characterised by a supply-side equilibrium (at NAIRU), with aggregate demand having no impact whatsoever.

Block II (equations 8 to 13 as in the appendix). It relates to the distributional aspects and the inflationary process. The range of factors, which impact on the distributional aspects and the rate of inflation, includes: struggle over income shares; the level and rate of change of the level of aggregate demand; cost-push factors emanating notably from the foreign sector (changes in import prices and the exchange rate); and the sources of inflationary pressures vary over time.

Block III (equations 14 to 18 as in the appendix). This block relates to the money, credit and finance sector. Money is endogenously created within the private sector with loans initiated by banks thereby generating bank deposits. The behaviour of banks and related credit institutions become important for the economy. Their willingness or otherwise to create loans and the terms upon which they are provided impact on the level and structure of demand. The central bank sets the key policy interest rate, which governs the terms upon which the central bank provides the 'base' money to the banking system. Monetary policies, however, such as credit-rationing by the authorities, which can properly control the financial sector, are also important. These are what is labelled as 'financial stability' policies as dicussed below in sub-section 3.3.

Block IV (equations 19 to 23 as in the appendix). There is also the government sector, which is accounted for in this block. Government expenditure and taxes along with the public sector borrowing requirement are taken on board and examined; as well as endogenised as necessary.

Block V (equations 24 to 27 as in the appendix). Finally, the open economy aspects are examined as in this block. The openness of the economy means that the domestic economy is buffeted by events in the rest of the world. A relevant and significant aspect of the foreign sector is that imports and exports are included in the aggregate demand equation, and endogenised in this block. This inclusion also reflects the effects on demand (and hence employment) of variations in the exchange rate.

The model just presented is cyclical and could potentially produce periods of instability. It is, thus, paramount that economic policies to stabilize the economy and lead it to high levels of employment and output are vitally necessary. This is undertaken in the section that follows, where we concentrate mainly on 'new' economic policies rather than on the traditional ones.

3. Economic Policies

3.1. Introduction

The overall objective of economic policies should be sustainable and equitable economic development and growth, along with the achievement of full employment of the labour force. Maintenance of a high level of aggregate demand and provision of sufficient productive capacity are important prerequisites for such objectives. It is clear from the analysis in section 2 that traditional fiscal and

monetary policies employed in a co-ordinated manner (see, also, Arestis, 2012, 2013, 2015) could potentially help on this score. Our theoretical analysis, however, suggests that further economic policies for the achievement of the above mentioned objectives are paramount. These are relevant economic policies for a fair distribution of income and financial stability, which have not been seriously considered previously. We elaborate on these two prerequisites in the rest of this section.

3.2 Distributional Policies

Distributional effects should be a major objective of policy as this is clear from our theoretical analysis (see, also, Arestis and Gonzalez-Martinez, 2016). Recent evidence of a steady but sharp rise in inequality is also very supportive of this proposition.[4] Inequality had risen prior to the emergence of the GFC of 2007/2008 and the 'Great Recession' (GR) that followed, and has continued since then. Galbraith (2012) suggests that "inequality was the heart of the financial crisis. The crisis was about the terms of credit between the wealthy and everyone else, as mediated by mortgage companies, banks, rating agencies, investment banks, government sponsored enterprises, and the derivatives markets" (p. 4). Arestis and Karakitsos (2011, 2013; see, also, Arestis, 2016) argue that inequality was one of the main causes of the GFC and the subsequent GR. Stiglitz (2012) suggests that income inequality in the US is an important cause of the economic and financial troubles in the last twenty years. According to Stiglitz (op. cit.) in 2007 the income of the top 0.1 percent in the US was 220 times larger than the average of the bottom 90 percent. Piketty (2014) also shows that the income share of the top 1% in English speaking countries (especially in the US) has risen since 1980; the same 1% appropriated 60% of the increase in US national income between 1977 and 2007. Kumhof and Rencière (2010a, 2010b, 2011) make the point that restoring equality through redistribution of income from the rich to the poor could very well save the global economy from another crisis similar to the GR. Atkinson et al. (2011) show that the share of US total income going to top income groups had risen dramatically prior to 2007. The top pre-tax decile income share reached almost 50% by 2007, the highest level on record; the share of an even wealthier group – the top 0.1% - more than quadrupled from 2.6% to 12.3% over the period 1976 to 2007.

Clearly, the declining wage and rising profits share were compounded by the increasing concentration of earnings at the top, especially in the financial sector. An important piece of evidence in the case of the US is the share of the financial sector to GDP, which almost doubled in size between 1981 and 2007, and subsequently accounted for 8% of the US GDP (Philippon 2008). Between 1981 and 2007 the US financial sector as measured by the ratio of private credit to GDP grew from 90% to 210%; also, a sharp, nearly six-fold increase occurred in their profitability since 1982. Similar but less pronounced financial shares are relevant in many other countries. Germany, China and the UK are three examples but many more can be cited (see OECD, 2008, for a relevant discussion and empirical evidence on these economies). Turner (2010), the ex-Chairman of the UK Financial Services Authority, made the point in the case of the UK: "there has been a sharp rise in income differential between many employees in the financial sector and average incomes across the whole of the economy". A recent contribution to the UK inequality has been the pursuit of 'Quantitative Easing' (QE) type of policy. The Bank of England (2012) report shows that its QE programme increased the value

[4] It is interesting to note that at the G20 meeting in Hangzhou, China (September 2016), the managing director of the IMF praised the group's commitment to reduce excessive inequality and to ensure growth was more widely shared.

of the relevant financial assets by 26 percent with 40 percent of the gains having gone to the richest 5 percent of British households. Similar results are expected for the US economy, where the top 5 percent of wealthiest households owns 82 percent of all individually held stocks and more than 90 percent of the individually held bonds.

