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Income Inequality: Implications and Relevant Economic Policies

Summary: The aim of this contribution is to discuss closely the implications of income inequality and the economic policies to tackle it, especially so in view of inequality being one of the main causes of the 2007/2008 international financial crisis and the "great recession" that subsequently emerged. Wealth inequality is also important in this respect, but the focus is on income inequality. Ever since the financial crisis and the subsequent "great recession", inequality of income, and wealth, has increased and the demand for economic policy initiatives to produce a more equal distribution of income and wealth has become more urgent. Such reduction would help to increase the level of economic activity as has been demonstrated again more recently. A number of economic policy initiatives for this purpose will be the focus of this contribution.

Key words: Income inequality, Economic activity, Redistribution of income, Economic policies.

JEL: D31, E25, E61.

We deal in this contribution with inequality of income around the world, which has become especially serious over the last thirty years or so, emphasising particular problems in individual countries as necessary. There has been a substantial decline in wage shares across the world with broader changes in income distribution. Relevant statistics on wages are provided in *The Economist* (2015), where it is reported that in the US case real wages in 2014 were 1.2 percent below what they were in 2009; in the UK and in 2014 median pay was 10 percent below its 2008 high; and in Germany wages were still 2.4 percent below their 2008 level (see, also, International Labour Organisation (ILO) 2008; Organization for Economic Co-operation and Development (OECD) 2011).

Indeed, distribution of income has become more polarised in the OECD countries (OECD 2008, 2011; see also, Danilo Šuković 2014), with the top income groups increasing their shares substantially, especially the financial sector group (Philip Arestis and Elias Karakitsos 2013); and particularly so in the Anglo-Saxon countries, especially in the US (Anthony B. Atkinson, Thomas Piketty, and Emmanuel Saez 2011). Real wage growth has lagged behind productivity growth since the 1980s in the advanced economies and since the 1990s in developing and emerging economies (Engelbert Stockhammer 2013). Joseph E. Stiglitz (2015) suggests that inequality is counterproductive for the general health of the economy.

Inequality of wealth is also an important and relevant issue, which, however, needs a separate contribution to be dealt with satisfactorily. It is also the case that

“personal distribution of wealth (both capital and land) is less available on an internationally comparable basis than in the case of income” (Atkinson 2015, p. 71). We refer to it, nonetheless, in what follows when it is necessary. The focus of this contribution, though, is on the economic policies to reduce income inequalities. This is a particularly important aspect in view of the extraordinary increase in inequality, especially so prior to the international financial crisis of 2007/2008 and the “great recession” that followed it. In fact the increase in inequality started from the 1980s (see, for example, Atkinson 2015, Chapter 2); a period of inequality that has been labelled as the “great inequality” era (Michael D. Yates 2012; see also John B. Foster and Yates 2014).

We begin with a short discussion of the implications of income inequality, and of the importance of tackling inequalities in Section 1. In Section 2 we turn our attention to the economic policies to contain inequality, the main focus of this contribution. We summarise and conclude in Section 3.

1. Inequality and Implications

A number of contributors have suggested that the steady but sharp rise in inequality, especially in the US and the UK, but elsewhere, too, is an important feature of the 2007/2008 international financial crisis and the “great recession” that followed. John K. Galbraith (2012, p. 4) 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, ratings agencies, investment banks, government sponsored enterprises, and the derivatives markets”. In the US “the top 1 percent of households accounted for only 8.9 percent of income in 1976, but this share grew to 23.5 percent of the total income generated in the United States by 2007” (Raghuram G. Rajan 2010, p. 8). Further evidence by Piketty (2014) shows that between 1914 and the 1970s income inequality and the stock of wealth in the US fell dramatically. Since the 1970s, however, both income inequality and the stock of wealth have risen back to the pre-1914 norms. In the past 30 years or so, and as Piketty (op. cit.) shows, in the US nearly 75 percent of the aggregate income growth has gone to the top of the distribution. And since 1980, “income inequality has exploded in the United States. The upper decile’s share increased from 30-35 percent of national income in the 1970s to 40-45 in the 2000s - an increase of 15 points of national income” (Piketty 2014, p. 294). Piketty (2014) deals with the issue of growing inequality in a statistical sense “without explicitly addressing either the roots of this or the question of growing class power” (Foster and Yates 2014, p. 13). Robert Wade (2012, p. 12) suggests that “the richest 1 percent of American households owned about 35 percent of national wealth in 2006-2007 ... a far greater share than in most other developed countries”. Evidence produced by Atkinson, Piketty, and Saez (2011) also shows 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. Atkinson (1997) shows that for the UK in the 1980s an “unparalleled” rise in the UK inequality occurred. Also, according to Stiglitz (2013), and by the August 2007

emergence of the international financial crisis, the top 0.1 percent of US households had an income, which was 220 times larger than the average of the bottom 90 percent. Real wages had lagged even behind productivity well before the onset of the “great recession” (we may note that in the US wages constitute the most important component of incomes).

Available data in 51 out of 73 countries around the world, reported in the ILO (2008, p. 1) study, “show that the share of wages in total income declined over the past two decades. The largest decline in the share of wages in GDP took place in Latin America and the Caribbean (-13 points), followed by Asia and the Pacific (-10 points) and the Advanced Economies (-9)”. Eckhard Hein and Matthias Mundt (2012) show that in the G20 developed economies, and since the early 1980s, a falling trend of the wage share clearly materialised. In the same contribution, Hein and Mundt (op. cit.) examine a group of emerging G20 countries, which also experienced an overall falling trend of the wage share with the exception of India (the original data utilised can be found in Özlem Onaran and Giorgos Galanis 2013). Another relevant characteristic of the period 1983 to 2007 was that the ratio of household debt to GDP in the US, among lower- and middle-income households, increased dramatically: it doubled from 49.1% in 1983 to 98.0% in 2007 (see Michael Kumhof and Romain Rencière 2010a, b; Kumhof, Rencière, and Pablo Winant 2015, for further details). In terms of the “great depression”, Kumhof, Rencière, and Winant (2015) provide relevant US data that suggest that between 1920 and 1928 the ratio of household debt to GDP, among lower- and middle-income households, more than doubled from 16.9% to 37.1%.

