

The determinants of income inequality in OECD countries

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The objective of this paper is to identify the determinants of the increase in income inequality that OECD countries have experienced over the past two decades. My hypothesis is that along with the financialisation of economies that has taken place since 1990, inequality increased because labour flexibility intensified, labour market institutions weakened as trade unions lost power, and public social spending started to retrench and did not compensate for the vulnerabilities created by the globalisation process. Using data from 25 high-income OECD countries from 1990 to 2013, I empirically evaluate this hypothesis. My results clearly suggest that the increase in inequality over the past two decades is caused by an increase in financialisation, a deepening of labour flexibility, the weakening of trade unions and the retrenchment of the welfare state.

Key words: Inequality, Financialisation, Labour market, Welfare states

JEL classifications: F600, G010, I380

1. Introduction

For at least the past two decades, income inequality within rich countries or, more precisely, among OECD countries has increased; while income inequality between countries based on per capita income has likely decreased recently, income inequality within countries has risen in most OECD and several developing countries over the past two to three decades (Allison *et al.*, 2014).

The richest 10% of the population in the OECD countries earns about 10 times the income of the poorest 10%; in the late 1980s, the richest 10% earned about seven times the income of the poorest 10% (OECD, 2014). At the same time, the Gini coefficient increased from about 27% to 33% on average. In a way, this contradicts the

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famous Kuznets curve (1955), according to which inequality increases in the initial phase of the development process and then decreases as economies become richer. Piketty noticed its limitations, and in his recent book (2014) he rejects the idea of the bell curve. What he proposes is a horizontal ‘S’ curve—inequality re-increases when countries reach an advanced stage of development. Following to some extent Piketty’s broad conclusions, in this paper I focus on the years which are probably the ones during which inequality increased the most, i.e. from 1990 to 2013. During this period the world changed substantially, the structure of rich economies was reshaped, and in most of these economies impressive technological progress has led to strong and long waves of transformations. Before that—in the late 1970s—political changes also created the basis for a new paradigm of political economy, first in the USA and in the UK, and later in most advanced and emerging economies.

This new paradigm, which I call ‘financial capitalism’, is characterised by a strong dependency on the financial sector, by the globalisation and intensification of international trade and capital mobility and by the ‘flexibilisation’ of the labour market (Epstein, 2005; ILO, 2013). From an economic policy perspective, these changes resulted in the partial withdrawal of the state from the economy (i.e. the minimisation of its economic intervention) and the dominance of supply-side policies (i.e. labour flexibility, tax competition for firms and capital, etc.; Shield, 2012).

In this context, I argue that income inequality increased because labour, which is the most important production factor for income, is seen by the supply-side approach as a cost to be compressed rather than as a fundamental part of aggregate demand to be expanded. In the age of financial capitalism, labour-capital relations are changing, and in most cases labour represents the weaker part. On the one hand, as a result of the conflict between labour and capital, trade unions have lost power and labour market regulations—such as labour protection against firing, unemployment benefits, minimum wage, etc.—have weakened. On the other hand, the expansion of labour flexibility, atypical labour contracts and temporary jobs has created unstable jobs and, therefore, unstable consumption (Jha and Golder, 2008).

Moreover, within the aforementioned new paradigm of political economy, the welfare state represents another cost to compress. In order to improve firms’ competitiveness and boost economic growth, advocates of the so-called ‘efficiency thesis’ argue that social spending needs to be reduced¹ (Allan and Scruggs, 2004; Castells, 2004; Blackmon, 2006). In fact, most countries are experiencing a retrenchment of the welfare state or at least a stabilisation of public expenditure. In an age of globalisation and ageing, this corresponds to a per capita reduction in real terms (Adema *et al.*, 2011).

To sum up, financialisation, labour flexibility, the weakening of trade unions and the retrenchment of the welfare state are the most important factors in my analysis which explain the explosion of income inequality, after transfers and taxes, over the past two decades. The econometric analysis of the paper uses data from 25 high-income OECD countries from 1990 to 2013, and clearly and robustly suggests that all these factors are at play.

The rest of the paper is organised as follows: Section 2 presents the theoretical framework of the paper, the literature to which I refer, and from where my contribution emerges; in Section 3, I briefly review the literature regarding the relationship

¹ For more on the efficiency thesis, see Section 4.

between globalisation and inequality; in Section 4, I analyse—theoretically and empirically—the relationship between financialisation and labour market legislation and its impact on inequality; in Section 5, I put forward my econometric model; and I conclude the paper in Section 6.

2. Literature review and theoretical framework

According to several economists, a clear trajectory of a new political economy paradigm took place after 1980 in the USA and in Europe, which is at the basis of the worsening of income distribution. This paradigm is shaped by specific and flawed economic policies. Palley (2012) sees three momentums shaping the new model: the first flaw was the growth model adopted after 1980 that relied on debt and asset price inflation to fuel growth instead of wages. The second flaw was the model of globalisation that created an economic gash. The third was the financial deregulation and the house price bubble that kept the economy going by making ever more credit available. In this context, while income distribution worsened and debt accumulated, the economy needed larger speculative bubbles to grow. Finally, these bubbles started to burst with the housing sector crash in 2007. Stiglitz (2012), who examines the devastating effects of monetary and budgetary policies and of globalisation on the increase of inequality in USA since the 1980s, conducts a similar analysis. Moreover, Stiglitz (2012) warns of the dangerous effects of inequality on democracy.

Some labour market arguments explaining inequality have been challenged by Lemieux *et al.* (2009) and Card *et al.* (2004), among others, and more recently by the OECD (2011) and Bogliacino and Maestri (2014), who find that labour market reforms appear to be responsible for most of the wage inequality which has occurred in the past decade. Chusseau and Dumont (2012) show that globalisation and changes in labour market institutions which weaken the welfare state explain the increase of inequality in a group of 12 rich countries.

Atkinson *et al.* (2011) instead point to changes in taxation which have reduced progressivity, in particular at the top of the distribution, as the main drivers of inequality. Similarly, Facundo *et al.* (2013) argue that reductions in the top income tax rate are the most important factor explaining inequality. Liberati (2007) argues that financial openness is negatively associated with government size (and tax rates) and this, of course, affects redistribution policies.

Other recent explanations for income inequality were put forward by Van Reenen (2011), who seems to find support for the association of trade-induced technological change with inequality. According to Allison *et al.* (2014), major determinants of growing income inequality within countries appear to be skilled-biased technological change (SBTC) and the growth of incomes of workers in the financial industry, particularly among executives. However, the SBTC explanation for inequality is very controversial and quite complex (Pianta and Tancioni, 2008). First of all, evidence among countries is not consistent at all: Scandinavian and other North European countries have proved that technological progress is compatible with equity if institutions and appropriate policies are implemented. Similar conclusions are reached by Bogliacino and Lucchese (2015), who analyse the East and West Germany reunification in order to see whether the supply of skills could lead to inequality and find no evidence for that. Moreover, technological change (and its consequences) can be state-guided, as Mazzucato (2013) shows in the case of the USA, where every major technological

change in recent years traces most of its funding back to the state. Finally, [Piketty \(2014\)](#) and [Palma \(2009\)](#) show that most income inequality can be attributed to the top 1% of wage earners, particularly within the financial sector, and this is difficult to explain in combination with the SBTC argument.

[Stockhammer \(2015\)](#) in his econometric analysis shows that the technological change had little effect on the decline of wage share over GDP in advanced economies in the past three decades, which was instead caused by the decline of the bargaining power of trade unions. The reduction of wage share consecutively contributed to the increase of income inequality rather than the SBTC. Similarly, [Galbraith \(2012\)](#), who in his recent book stresses inequality as a cause of the crisis, argues that inequality reflects the concentration of wealth at the very top of the distribution, quite independently from the SBTC.

[Tridico \(2012\)](#) argues that the financial-led growth model—which is characterised in the labour market by labour flexibility, precarious and unstable jobs and poor wages (which are at the basis of the worsening of income distribution)—encourages the demand for credit to finance consumption. In turn, new demand for credit destabilises aggregate demand and economic growth. [Cynamon and Fazzari \(2013\)](#) argue in favour of the unsustainable rise in household leverage concentrated in the bottom 95% as the ultimate cause of the Great Recession. They found that inequality affects demand growth and creates a drag on the economy, because higher-income groups spend a smaller share of income;² while [Goda and Lysandrou \(2014\)](#) argue that economic inequality was boosted by credit consumption and, in turn, this negatively affects stable economic growth. These interactions between income inequality and finance can be described within a Marxian analysis as follows: wage compensation which, as [Stockhammer \(2013\)](#) reported, is shrinking, affects the labour capacity, the value of which is generally less than the value of the output produced. The excess of supply (from which workers' exploitation emerges) is compensated by credit consumption. In this way, [Lysandrou \(2011\)](#) argues that the crisis is endemic to capitalism and inequality, and while workers suffer twice from these crises (being exploited and paid less, and being encouraged to increase credit consumption), capitalists gain twice (because they gain from the exploitation which, however, produces an excess of supply and obtain returns from financial products).

[Wisman \(2013\)](#) in his analysis concludes that rising inequality was the cause for the current economic crisis. The increase of inequality and wage stagnation originated through at least three channels in the 1980s. First, consumption constraints made investments less profitable and favoured instead credit consumption, greater indebtedness, and financial speculation. Second, a negative externality started to spill over, with workers forced to struggle more to keep a minimum acceptable level of income through longer working hours and greater levels of indebtedness. Third, rich people, most in the financial sector, became even more politically influential and able to affect policies such as tax cuts for themselves, further financial deregulation and welfare reduction.

All these contributions, which are very relevant to this study, have stressed the link between credit availability (as a consequence of increasing inequality) and financial

² [Cynamon and Fazzari \(2013\)](#) found that, in particular, after the 2007–2008 financial crisis, in the USA the top 5% spent a smaller share of income and the following stagnant recovery could be explained by the demand drag on the economy.

crises (see, for instance, [Perugini et al., 2015](#)) and inequality as the cause of the current financial crisis ([Stockhammer, 2015](#); [Galbraith, 2012](#)).

To sum up, the relationship between inequality and finance can be described, according to most of the current critical political economy literature, in at least two ways:

1. Inequality → (credit availability and) Financial crisis.

First, inequality may weaken aggregate demand and drag on the economy since higher-income groups spend a smaller share of the income; moreover, income inequality boosts financial instability because it increases demand for credit and this may destabilise the aggregate demand, in particular during credit rationing times.