Even more recent evidence shows that US household incomes have been falling for the fifth consecutive year; the typical US family earned less in 2013 than in 1989, according to the US Census Bureau (September 2013). In fact the medium household income is now 8.3 per cent below its pre-GR peak in 2007. Still, the share of the wealth accruing to the top 1 per cent grew by 31 per cent in the three years to 2012, while the rest rose by just only 0.4 per cent. The top 1 per cent is close to full recovery since the emergence of the 2007/2008 GFC, while the bottom 90 per cent has hardly started recovering (Saez, 2013). Cynamon and Fazzari (2014) also argue that rising income inequality as from 1980 reduced income growth for the bottom by 95 per cent of the US income distribution. The debt to income ratio of the bottom 95 per cent increased dramatically. The income growth for the top 5 per cent increased by contrast. The consumption-income ratio of the bottom 95 per cent rose dramatically unlike that of the top 5 per cent. The end of that borrowing boom prior to the 2007/2008 GFC, caused household spending to collapse, which was the proximate cause of the subsequent GR. However, during the GR and subsequently the borrowing boom came to an end, and as a result the higher inequality with the associated demand drag provides an explanation of the slow US recovery following the GR.

These are clear empirical examples, in addition to the theoretical premise as above in section 2, of the importance of distributional effects as a clear and vital objective of economic policy, which if not accounted for and proper action initiated, can produce serious problems. A clear message then follows from both our theoretical framework and the evidence discussed in this sub-section: distributional effects should be a major objective of economic policy. We have also argued in Arestis and Sawyer (2011) for the importance of accounting for 'distributional effects' in both economic theory and policy, which have been fatally ignored recently (see, also, Arestis, 2016; and Arestis and Gonzalez-Martinez, 2016). Consequently, it is vital that economic policies not only should they focus on achieving full employment but should also be geared towards reducing inequality. This theoretical framework is supported by empirical evidence, as for example, the findings of Onaran and Galanis (2013).[5]

It clearly is the case then that pro-labour distributional policies that promote wage policies, strengthening the status of labour unions and collective bargaining, are important and relevant policies. Such a strategy should be complemented by fiscal and monetary policies, along with proper co-ordination of them. The objective should be full employment. Fiscal policy in particular is an important dimension in this regard (Arestis, 2012, 2015). The study by Muinelo-Gallo and Roca-Sagalés (2011) employs an endogenous growth model that incorporates fiscal policy and economic growth along with their effects on income inequality. Pooled-panel estimations are undertaken for 43 upper-middle and high-income countries for the period 1972-2006 to conclude that increases in pub-

[5] See, also, The Economist (2014) where it is argued that redistribution does help to increase national income.

lic investment expenditure reduce inequality without harming output, regardless of whether they are financed through direct or indirect taxes.

Targeting social spending, including people's investment in skills and education, is paramount from the government spending point of view. Reforming taxes to make them fairer is another important aspect of fiscal policy. Indeed, Berg and Ostry (2011) show that a redistributive tax system is associated with higher and more durable economic growth. Raising the minimum wage and indexing it to inflation is another important tool to fight inequality (see, for example, The Economist 2014). A further example, and priority, is the removal of subsidies for the 'too-big-to-fail' financial insitutions (see, also, The Economist 2012). Such a policy initiative would help to remove, to a large extent, one of the main contributory factors to the surge in wealth at the top of income distribution and to the financial sector in particular. This inequality, as we have argued elsewhere (Arestis and Karakitsos, 2011, 2013; see, also, Arestis, 2016), was one of the main causes of the GFC of 2007/2008 and the subsequent GR. In the latter sense, addressing the problem of income inequality is even more important today with the background to which we have just referred. A recovery led by domestic demand and an increase in the wage share in the global economy would help to reverse the major factor of inequality behind the GR.

To summarise, a combination of economic policies is needed to tackle inequality; progressive taxation and public expenditure policies, social welfare, industrial relations,[6] are all relevant and important. Most important of it all is the suggestion by Atkinson (2015) that "a more progressive structure for the personal income tax" (p. 290) should be introduced. Atkinson (op. cit.) also suggests that it is of paramount importance to have in place proper distributional policies along with wage policies if a viable growth regime is to emerge and be sustained. We would go a step further, though, and argue that to reduce inequality significantly proper policies as discussed above are necessary but also with appropriate coordination of monetary and fiscal policies, along with financial stability, would be the best way forward. Monetary and fiscal policies should be directed at reducing inequality through appropriate expenditure and progressive tax policies, which should be supported by financial stability type of policies. The latter should be concerned with reforms in an attempt to regulate the financial sector and avoid the type of financial architecture that led to the 2007/2008 GFC.