Such household debt levels did support aggregate demand and employment but were clearly unsustainable. Kumhof, Rencière, and Winant (2015) investigate the impact of inequality and debt, within a theoretical framework and an empirical methodology (utilising US stylised facts) along with calibrations, as well as comparing the “great depression” of 1929 and the “great recession” of 2007. They suggest that “a striking and often overlooked similarity between these two crises is that both were preceded, over a period of decades, by a sharp increase in income inequality, and by a similarly sharp increase in debt-to-income ratios among lower- and middle-income households. When debt levels started to be perceived as unsustainable, they contributed to triggering exceptionally deep financial and real crises” (Kumhof, Rencière, and Winant 2015, p. 1217). It is the case that the increase in the US household debt over the period 1983-2007 contributed substantially to the increase in the GDP share of the US financial sector (Thomas Philippon 2013; Kumhof, Rencière, and Winant 2015). The increase was from 5.5% to 7.9% between 1983 and 2007. A similar increase also took place in the US before the “great depression”, where the increase was from 2.8% in the early 1920s to 4.6% by 1928. The theoretical model proposed in the Kumhof, Rencière, and Winant (2015) study is a Dynamic Stochastic General Equilibrium (DSGE) model, with two groups of households, investors (the top 5% of the households) and workers (the bottom 95% of households). This model links “greater income inequality”, generated endogenously, with increased debt-to-income ratio that generates financial fragility, and eventually the risk of a financial crisis is increasingly enhanced. The mechanism in the context of financial fragility is that the

crisis is characterised by household defaults, which lead to abrupt output contraction. This is consistent with the results of the study by Philippon and Virgiliu Midrigan (2011) in terms of explaining the “great recession”.

Their calibrations support the theoretical model proposed. A study by Kumhof et al. (2012) examines inequality and balance of payments by studying the interactions between two types of agents that represent the top 5% and the bottom 95% of the income distribution. This study is based on Kumhof and Rencière (2010a) but in the case of an open economy. They conclude that in the case of developed economies, inequality results in the poor and middle class, the 95 percent, borrowing from the rich, so that their consumption does not decrease as much as their income; at the same time, consumption of the rich, the 5 percent, increases. The net effect is an increase in domestic demand and therefore a current account deficit. In the case of emerging economies the fact that poor and middle class households cannot increase their borrowing to finance consumption, a surplus in the balance of payments prevails. Another study by Kumhof, Rencière, and Winant (2013, p. 1243) investigates the possible impact of reducing the income inequality post 1983 over a period of ten years to conclude that “this would lead to a sustained reduction in leverage that would significantly reduce the probability of further crises”.

Jess Bailey, Joe Coward, and Matthew Whittaker (2011) examine the relationship between median pay and *per capita* GDP growth over the period prior to the great recession to conclude that it weakened in the ten advanced countries examined. Three groups are identified where the median pay grew significantly less quickly than output per person in all of the ten countries considered with different degrees as follows: chronic (US, Australia, Canada), acute (France, UK, Germany) and mild (Japan, Finland, Sweden, Denmark).

The declining wage, and rising profit share, were compounded by the increasing concentration of earnings at the top, especially in the financial sector; and as Galbraith (2012) has shown, countries with larger financial sectors have more inequality. This has been the case not just in the US but also in the rest of the world (see, for example, Arestis and Karakitsos 2013). In the US the share of the financial sector to GDP almost doubled in size between 1981 and 2007, and more recently accounted for 8% of 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. Indeed, and over the same period, wages in the financial sector were higher than in other sectors, even after controlling for education. Financial sector relative wages, and the ratio of the wage bill in the financial sector to its full-time-equivalent employment share, enjoyed a steep increase over the period mid-1980s to 2006 (Philippon and Ariell Reshef 2009).

Similar but less pronounced trends in the financial sector are relevant in many other countries. Germany, China and the UK are three examples but many more can be cited, including emerging countries. In Germany, for example, and according to the OECD (2008), income inequality over the years 2000 to 2005 grew faster than in any other OECD country. In China the top 1% income share gradually increased from 2.6% in 1986 to 5.9% in 2003. Also in China financial intermediary shares to

GDP rose from 1.6% in 1980 to 5.4% in 2008 (Alan Greenspan 2010, p. 15). The then 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” (Adair Turner 2010).

Table 1 provides a summary of the Gini index for income inequality of the fifteen most unequal and fifteen least unequal countries around the world. The Gini index ranges between 0 (complete equality) and 100 (complete inequality). A country with equal distribution where all people receive the same amount of income would have a 0 Gini index. A country with completely unequal distribution of income would have a Gini index of 100. When using the Gini coefficient “we need to remember that the index converts a whole distribution to a single number and that there are many different ways in which such a conversion can be made” (Atkinson 2015, p. 17). The relevant Gini index varies between 25 and 66 as shown in Table 1, with more equal countries having Gini coefficients of 30.0 or below; the most unequal countries have Gini coefficients of 50.0 or above. We may add that the Gini index for US, UK, Japan and China falls in the middle of the list, with the World Bank Gini index being 41.1 for the US, 38.0 for the UK, 38.1 for Japan and 37.0 for China. All four are around the average of 38.8 Gini index. These Gini indices clearly make the point of inequality and the urgency for relevant economic policies around the world to reduce inequality. Especially so since income inequality has been rising in most countries around the world since the early 1980s as the OECD (2008) study demonstrates. A more recent study by Branko Milanović (2011, p. 8), shows that between

Table 1 Gini Index of Fifteen Most Unequal and Fifteen Least Unequal Countries

Fifteen most unequal countries	Gini index (%)	Fifteen least unequal countries	Gini index (%)
Seychelles	65.8	Sweden	25.0
South Africa	65.0	Norway	25.8
Comoros	64.3	Austria	26.0
Namibia	61.3	Czech Republic	26.0
Botswana	61.0	Slovakia	26.0
Haiti	59.2	Ukraine	26.4
Angola	58.6	Belarus	26.5
Honduras	57.4	Finland	26.9
Central African Republic	56.3	Serbia	27.8
Zambia	54.6	Afghanistan	27.8
Colombia	53.5	Denmark	28.1
Belize	53.1	Albania	29.0
Suriname	52.9	Kazakhstan	29.0
Brazil	52.7	Iraq	29.5
Lesotho	52.5	Ethiopia	29.8

Source: World Bank (2015)¹.