2. Finance → (financialisation and) Inequality.

Second, inequality is boosted (i.e. can be considered a dependent variable) by financial development, credit consumption and the financialisation of the economy, which allows for an expansion of debt (both public and private), the compression of the wage share through the downsizing of the workforce and distribution of profits among shareholders, flexible labour markets and the reduction of the welfare state, which increases income vulnerability and reduces worker purchasing power. This second scenario is more a long- to medium-term perspective where institutions change, a transformation of the structure of the economy occurs and the relationship between capital and labour takes new forms. Our contribution can be found within this perspective, and it can be described as the relationship between inequality and other variables.

These two lines of relationship between finance (and financial crisis) and inequality are, obviously, interconnected and interdependent and, as several authors claim, often the differences between the two mechanisms described above are overlapping ([Wisman, 2013](#)) or, to use the words of [Van Treeck \(2014\)](#), complement each other. One of the first to argue in favour of the interdependencies between financial crises and inequality was [Rajan \(2010\)](#), who maintains that low- and middle-income consumers had reduced savings and increased private debt in the USA during the increase of income inequality in the 1980s. This kept—at least temporarily—private consumption and employment high, but contributed also to the creation of an unsustainable credit bubble, which burst in 2007.

My contribution emerges clearly in light of this existing literature, since it aims at synthesising most of the causes mentioned above into a single and valid empirical model, stressing in particular the role of financialisation, globalisation, labour market institutions and the retrenchment of the welfare state as an explanation of income inequality. Although financialisation has to do with wealth (in the sense of capital ownership), it affects above all functional income distribution and income inequality and, therefore, we focus on income inequality rather than on wealth inequality. The dominance of finance in advanced economies is connected not only to the development of the financial sector in those economies but also to the huge increase, in the past two to three decades, of so-called ‘performance related payments’ (PRP) of managers with respect to the rest of the economy. However, PRP are not formally part of the profit share, but are part of the wage share. As [Stiglitz \(2012\)](#) noticed, this misleading allocation not only over-evaluates the wage share, but it also contributes to increasing income inequality (or, more precisely, wage inequality—which includes PRP).

Hence, the channel of transmission, in my approach, follows more the second line described above: Financialisation → Inequality. In particular, in the past two to three decades, financiers and shareholders found it to be more convenient for their dividends and compensations to follow a business model which can be synthesised as ‘downsize and distribute’ (i.e. reducing the size of the workforce instead of increasing their investment levels).³ Policies in this period such as labour flexibility, welfare retrenchment, tax reduction (and tax competition) and capital mobility were all functions of that aim. In this context, wage share in advanced and, in particular, in financialised countries decreased, wages stagnated or decreased and income inequality increased. A similar thesis is discussed by [Lavoie and Stockhammer \(2013\)](#), who also discuss the role of inequality in the 2007 financial crisis and put forward a wage-led strategy to stimulate economic growth instead of the dangerous debt-led growth which took place before the crisis.

3. Globalisation and inequality

The link between globalisation and inequality has been explored in detail in the literature since the Stolper and Samuelson theorem, according to which market integration increases inequality and vulnerability because increased international trade raises the incomes of the owners of abundant factors and reduces the incomes of the owners of scarce factors ([Stolper and Samuelson, 1941](#)). Since advanced industrial countries are more capital-intensive economies and abundant in skilled labour, trade is expected to be beneficial for skilled labour and detrimental to unskilled labour, thus increasing income inequality. For labour-intensive economies, which are typically those of developing countries, trade is expected to increase regional disparities.

Globalisation and financialisation took place almost simultaneously in advanced economies. Financialisation has been defined in several ways by scholars from the political sciences, sociology and economics. Most of these definitions, however, converge towards the identification of the financialisation process in a political economy phenomenon where there is a growing dominance of capital financial systems over bank-based financial systems ([Krippner, 2005](#)) or, more broadly, an increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of domestic and international economies ([Epstein, 2005](#), pp. 3–4). This process culminated, according to the Bank for International Settlements, in a daily volume of foreign exchange transactions of about \$2 trillion in 2006, just before the financial crash of the summer of 2007. This is more or less equivalent to the GDP of France. In contrast, in 1989 this volume was about \$500 billion per day ([BIS, 2013](#)).

Globalisation, just like financialisation, is still a generic term which, in most definitions, is identified as a process of *intensification* of trade, capital mobility, finance and labour mobility. Conversely, authors such as [Hay and Wincott \(2012\)](#) disagree with such a definition of globalisation and would rather define it as a process not only of *intensification* of those flows but also of *extensive increase*, on a global level, of trade, capital, labour mobility and technological exchange (see also [Held et al., 1999](#)). Because evidence of this second type of definition of globalisation is missing and because not all countries have taken part in the globalisation process (globalisation interests a limited, yet increasing, number of countries), [Hay and Wincott \(2012\)](#)

³ See also [Lazonick \(2014\)](#), who summarises this model as ‘profit without prosperity’.

conclude that it would be more appropriate to speak about regionalisation rather than globalisation. For instance, trade, capital and labour mobility increased particularly in the European Union (Europeanisation), among advanced and emerging economies (trans-regionalism) and between North American countries (with regional agreements such as NAFTA), etc. Hence, the interpretation of globalisation remains quite controversial and an ongoing and evolutionary process.

Nonetheless, while it is true that globalisation and financialisation affect more advanced and increasingly more emerging economies—typically BRIC countries—it is objectively impossible to deny the intensification of this process and the increase in the number of countries involved in the global economy over the past two decades.

Figure 1 is a simple representation of this kind of globalisation. In particular, a first big wave of globalisation, identified purely according to the *intensive* definition, occurred after 1970 and may have been generated by a new international monetary system, the change in oil prices and the birth of the European Monetary System. However, this first wave of globalisation was unstable and the process of intensification declined during the 1980s. Finally, the process of intensive globalisation, often accompanied by the extensive inclusion of more and more countries, steadily rejuvenated at the end of the 1980s when several institutional, geopolitical and technological changes occurred.

Globalisation or, to be more precise, trade openness (defined as imports and exports as a percentage of GDP) was and is supported by the mainstream neoclassical approach.⁴ Lewis (1980) and many other economists such as Lucas (1993) and Bhagwati (2004) believe trade is the engine of economic growth. However, the experience of globalisation so far has shown that the performance of opened economies can vary dramatically (Rodrik, 1999; Rodrik *et al.*, 2004). Openness and integration in the world economy should be accompanied by appropriate institutions, state strategies

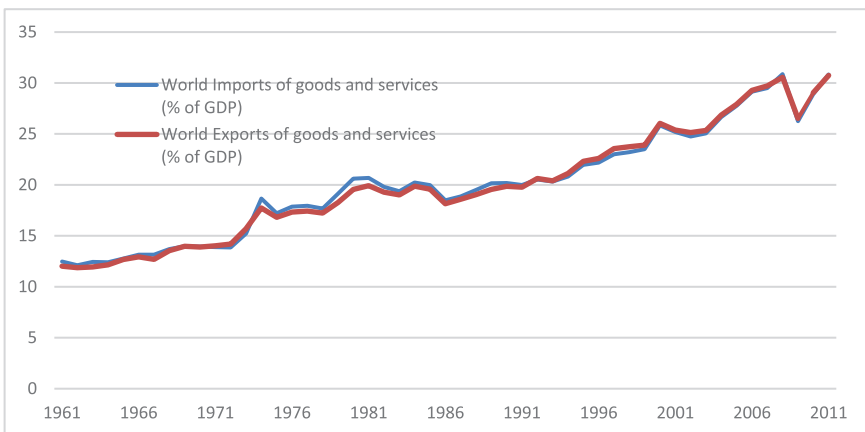


Fig. 1. Globalisation in terms of trade intensification. Source: The World Bank database.

⁴ Interestingly, the IMF has recently backtracked with regard to capital market liberalisation, arguing that opening capital markets in developing economies could increase economic instability if an appropriate regulatory environment is not put in place (IMF, 2014).

and particularly by an important welfare state that supports internal cohesion and maintains external competitive advantages. In fact, according to [Rodrik \(1999\)](#), the best-performing countries are the ones that are integrated in the world economy with institutions capable of supporting the impact of globalisation on the domestic market and social cohesion. Countries with poor social institutions, weak conflict management institutions (which means poor welfare states) and strong social cleavages suffer external shocks and do not perform well in the world economy.

The current financial and economic crisis, which started in the USA in 2007, suggests Rodrik's argument still holds true:

The world market is a source of disruption and upheaval as much as it is an opportunity for profit and economic growth. Without the complementary institutions at home—in the areas of governance, judiciary, civil liberties, social insurance, and education—one gets too much of the former and too little of the latter. ([Rodrik, 1999](#), p. 96)

For [Lucas \(1993\)](#), international trade stimulates economic growth through a process of structural change and capital accumulation, as in the case of Ireland where, according to [Walsh and Whelan \(2000\)](#), a structural change had already taken place during the 1970s and created conditions that allowed the Irish economy to grow considerably in the 1990s and later in the 2000s. Capital accumulation is determined by 'learning by doing' and 'learning by schooling' in a process of knowledge and innovation spillovers. A country that protects its goods made with intensive skilled work from international competition by raising tariffs on them will see a domestic increase in the price of those goods. Skilled workers' wages will increase and R&D will become more expensive. Consequently, investments in R&D will decrease and growth will be negatively affected. On the contrary, removing tariffs on those goods will cause a reduction in their price, a reduction in the cost of R&D and thus an increase in investments in R&D with positive effects on growth ([Lucas, 1993](#)).

This argument, however, does not take into consideration the inequality and uneven development caused by trade liberalisation and intensification via wage differentials. This issue has already been raised by Stolper and Samuelson, as we saw previously. Similarly, increased capital flows are expected to raise income inequality in advanced industrial economies because capital outflows from capital-rich countries to LDCs reduce domestic investment and lower the productive capability and demands for labour in these economies ([Ha, 2008](#); [Tsebelis, 2002](#)). Since a reduction in total capital in the production process increases the marginal productivity of capital and reduces the marginal effect of labour, capital outflows increase the income of capital relative to labour, thus exacerbating income inequality. In particular, because foreign direct investment (FDI) outflows from advanced industrial economies tend to be concentrated in industries with low-skilled labour in the home country ([Lee, 1996](#)), rapidly rising FDI outflows often reduce the demand for low-skilled labour and increase income gaps in industrialised countries. In fact, several studies find that FDI outflows are associated with expanded income inequality in industrialised countries ([Leamer, 1996](#); [McKeown, 1999](#); [Wood, 1994](#)).