3.3 Financial Stability Policies

Financial stability is the second 'new' objective of economic policy we discuss next. The objective of financial stability should be the most significant one for central banks. The focus of financial stability should be on proper control of the financial sector so that it becomes socially and economically useful to the economy as a whole and to the productive economy in particular. Financial deregulation entails redistribution effects in favour of the financial sector by allowing for greater risk-taking and higher expected profits; at the same time, though, greater risk-taking can lead to losses sufficient to cause a credit crunch. Redistribution of welfare thereby emerges from workers to bankers (Korinek and Kreamer, 2013). As suggested above and argued elsewhere (Arestis, 2016, for

[6] An important aspect on this score is the change in labour markets over the recent years, where the role of trade unions has diminished. Re-strengthening the role of trade unions is crucial in terms of reducing inequality.

example), this process had been one of the major causes of the 2007/2008 GFC and the subsequent GR. Clearly, then, banks should serve the needs of their customers rather than provide short-term gains for shareholders and huge profits for themselves. This requires the development of alternative policy instruments alongside the downgrading of interest rate policy, as the only instrument of monetary policy, and of any notion of price stability as the only objective of economic policy.

Financial stability policies have emerged as particularly important in view of the GR. In Arestis and Karakitsos (2013) it is argued that in the past, especially prior to the GFC and GR, a variety of regulatory policies were in place, which were intended to maintain financial stability. However, those policies were focused merely on the stability and viability of individual banking institutions, the microprudential type of policies, rather than embracing also the whole of the financial system, the macroprudential type of policies. The key point here is to bring to the forefront a form of financial policy, which is focused on proper financial stability. Such a policy has to be comprehensive in its coverage, in terms of both the range of financial institutions covered and its international coverage. It further suggests that the policy needs to act in a counter-cyclical manner and to differentiate between assets.[7] Central banks should go beyond the traditional single objective of targeting inflation; they should monitor price fluctuations of assets, especially housing. Of equal importance is the further proposition, discussed below, which suggests that co-ordination of macro-prudential and monetary policies along with fiscal policy is paramount, as argued in Arestis (2015).

Financial stability should incorporate both microprudential and macroprudential instruments. Microprudential instruments relate to the structure and regulation of individual banks. Banks that are 'too big to fail' should be reduced in size; guarantees to retail depositors should be limited to banks with a narrower range of investments; risky banks to taxpayers and economy should face higher capital requirements; large and complex financial institutions can be wound down in an orderly manner; and large banks should not be allowed to combine retail banking with risky investment business. The macroprudential toolkit should account for the potential failures of the system: low levels of liquid assets; inadequate levels of capital with which to absorb losses; too big a financial sector; too leveraged a sector with high risks to the taxpayer and the economy. Thus, macroprudential financial instruments should be able to control the size, leverage, fragility and risks of the financial system. And to quote the Bank of England (2009), "In general terms, the goal of financial stability policies should be the stable provision of financial intermediation services to the wider economy — payment services, credit intermediation and insurance against risk. They should seek to avoid the type of boom and bust cycle in the supply of credit and liquidity that has marked the recent financial crisis" (p. 9). Most importantly from our theoretical framework perspective, macroprudential policy should be linked to other relevant policies that affect cyclical fluctuations, and in particular monetary policy, which affects asset prices and bank credit. The latter variables are also affected by macroprudential policies and thereby can influence the transmission mechanism of monetary policy in terms of avoiding excessive liquidity and containing cyclical fluctuations. In this sense macroprudential authorities should take credit as an important indicator of financial stability as suggested by our theoretical framework. Possibly all the elements just suggested could be combined so that both micro- and macro-prudential instruments would be under the banner of the policy

[7] See, Arestis and Karakitsos (2013) for further discussion on the impact of asset bubbles in the context of the housing market.

makers, and properly co-ordinated with the central bank to avoid conflicting policies and results (see, also, Angelini et al., 2012). Policy makers should avoid rules and employ instead judgement and thus discretion.

Clearly, serious interest in financial stability requires the development of a range of policy instruments. There is an important ingredient in the idea of financial stability as the key objective of the monetary authorities. This relates to the notion of independent Central Banks, based on the idea of price stability being the single objective of economic policy, to be pursued by inflation-averse central bankers. Such notion substantially weakens the idea of financial stability. With multiple objectives pursued by multiple instruments, there is a need for co-ordination between the macroeconomic authorities (e.g. the Ministry of Finance/Economics and the Central Bank), which is precluded by the independent Central Bank notion. This suggestion also reinforces the argument for co-ordination between monetary and fiscal policies (Arestis, 2015). With financial stability policies in place, the new economic policies will work best if co-ordinated with other areas of economic policy outside the remit of the central bank. The GR has clearly demonstrated the need for more than one objective of economic policy and indeed proper co-ordination of the relevant economic instruments to achieve the objectives. Such co-ordination is supported by empirical evidence, which suggests that under fiscal and monetary policy co-ordination, fiscal multipliers are higher than when no policy coordination prevails (even bigger than the Keynesian ones). This is possible so long as the fiscal and monetary authorities have a common objective, for example maximization of social welfare. The multiplier under fiscal and monetary policy coordination, and in the case of deficit spending, is found to be of the order of 3.8 (Eggertsson, 2006; see, also, Arestis, 2015). When there is no policy coordination, i.e. when the central bank is 'goal independent', the deficit spending multiplier is zero. This large difference in fiscal multipliers is explained by the expectations channel, which is thought to work via inflation expectations. Fiscal expansion increases expectations about future inflation, the real rate of interest is reduced (provided the central bank collaborates with the fiscal authority) and spending is stimulated. Expectations of future income also improve, thereby stimulating spending further (Eggertsson, 2011). These results suggest that macroeconomic stability is the joint responsibility of the monetary and fiscal authorities: potentially destabilising behaviour by one authority can be offset by an appropriate stance of the other authority. These results are particularly important in view of the current New Consensus Macroeconomic (NCM) theory and practice that sees fiscal policy better divorced from monetary policy.