¹ **World Bank.** 2015. World Bank Gini Index.

http://en.wikipedia.org/wiki/List_of_countries_by_income_equality (accessed February 15, 2015).

the 1980s and 2010, “the United States and the United Kingdom - and indeed most advanced economies - have become much richer and much more unequal. In 2010, real per capita income in the United States was 65 percent above its 1980s level and in the United Kingdom, 77 percent higher. Over the same period, inequality in the United States increased from about 35 to 40 ... and in the United Kingdom, from 30 to about 37 Gini points. These increases reflect significant adverse movements in income distributions. Overall, between the mid-1980s and the mid-2000s, inequality rose in 16 out of 20 rich OECD countries”. See, also, Nuno Crespo, Sandrina B. Moreira, and Nadia Simoes (2015) for an alternative approach to measure inequality and some empirical evidence in the case of Portugal.

These redistribution effects were greatly helped by attempts at financial liberalization in many countries around the world, especially so before the international financial crisis of 2007/2008. Of particular importance for our purposes was the financial liberalization framework in the US, especially the repeal of the 1933 Glass-Steagall Act in 1999. Both the redistribution and the financial liberalization policies led to a period of financial engineering in the US, namely securitisation in the form of what we now know as interlinked securities, based on subprime mortgages. The sale of the interlinked securities to international investors made the US housing bubble a global problem and provided the transmission mechanism for the contagion to the rest of the world. The spread of the interlinked securities worldwide produced the international financial crisis of August 2007 and the subsequent “great recession”. In all these main causes of the financial and real crises there were also contributory ones, namely the international imbalances, the monetary policy pursued at the time and the role of credit rating agencies (for further details see, Arestis and Karakitsos 2013; Arestis forthcoming). The link between financialisation - the increase in size and importance of unregulated financial sector, which creates a process whereby financial markets dominate over the rest of the markets in the economy - and rising inequality should be emphasised. For it is true that “led by a dismantling of the controls over financial flows, the finance sector has been the main component of a decisive shift in the share of gross domestic product (GDP) towards capital and away from labour” (New Economics Foundation (NEF) 2014, p. 4). It is interesting to compare the period prior to the “great recession” with that of after the “great depression” in the case of the US. In the latter case, regulation of the financial sector was very successful in terms of producing almost four decades of financial stability and rapid growth. Following the Glass-Steagall Act of 1933, banks focussed on lending, thereby providing credit as needed for the rapid expansion of the enterprise sector. Markets acted the way markets are *supposed* to function, by reducing the scope for risk-taking. But beginning with financial liberalisation in the mid-1970s and culminating to the repeal of the Glass-Steagall Act of 1933 in 1999 the deregulation that emerged led to instability (see, also, Stiglitz 2013, Chapter 6).

Clearly rising inequality, along with financialisation, has had profound macroeconomic effects; as such it plays a serious role in creating the conditions for both chronic and acute financial and economic instability. This is essentially so since increasing inequality depresses aggregate demand given that lower income groups have a higher marginal propensity to income than the top income groups. There are, there-

fore, policy implications that emerge from the analysis of this section. We thereby turn our attention next to the policy implications in terms of tackling the kind of income inequalities we have discussed in this section.

2. Economic Policy Implications

2.1 Importance of Distributional Effects in Economic Policy

Recent experience, as the literature reviewed above demonstrates, the distribution of income if not tackled can lead to crises, as the case was with the international financial crisis of 2007/2008 and real crisis of 2009, and the “great depression” of the late 1920s. Distribution of income from wages to profits, especially to the top end and to the financial sector in particular, was one of the main causes of the international financial crisis of 2007/2008 and the “great recession” that followed (Arestis and Karakitsos 2013; Arestis forthcoming). Distributional effects should be a major objective of economic policy. As we have argued in Arestis and Malcolm Sawyer (2011) it is very important to account for “distributional effects” in both economic theory and policy, which have been fatally ignored. This is an important finding in view of the fact that “until the crisis, it is difficult to identify a period in the past 50 years when inequality was close to the top of the public policy or academic agenda” (Stiglitz 2013, 2015; Andrew G. Haldane 2014). In terms of the relevant empirical evidence, John S. L. McCombie and Marta R. M. Spreafico (2015, p. 20) summarise it to conclude that “the evidence now strongly suggests that greater inequality is harmful for growth. This suggests that there is a case for government intervention”. John M. Keynes (1936) argued that the two outstanding faults of economic policy were the failure to secure full employment and to tackle the arbitrary and inequitable distribution of income. Reducing inequality enhances growth and with appropriate economic policies, as suggested below, full employment could be achieved.

Still there is no general tendency towards attempting to achieve greater economic equality, as others have also demonstrated (see, for a recent contribution, Piketty 2014). On the contrary, unequal distribution continues unabated. And to quote a relevant conclusion from an International Monetary Fund (IMF) study (Kumhof and Renci re 2010b, p. 31), “restoring equality by redistributing income from the rich to the poor would not only please the Robin Hoods of the world, but could also save the global economy from another major crisis” (see, also, Andrew G. Berg, Jonathan D. Ostry, and Jeromin Zettelmeyer 2008; Berg and Ostry 2011; Michael D. Bordo and Christopher M. Meissner 2012; Stiglitz 2013, 2015; Ostry, Berg, and Charalambos G. Tsangarides 2014). Not only has the IMF recognised the importance of reducing inequality but also the Asian Development Bank (ADB) and the OECD (OECD 2011; ADB 2012; Federico Cingano 2014; McCombie and Spreafico 2015). An interesting and relevant finding is that of the Ostry, Berg, and Tsangarides (2014) study, where measures of inequality at the bottom and top of the income distribution differ significantly. The degree of inequality at the bottom of the income distribution impacts negatively on growth. The degree of income inequality at the top of the distribution, however, has no significant effect on economic growth. This finding further supports the importance of economic policy in tackling inequality. An important

policy implication is that “because crises are costly, redistribution policies that prevent excessive household indebtedness and reduce crisis-risk ex-ante can be more desirable from a macrostabilization point of view than ex-post policies such as bailouts or debt restructurings” (Kumhof and Rencière 2010a, p. 4). But more macrostabilization policies are necessary as we argue in the sub-section that follows.