Empirically, it is interesting to observe the expansion of FDI, which experienced a strong increase in the 1990s due to the liberalisation of capital markets, followed by a collapse at the beginning of the 2000s due to the global uncertainty caused by the international events of September 11, 2001. A further and bigger increase in FDI flows can be observed immediately after and up to the financial crash of 2007, reaching a peak in 2006–2007. The current crisis, marked by financial instability and depression,

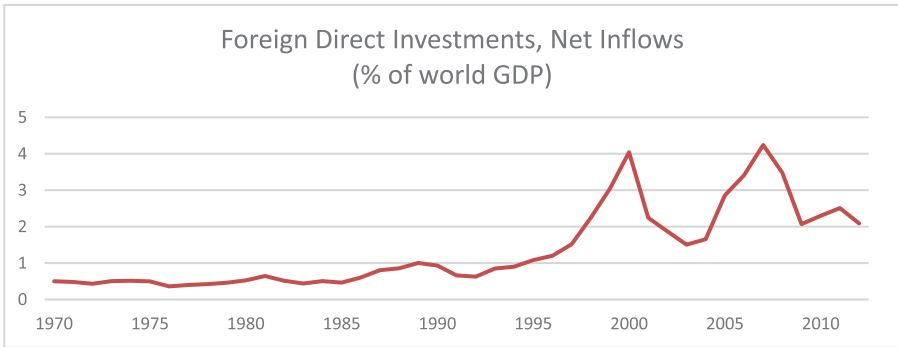


Fig. 2. *FDI in the world economy.*
Source: The World Bank database.

caused a further squeeze in FDI, although it remains at a substantially higher level than at the beginning of the 1990s (Figure 2).

Globalisation poses several challenges to national economies and governments. One of the most important is its effect on inequality—both within and between countries—and its impact on welfare state sustainability. The debate about these challenges has been very lively, and it has produced two main interpretations. The first one states that globalisation reduces the size of welfare states because the latter constitutes a cost for firms. Higher levels of welfare spending necessitate higher levels of income tax, payroll taxes and/or corporate tax which all reduce prospective profits and increase firms' costs. Firms would therefore be inclined to move abroad unless the government retrenches social spending and reduces taxes. Thus, in order to maintain high levels of investment and employment in the country, the welfare state needs to be reduced under the process of globalisation. This famous interpretation is known as the 'efficiency thesis'. This thesis was developed within the neoclassical and neoliberal paradigms, and it argues that globalisation has forced (or should force) states to retrench social welfare in order to achieve a market-friendly environment, improve its competitiveness and attract increasingly mobile international capital (Allan and Scruggs, 2004; Blackmon, 2006; Castells, 2004).

The efficiency thesis can be contrasted with the 'compensation thesis', which argues that because globalisation increases inequality, welfare states need to increase. In other words, globalisation pressures governments to expand welfare expenditures in order to compensate the domestic 'losers' in the globalisation process (Brady *et al.*, 2005; Rodrik, 1998; Swank, 2002).

It is true that with the rise of outsourcing practices and FDI outflows, globalisation has improved the position of capital with respect to labour. Firms' decisions to move capital and production across countries has distributional effects: the position of low-skilled workers in industrial countries is worsened by a combination of 1) globalisation and 2) new technology. The first increases the bargaining power of capital against labour, with the consequence of easing capital owners' procurement of tax reductions and welfare retrenchment (Chusseau and Dumont, 2012). States are willing to embark on tax competition among themselves in order to keep investments and production at home. The second has a direct and negative impact on unskilled labour and income distribution without welfare support and social institutions (Tisdell and Svizzero, 2003).

In this context, wage shares in the richest countries have declined dramatically, as [Figure 3](#) suggests, with negative consequences on aggregate demand and on income distribution.

The new macroeconomic consensus of the past two to three decades is strictly linked to, if not completely corresponding with, the Washington Consensus doctrine, which calls for the implementation of some institutional forms that better suit the globalisation process such as the financialisation of the economy and the introduction of labour flexibility in the economy (see [Tridico, 2012](#)).⁵ [Acemoglu \(2011\)](#) argues that the policies implemented over the past two decades in particular were more closely aligned with the preferences of a minority of high-income voters in USA. Instead of redistributive policies favouring low- and middle-income constituents, politicians implemented financial deregulation policies favouring a small group of influential high-income earners (many of whom worked in, or directly benefited from, the financial sector).

To sum up, inequality has increased in most advanced and emerging economies over the past two decades—an era of growing interconnectedness of the world economy—as many studies have already shown ([Atkinson, 1999](#); [Galbraith, 2012](#); [Milanovic, 2011](#); [Piketty, 2014](#)); a simple look at Gini coefficients across countries exposes this trend.

In the next section, I examine the main factors underpinning this development and then, in the following section, I will put forward a model which tries to explain the determinants of inequality ([Figure 4](#)).

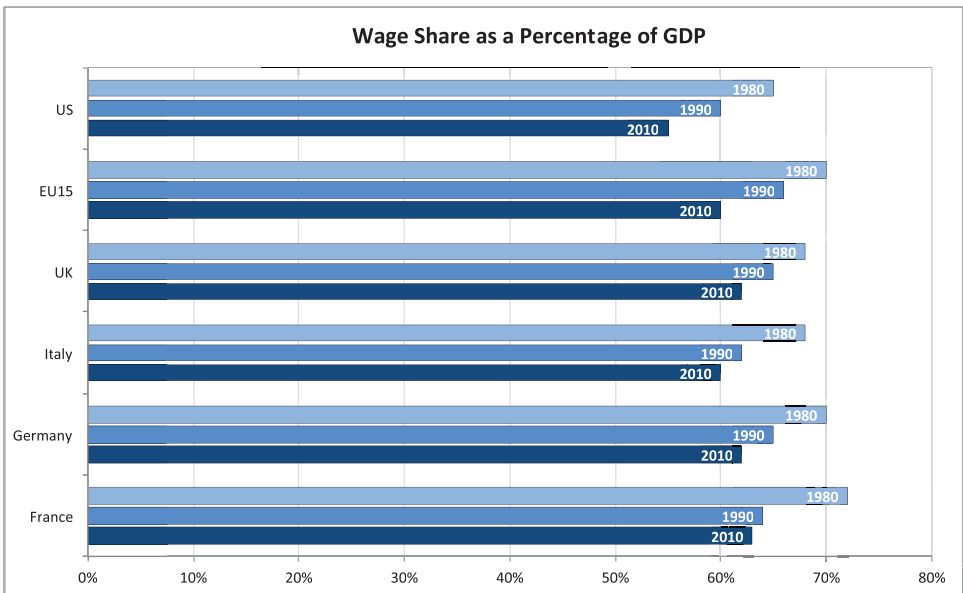


Fig. 3. Wage share in selected OECD countries.

Note: The unadjusted wage share is calculated as total labour compensation of employees divided by value added.

Source: own elaboration on the [ILO \(2013\)](#).

⁵ It has to be said that in the past few years, in particular after the 2007 financial crash, the Washington Consensus—along with other mainstream policies—evolved and the main advocates of those policies started to acknowledge failures and mistakes ([IMF, 2014](#)).

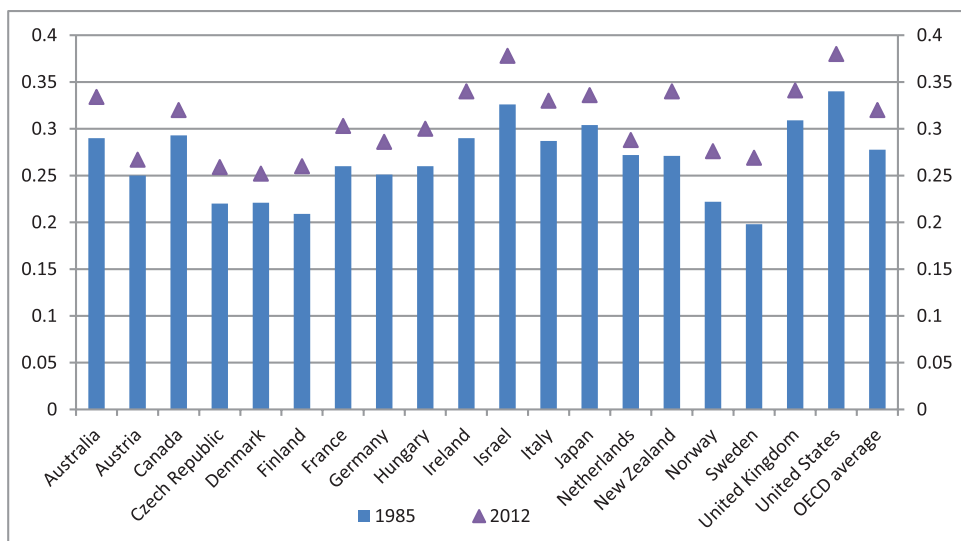


Fig. 4. *Inequality – Gini Coefficient.*

Source: OECD.

4. Financialisation, labour market institutions and inequality

Financialisation (a process which involves a set of institutions and financial tools) and labour flexibility (a set of labour market policies that increase the ease with which businesses can fire and hire workers and cut wages) are two general categories of institutional arrangements that have gone hand in hand particularly during the past two decades, although not at the same pace everywhere. They have been introduced across the world by governments, in varying degrees, in order to take advantage of the globalisation process which most policymakers and governments believe will boost their national economy. Labour flexibility has increased almost everywhere in Europe and in advanced economies over the past 20 years. However, some countries, such as Austria, Belgium, France and Germany, have retained more rigid labour markets. Other economies, such as Denmark, Sweden, Finland and the Netherlands, introduced higher levels of flexibility along with higher levels of security (OECD, 2013). Countries such as the USA, the UK and Ireland increased (or maintained) their already very flexible labour markets. Finally, Mediterranean countries such as Italy, Spain and Greece and most of the former communist economies in Europe combined very hybrid situations (of liberal and corporative elements) with an increased level of labour flexibility.

The political and economic roots of the financialisation process that brought about a new financial-led growth regime can be traced to the 1970s (Jessop, 2002). After the fall of the Soviet Union, Alan Greenspan, who rose to oversee the US Federal Reserve by the end of the Reagan administration, believed that the world economy could expand greatly through the globalisation of the financial sector (Greenspan, 2007; Semmler and Young, 2010). Many other economies followed the American example of a financial-led regime of accumulation, which used other institutional forms such as flexible labour and the nexus of compressed wages in order to increase firms' competitiveness (Tridico, 2012). Shareholders sought higher dividends because they invested their own capital in firms, taking on a higher level of risk. Since the economic growth

of advanced economies under financial capitalism has not been higher than under previous phases (the so-called Fordist period), as [Figure 5](#) shows,⁶ it follows that wages should be compressed in order for shareholders to obtain higher dividends. However, wages did not follow the increases in productivity and profits continued to soar (as was the case in most advanced countries and, in particular, in the USA).