It is the case that efforts to establish a financial stability framework have been undertaken as shown in Arestis and Karakitsos (2013). Perhaps the most promising initiative on this score is the establishment in the UK of a Financial Policy Committee (FPC) created in April 2013, which "is charged with a primary objective of identifying, monitoring and taking action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK financial system".[8] The FPC agreed at its meeting of June 2013 on the creation of two further committees: the Financial Conduct Authority (FCA), whose purpose is to regulate "financial firms providing services to consumers and maintain the integrity of the UK's financial markets. It focuses on the regulation of conduct by both

[8] The quote is from the Bank of England website: http://www.bankofengland.co.uk/financialstability/pages/fpc/default.aspx

retail and wholesale financial services firms".[9] And the Prudential Regulation Authority (PRA) whose responsibility is "the prudential regulation and supervision of banks, building societies, credit unions, insurers and major investment firms. In total the PRA regulates around 1,700 financial firms".[10] There is also the Financial Policy Committee (FPC), which is an official committee of the Bank of England; this is a body responsible for macro-prudential measures. It focuses on the macro-economic and financial issues that may threaten long-term growth prospects. It cooperates and coordinates action with PRA and FCA. These committees are in addition to the Monetary Policy Committee created in May 1997. Despite this recent UK experience, progress around the world on financial reform is extremely slow and worrying poverty of action is evident. And as the IMF managing director (Lagarde, 2014) suggests "the behaviour of the financial sector has not changed fundamentally in a number of dimensions since the financial crisis"; the IMF managing director proceeds to complain that "The bad news is that progress is still too slow, and the finish line is still too far". It is the case that financial stability remains a work in progress across the world; positive action is desperately needed along the lines suggested in this contribution.

4. Current 'Unorthodox' Monetary Policies

Monetary policy since the GFC of 2007/2008 in effect has abandoned the main policy instrument, namely manipulation of the rate of interest to achieve the central bank's inflation target (IT). This was the only policy instrument to achieve the only policy objective, namely price stability, which had been very fashionable prior to the GFC. In view of the rate of interest reduced to nearly zero in many countries, and even to negative interest rates in some cases, after the GFC, and has stayed there ever since in most cases, monetary policy makers introduced unconventional means to still achieve an IT. QE has been introduced along with negative interest rates in some cases. A new, and additional, objective has been introduced, namely financial stability, as argued above,[11] but IT is still around to be achieved through the new 'unorthodox' instruments of monetary policy, namely QE and near zero or negative interest rates.[12]

These policies, however, entail serious problems. The most serious problem of the current QE and negative interest rate policy, is the potential negative impact on the banking system. Commercial-bank profitability is determined by the difference between the interest rates they pay on deposits and receive on loans. If lending rates fall more than deposit rates, which would happen more so in the case of negative interest rates, in view of the fear of the banks that depositors would respond by withdrawing their cash, then the profitability of the commercial banks suffers and the performance of the financial sector is undermined. This would be more likely to happen when negative interest rates emerge as in the case of Japan and the EMU for example. This clearly implies that under such policies the performance of the financial sector is undermined.

Still there are further problems with the current 'unorthodox' monetary policies. One of the main aims of these policies is to stimulate investment. But investment has been unresponsive. Our invest-

[9] The quote is available on the relevant website, which is: http://en.wikipedia.org/wiki/Financial_Conduct_Authority

[10] The quote is from the Bank of England website: http://www.bankofengland.co.uk/PRA/Pages/default.aspx

[11] However, see above on the slow progress on the financial stability 'new' objective.

[12] The Bank of Japan pledged (end of September, 2016) to overshoot its 2 per cent inflation target and has also adopted a new tool to achieve it. This is to cap the 10-year bond yields at zero, in addition to its Quantitative and Qualitative and negative interest rate policies.

ment equation above contains the variables of profitability and growth in addition to other variables. If expectations of profitability and growth are not robust, investment would not be forthcoming. Central banks need to think in terms of their monetary policies in a way that they would have a direct impact on consumption and investment. Financial stability and fiscal policy thereby become paramount.

Another problem is that when interest rates of all debt maturities are zero, "then money and long-term government bonds become perfect substitutes (they are both government promises to pay, which offer zero interest), and the creation of one by buying the other makes no difference" (King, 2016, p. 183). Under such circumstances it is highly unlikely for productive investment to materialise for investors prefer to hold more cash than investing in view of poor growth expectations and uncertainty. It is also the case that those who rely on bonds for their income, such as banks, insurance and pension companies, suffer substantially. UK pension fund deficits in particular have emerged in view of the QE; as a result a pensions crisis could follow.

A further problem with negative interest rates is that in those cases where there is a strong 'savings culture', negative interest rates have hurt savers and smaller banks that rely heavily on interest income for profits. It is also the case that banks in some countries, Germany in particular, resist to pass negative policy rates on to retail customers in view of the uncertainty of the latter's reaction to such a move. Retail customers might begin to store cash outside the banking system in response to such a move. In other countries banks have responded by introducing quietly fees for services that were free previously (Financial Times, 30 June, 2016). In other countries, such as the UK, for example, National Westminster Bank, Royal Bank of Scotland, HSBC, and Lloyds Banking Group are the first banks to have warned business customers that negative interest rates on current accounts could be introduced (personal customers are not to be affected), if the Bank of England base rate was reduced below 0%. Negative interest rates have also hurt life insurers, pension funds, and in more general terms they have put financial institutions, and investors/savers, under strain. As reported in the Financial Times (21 May, 2016), the Fitch credit rating agency estimates show that $10 trillion negative–yielding government bonds cost investors annually around $24 trillion. It is also the case that German banks have accused the ECB for punishing savers and their business model with negative interest rates; and Japanese banks raised the issue of ending their sales of government debt to the central bank (Financial Times, 9 June, 2016). All these fragile consequences of negative interest rates have been particularly harmful in the case of Germany as reported in the Financial Times (21 and 22 April, 16 May, and 01 June, 2016). Also reported in the Financial Times (21 July, 2016), and based on data from the Bank of America Merrill Lynch, more than 50 percent of German bonds eligible for the ECB's QE have become too expensive (with an interest rate lower than the -0.4% ECB's deposit rate charged on bank reserves) for the Central Bank of Germany to purchase. The ECB president, however, has defended negative interest rates arguing that without them and the