More recently, the IMF managing director and the governor of the Bank of England have clearly stated at a conference in London (“Inclusive Capitalism”, 27 May 2014) that rising inequality is a threat to economic growth and financial stability. The IMF managing director (Christine Lagarde 2014, p. 11) made the point that “one of the leading economic stories of our time is rising income inequality, and the dark shadow it casts across the global economy”. The IMF managing director went on to suggest that “the facts are familiar. Since 1980, the richest 1 percent increased their share of income in 24 out of 26 countries for which we have data. In the US, the share of income taken home by the top one percent more than doubled since the 1980s, returning to where it was on the eve of the Great Depression. In the UK, France, and Germany, the share of private capital in national income is now back to levels last seen almost a century ago”.

The Chair of the US Federal Reserve System made similar comments. At the Federal Reserve Bank of Boston conference (October 2014), Janet L. Yellen (2014) clearly admitted that “the extent of and continuing increase in inequality in the United States greatly concern me. The past several decades have seen the most sustained rise in inequality since the 19th century after more than 40 years of narrowing inequality following the Great Depression”. Yellen (2014) went on to suggest that “it is no secret that the past few decades of widening inequality can be summed up as significant income and wealth gains for those at the very top and stagnant living standards for the majority”. Yellen (op. cit.) showed that the average real US income of the top 5 percent of households grew by 38 percent from 1989 to 2013. The average real income of the other 95 percent of households grew less than 10 percent. In terms of the wealth distribution, the wealthiest 5 percent of US households held 54 percent of all wealth in 1989, and reached 63 percent in 2013. The rest of those in the top half of the wealth distribution held 43 percent of wealth in 1989 and only 36 percent in 2013. The lower half of households’ wealth was just 3 percent in 1989 and only 1 percent in 2013.

In terms of the contributory factors to inequality Atkinson (2015, p. 82) summarises them as follows: “globalisation, technological change (information and communications technology), growth of financial services; changing pay norms, reduced role of trade unions; scaling back of the redistributive tax-and-transfer policy”. Tali Kristal and Yinon Cohen (2015) provide empirical evidence, based on 43 US private non-agricultural industries between 1969 and 2007, which suggests that “the erosion of pay-setting institutions, mainly unionization and the real minimum wage, explains about 50 percent of rising wage inequality in U.S. private industries between 1969 and 2007, while the spread of computer technology explains 12-14 percent between 1969 and 1997 and 21-24 percent between 1988 and 2007”. It is also the case that “similar results showing a larger effect of de-unionization (vs. computerization) on inequality were found in Germany (Joe King 2013), as well as in a study on 22

developed countries (OECD 2011)” (Kristal and Cohen op. cit., p. 37). Furthermore, Davide Furceri and Prakash Loungani (2013, p. 25) suggest two further explanations of the increased inequality. “The first is the opening up of capital markets to foreign entry and competition, referred to as capital account liberalization. The second source is policy actions by governments to lower their budget deficits. Such actions are referred to as fiscal consolidation in economists’ jargon and, by their critics, as ‘austerity’ policies”. Furceri and Loungani (2013, p. 26) refer to 58 episodes of large-scale capital account reforms in 17 advanced economies to conclude that “on average, capital account liberalization is followed by a significant and persistent increase in inequality. The Gini coefficient increases by about 1 percent a year after liberalization and by 2 percent after five years”. It is also argued by Furceri and Loungani (op. cit., pp. 26-27) that “over the past 30 years, there were 173 episodes of fiscal consolidation in our sample of 17 advanced economies. On average across these episodes, policy actions reduced the budget deficit by about 1 percent of GDP. There is clear evidence that the decline in budget deficits was followed by increases in inequality. The Gini coefficient increased by 2 percentage points two years following the fiscal consolidation and by nearly 1 percentage point after eight years”.

It is indeed the case, then, that inequality needs to be tackled for it has grown to where it can no longer be ignored as Stiglitz (2013, 2015) has also suggested.

2.2 Economic Policies to Tackle Inequality

2.2.1 Wage-Led or Profit-Led Demand

The propositions as discussed above are further supported by findings that confirm a significant decline in the wage share in both the developed and developing worlds (see, for example, Onaran and Galanis 2014). In discussing how such changes in income inequality affect economic growth, the distinction between “wage-led” and “profit-led” regimes is adopted. A wage-led regime is one where a shift in income towards wages results in higher growth, while a profit-led regime is one where a shift in income towards profits lowers income. This is so, of course, since in a profit-led regime the positive impact of higher profit share on investment and net exports exceeds the negative impact on domestic consumption, while the opposite is true in a wage-led regime. Consequently, a redistribution of income to profits results in higher saving rates and as a result, a reduction in consumption. There are two demand effects in place: the domestic-demand effect, which captures the impact of changes in distribution on consumption and investment; and the open-economy effect, which accounts for the impact on net exports. Rising wage shares are expected to have a positive effect on consumption (in view of the higher marginal propensity to consume out of wage income in relation to that out of profit income), but negative effect on investment (in view of falling profits) and net exports (in view of the sensitivity of net exports to unit labour cost).