Similarly, [Lin and Tomaskovic-Devey \(2011\)](#) argue that the increasing reliance by firms on earnings realised through financial channels generated surplus from production, strengthening owners' and elite workers' negotiating power relative to other workers. This resulted in the exclusion of most workers from revenue and, therefore, in the increase of inequality.

In light of these developments, labour flexibility and wage contraction functioned to obtain this result (higher dividends for shareholders), at least in the short run. As far as financialisation is concerned, [Figure 6](#) shows the expansion of financialisation among OECD economies over the past two decades. The variable here is the World Bank's 'Market capitalization of listed [domestic] companies' as a percentage of GDP.⁷

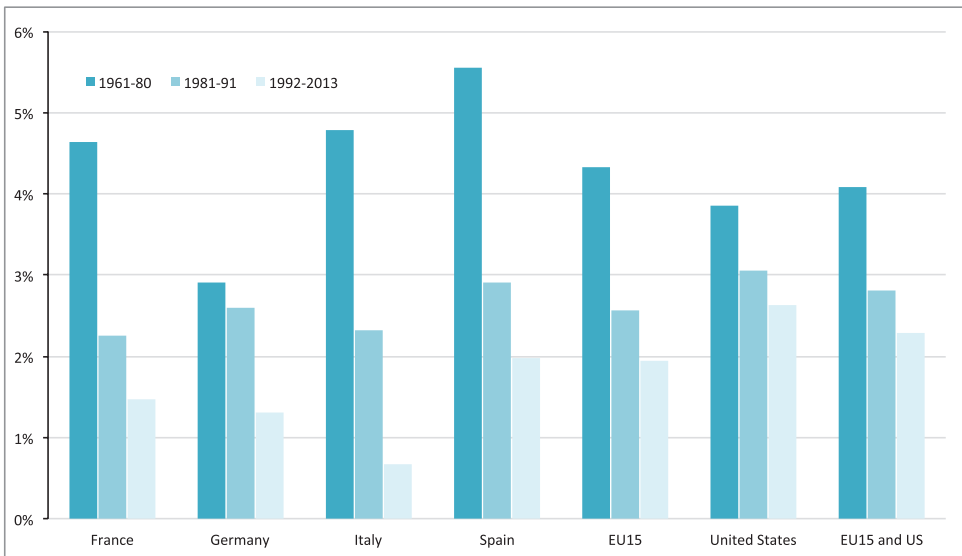


Fig. 5. Average GDP Growth in the EU15 and the US (1961–2013).

Source: The World Bank database.

⁶ [Figure 5](#) shows that GDP growth during Fordism (which is usually identified as the period before 1980) is higher than growth during both the transition period (which is usually identified as the period during the 1980s, in particular the decade 1981–1991) and post-Fordism (or the period of globalisation and financialisation), which is identified as the period from 1992 until today. For more details on the periodisation of Fordism and post-Fordism, see [Jessop \(2002\)](#).

⁷ Since financialisation refers to the rise of financial claims and incomes with respect to the real sector, one of the best variables able to be captured is the 'Market capitalisation' (also known as market value), which is the share price multiplied by the number of shares outstanding. Listed domestic companies are those domestically incorporated companies listed on the country's stock exchanges at the end of the year. Listed companies do not include investment companies, mutual funds or other collective investment vehicles. A similar definition of financialisation is used also in [Nölke and Vliegenthart \(2009\)](#), [Engelen et al. \(2010\)](#) and [van der Zwan \(2014\)](#). Stock market capitalisation (SMK) is one of the major sources of business finance in most advanced economies. Hence, it makes sense to refer to it as a proxy for financialisation. Obviously, inward FDI are also sources of business finance, but of lesser magnitude than SMK. I used both variables in the regression model and, as we will see, the significant variable remains SMK.

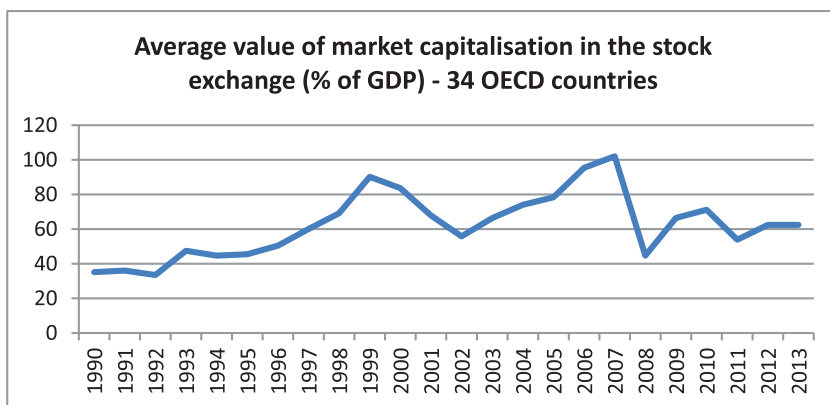


Fig. 6. *Financialisation.*
 Source: The World Bank database.

One can observe an important increase in the 1990s, driven probably by the ‘dot.com’ bubble; the fall after September 11, 2001; another consistent increase with a bubble which reached its peak in 2006 driven by the housing sector; and, finally, the crash of 2007–2008 and the following stabilisation after 2012 to a level which is almost double the average value of 1990 (more than 60% of GDP versus less than 40%).

More specifically, the highest level of financialisation is found in Anglo-Saxon economies (particularly the USA, the UK, Australia and Canada, which have enormous values of financialisation: between 100–150% of GDP), while the lowest levels of financialisation are in continental Europe, with the notable exception of Switzerland.

The USA promoted neo-liberalism as a main ideological paradigm for globalisation and financialisation through global, multi- and bilateral measures under pressure from all the major international financial institutions, multinational corporations, and Wall Street institutions (Epstein, 2005)⁸.

Importantly, within financial capitalism, the bargaining position of capital relative to labour in higher-income countries increased. As Feenstra (1998, p. 46) observes, the impact of globalisation on changing the bargaining position of labour and capital has far-reaching consequences. The decline in union power, particularly within trade-oriented industries, may well account for a portion of the increased wage inequality in the USA and other countries (Borjas and Ramey, 1995; Gordon, 2012) (Figure 7).

Of particular interest seems to be the case of the USA, where it is clear that throughout most of the twentieth century, the inverse relation existed between trade union membership and inequality. Gordon (2012) argues that between the New Deal—which granted, among other important things, workers’ basic collective bargaining rights—and the end of 1960s, ‘labor unions both sustained prosperity, and ensured that it was shared’. Since the 1970s, and in particular during the Reagan administration, ‘unions came under attack—in the workplace, in the courts, and in public policy. As a result,

⁸ Interestingly, financialisation also took place in Scandinavian economies. This is consistent with the results of Engelen *et al.* (2010) and van der Zwan (2014), who show that financialisation takes place everywhere, including in countries with strong welfare states. However, in these countries, the high level of social expenditure is able to contain inequality (which is nevertheless increasing in Scandinavian countries too). The highest percentage of financialisation in terms of GDP is in Switzerland while, in terms of absolute value, the USA is the most financialised market, followed by the UK.

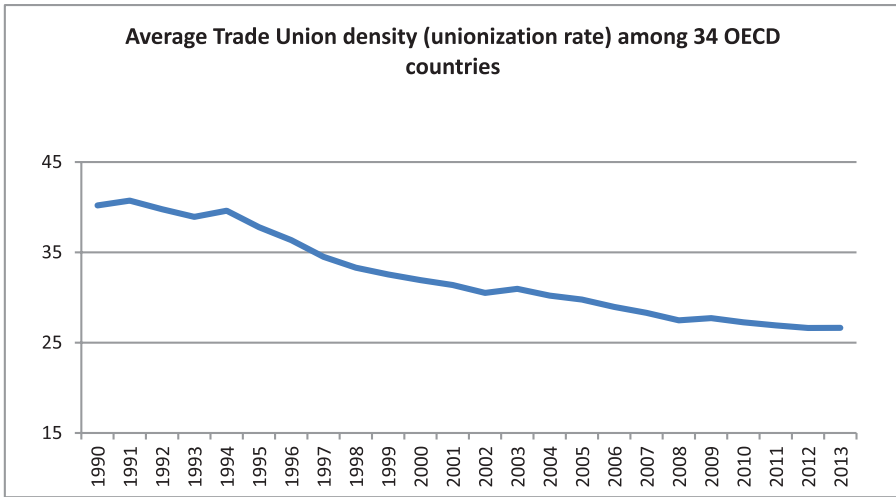


Fig. 7. *The decline of Trade Unions density.*
Source: own elaboration on OECD data.

union membership has fallen and income inequality has worsened—reaching levels not seen since the 1920s’ [Gordon \(2012\)](#) ([Figure 8](#)).

The decline in unionisation rates has contributed to the weakening of labour market institutions such as labour protection against firing and hiring, the level and duration of unemployment benefits with the introduction of constraints concerning eligibility and the reduction in most cases of their length and amount, the minimum wage, etc. In the appendix, a list of 10 labour market indicators (the eight in [Table A1](#), plus EPL and TU density in [Table A2](#)) is presented. Using these, a factor analysis was carried out in order to establish the most important elements which explain variation among the variables. This resulted in a principal component that, when scattered in a plot against the inequality index (Gini index in 2013), produces [Figure 9](#) below. This figure displays a clear correlation between the two: the higher the score of the principal component (more protection in the labour market), the lower the Gini level, and vice versa.⁹

The OECD’s Employment Protection Legislation (EPL) indicator is probably one of the most important labour market indicators, at least for our purposes in this paper, as far as it is able to capture labour market flexibility, which represents a crucial variable in our analysis and the evolution of which represents one of the most important changes in the labour market in the past two decades in many advanced economies. Moreover, EPL, in the principal component analysis presented in [Figure 9](#), has the highest value of the component loadings. It measures the general level of worker protection in the labour market and, consequently, the level of labour flexibility (it varies between 0 for very low protection and 6 for very high protection). In essence, it shows the level of protection offered by national legislation with respect to regular employment, temporary employment and collective dismissal; in other words, regulation that allows employers to fire and hire workers at will ([OECD, 2004](#)). The figure below

⁹ A similar result was obtained by [Butcher et al. \(2012\)](#) and [Autor et al. \(2015\)](#), who found that minimum wages have little effect on employment, but do have impacts on wage inequality, in particular in the UK and in the USA during the 1990s and 2000s.