ECB's QE, serious deflation would have emerged along with substantially lower euro-area growth.[13]

[13] The ECB president has also argued at the conference of the European Systemic Risk Board in Frankfurt (available at: https://www.esrb.europa.eu/news/speeches/date/2016/html/sp160922.en.html) that the euro-area banks have overgrown capital markets and have become too big relative to the needs of the economy. Bank lending should flow to productive

A further problem with negative interest rates is that they could produce reductions in the velocity of circulation of money. Economic agents may very well take their money out of the banking sector, and keep it in 'home safes', and in more general terms money could be kept out of circulation in the economy. Such a reduction in money velocity of circulation increases deflationary pressures. Savers, especially by getting low returns on their savings, may be forced to save more rather than spend and stimulate the economy in an attempt to increase savings to make up for what is perceived permanent loss of returns. This would lead to lower consumption and lower GDP growth as a result; thereby making the negative interest rate policy counterproductive. This would be especially so for those savers who are prevented from getting the returns they need for retirement. It is also the case that negative interest rates can cause disruption by jeopardising the insurance companies and pension funds sectors through lowering their incomes. Under such circumstances both insurance companies and pension funds may shift the composition of their portfolios to risky assets, thereby adding to asset price bubble pressures. A further serious concern is the impact of negative interest rates on the rather fragile banking sectors, especially in the EMU. Those institutions that are unable to increase lending or pass the costs of negative interest rates on to their depositors face a serious squeeze on their profits with serious implications on their ability to provide credit. Indeed, a prolonged period of low and negative interest rates may discourage lending as the net interest rate merging becomes smaller. Indeed, it may encourage EMU banks to turn their deposits with the ECB into cash.

Our main conclusion in terms of this section is that the unorthodox instruments have not been really effective in terms of achieving their objectives, especially that of boosting the level of nominal economic activity. In terms of financial stability, the relatively new objective, and although proposals have been put forward to achieve it, not much is evident in terms of implementing these proposals and succeeding to produce financial stability; and thereby avoid a future crisis of the GFC type. It is true, nevertheless, that central banks managed to avoid a complete collapse of their financial systems and their real economies after the emergence of the GFC. However, monetary policies have been very ineffective in restoring a robust recovery as the proponents expected. The enormous expansion of the monetary base has had little effect on the broader monetary and credit aggregates, let alone on the level of nominal economic activity. No wonder the IMF (2016) World Economic Outlook suggests that the current world-wide poor economic situation, especially in developed countries, risks getting into a full- blown deflation gap. Governments should avoid their continuing over-reliance on central banks and monetary policies, which are increasingly constrained, to single-handedly stimulate economic growth. Governments need to join central banks to undertake more economic policies to boost growth rates. Our suggestion on this aspect is that proper coordination of monetary and fiscal policies along with financial stability is the best and probably the only way forward to produce and maintain healthy growth in the economy.

5. Summary and Conclusions

We have put forward a theoretical framework, which entails 'new' aspects of economic policies. In terms of the theoretical framework of this contribtion, it is constructed by putting together five build-

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projects if the economy is to prosper. But bank lending in the euro area tends to be procyclical: growing too fast in the upswing and insufficiently in the downswing. Thereby banks in the euro area have not been helpful to the economy in the aftermath of the GFC.

ing blocks. The focus of all five blocks is on five propositions: (i) aggregate demand is always important for the level of economic activity; (ii) the supply side of the economy has to be fully incorporated; (iii) distributional effects are very important for they do matter, but are not always acknowledged as such; (iv) money is endogenous and credit driven, with financial stability being of primary importance; and (iv) co-ordination of economic policies is paramount.

A number of economic policies follow from our theoretical construct, but two 'new' economic policies emerge. The pursuit of distributional policies, which should be properly and fully considered and proper economic policies should be implemented; such policies should focus on an attempt to mitigate inequality. Inequality is strongly correlated with shorter spells of economic expansion and less economic growth over time; inequality, therefore, matters for it does have an important impact on economic growth (see Berg and Ostry 2011; see, also, Stiglitz 2012). It clearly is the case, then, that reducing inequality and promoting economic growth are "two sides of the same coin" (Berg and Ostrey 2011, p. 3). Of equal importance is the pursuit of financial stability policies by the central banks, a rather slow process currently; the central bank role, however, should be to achieve financial stability. In terms of current monetary policies, QE and low/negative interest rates, they have not been successful in terms of achieving their objectives. A sustainable recovery, with achieving the targeted inflation rate, remains elusive.