Onaran and Galanis (op. cit.) go a step further to argue that there are supportive relevant empirical findings. Onaran and Galanis (op. cit.) clearly state that the relevant empirical evidence is based on the examination of the effect of income distribution on growth in 16 large developed and developing countries, with the 16

countries comprising more than 80 percent of the global GDP; this is undertaken for the period 1960-2007 for developed countries and 1970-2007 for developing countries (in the case of China the period is 1978-2007). This empirical evidence establishes that in most of the major advanced economies there is a wage-led demand regime. Canada and Australia are two exceptions where a profit-led regime is confirmed. The empirical evidence provided by Onaran and Galanis (op. cit.) suggests that a 1 percentage point simultaneous decline in the wage share of the 16 countries in their empirical sample, leads to a decline in global GDP by 0.36 percentage points. Also if all wage-led countries were to return to their, for example, late 1970s wage share levels, along with a more modest increase in the wage share in the profit-led countries global GDP, would increase by 3.05 percentage points; in such a scenario GDP increases in all individual G20 countries. It is also shown by Onaran and Galanis (2014) that demand is wage-led not only in the majority of the developed economies in G20 but also in some emerging market economies in this group such as Turkey and Korea in isolation. When the external sector is included in the form of foreign trade and globalisation effects, aggregate demand remains wage-led in most of the developed G20.

This empirical evidence implies three important conclusions that support the proposition of implementing economic policies to tackle the significant inequality over the period of empirical investigation of Onaran and Galanis (2013, 2014). “First, domestic private demand (that is the sum of consumption and investment) is wage-led in all countries ... Second, foreign trade forms only a small part of aggregate demand in large countries ... Similarly, if countries, which have strong trade relations with each other ... are considered as an aggregate economic area, the private demand regime is wage-led. Finally, the most novel finding is that even if there are some countries, which are profit-led, the global economy is wage-led. Thus, a simultaneous wage cut in a highly integrated global economy leaves most countries with only the negative domestic demand effects, and the global economy contracts. Furthermore most profit-led countries contract when they decrease their wage share, if a similar strategy is implemented also by their trading partners” (Onaran and Galanis 2013, p. 87). Onaran and Thomas Obst (2015) examine empirically a simultaneous increase in the wage share in 15 countries of the European Union, which leads to an increase in growth. They show that a 1% increase in the wage share would lead to a 0.30% increase in the GDP of the 15 European countries. 11 of these countries are wage-led and 4 are profit-led, when the 15 countries are examined in isolation.

It is the case then that a higher wage share can have expansionary effects as the Keynesian tradition has long asserted. Since wages is the main source of income for most households, higher wages feed into higher consumption. It is also true that low income households have a higher marginal propensity to consume than high income households. As a result low income households spend a higher share of their income. It clearly is the case, then, that pro-capital redistribution of income is detrimental to growth. By contrast, “a wage-led strategy ... will generate a much more stable growth regime for the future” (Marc Lavoie and Stockhammer 2013, pp. 13-14). This is of course particularly important in view of the 2007/2008 international financial crisis and the subsequent “great recession”, which have weakened the

power of labour to defend nominal and real wages (see, also, Hein and Mundt 2013). It is also the case that in large economic areas, like the euro one, where wage-growth is the order, wage-led recovery policies, instead of wage moderation, can improve growth and employment. In more general terms, a global wage-led recovery through a significant increase in wage share can lead to an increase in global growth. Such policy would also help to reduce the danger of another global financial crisis by reducing inequality - one of the main causes of the international financial crisis of 2007/2008 (see, also, Arestis forthcoming).

Lavoie and Stockhammer (2013, p. 26) examine the case of “supply effects” in addition to “demand effects” to conclude that changes in functional income distribution have supply-side effects in addition to demand-side effects. The authors argue that the “summary variable for the supply side is labour productivity”, and as such it is a wage-led partial productivity regime. Available empirical evidence suggests that higher wage growth induces higher productivity growth, as for example the study by Hein and Arthur Tarassow (2010). The latter study provides evidence in six OECD countries, over the period 1960-2007, to show that faster real wage growth leads to higher productivity growth. Similarly, Servaas Storm and C. W. M. Naastepad (2013, p. 103) suggest that this positive “supply-side” relationship, whereby real wage growth affects labour productivity growth can be explained in two ways: “by depressing the growth of aggregate demand, real wage growth restraint reduces productivity growth” and “directly, by retarding the rate of labour-saving technological progress, because lower wage growth reduces firm’s incentives to invest in labour-saving R&D”. The same authors provide a short review of the empirical evidence on this score, which suggests that in terms of the causal link from demand growth to productivity growth it is 0.46 for the group of the OECD countries. A one percentage point change in demand growth is associated with a 0.46 percentage change in labour productivity growth. In terms of the relationship between real wage growth and productivity growth for the same group of countries, the relevant coefficient is 0.38, so that a one percentage change in real wage growth is associated with 0.38 percentage change in productivity growth.

The Economist (2014) supports the argument that redistributing income more equally does help to increase aggregate demand. Ostry, Berg, and Tsangarides (2014, pp. 25-26) provide evidence on the relationship between inequality, redistribution and growth to conclude that “first, inequality continues to be a robust and powerful determinant both of the pace of medium-term growth and of the duration of growth spells, even controlling for the size of redistributive transfers ... And second, there is surprisingly little evidence for the growth-destroying effects of fiscal redistribution at a macroeconomic level”. Such a strategy should be complemented by fiscal and monetary policies, along with proper co-ordination of them, as we argue in Arestis (2015) and further discussed below. The objective should be full employment. Fiscal policy in particular is an important dimension in this regard. The study by Leonel Muinelo-Gallo and Oriol 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 public

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

The policy implications just discussed are further supported by the ILO (2008) study that provides evidence to show that it is possible to avoid excessive income inequality while achieving a high employment rate. This is the case for both high and medium/low *per capita* GDP countries. Examples provided by the ILO (op. cit.) study among high *per capita* GDP countries, where employment rates are high and income inequalities relatively low, like Austria, Australia, the Nordics and Switzerland, have managed well on this score. Wage share has fallen in these countries too; however they seem to be able to use welfare state to counter the impact of market (pre) distribution. These countries “are characterized by relatively strong, employment-oriented social protection, higher than average coverage of collective agreements and well-respected political rights” (ILO 2008, p. 156). Examples among medium and low *per capita* GDP are countries, like the Czech Republic and Uruguay, where relatively high employment is accompanied by limited income inequalities. It is suggested that these countries are also “associated with relatively developed social protection, stronger tripartite institutions than in other countries, and observance of political rights” (ILO op. cit., p. 6). It is then clear that pro-labour distributional policies that promote wage policies, strengthening the welfare state and the power of the labour unions *via* improving the status of labour unions through changing union legislation to foster collective bargaining, and establishing sufficiently high minimum wages, are important economic policy ingredients. It is interesting to note that US union membership -- the percent of wage and salary workers who were members of unions -- declined from 20.1 percent of wage - and salary - earnings of workers in 1983 (the first year for which comparable union data are available) to 11.9 percent in 2010. In 2014, the union membership rate was 11.1 percent, down 0.2 percentage point from 2013 (Stiglitz 2013; US Bureau of Labour Statistics, 23 January, 2015). Similar trends prevail in many other countries.