Fig. 8. Unionisation and share of income to the top 10%.
 Source: reproduced from [Gordon, 2012](#).

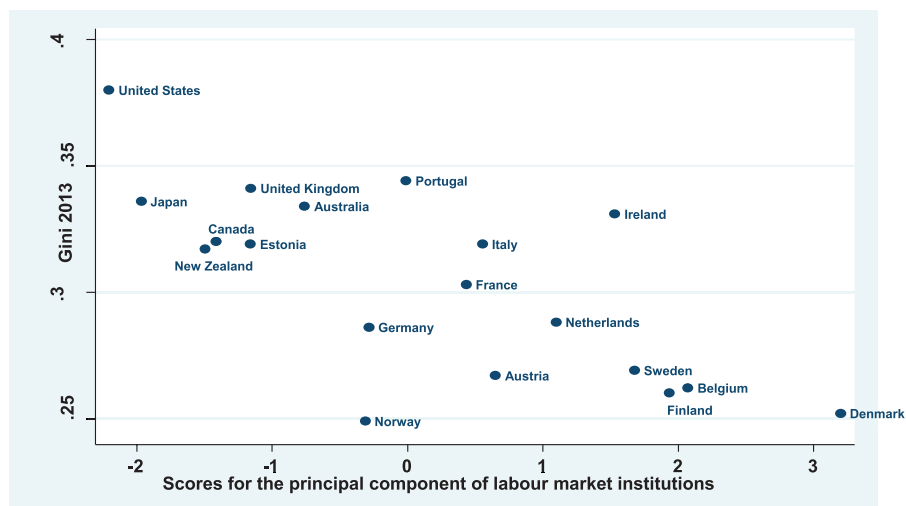


Fig. 9. Inequality and Labour Market indicators.

Note: data concerning the set of 10 labour market institutions used to create the score on the horizontal axe are available only for a limited number (19) of advanced countries (see [Table A1](#) in Appendix).

Source: own elaboration on OECD data.

shows the evolution of the average level of EPL among OECD countries from 1990 to 2013. Its decline clearly underlines an increase in labour flexibility ([Figure 10](#)).

As already noted by [Hall and Soskice \(2001\)](#) and [Storm and Naasteepad \(2012\)](#), complementarities between labour flexibility and financialisation are strong in advanced economies. A flexible labour market with compressed wages needs to be supplemented by available financialisation, credit and developed financial tools to sustain consumption, which otherwise would be compressed by low and unstable wages. Therefore, a large number of financial tools were invented to finance consumption, postpone payments, extend credit and create extra consumption ([Brancaccio](#)

and Fontana, 2011). That being said, it is difficult to establish a causal relationship: we cannot be certain whether financialisation requires labour flexibility or if increased labour flexibility brings about hyper-financialisation. A simple, but important, correlation between these two complementary institutional forms of neoliberalism seems more likely.

Labour flexibility allows for the reduction of firms’ labour costs and, thus, wage savings at the expense of wage earners; that is, consumers. In such a situation, inequality increases and aggregate demand is restricted because consumption decreases.

It is very interesting to notice an inverse relationship between inequality and the EPL index (labour flexibility): the lower the EPL (higher labour flexibility), the higher the inequality. Continental and Scandinavian European countries have a higher EPL (lower labour flexibility) and lower inequality relative to Anglo-Saxon and Mediterranean countries, which generally show the opposite values of higher inequality and lower EPL (higher labour flexibility).

As a result, one can see that high financialisation is typically associated with high Gini coefficients and high labour flexibility. More interesting are the parallel trends of these variables: when financialisation increases, both flexibility and inequality increase. All these relationships can also be read in the correlation matrix (Table 1) below. In other words, as was argued elsewhere (Tridico, 2012), the rise of inequality generated an increased demand for credit, which translated into a credit expansion provided for by accommodating monetary policies and financial deregulation. One should take particular notice of the particular path of Scandinavian countries (especially Sweden

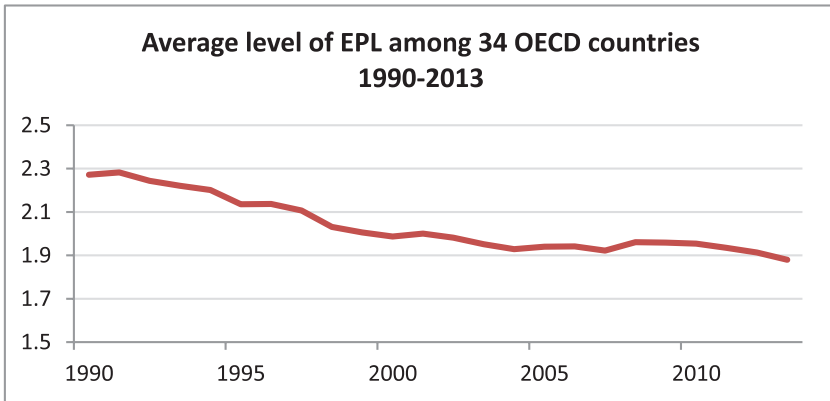


Fig. 10. Labour Market Flexibility. Source: own elaboration on OECD data.

Table 1. Correlation matrix

	Gini	S	TU	EPL	F
Gini	1.0000				
S	-0.4857	1.0000			
TU	-0.7051	0.3134	1.0000		
EPL	-0.3854	0.5258	0.0712	1.0000	
F	0.2902	-0.3249	-0.2408	-0.3524	1.0000

and Finland), which display a relatively high degree of financialisation but yet are able to contain inequality (which nevertheless is increasing) with their strong welfare states (along with other labour market institutions).

Many economists in the recent years showed, empirically, a strong correlation between inequality and tax reduction, in particular for top income earners (Piketty, 2014; Atkinson *et al.*, 2011; Facundo *et al.*, 2013). In fact, it can be noticed, from Figure 11 below, that the top marginal taxation, among advanced economies, decreased steadily since 1970 from 60% to 80%, and stabilized before 1990 around a rate of 40% to 50%. This may have contributed, in that period, and immediately after, to the increase of inequality.

However, from 1990 up to today, which is the period of our empirical analysis, top marginal rates on income earned were stable with little variation around 45% in most advanced economies, and in the last part of this period, after 2007, slowly increased to 48%. Hence, very likely the increase of inequality, in this period, is due mostly to other factors, as we will show in the econometric section. Figure 12 below, concerning the top personal income tax in high-income OECD countries on average, since 2000, according to the available data, shows this pattern.

On the contrary, as Figures 13 and 14 show, tax on dividends, both corporate income tax and personal income tax, between 2000 and 2017 in the 25 OECD countries under analysis decreased steadily (the decrease of corporate income tax was more marked). This is consistent with our hypothesis of the financialization of the economy. Financial expansion shaped the model of financial capitalism in which states and governments are obliged to fit, to create institutions, to implement policies to compete with each other through tax competition, attraction of capitals, social dumping, and to deregulate labour market and compress labour through labour flexibility. More in particular, concerning taxation, the finance-dominated capitalism requires lower tax on dividends. In turn, low taxes on dividends pushed economic agents to invest more in the financial sector and in particular on shares.

Finally, our series of correlations and relationships suggest that what contributes to the increase or decrease of inequality seems to be the choice of the socio-economic model that each country built during the decades after the Second World War. More specifically, what is most relevant is the set of policies that each country is currently able to implement in order to cope with the challenges of globalisation in terms of both income distribution and competitiveness (Rodrik, 1999). These include in particular social protection against unemployment and low wages, welfare programs against poverty, health and education policies, social policy for housing, and so forth. As the correlation matrix below shows (Table 1), there seems to be a clear relationship between inequality and welfare expenditures in the sense that countries that spend more on welfare generally have a lower level of inequality.

After the Second World War and particularly since 1960, countries, especially those in Europe, invested increasing shares of their GDP in developing welfare states. This trend continued until the beginning of the 1990s. After that, and particularly after the peak was reached in 1993, governments started to retrench welfare states and welfare expenditure was lower on the eve of the financial crisis in 2007 than in 1993 (OECD, 2012) (Figure 15).

Only countries which managed to maintain relatively high levels of welfare spending (along with the other variables discussed) have managed to preserve low levels of inequality, as our model in the next section shows.

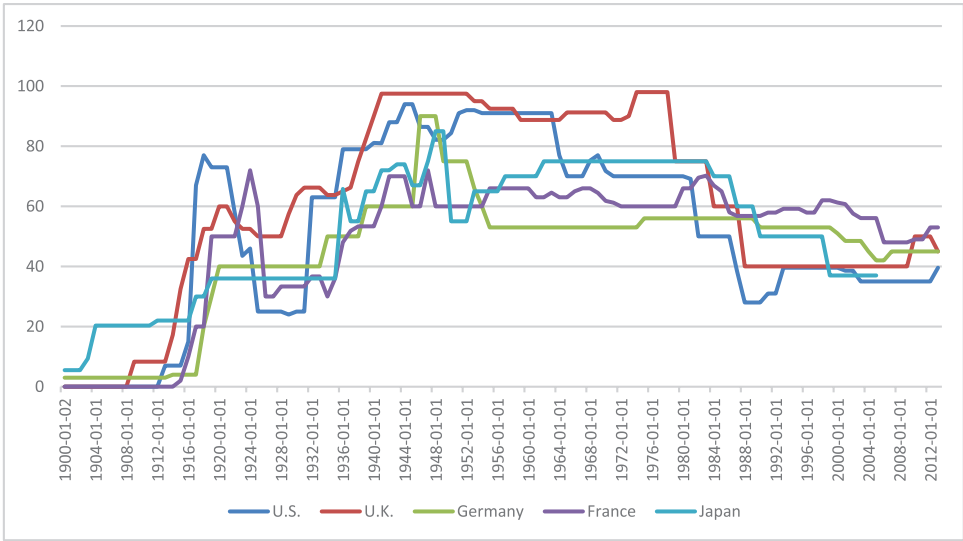


Fig. 11. Top marginal tax rate on income earned 1900-2012 (selected countries).
 Source: Piketty 2014, <http://piketty.pse.ens.fr/en/capital21c2>.