The banking sectors around the world are still fragile, especially in Europe. A relevant contribution in this respect is the Sarin and Summers (2016) study, which, using financial market information on a number of relevant variables, shows that despite regulatory changes initiated in the wake of the GR, such as higher capital requirements, increases in bank liquidity, bank stress-tests, major financial institutions in the United States and around the world are more vulnerable to adverse shocks than they were before the GFC. The decline in financial institutions' ratio of the market value of their equities to total assets on both risk-adjusted and risk-unadjusted basis, promoted, at least in part, by the new regulations, is the major cause. Proper regulatory policies need to be urgently introduced.

References

Angelini, P., Nery, S. and Panetta, F. (2012), "Monetary and Macroprudential Policies", *Working Paper Series No. 1449*, Frankfurt: European Central Bank.

Arestis, P. (2007), "What is the New Consensus in Macroeconomics?", in Philip Arestis (ed.), *Is There a New Consensus in Macroeconomics?*, Houndmills, Basingstoke: Palgrave Macmillan, 22-42.

Arestis, P. (2009), "New Consensus Macroeconomics and Keynesian Critique", in Eckhard Hein, Torsten Niechoj and Engelbert Stockhammer (eds.), *Macroeconomic Policies on Shaky Foundations – Whither Mainstream Economics?*, Marburg: Metropolis, 165-185.

Arestis, P. (2010), "Economic Policies after the New Concensus Macroeconomics", in Sebastian Dullien, Eckhard Hein, Achim Truger, and Till van Treeck (eds.), *The World Economy in Crisis – The Return of Keynesianism?*, Marburg: Metropolis, 271-294.

Arestis, P. (2012), "Fiscal Policy: A Strong Macroeconomic Role", *Review of Keynesian Economics*, vol. 1, no. 1: 93-108.

Arestis, P. (2013), "Economic Theory and Policy: A Coherent Post-Keynesian Approach", *European Journal of Economics and Economic Policies: Intervention* (EJEEP), vol. 10, no. 2, 243-255.

Arestis, P. (2015), "Coordination of Fiscal with Monetary and Financial Stability Policies Can Better Cure Unemployment", *Review of Keynesian Economics*, 3(2), 233-247.

Arestis, P. (2016), "Main and Contributory Causes of the Recent Financial Crisis and Economic Policy Implications", in Philip Arestis and Malcolm Sawyer (eds.), *Emerging Economies During and After the Great Recession*, Annual Edition of *International Papers in Political Economy*, Houndmills, Basingstoke: Palgrave Macmillan.

Arestis, P. and González-Martinez, A.R. (2016), "Income Inequality: Implications and Relevant Economic Policies", *Panoeconomicus*, 63(1), 1-24.

Arestis, P. and Karakitsos, E. (2011), "An Analysis of the Causes of the 'Great Recession' and Some Policy Implications", in: Torsten Niechoj, Özlem Onaran, Engelbert Stockhammer, Achim Truger and Till van Treeck (eds.), *Stabilising an Unequal Economy? Public Debt, Financial Regulation, and Income Distribution*, Metropolis-Verlag: Marburg, Germany.

Arestis, P. and Karakitsos, E. (2013), *Financial Stability in the Aftermath of the 'Great Recession*, Houndmills, Basingstoke: Palgrave Macmillan.

Arestis, P. and Sawyer, M. (2010), "21st Century Keynesian Economic Policies, in Philip Arestis and Malcolm Sawyer (eds.), *21st Century Keynesian Economics*, Annual Edition of International Papers in Political Economy, Houndmills, Basingstoke: Palgrave Macmillan.

Arestis, P. and Sawyer, M. (2011), "Economic Theory and Policies: New Directions after Neoliberalism", in Philip Arestis and Malcolm Sawyer (eds.), *New Economics as Mainstream Economics*,

Annual Edition of International Papers in Political Economy,Houndmills, Basingstoke: Palgrave Macmillan.

Atkinson, A.B. (2015), *Inequality: What Can be Done?*, Cambridge, MA: Harvard University Press.

Atkinson, A.B., Piketty, T. and Saez, E. (2011), "Top Incomes in the Long Run of History", *Journal of Economic Literature*, vol. 49, no. 1, 3-71.

Bank of England (2009), "The Role of Macroprudential Policy", *Bank of England Discussion Paper*, 19 November.

Bank of England (2012), "The Distributional Effects of Asset Purchases", *Bank of England Report*, 12 July.

Berg, A.G. and Ostry, J.D. (2011), "Inequality and Unsustainable Growth: Two Sides of the Same Coin?", *IMF Staff Discussion Note 11/08*, Washington: International Monetary Fund.

Cynamon, B.J. and Fazzari, S.M. (2014), "Inequality, the Great Recession and Slow Recovery". Available at: 10.2139/ssrn.2205524.

Eggertsson, G. B. (2006), "Fiscal Multipliers and Policy Coordination", *Federal Reserve Bank of New York Staff Reports, No. 241*, Federal Reserve Bank of New York: . New York.

Eggertsson, G. B. (2011), "What Fiscal Policy is Effective at Zero Interest Rates?", *NBER Macroeconomics Annual 2010*, Vol. 25, 59-112; Edited by D. Asemoglu and M. Woodford, Chicago University Press: Chicago.

Galbraith, J.K. (2012), *Inequality and Instability*", Oxford: Oxford University Press.

International Monetary Fund (IMF) (2016), *World Economic Outlook*, October.

King, M. (2016), *The End of Alchemy: Money, Banking and the Future of the Global Economy*, Little, Brown: London.

Korinek, A. and Kreamer, J. (2013), "The Redistributive Effects of Financial Deregulation", *NBER Working Paper 19572*, Cambridge, MA: National Bureau of Economic Research.