Another relevant study that strongly supports these economic policies is the study by Stockhammer (2013, p. 63), where it is also argued that in addition to these ingredients financialisation is confirmed “as the single most important cause for the decline in the wage share” in view of the deregulation of the financial system and the rising prominence of the financial institutions not only in the US but in other countries as well. Financialisation further includes “the rising indebtedness of households, more volatile exchange rates and asset prices, short-termism of financial institutions, and shareholder value orientation of non-financial business” (Stockhammer op. cit., p. 47). Social institutions and the structure of the financial system are thereby important ingredients of income distribution. Clearly then, in addition to the above discussed distributional policies, financial regulation is a further important and relevant policy ingredient (see, also, Stockhammer op. cit.).

2.2.2 Further Economic Policies to Tackle Inequality

The ILO (ILO 2008, Chapter 4) study examines the extent to which taxes and social transfers can be a powerful redistributive mechanism. While it is argued that this could be the case, the evidence shows that despite increasing income inequality this

redistributive mechanism has not been successful. The main reason for this “is that taxation has become less progressive and therefore less likely to address the growing income inequality found in the majority of ILO member states” (ILO 2008, p. 127). Another factor suggested by the ILO (op. cit.) study is that the “weaker progressivity” of the tax system has not been offset by relevant social transfers to enable redistributive effects. This does not mean that taxes and social transfers cannot address income inequality; policy makers should make sure that relevant policies are applied properly so that they are effective.

Reforming taxes to make them fairer and more effective is, therefore, an important aspect of fiscal policy. Indeed, Berg and Ostry (2011) show that a redistributive tax system is associated with higher and durable economic growth. Anton Korinek and Jonathan Kremer (2013, p. 6) advocate redistributive policies “such as higher taxes on financial sector profits that are used to strengthen the social safety net of the economy would constitute such a mechanism”. 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 institutions (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.

A recovery led by domestic demand and increase in the wage share in the global economy would help to reverse the major factor of inequality behind the global crisis. Gains in competitiveness can and should be achieved through productivity increases rather than wage reductions and weak labour conditions. In this sense strong trade unions, collective bargaining and high minimum wages are beneficial. All this would ensure that wage growth catches up with productivity growth, and hence consumption growth strengthens output growth. More generally speaking, the state should be able to reduce inequality through progressive taxation and public expenditure policies. There is, of course, the argument that fiscal policy is ineffective in view of the Ricardian Equivalence Theorem. As argued in Arestis (2012, 2015), where further and relevant references are provided, such arguments lack theoretical and empirical credence (see, also, Arestis 2011; Arestis and Ana R. Gonzalez-Martinez 2015).

These policies would tax the top more than the rest, and through the orientation of social expenditure towards the low income households. By contrast, programmes that give away a country’s resources to the rich and well connected can increase inequality. A good example of the latter case is the enormous decrease of the progressivity of the income tax in the US and UK since 1980, which “probably explains much of the increase in the very highest earned income” (Piketty 2015, pp. 495-496). It is interesting to note that both the US and UK were among the main proponents of progressive taxation after World War II; but of course not so more recently. Progressive taxation in the US was evident between 1933 and mid-1960s when the top tax rate stabilised at 90 percent, but fell to 70 percent in the early 1980s. Between 1933 and 1980 the top federal income tax rate averaged 81 percent. In the UK case the top rate for unearned income (income from capital) was 98 per-

cent from 1941 to 1952 and again from 1974 to 1978. The top rate for earned income (income from labour) was slightly lower; for example, between 1974 and 1978 it was 83 percent. It is also the case that the US and UK tax rates fell from 80-90 percent in 1933-1980 to 30-40 percent in 1980-2010 (with a low tax point of 28 percent in the US as a result of the then President's tax reform in 1986). All these examples and percentages are from Piketty (2015, pp. 507-512).

We should not forget the required reduction of the enormously high pay of top executives and financiers, which reached the public agenda with the emergence of the global 2007/2008 financial crisis. Indeed, the immense accumulation of income and wealth in the financial sector, as shown above in Section 1, should not be accompanied by austerity measures. It should, instead, be tackled by raising taxes on upper-income holders and cutting war expenditure (James Crotty 2011, for example). The IMF (2014) relevant study suggests that there is growing evidence that high income inequality has increased in recent decades in both developed and developing countries (as well as emerging), and has been detrimental to macroeconomic stability and growth. It is thereby of paramount importance for governments to employ fiscal policy to influence income distribution. Fiscal policy, it is argued, is the primary tool for governments to affect income distribution and thereby inequality. This should be undertaken through both tax and spending policies. As for specific guidance on the use of fiscal policy for redistribution, this, it is suggested, is a country-specific problem.

Piketty (2014) deals with the rise of inequality over the past forty year or so, and suggests that increases in inequality are due to the return on capital (r) exceeding the economic growth rate of the economy (g). This emerges in view of increased savings generated by the high rate of return on capital, causing capital and wealth to grow faster than the growth of the economy. As a result capital income grows, as a share of total income, since the rate of return does not fall sufficiently fast with capital deepening. Piketty (2015, p. 48) goes further to suggest that "institutional changes and political shocks - which to a large extent can be viewed as endogenous to the inequality and development process itself - played a major role in the past, and it will probably be the same in the future". Piketty (2014) argues that with such substantial income inequality worldwide, restoration of high marginal tax rates is in order. Gregory N. Mankiw (2015, p. 43), though, asks the question "Yes, $r > g$. So what?". The argument is that in neoclassical economics $r > g$ is not a problem, while $r < g$ "could be". Mankiw (op. cit., p. 46), therefore, believes "that wealth inequality is not a problem"; on the contrary, a global tax on capital would lower everybody's standard of living.