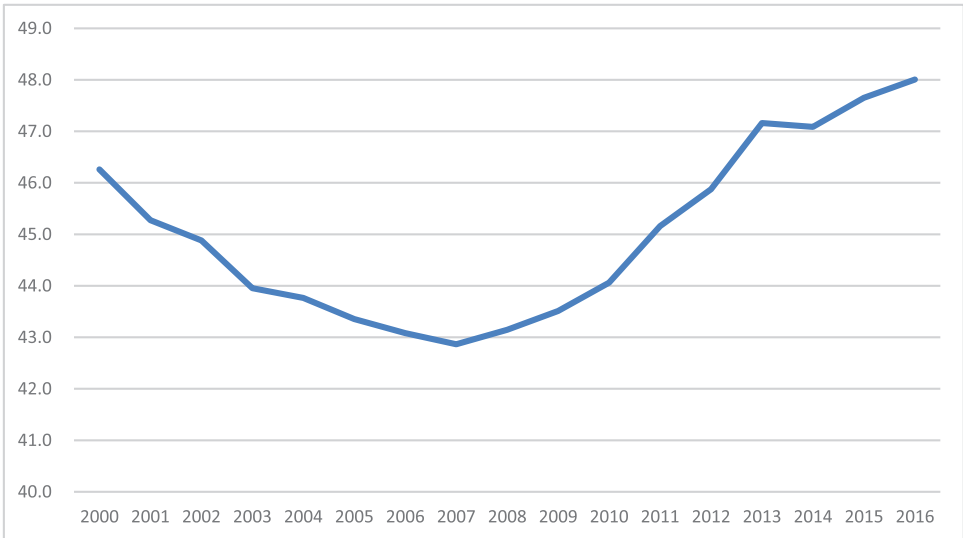


Fig. 12. Top marginal tax rate on income earned 2000-2016 (average 25 OECD countries).
 Source: own elaboration on OECD data.

5. The model

The model that I put forward in this section takes into consideration the analysis and the relationships discussed previously. The objective is to identify the determinants of inequality over the past two decades in rich countries or, more precisely, in 25

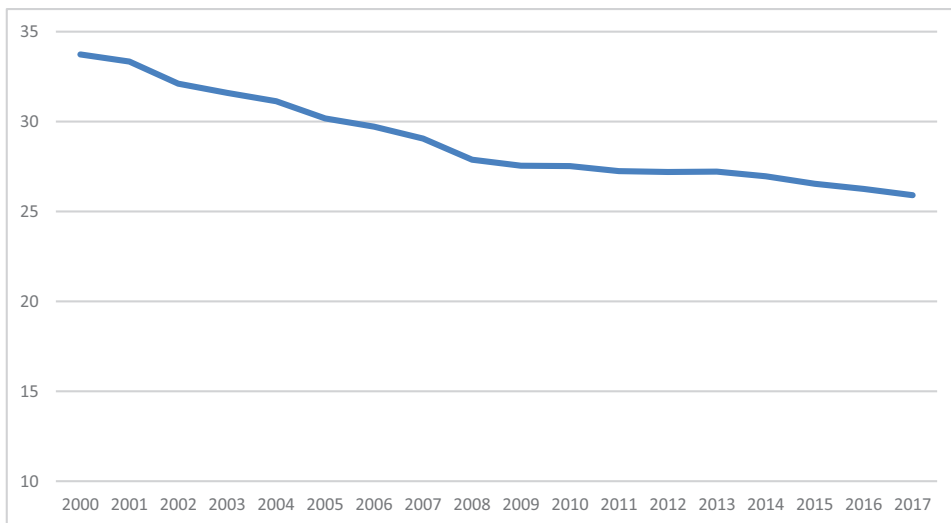


Fig. 13. *Tax on dividends (Corporate income tax) 2000-2017 (average 25 OECD countries).*
Source: own elaboration on OECD data.

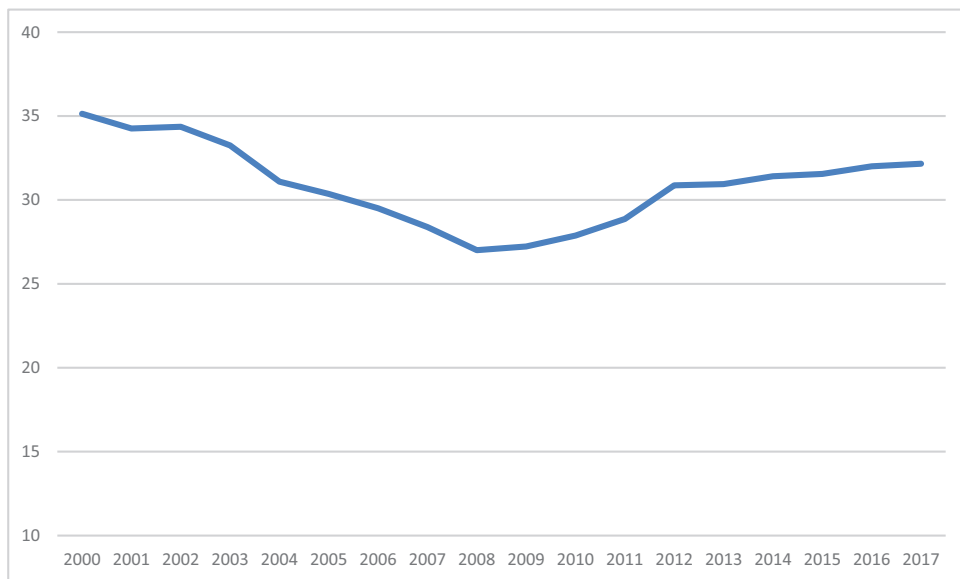


Fig. 14. *Tax on dividends (Personal income tax) 2000-2017 (average 25 OECD countries).*
Source: own elaboration on OECD data.

OECD countries.¹⁰ We have observed inequality increases in the past two decades or more, according to both Gini coefficients and various ratio indicators, including the Palma ratio. The strong correlation between these indicators, as represented in [Figures 16](#) and [17](#), is consistent through time.

¹⁰ In the sample are included the ‘old’ high-income OECD members such as the previous EU15 plus Norway, Switzerland, Iceland, North America, Australia, New Zealand, Israel, Japan and Korea. This is group of quite homogeneous and similar countries.

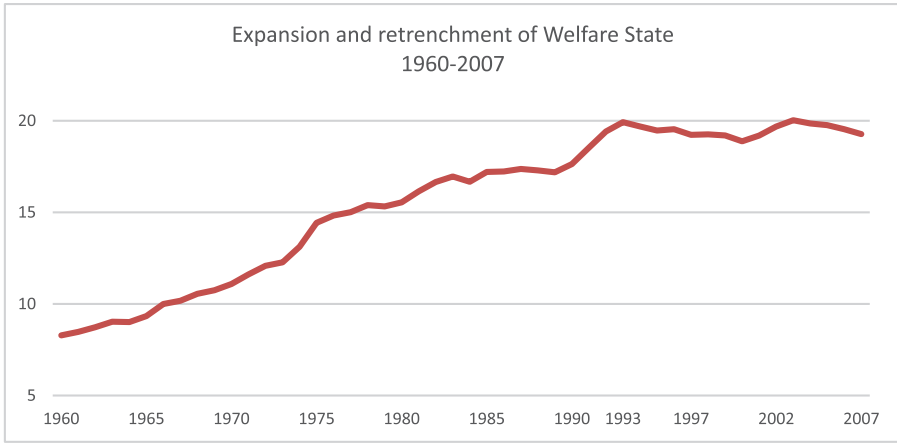


Fig. 15. *The Welfare States since 1960 (Public Social Expenditure, % of GDP).*
Source: own elaboration on OECD data.

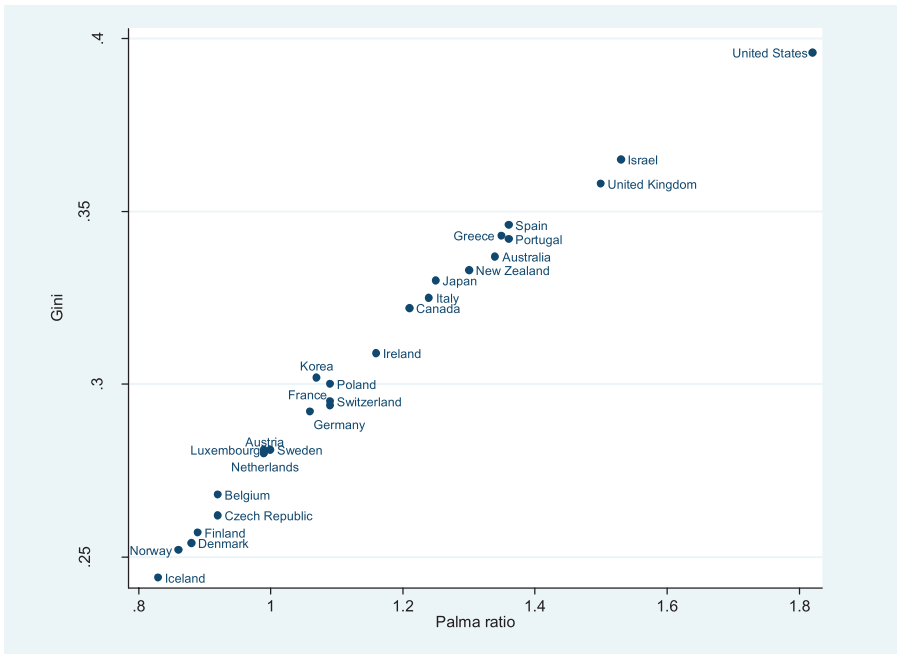


Fig. 16. *Correlation between Gini and the Palma ratio (2013).*
Note: The Palma ratio is the share of all income received by the 10% people with highest disposable income divided by the share of all income received by the 40% people with the lowest disposable income.
Source: own elaboration on OECD data.

In our model, we preferred to use the Gini coefficient because it has a wider coverage in terms of years and countries than the Palma ratio and other ratios. Our model is represented by the following equation:



Fig. 17. Correlation between Gini and other ratios (2012).

Note: The 90/10 ratio is the ratio of the upper bound value of the ninth decile (i.e. the 10% of people with highest income) to that of the upper bound value of the first decile. The 90/50 ratio is the ratio of the upper bound value of the ninth decile to the median income.

Source: own elaboration on OECD data.

$$Ineq = \alpha + \beta_1 F - \beta_2 EPL - \beta_3 TU - \beta_4 S + \varepsilon$$

where the dependent variable is inequality (Ineq) and the independent variables are financialisation (F), labour flexibility, indicated as LF or as (the reduction of) EPL (Employment Protection Legislation), trade union density (TU) and public social spending (S). I used panel data for 25 OECD countries from 1990 to 2013, with more than 500 observations. We start to show a simple correlation matrix which highlights the strong correlation among the relevant variables and in particular the correlation between Gini (the dependent variable) and the five explanatory variables, which confirms, in the sign, the direction of our hypothesis.

