

# ECONOMIC INEQUALITY: A SURVEY OF RECENT LITERATURE<sup>1</sup>

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**Abstract.** *The purpose of this paper is to review the recent literature on economic inequality. In particular, the developments in the fields of economic growth, financial crises, happiness and skill (capital) biased technological progress are surveyed. By using the methods of systematic and narrative literature review and conducting meta-synthesis of the recent studies, it is shown that conventional wisdom is contested in all of the mentioned fields. The rising economic inequality is linked to financial crises as well as the slower and shorter economic growth. The Easterlin paradox is losing support. Skill-biased technological progress is possibly evolved into a capital-biased one.*

**Key words:** *economic inequality, financial crises, skill-biased productivity, capital-biased productivity, the Easterlin paradox*

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## Introduction

Economic inequality has always been a controversial topic among economists. High or low levels of income dispersion and their effects on various economic and social phenomena have seen their fair share of treatment. Traditionally, inequality was somewhat counter-intuitively not associated with contributions to financial crises, lower growth rates and the decrease in the self-reported measure of life satisfaction. Respectively, as the modern technological progress favoured those who had the skills to exploit it, the income gap between the rich and the poor in advanced economies was thought to be determined by the structure of human capital. Recently, all of the mentioned fields of research have come under some overhaul. Counter-intuitive ideas always call for reassessment when new data become available or new research methods that overcome the shortcomings of their predecessors are developed. In this paper, I review recent studies on the topics and contribute to the literature by systemizing the most current research.

Historically, increases in inequality were not linked to the higher likelihood of financial crises. The main obstacle for more attention to the possible relationship was

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<sup>1</sup> I would like to thank Artūras Juodis for useful comments and suggestions. However, all errors are my own responsibility.

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the lack of adequate data. Prior to the 2008 financial crisis, the most recent period when a huge financial crisis followed a significant increase in income inequality was the Great Depression. Today, some researchers (e.g., Rajan, 2011; van Treeck, 2012) argue that the similar inequality patterns observed prior to and during the Great Recession are not a coincidence. The idea has gone mainstream and was widely discussed in the media. However, while income inequality does seem to have contributed to the financial crisis of 2008, it fails to tell the whole story.

Skill-biased productivity growth was the main explanation of the increase in income inequality since the early 1980s. As a more advanced and sophisticated technology becomes available, only those who are in a position to exploit it (have the adequate skills to use it) benefit. This view still has a strong support in the evidence reported by the recent research, but there are some (e.g., Vardi, 2012; Spence, 2013; Brynjolfsson, McAfee, 2011) who argue for a shift of attention to a capital-biased technological change. The latter favours those who own capital (returns on it improve greatly) and those with the skills that are hard to automate (e.g., software developers). The technological progress seems to account for some of the developments in labour markets around the world, but it is not enough to explain the complete picture (especially the structural unemployment).

Originally, some degree of inequality was thought to be necessary for a fast economic growth as it provides incentives to work harder and invest. Some recent studies contest the idea (e.g., Berg et al., 2012) by showing that long periods of fast economic growth are more sustainable when income dispersion is lower. Besides, more equal societies experience fewer fluctuations in saving rates and thus display more stable consumption patterns.

The rest of the paper is structured as follows. In the next section, I review the recent developments in economics regarding the relationship between income inequality and financial crises. Next, I turn the focus on the changing views towards skill-biased productivity growth. Then I discuss the relationship between inequality and economic growth and recent findings in the field. After that, I go through some recent literature discussing the possible implications of the sense of equality to the feeling of life satisfaction. Finally, I present some concluding remarks.

## **Economic inequality and financial crises**

There are quite a few economists who argue that economic inequality contributed greatly to the Great Recession. Although a consensus leans toward the notion that the growing gap between the rich and the poor is a dire consequence of the financial crisis of 2008, some see the causality to be reversed, i.e. the crisis being caused, at least partly, by the high level of inequality. Among others, this idea is escalated by Kumhof and Ranciere (2010), van Treeck (2012), Rajan (2011), van Treeck and Sturn (2012), the U.S. Congress Joint Economic Committee (2010) as well as in press (e.g., Story, 2010) and in economists' blogs (e.g., Thoma, 2012).