Most important, though, for Piketty (op. cit., pp. 516-517), is the imposition of a progressive global tax on capital, "that is a tax on the net value of assets each person controls", which should be "a progressive annual tax on global wealth. The largest fortunes are to be taxed more heavily, and all types of assets are to be included: real estate, financial assets, and business assets - no exceptions". Such a proposition, it is argued, would offer the best option for keeping inequality under control, and such a tax is "by far less dangerous than the alternatives" (Piketty op. cit., p. 516). Still, though, it is suggested that capital, income, and inheritance taxes play "useful

and complementary” (Piketty op. cit., p. 547) roles. It is also argued that a global tax on capital can impose effective regulation on the financial and banking system, which helps to avoid crises. Piketty (2014, p. 526) argues that a tax on capital is an incentive to seek the best return on capital. Indeed, and given that the top capital owners earn very high returns, clearly suggests that this “argument is the most important justification of a progressive tax on capital”.

Those with low incomes would pay little, while those who have billions would pay a great deal more. Such tax would require international co-operation of course, and as such, Piketty (2014, p. 515) admits, “it is a utopian idea”, but “it is nevertheless useful” at the same time. The usefulness of such a tax relies on the proposition that it “can serve as a worthwhile reference point, a standard against which alternative proposals can be measured”. Still, and although implementing such a tax would be a serious challenge politically, Piketty (op. cit., p. 471) suggests that if the European Union and the US supported such a tax, it would be a great beginning. It is further suggested that “short of that, a regional or continental tax might be tried, in particular in Europe, starting with countries willing to accept such a tax” (Peter Diamond and Saez 2011; Piketty, Saez, and Stefanie Stantcheva 2014). It is also suggested that “such a tax would also have another virtue: it would expose wealth to democratic scrutiny, which is a necessary condition for effective regulation of the banking system and international capital flows (Piketty 2014, p. 471). Foster and Yates (2014) argue that when Piketty (2014) “presented a theoretical perspective that challenged the primary approach to questions of income and wealth distribution previously held to by almost all neoclassical economists, the result was explosive. Suddenly there was a work on growing inequality that had the imprimatur of the establishment ... and could not be easily dismissed *ad hominem* as the work of a ‘non-scientific’ heterodox economist. If not exactly a revolution against neoclassical economics, the contents of his book had all the looks of a palace coup” (Foster and Yates 2014, p. 5).

A contribution by Olivier Bargain et al. (2015), attempts to answer the question of whether it is economic policy or other factors that caused inequality in the US over the period 1979-2007. The study deals with the impact of tax policy on post-tax income inequality, by focusing on pre- and post-tax income inequality. The authors suggest that their contribution “can be seen as a natural follow-up of the study by Piketty and Saez (2007) who analyze changes in the progressivity of the federal income tax over time but cannot disentangle policy changes from other factors” (Bargain et al. 2015, p. 1062). The main conclusion of Bargain et al. (op. cit., p. 1080) is that “over the whole sample period, tax policy aggravated the trend of growing inequality in pretax incomes: tax policy had a positive (negative) effect on the income share of taxpayers above (below) the 80th percentile ... A second key result is that the policy effect ... was largest for taxpayers in the 95th to 99th percentiles but smallest for those in the top 1% ... In addition, accounting for indirect policy effects due to behavioral responses does not change our results qualitatively, but raises the relative importance of the policy effect on inequality: the upper bound estimate for the total policy effect is 18%-41% (depending on the inequality measure) of the total change. The analysis also suggests that tax reforms in the 1980s and early 2000s exacerbated

trends of growing inequality while those in the early 1990s benefited low-income taxpayers". The taxes implemented and examined over the period of investigation were federal and state level income taxes and payroll taxes, as well as tax credits. The tax reforms implemented over the period under investigation are not of the progressive-taxation type and certainly no orientation of social expenditure towards the low income households was in place. The taxes implemented over the period under investigation are not of the type that would deal with the question of appropriate tax policies affecting causally inequality. It is the case that the authors admit that the results of the study "should be interpreted as association rather than causation" (Bargain et al. op. cit., p. 1066).

Atkinson (2015) is clear on the harm of inequality. It undermines economic growth and social cohesion. According to Atkinson (op. cit.) the use of the old redistributive tools with more vigour is the best way forward to tackle the "Inequality Turn" in the years since around 1980. The main suggestion is progressive taxation. This argument is based on the idea that "a more progressive structure for the personal income tax" (Atkinson op. cit., p. 290) should be introduced. In the case of the UK, for example, the current top rate of tax (45 percent) should be levied at a lower level of income (£55,000 is suggested) with a new 55 percent when taxable income reaches \$100,000 and also a new 65 percent top rate for those earning more than £200,000. Atkinson (2015, p. 187) states that "the UK has had a top income tax of 65 percent or higher for half of the past 100 years".

It is also proposed that an "Earned Income Discount" should be introduced, aiming at not raising the tax rate on low levels of earnings (and pensions) as a result of the implementation of the progressive tax structure. Atkinson (op. cit., p. 205) also argues for renewal of "social security for all" in view of the fact that "one reason for rising austerity in recent decades has been the scaling back of social protection at a time when needs are growing, not shrinking"; indeed, it is the case that "the welfare state has in the past played a major role in reducing inequality". It is further suggested that radical reform of inheritance taxation, modernisation of property taxation, a wealth tax, and a global taxation are important ingredients. It is also argued that policy-makers should be concerned with tackling unemployment. An unemployment target of 2 percent is suggested along with the government acting as "an employer of last resort", thereby introducing guaranteed public employment. It is also proposed the introduction of a national pay and social policy, under the aegis of a Social and Economic Council involving trade unions, other social partners and nongovernmental bodies, and establishing a substantially higher statutory minimum wage. "Technological change" in a way that increases the "employability of workers" (through funding of scientific research), a more secure legal framework for trade unions, more comprehensive taxation of inheritance and property tax, and expansion of universal benefits are further proposals. All these measures should produce a more equitable income distribution. Atkinson (2015) goes a step further to suggest that economic policies to reduce inequality in the OECD countries as a whole, or in the European Union as a whole, are possible. Although Atkinson (op. cit.) recognises the difficulties of pursuing such a path, the suggested relevant proposals can be introduced on

the basis of cooperation and coordination of economic policies of the group of countries concerned.