The regression results are very interesting and confirm our hypothesis (see Table A3 in the appendix). I use a GLS model with a random effect to establish the relation, verified through the Hausman test against the fixed effect. The GLS Model I produces very robust results, according to which inequality increases when 1) financialisation increases (i.e. the level of market capitalisation as defined previously); 2) labour flexibility increases (i.e. the Employment Protection Legislation or EPL decreases); 3) trade unions are weaker (i.e. TU density declines); and 4) the level of public social spending decreases. All coefficients are statistically significant at least within a 5% level.

Thus, we can consider the following output (RE GLS Model 1, Table A3 in the appendix):

$$Gini = .35 + .00005 * F_{ij} - .002 * EPL_{ij} - .0001 * TU_{ij} - .0008 * S_{ij},$$

with i = country, and j = year

The economic importance of this model is considerable. Take, for instance, two emblematic cases (cases so different they could be described as poles apart); the USA with a Gini = 37% and Germany with a Gini = 27%. The model tells us how much of

the variation in *Ginis* is explained by variations in *F* (and other independent variables). For the USA, $F = 119\%$, and $F = 44\%$ for Germany. That is a difference of 75% ; $75\% \times \beta_1 = 75\% \times 0.0000502 = 0.0375$, which is about one-third of the difference in inequality between the USA and Germany. The rest of the difference in inequality (the other two-thirds) can be explained by the other three relevant variables of the model: *EPL* (labour flexibility), *TU* (Trade Union density) and *S* (Social Spending), with this last variable having the most important role. Similar explanations can be drawn for all countries of the sample.

Model 2 shows the results of the fixed effect regression, which, however, are not confirmed by the Hausman test performed. Economically, this has an important meaning: fixed effect is usually preferred when it is assumed that variation of the dependent variables is due to structural (fixed) policies/institutions/factors which do not change much in a short time period. However, in my model, the timespan of my panel (1990–2013) is long enough to allow for changes in policies/institutions/factors which in a shorter time period could be more or less fixed. Hence, random effect is a favoured option, not only because it is consistent against the fixed effect according to the Hausman test, but also because it is a more reasonable option from an economic point of view. Inequality changed very much in the past two to three decades, and this has to do with policies and institutions (such as labour market flexibility, social spending, etc.) implemented in that time period, which vary consistently among countries and over time so that they cannot be considered fixed.

In Model 3, I include some relevant control variables, such as the unemployment rate, imports (as a percentage of GDP), FDI inflow (as a percentage of GDP), economic growth and tertiary education level, plus the years (as time dummies). The same timespan was used for all these variables as that covered by the panel, i.e. 1990–2013. As the regression table suggests, adding these variables to the initial model does affect the results (they are all statistically insignificant), since the coefficients for our variables of interest (*F*, *EPL*, *TU* and *S*) stay approximately the same. This means that higher unemployment rates do not affect inequality levels, so long as the welfare state of that country is able to compensate the unemployed. Moreover, the other two control variables suggest that an open economy with more unskilled labour is not condemned to increased inequality if this economy has a stronger welfare state, powerful trade unions, a more rigid labour market and social institutions which mitigate the negative effects of globalisation and of technology. This seems to be the case, for instance, in the very competitive Scandinavian and continental European economies, which are also countries where inequality is low.

Model 4 includes also taxation. We have three variables on taxation: top tax rate on earned income, tax on dividends by firms (*CIT*) and by individuals (*PIT*).¹¹ We have seen in the descriptive part in the previous session that taxation on personal earned income reduced steadily from 1970 to 1990, and this is probably one of the reasons why inequality increased in that period (as suggested by [Piketty, 2014](#), among others). However, taxation, in particular on personal earned income, remained more or less stable after 1990, which is the period of our analysis. Hence, when we include those three variables in our panel, they are statistically not significant, as Model 4 shows, although the signs of the coefficient are negative (the higher the taxation, the lower the inequality), at least for *CIT* and for top tax rate on earned income.¹² Nevertheless,

¹¹ *CIT* stands for Corporate Income Tax, and *PIT* stands for Personal Income Tax.

¹² Moreover, we have to add that available data concerning taxation for all 25 countries analysed here start only from 2000, while the rest of our sample starts in 1990.

lower tax, in particular lower CIT on dividends, remains functional to the financialisation of the economy, as we have explained in Section 4, and this crucially explains, in our model, the increase of inequality.

Models 5 and 6 check the robustness of the findings and the sensitivity of the analysis to possible outliers, such as Luxembourg (which has a very high level of financialisation ratio of 149%, more than double the OECD average of 62%, despite the fact that its population is only about 350,000 people) and Iceland (which has about 300,000 inhabitants). Model 5 shows that results do not change when Luxembourg and Iceland are dropped from the panel. Hence, the findings are robust. In Model 6, Switzerland was also dropped from the panel; this country has the highest level of financialisation (187%). In this case, the results also do not change; hence, the main conclusions of model 1 still apply.

A further robustness check was carried out with Model 7, which includes a lag of one year for the dependent variable (Gini coefficient) in order to overcome possible auto-correlation problems in error terms. In this case, the results are also very robust and the model confirms the previous results: although lagged, the dependent variable seems to be caused by the same independent variables (F, EPL, TU and S). Finally, the Hausman test for these models also confirmed the appropriateness of the random effect. Hence, Model I, which was our main specification, is confirmed.

As for other diagnostic issues, the correlation matrix above shows also that there is a relatively small (imperfect) multicollinearity between F and EPL (−0.38), between TU and S (0.31) and between EPL and S (0.52). However, the multicollinearity test carried out in [Table A4](#) in the appendix—the VIF test (*variance inflation factor*)—excludes systematic multicollinearity among the explanatory variables: all the VIF values are much below 10, and the tolerance level (1/VIF=0.1) under which multicollinearity may take place is well overcome by all the independent variables used in the regressions ([Drukker, 2003](#)). Hence, multicollinearity is not biasing the estimated coefficients.

In [Table A5](#) in the appendix, the Levin-Lin-Chu test was used to verify whether the panel data contains unit roots or if it is stationary. The null hypothesis tested, which I rejected with a level of significance below 1%, is that the series contains a unit root, and the alternative hypothesis is that the series is stationary ([Levin-Lin-Chu, 2002](#)). Last but not least, the residual normality test (see Kernel test in [Figure A1](#)) confirms a symmetric and unimodal distribution.

Conclusion

This paper argues that the increase in inequality in OECD countries, which has been very marked over the past two to three decades, is due to a radical change to the main features of the socio-economic model in those countries. This change involves a shift towards financialisation, a pressure on labour through increased labour flexibility, the decline of trade unions' power and the retrenchment of public social spending. Our sample was composed of data for 34 OECD countries during the period between 1990 and 2013. The econometric analysis produced very interesting results, and the regression confirmed our hypothesis that inequality, after transfers and taxes, increases when the level of labour flexibility and the level of financialisation of the economy increases, and when trade union density and public social spending declines. The introduction of control variables such as the unemployment rate, FDI, imports, economic growth or tertiary education level did not alter the results.

These results pose further challenging questions for governments and policymakers. First of all, does inequality negatively affect economic performance and, second, does inequality negatively affect government revenues and fiscal performance? Important answers have already been found by [Winkelmann and Winkelmann \(2010\)](#), who discovered a robust inverse relation between the size and the income of middle class (and economic performance) and inequality, and by [Larch \(2012\)](#), who found evidence that a more unequal distribution of income can harm fiscal performance of a country. More recently, evidence from the IMF (see [Ostry *et al.*, 2014](#)) and the OECD (see [Cingano, 2014](#)) demonstrated that high levels of inequality were associated with lower economic growth, suggesting that there is no ‘big trade-off’ between equality and efficiency. Hence, economic and fiscal policies in the post-2007 financial crisis should take into consideration their distributional implications.

Moreover, inequality is problematic not only for intrinsic ethical reasons. It involves at least two more types of problems. The first has to do with democracy and social cohesion: a strongly unequal society may easily evolve towards an authoritarian regime and an unstable political system ([Stiglitz, 2012](#)). In the past, examples of several Latin American countries and, today, several post-communist countries show that this is a very realistic scenario. The second problem has a genuinely instrumental nature: inequality leads easily to economic instability and financial crisis, in particular when the financial sector tries to compensate for the lack of consumption and aggregate demand with credit availability and debt-led growth, as we have argued before and as several studies show ([Galbraith, 2012](#); [Perugini *et al.*, 2015](#); [Stockhammer, 2013, 2015](#); [Cynamon and Fazzari, 2013](#); etc.).

The financialisation of advanced economies, as I discussed in this paper, occurred from the end of the 1970s in the USA and the UK and from the end of the 1980s in Western Europe and in other advanced economies. It increased rapidly in the 1990s and in the 2000s, with negative effects on inequality. Compensations in the financial sector soared enormously in the past two decades, beyond any reasonable link with labour productivity. The globalisation of the economy, which occurred during the same period, increased the power of capital in relation to labour and trade unions lost power, contributing to the deterioration of labour market institutions. During the process of financialisation and globalisation of economies, which defines the shift towards what I called financial capitalism, labour markets were affected by radical changes too, involving above all an increase in labour flexibility. As I argued, a flexible labour market with compressed and low wages needs to be supplemented by credit consumption and developed financial tools to sustain consumption. Hence, a strong correlation between financialisation and labour flexibility was identified in our empirical analysis, suggesting complementarities between these two phenomena. Labour market institutions—such as protections against firing and hiring—were weakened and contracts for temporary jobs increased. This process is demonstrated by the trend of the Employment Protection Legislation (EPL) indicator, which has decreased on average in the sample used in this paper. In this context, labour has been continuously under pressure, contributing to the worsening of income distribution and, therefore, to the increase in inequality. Finally, income distribution has worsened due to the retrenchment of the welfare state (as illustrated in this paper by the stagnation in public social spending) in advanced economies, mostly with the justification that firms would be more competitive and economies could attract more capital, as the so-called ‘efficiency thesis’ would suggest.

Obviously, there is a strong variation in the independent variables among the countries analysed, and strong variation also exists with regards to inequality. Usually continental European countries have lower inequality levels, lower levels of financialisation and labour flexibility and higher levels of trade union density and social spending. Conversely, Anglo-Saxon countries have higher inequality levels, higher levels of financialisation and labour flexibility and lower levels of trade union density and social spending. Mediterranean countries, new European Union Member States (from Central and Eastern Europe) and emerging economies, which have increasing levels of inequality, are also increasing their levels of financialisation and of labour flexibility, while they are lowering their levels of trade union density and social spending.