The notion that economic inequality may have caused the biggest financial crisis since the Great Depression has recently been raised by Rajan (2011). In his book, he argues that many of the US consumers reacted to a decrease in their permanent incomes since the early 1980s by reducing saving and increasing borrowing. A study by IMF (2012) supports this note by showing that households with the bottom third of income reduced their saving rates (“transferred future consumption to today”) prior to the recent crisis.

For some time, this helped to sustain private consumption, aggregate demand and employment at high levels despite nearly stagnant incomes in most households. The rising appetite for debt also created a large credit bubble which burst in 2008 when Lehman Brothers went bust. This insight (dubbed as the Rajan hypothesis by some) is not entirely new, but it is fair to state that it is the modern reincarnation of the notion that large gaps in income lead to the unsustainable expansion of lending, especially the low-income households.

Rajan’s ideas are further supported by Lansley (2012) calculations that today workers in the UK and the US earn considerably less than what they would be earning if the output were divided in the late 1970s proportions. He also suggests that expansion in private debt to fill the demand gap allowed postponing the prolonged recession into the late 2000s. Van Treeck (2012) notes that if the Rajan insight turns out to be true, the conventional macroeconomic theories of consumption that see no link between permanent income inequality and aggregate personal consumption are challenged and may be rejected.

Moss (2010), using the US data, reveals that there is a remarkable correlation between the increase in income inequality and the total deposits of failed and assisted institutions as a percentage of the GDP (bank failures correlate as well). He shows that the share of income earned by the top 10 percent of households before the 2008 financial crisis is only comparable to the levels that existed before and throughout the Great Depression. While correlations and anecdotal evidence might not be sufficient to reverse the established theories, they make a solid case for the Rajan hypothesis.

A bigger demand for debt in low-income households, as noted by Ranciere et al. (2012), also leads to current account imbalances. They use a theoretical (Dynamic Stochastic General Equilibrium) framework to show that higher top income shares and financial liberalization are associated with large external deficits. These results, however, are challenged by Bordo and Meissner (2012) who estimate a panel of 14 advanced economies and show that inequality is not a robust determinant of the boom and bust cycle.

In addition, Perri and Steinberg (2012) show that the Great Recession had impact on the US income distribution (not the other way around). While it is clear that income disparities rose to very high levels prior to the crisis, disposable income did not entirely follow this pattern because of the historically high redistribution through taxes and transfers. This means that poor families did not have much incentive stemming from decreasing