We would agree with Atkinson (2015) 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 as Atkinson (2015) and, also, Arestis and Sawyer (2013) propose, proper coordination of monetary and fiscal policies along with financial stability would be the best way forward (see, also, Arestis 2012, 2015). The ECB President (Mario Draghi 2015) warned central banks of the dangers of aggressive monetary easing, including mass bond buying, which might lead to financial instability and thereby worsen income inequality. Draghi (op. cit.) suggests that distributional consequences may arise from “very low rates for a prolonged period”, which “might penalise savers to the benefit of debtors”; also “rising asset prices as a consequence of our purchases might benefit the wealthy disproportionately and thereby increase inequality”. It is the case actually that monetary easing in both the US and the UK has had the effect Draghi (2015) referred to in that it has not helped much in terms of what it was intended to achieve. It has instead promoted the stock markets and the estate markets in terms of enormous increase in their relevant prices, both of which increase inequality.

Monetary and fiscal policies should be directed at reducing inequality through appropriate expenditure and progressive tax policies, which should be supported by monetary policy. The latter should be concerned with reforms in an attempt to regulate and avoid the type of financial architecture that led to the 2007/2008 international financial crisis. Such regulation had been neglected prior to the international financial crisis of 2007/2008. The regime of inflation targeting under the auspices of an independent central bank, and the neglect of proper regulation of the financial system has not worked as efficiently as the proponents had expected, as many authors have demonstrated (see, for example, Alvaro Angeriz and Arestis 2008; Angeriz, Arestis, and McCombie 2008; Stiglitz 2013, Chapter 9). Inflation targeting also neglects distributional effects in view of its central assumption of the representative agent and its emphasis on inflation as the single target of economic policy, thereby neglecting unemployment.

This concern should particularly be with respect to prudential regulation and financial supervision. The role of monetary policy in promoting employment creation is another objective that needs to be properly implemented. Manipulation of the rate of interest by the central bank to keep the real interest rate below the productivity growth would have stimulating effects on aggregate demand (Hein and Mundt 2013). Such a monetary policy should be implemented in coordination with fiscal policy. At the same time, financial stability policies are necessary to avoid sharp and unsustainable increases in debt-to-income ratios among lower- and middle income households thereby containing the leverage ratio and the risks of crises like the 2007/2008 international financial and real crisis. At the end of the day, crises can be avoided if economies are well managed and financial markets are sufficiently regulated. Since the international financial crisis of 2007/2008 and the “great recession” a number of financial reforms have been proposed (see, for example, Arestis and Karakitsos 2013).

However, it is over five years since the US Dodd-Frank Act of July 2010, and other subsequent proposed financial reforms, like the UK Vickers Report and the similar one in Europe, the Basle Committee Banking Regulations, were proposed, but the news is not encouraging since financial reforms remain a work in progress across the world. And as the Managing Director of the IMF, argued at a conference in London (27 May, 2014) “progress is still too slow, and the finish line is still too far off”. Another relevant suggestion is the introduction and implementation of a financial transactions tax, which should cover both spot and derivative assets. The purpose of such tax should be to curb speculation and raise substantial funds for public investment (see, for example, Arestis and Sawyer 2013; Stephanie Seguino 2014).

It is also important to remember that an increased and progressive tax burden on the remuneration of rentier capitalists and top professionals will not make capitalism just, but it will reduce its intrinsic injustice. In all these, pro-labour policies are vital as argued above. Such policies are the following: strengthening the welfare state, labour unions and labour market institutions, collective bargaining as well as improving union legislation and strengthening trade unions. Increased unemployment benefits, higher minimum wages, and real wage growth in line with labour productivity are further policies that could help to reduce inequality. Indeed and only when wages grow with productivity growth will consumption expenditure grow without raising debt levels to unsustainable levels that can trigger serious crises. We would also suggest that capping high pay and education policies are further examples that can help redistributive effects. In terms of investment in education, this can exert a significant redistributive effect; this effect can materialise through the creation of relevant opportunities for enhancing employment (see, for example, the view of the ILO 2008, on education). It is also true that, and as Atkinson (2015) notes, there is a chance of a change in attitude on inequality for in the past, not just in wartime, significant reductions in inequality were achieved; and history can, and does, teach us a great deal.

3. Summary and Conclusions

We have discussed inequality in a number of countries around the world but have emphasised the US case in view of the significance of this aspect as one of the main causes of the 2007/2008 international financial and real crises. The focus of this contribution, though, is on economic policies to tackle inequality. We have concluded that such economic policies should be coordination of fiscal and monetary policies along with financial stability type of policies, without forgetting pro-labour distributional policies.

In terms of whether relevant economic policies have been initiated for this purpose, the answer is very disappointing; not much, if any, relevant policy at all has been undertaken. Indeed, and all this is happening when “the ongoing global economic slowdown is affecting low-income groups disproportionately”; and “this development comes after a long expansionary phase where income inequality was already on the rise in the majority of countries” (ILO 2008, p. 1).

A further and interesting question is whether it is likely that relevant economic policies will be pursued to reduce inequality. Unfortunately tackling unequal distri-

bution is an area where very little progress, if any and as suggested above, has been undertaken; and it is highly unlikely to materialize in view of the undue political influence of the top 1% influential group in the political system. And as Stiglitz (2013, Chapter 9) notes, while policymakers should be aware of the inequality problems and act appropriately, very rarely do they respond, if at all. Also, Atkinson (2015) suggests that the influence of the upper class on government policy in their attempt to protect their wealth is an important factor on this score. A relevant survey on this score is provided by Adam Bonica et al. (2013) that supports this contention. It is true, nonetheless, that perceptions that the existing distribution of income is not fair are growing, which may very well have a positive and relevant impact on the relevant thinking of the top 1% influential group.

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