Kumhof, M. and Rencière, R. (2010a), "Inequality, Leverage and Crises", *IMF Working Paper 10/268*, Washington DC: International Monetary Fund.

Kumhof, M. and Rencière, R. (2010b), "Leveraging Inequality", *Finance and Development*, vol. 47, no. 4, 28-31, December.

Kumhof, M. and Rencière, R. (2011), "Unequal = Indebted", *Finance and Development*, vol. 48, no. 3, 25-27, September.

Lagarde, C. (2014), "Economic Inclusion and Financial Integrity", Speech Given at the Conference on *Inclusive Capitalism*, London, 27 May. Available at: http://www.inc-cap.com/IC_ESSAY_Book_Introduction_Keynotes.pdf

Muinelo-Gallo, L. and Roca-Sagalés, O. (2011), "Economic Growth and Inequality: The Role of Fiscal Policies", *Australian Economic Papers*, vol. 50, no. 2-3, 74-97.

OECD (2008), *Growing Unequal? Income Distribution and Poverty in OECD Countries*, October, Paris: OECD, ISBN 978-92-64-044180-0.

Onaran, O. and Galanis, G. (2013), "Is Aggregate Demand Wage-led or Profit-led? A Global Model", Chapter 3 in Marc Lavoie and Engelbert Stockhammer (eds.), *Wage-Led Growth: An Equitable Strategy for Economic Recovery*, Houndmills, Basingstoke: Palgrave Macmillan and International Labour Organization.

Philippon, T. (2008), "The Evolution of of the U.S. Financial Industry from 1860 to 2007", *Working Paper*, November, New York University.

Piketty, T. (2014), *Capital in the Twenty-First Century*, Cambridge, Massachusetts: Harvard University Press (translated by A. Goldhammer).

Saez, E. (2013), "Income Inequality: Evidence and Policy", Lecture given for the Ethics and Wealth series, *McCoy Family Center for Ethics in Society*, Stanford University, 24 January 2013.

Sarin, N. And Summers, L.H. (2016), "Have Big Banks Gotten Safer?", *Brookings Papers on Economic Activity*, BPEA Conference Draft, September 15-16.

Stiglitz, J.E. (2012), *The Price of Inequality: How Today's Divided Society Endangers Our Future*, Allen Lane: Penguin Books Ltd.

The Economist (2012), " Policy Prescription: A True Progressivism", *Special Report: World Economy*, 13 October.

The Economist (2014), "Social Mobility: A Memo to Obama, and Inequality v Growth", 1 March.

Turner, A. (2010), "What Do Banks Do? What Should They Do and What Public Policies are Needed to Ensure Best Results for the Real Economy?", Speech given at the CASS Business School, 17 March. Available at: http://www.fsa.gov.uk/pubs/speeches/at_17mar10.pdf

APPENDIX

SUMMARY OF BLOCKS

In what follows, the sign under the variables indicates the partial derivative of the dependent variable with respect to the relevant independent variable. In all equations in this contribution lower case letters stand for the rate of change of the relevant variable; otherwise letters indicate the level of the relevant variable.

BLOCK I: Aggregate Demand and Supply

(1) $Y = C + I + G + (X - Q)$

where Y is national income, C is consumption, I is investment, G is government expenditure, X is exports and Q is imports, and thus (X – Q) is net exports (NE).

(2) $C = C[(WE(1 - tw), \Pi(1-t\pi), R, \Delta BLP_h]$
$\quad\quad\quad\quad + \quad\quad\quad + \quad - \quad +$

where W is wages, E total employment so WE is the wage bill, tw is the tax rate on wages, Π is total profits, tπ is the tax rate on profits, R is the rate of interest on loans to households, and ΔBLP_h is changes in bank lending to households.

(3) $I = I(\Pi/K, Y/Ya, R, \Delta BLP_f)$
$\quad\quad + \quad + \quad - \quad +$

where the symbols are as above with the exception of K, which is capital stock, ΔBLP_f that stands for changes in bank lending to firms, and Ya, which is a measure of capacity output and corresponds to the 'desired level' of operation.

(4) $Ya = Ya(E, K, ST)$
$\quad\quad\quad + \; + \; +$

so that Ya would change over time in the same direction as changes in employment, capital stock and state of technology (ST).

There is a level of employment that corresponds to the capacity-output measure:

(5) $Ea = E(Y/Ya, K, ST)$
$\quad\quad\quad + \quad + \quad +$

Ya is taken as a benchmark for firms' investment decisions and employment.

Aggregate supply of output is:

(6) $Ys = Ys(E, K, ST)$
$\quad\quad\quad + \; + \; +$

where the aggregate supply output (Ys) is determined by E, which is employment, and the rest of the symbols are as defined above.

There is a level of employment that corresponds to output:

(7) $E = E(Y, K, ST)$
$\quad\quad\quad\quad + \; - \; -$

BLOCK II: Distributional Aspects and the Inflationary Process

(8) $\pi = \pi [(P/ULC), Y/Ya, R, dR_f]$

$\quad\quad\quad\quad + \quad + \quad - \quad -$

where the variables are as above. In addition, π is the profit rate, P is the level of prices, ULC is unit labour cost, and dR_f is the debt ratio of firms, defined as total debt to total assets of firms.

(9) $ULC = W/PR$

where W is the level of wages, and PR is productivity.