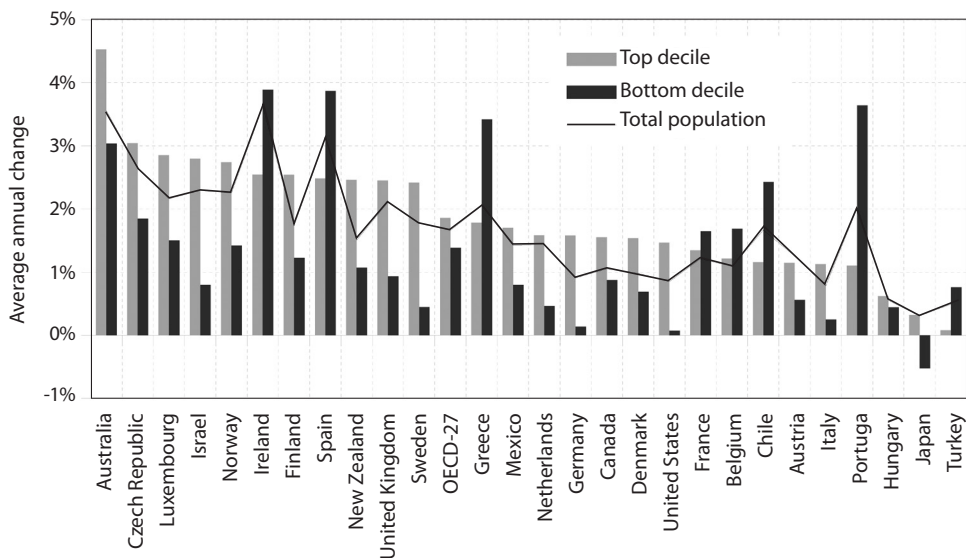


FIG. 1. Annual average real household income change by group from mid-1980s to late 2000s

Source: composed by the author using OECD (2013) data.

incomes (relatively, i.e. compared to their richer counterparts) to borrow in order to keep consumption at roughly the same proportions to the GDP. If you look at the data (Fig. 1), the increase in inequality is not even evident in some of the advanced economies, especially in the European countries (see Fig. 2). The Perri and Steinberg (2012) study supports the Bordo and Meissner (2012) claim that the key determinants of the Great Recession were traditional: the decline in interest rates and a strong growth that led to a rise in credit which, in turn, created the asset price bubbles which eventually burst.

However, the issue of inequality is more pronounced in the US. That matters because it is where the global financial crisis began in 2008. Attanasio et al. (2012) show that the US have actually experienced a widening consumption dispersion despite the claims of not so unequal disposable incomes. Using several alternative techniques (e.g., comparing spending on luxuries relative to necessities, measuring vehicles owned as opposed to simply using data from the Consumer Expenditure Survey) they find that consumption inequality in the US rose to nearly the same amount as income inequality. Their claims are supported by Fisher et al. (2012) who showed that consumption inequality did increase in the period 1985–2010.

In other words, Attanasio et al. (2012) imply that households were not able to keep their consumption levels at roughly constant proportions by borrowing. This contradicts<sup>2</sup>

<sup>2</sup> Although Perri and Steinberg (2012) argue that the record high inequality in the US is followed by an equally high redistribution through taxation and transfers, they acknowledge that individual members of society have experienced sizable decreases in disposable income and consumption expenditures.

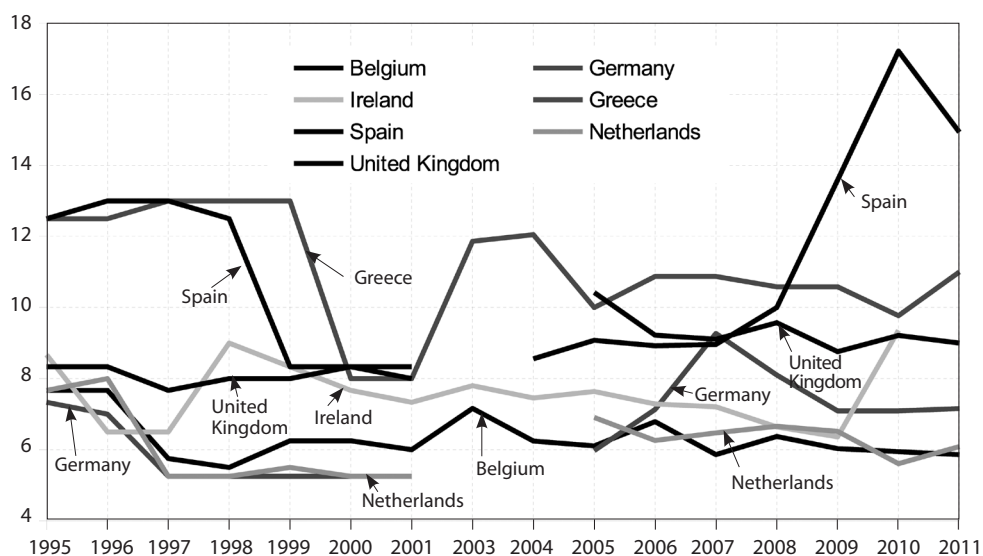


FIG. 2. The ratio of the tenth and the first deciles of the share of national equalized income

Source: composed by the author using Eurostat (2013) data.