These worrying changes constitute strong signals to policymakers who wish to reduce income inequality. In fact, this study indicates that there are specific variables that policymakers should address in order to reverse these changes and decrease inequality, beginning with labour flexibility. Restoring higher levels of labour protections would help stop the declining trend of wage share along with the instability of consumption. Stable and higher wage share would be also strongly helped by a change in financial sector regulation, aiming at limiting the shareholder principle of 'downsize and distribute' and at protecting the size of the workforce and employment levels. This latter aim could be reached only if corporations and their boards of directors involve trade unions and workers in distributional and ownership decisions. This obviously requires new management models, which should be promoted and supported by governments. Last but not least, the crucial role of the welfare state should be reconsidered. The welfare state is not only the major tool for income support for people without a job and the provider of essential social services which otherwise would be inaccessible for most workers. The welfare state is also the major public institution for income re-distribution and should be used as such. It can be the source and the regulator of employment levels, and it is the major institution able to reconcile the conflict between capital and labour.

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Appendix

Table A1. Labour market indicators

	Active Policy 2012 (% of GDP)	Passive Policy 2012 (% of GDP)	Coverage (in % of workers) of trade Unions 2009–11	Level of coordinat bargaining wage	Length unempl. subsidies (months) 2011	Substitut. rate for unempl. subsidies (% 2009–11)	Minimum wage, hourly (US\$ PPP)	Scores of the principal component analysis
Australia	0.29	0.51	99.00	6.00	9	0.55	10.5	-.75
Austria	0.75	1.29	60.00	0.00	48	0.22		.65
Belgium	0.81	2.08	96.00	0.33	48	0.59	10.1	2.07
Canada	0.24	0.59	31.50	0.00	11	0.59	7.8	-1.41
Denmark	2.1	1.7	82.00	0.00	24	0.55		3.19
Finland	1.03	1.45	90.00	1.67	23	0.54	10.7	1.93
France	0.9	1.45	95.00	3.33	24	0.69		.43
Germany	0.69	0.98	63.00	0.00	12	0.60	9.0	-.28
Ireland	0.91	0.57	44.00	0.00	12	0.36		1.53
Italy	0.45	0.34	80.00	0.67	8	0.63		-.19
Netherlands	0.98	0.37	82.00	3.67	38	0.68	9.5	1.09
New Zealand	0.29	0.35	17.00	0.00	48	0.23	8.7	-1.49
Norway	0.54	0.3	72.00	0.00	24	0.67		-.31
Portugal	0.49	0.44	62.00	0.00	24	0.78	4.0	-.010
Sweden	1.33	0.59	92.00	0.00	35	0.60		1.67
UK	0.41		34.80	0.00	6	0.17	8.0	-1.15
US	0.12		13.10	0.00	23	0.57	7.3	-2.20

Note: Data concerning most of these labour market indicators, on the basis of which the factor analysis was run, and the score of PC in the last column was extracted, are not available for all OECD countries, but only for 19, as this table suggests.

Source: Own elaboration on OECD data.

Table A2. Descriptive statistics for the regression of Table A3

	Financializ 2013 (% gdp)	Financializavg (% gdp)	EPL 2013	EPL avg	TU density 2013	TU density avg	Social Spending 2013 (% gdp)	Social Spending avg (% gdp)	Inequality (Gini 2013)	Inequality (Gini avg)
Austral.	85	92	1.27	1.11	17	26	19	15.2	0.32	0.32
Austria	27	21	1.84	1.94	27	36	28.3	25.5	0.28	0.27
Belgium	62	57	2.09	2.46	55	54	30.9	26.3	0.26	0.27
Canada	111	95	0.59	0.59	27	30	17.2	16.9	0.32	0.31
Denn.	72	54	1.79	1.95	67	72	30.2	26.9	0.25	0.23
Finland	63	85	1.86	1.88	69	74	30.6	25.6	0.26	0.25
France	70	64	3.00	2.99	8	8	32	27.9	0.31	0.29
German	44	40	2.00	2.34	18	25	25.6	24.5	0.29	0.27
Greece	18	41	2.18	3.29	21	27	24.3	18.7	0.34	0.34
Iceland	21	62	1.18	1.18	83	88	17.1	15.7	0.25	0.26
Ireland	52	54	1.01	0.90	30	39	21.9	18.6	0.30	0.31
Israel	57	61	1.46	1.46	32	55	15	15.9	0.38	0.36
Italy	24	31	2.26	2.97	37	36	28.7	23.1	0.32	0.32
Japan	62	74	1.12	1.40	18	21	23	14.4	0.34	0.33
Korea R	105	60	2.25	2.55	10	12	10.2	5.7	0.31	0.31
Luxemb	123	149	3.00	3.00	33	41	23.4	20.9	0.28	0.27
Netherla	84	92	1.88	2.00	18	22	24.6	23.8	0.28	0.29
NewZea	48	42	1.20	1.06	19	25	20.8	19.1	0.32	0.33
Norway	51	43	2.67	2.67	54	55	22	20.8	0.25	0.26
Portugal	31	32	2.50	3.57	21	23	25.8	17.0	0.34	0.37
Spain	74	65	2.31	2.91	17	17	27.3	21.2	0.34	0.33
Sweden	107	92	1.71	2.17	68	77	28.2	28.8	0.27	0.24
Switzerl	171	187	1.36	1.36	16	20	19.9	16.5	0.29	0.30
UK	124	128	0.70	0.71	25	30	22.5	19.4	0.34	0.34
US	119	115	0.25	0.25	11	13	18.6	15.1	0.39	0.37
OECD	62	62	1.88	1.11	17	21	21.7	15.2	0.32	0.32

Note: The average (avg) is for the whole period (1990–2013).

Source: Own elaboration on OECD data.

Table A3. Regression results for inequality (Gini, 1990–2013)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
	GLS Random effect baseline	Fixed effect	RE with control var		RE without Luxembourg and Iceland	RE without Switzerland, Luxembourg and Iceland	RE with 1 year-Lag (Gini)
Financialization (F)	4.14e-05*** (-1.54E-05) -0.00270* (-0.00163) -0.00102*** (-0.00012) -0.00018*	4.17e-05*** (-1.55E-05) -0.00280* (-0.00167) -0.00104*** (-0.00013) -0.00018*	5.16e-05** (-1.91E-05) 0.00430** (-0.00216) -0.00125*** (-0.00015) -0.00013*	5.10e-05** (-1.91E-00) 0.00320* (-0.00115) -0.00196** (-0.00010) -0.00011*	4.32e-05*** (-1.57E-05) -0.0024* (-0.00164) -0.00106*** (-0.00013) -0.00018*	5.99e-05*** (-1.83E-05) -0.00185* (-0.00168) -0.00107*** (-0.00013) -0.00013*	3.58e-05** (-1.57E-05) -0.00141* (-0.00169) -0.00118*** (-0.00013) -0.00022*
EPL (LF)							
TU_density (TU)							
Social spending (S)							
FDI_IN							
Import							
Unemployment							
Tertiary education level							
Econ. Growth							
Tax on dividends (CIT)							
Tax on dividends (PIT)							

Table A3. Continued

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
GLS Random effect baseline		Fixed effect	RE w/ht control var		RE without Luxembourg and Iceland	RE without Switzerland, Luxembourg and Iceland	RE with 1 year- Lag (Gimi)
Top tax rate on income				-7.91e-07 (1.95e-06) YES			
Time dummies (1990-2013)	YES	YES	YES	YES	YES	YES	YES
Constant	0.343*** (-0.0112)	0.343*** (-0.0087)	0.331*** (-0.0138)	0.357*** (-0.0146)	0.342*** (-0.0113)	0.340*** (-0.0116)	0.347*** (-0.0114)
Observations	535	535	477	379	523	499	514
R-squared	0.2578	0.2573	0.2128		0.2883	0.3102	0.2698
Number of countries	25	25	25	24	23	22	25
Wald $\chi^2 =$	114.02	27.27	108.51	51.34	117.32	121.4	124.84
Prob > $\chi^2 =$	0	0	0	0	0	0	0

Hausman Test (RE vs FE): b (RE) = consistent under H_0 and H_a ; obtained from xtreg; B (FE) = inconsistent under H_0 , efficient under H_a ; obtained from xtreg;

Test: H_0 : difference in coefficients not systematic $\chi^2(4) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 5.99$ Prob> $\chi^2 = 0.1997$

Note: * indicates significance level at 10%; ** significance level at 5%; *** significance level at 1%.

Robust standard errors in parentheses.

Source: Own elaboration.

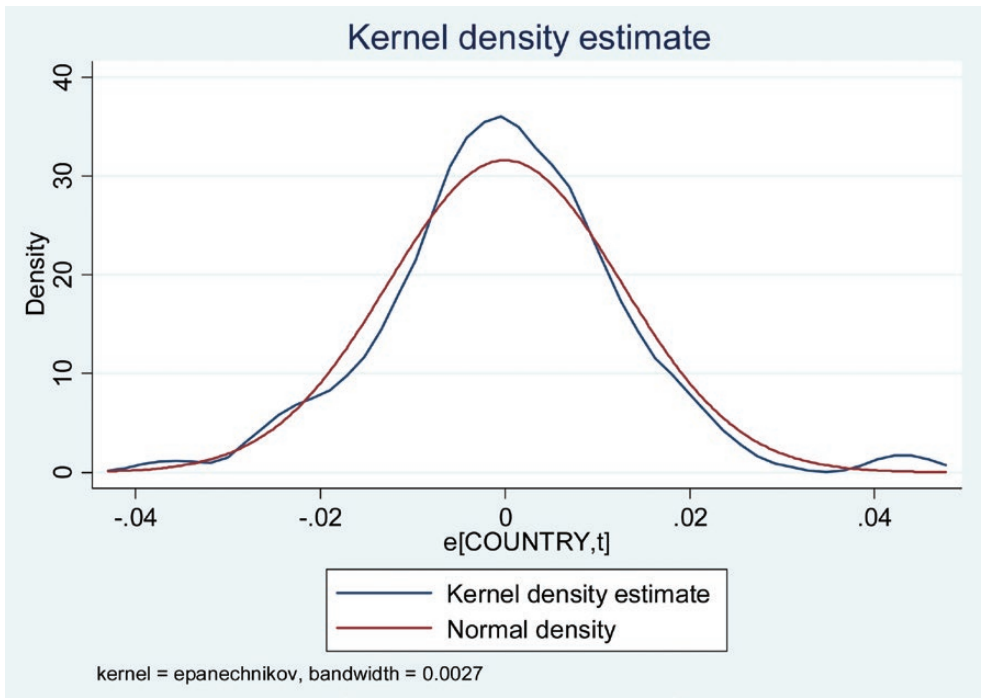


Fig. A1. *Residual normality test.*
Source: Own elaboration.