(10) $w = w\{[(W/P)^d - (W/P)], (Y/Ya), p, U, \pi, w^e\}$

$\quad\quad\quad\quad\quad\quad + \quad\quad + \quad + \; - \; + \; +$

where the variables are as above with the exception of the bargaining position of workers, which is defined as the difference between their desired real wage $[(W/P)^d]$ and the actual real wage (W/P); p, which is inflation, U is unemployment, where unemployment is taken as per cent of the labour force, and w^e that stands for expectations of the wage rate.

(11) $U = U[(Y/Ya), PR]$
$\quad\quad\quad\quad - \quad -$

where the variables are as defined above.

(12) $p = p[w, (Y/Ya), q, er, p_{rm}, p^e]$

$\quad\quad\quad + \quad + \quad\quad - \; - \; + \; +$

where the variables are as defined above, with the exception of q, which is the rate of change of productivity, er is the rate of change of the nominal exchange rate, p_{rm} is the rate of change of the prices of raw materials, and p^e that stands for price expectations.

(13) $p_{rm} = p_{rm}(er, WT)$

$\quad\quad\quad\quad - \quad +$

where the variables are as defined above with the exception of WT that stands for world trade.

BLOCK III: Money and Credit

(14) $\Delta M = \Delta BDGC + \Delta BDP$

where ΔM is changes in the money supply, namely the sum of changes in bank deposits to the government including currency ($\Delta BDGC$) and changes in bank deposits to the public (ΔBDP). In view of the small proportion of $\Delta BDGC$ of the total money supply, we treat it as the residual in the following identity:

(15) $\Delta BDGC = \Delta BLP + \Delta BLG + \Delta BLES - \Delta BDP$

Identity (15) then defines $\Delta BDGC$ as the sum of changes in bank lending to the public (ΔBLP) and to the government (ΔBLG) as well as of changes in bank lending to the external sector including other non-bank lending ($\Delta BLES$), minus ΔBDP. $\Delta BLES$ is treated as an exogenous variable and with ΔBLG endogenised in Block IV (see equation 19), the remaining variables in equation (15) are endogenised as follows.

(16) $\Delta BLP = \Delta BLP(\Delta Y, \Delta R, MP1)$

$\quad\quad\quad\quad\quad\quad + \quad - \quad -$

where the variables are as defined above, with the exception for the variable MP1, which stands for monetary policy variables such as credit-rationing by the authorities; this is of course in addition to

changes in the rate of interest, which as equation (18) below shows it is influenced by changes in the bank rate.

(17) $\Delta BDP = \Delta BDP(\Delta Y, \Delta R, MP2)$

$+ \quad - \quad -$

With the variables as defined above, with the exception of MP2 that stands for monetary policy variables.

Both MP1 (equation 16) and MP2 ((equation 17) can be thought of as financil-stability policy variables as discussed in section 3.3 above.

(18) $\Delta R = \Delta R(\Delta BR, \Delta EF, \Delta PDC)$

$+ \quad + \quad +$

where in addition to the variables as defined earlier, ΔBR stands for changes in the bank rate, ΔEF stands for changes in external financing, and ΔPDC that stands for sales of public debt to the non-bank public.

BLOCK IV: Government Sector

(19) $\Delta BLG = PSBR + \Delta EF - \Delta PDC$

where the variables are defined as above with the exception of PSBR that stands for the public sector borrowing requirement.

PSBR, as portrayed in equation (20), is simply defined as the difference between government expenditure (G) and tax revenues (T) along with other government revenues (OGR).

(20) $PSBR = G - T - OGR$

We treat OGR as exogenous and hypothesise G and T to be determined as shown below in equations (21) and (23) respectively.

(21) $G = P_G Q_Q + WE_G + UU_B + ID$

where the symbols are defined as follows, with the exception of G, W and U that are defined as above: Q_Q denotes the amount of goods and services bought by the government, with P_G being their

prices, E_G stands for the number of employees in the government sector, U_B is unemployment benefits, and ID stands for interest payments on government debt. E_G is defined as in equation (22):

(22) $E_G = E - E_P - U$

where E is is total working population, as defined above for the purposes of equation (2), and E_P is employment in the private sector. Clearly $E_G + E_P = E$ that is total employment.

(23) $T = T(Y)$

+

BLOCK V: Open Economy Aspects

(24) $\Delta EF = CB + \Delta KM - OEF$

where ΔEF is equal to the current balance of international payments (CB) plus changes in capital movements (ΔKM) minus other external financing (OEF); the latter variable includes external lending to the public sector plus domestic bank lending to the public sector in foreign currencies. We treat OEF as exogenous and endogenise CB and ΔKM.

(25) $CB = NE + OCB = X(WT, RER) - Q[(WE(1 - tw), \Pi(1-t\pi), RER) + OCB$
$+ \quad - \quad + \quad + \quad +$

where CB and NE are as above, OCB stands for other earnings on foreign investments minus payments made to foreign investors and cash transfers, WT is world trade, RER is the real exchange rate (where the exchange rate is defined as foreign to domestic currency), with WE(1 – tw) and Π(1-tπ) being the income distribution terms as they influence imports; all these variables are in real terms.

Finally, equations (26) and (27) define ΔKM and RER:

(26) $\Delta KM = \Delta KM[(R/R_W), (er)^e]$
$+ \quad -$

where the variable, ratio of domestic interest rates (R) to world interest rates (R_W), is included, along with the expected rate of change of the nominal exchange rate variable, $(er)^e$.

(27) $RER = RER[(R/R_W), Y, WT, (er)^e]$
$+ \quad - \quad + \quad +$

where the variables are as defined above.