Perri and Steinberg (2012) findings and shows that the results are not robust to the data conditions. It is still too early to tell which story is the right one. There is a strong evidence that credit booms are linked to banking crises, but the evidence linking credit booms to rising income concentration is not that clear.

Thus, the premises of the Rajan hypothesis still lack support even considering studies (e.g., Attanasio et al., 2012) which find that consumption inequality rose in line with income inequality. Yet it could still be defended if the link between income concentration and financial crises is political. Philippon and Reshef (2009) have shown that when money buys influence which is used to deregulate financial markets, earnings in financial sectors increase. Atkinson and Morelli (2011) argue that in the latter way the rising inequality increases the probability of a crisis, and when it happens it may have the distributional effects that further strengthen the link. Gilens (2012) shows that in highly unequal societies democratic institutions become dysfunctional in the sense that they are disproportionately influenced by the rich. Indeed, Reinhart and Kaminsky (1999) have found that banking crises are four times more likely to occur following the deregulation. Political influence may also help the rich to secure their incomes during the crises by transferring resolution costs to taxpayers and prevent regulation from being brought back. However, Atkinson and Morelli (2011) do not commit to an exact conclusion because financial crises differ a lot in all sorts of circumstances.

What is more, income and consumption inequality both might be caused by a third factor such as capital-biased productivity growth. It is possible that it causes both the

inequality and macroeconomic instability to rise. As of now, more evidence is needed to choose one story over another.

All in all, the evidence is not clearcut whether the inequality leads to financial crises. Given the mixed conclusions of researchers, it may simply be that the rise in economic inequality since 1980s is not as big as often understood (e. g., due to a bigger redistribution), but it may also have a role in causing a financial turmoil (e.g., through the political process of deregulation), although most probably not a determinant one. In the next section, I turn to analyzing one possible reason – capital-biased productivity growth which may have caused income disparity for the past 30 years to rise.

### **Skill- (capital)-biased productivity growth**

Skill-biased productivity growth is a rather widely accepted hypothesis claiming that the main cause of modern inequality is the technological progress which favours more educated individuals. Recently it has come to economists' attention that income inequality in the past 30 years has possibly been rising not because of the widening skill gap, but because the technological progress has been making human labour less and less competitive as compared to machines (IMF, 2007; OECD, 2007). The idea sprung up during the discussion of manufacturing automation in the media (see Rampell, Wingfield, 2012) and the ways some firms in advanced economies “reshore” their plants back home. It is as if the industrial revolution is happening in its digital reincarnation.

Krugman (2012) is among the supporters of the idea pointing out that, indeed, since the 1980s the share of compensation to employees as a percentage of the GDP has been falling steadily in the US (Fig. 3). Similar trends have been going in all OECD countries (OECD, 2011). As manufacturing robots become cheaper and more efficient, labour costs become almost irrelevant. This allows the companies that have been utilizing globalization for outsourcing to bring back low-added-value manufacturing processes (as compared to product design and engineering) to home countries. However, when the productivity of capital rises faster than that of labour, the income is shifted from workers to owners of capital and highly skilled workers, e.g., when computers are replacing medium-paid white collar jobs such as information processing (Spence, 2013).

Vardi (2012) argues that machines are yet to exceed humans in intelligence, but their algorithms have become sophisticated enough to have a significant impact on the labour market. Although technology has been destroying jobs since the Industrial Revolution, new jobs were simultaneously created. The artificial intelligence revolution is considerably different from the former because machines are displacing human labour not only as mechanical automation; they are competing with our brain. Some evidence of this in the US can be seen in Fig. 4: the human labour compensation started lagging from the productivity growth in 1983, and since then the gap has only expanded. Vardi (2012) claims that if the labour of men can be completely replaced by robots, our economic

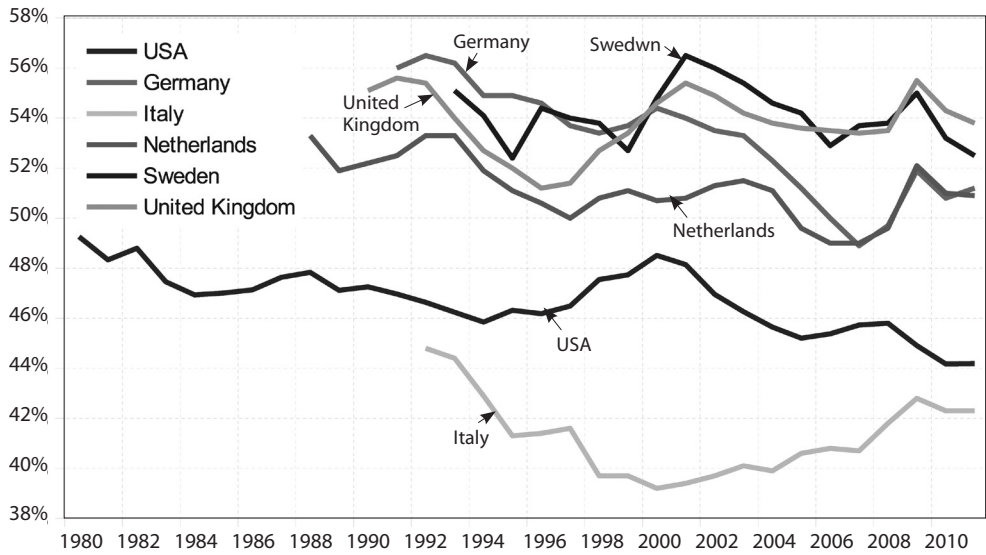


FIG. 3. Compensation of employees as a share of GDP in selected countries

Source: composed by the author using FRED (2013) and Eurostat (2013) data.

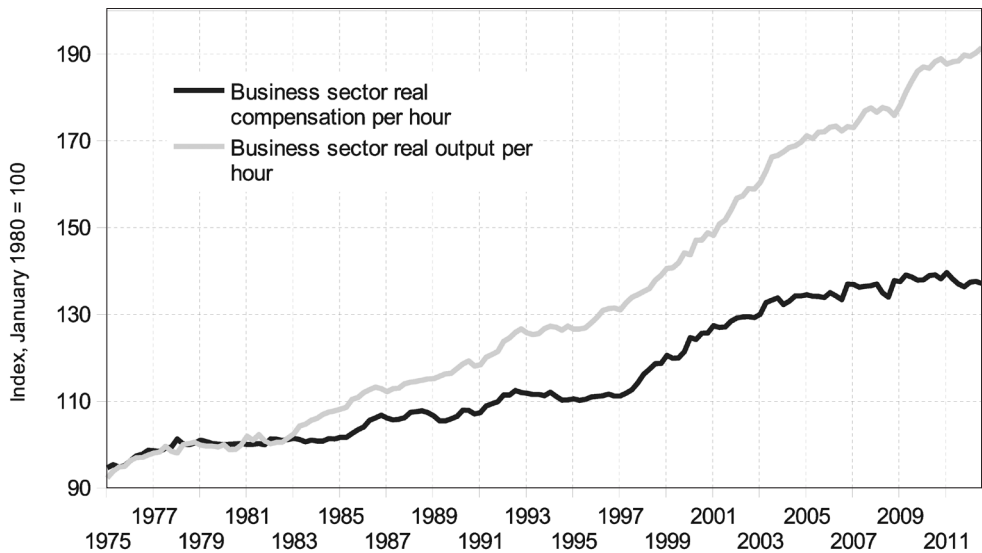


FIG. 4. Real compensation and real productivity growth in the US (seasonally adjusted)

Source: composed by the author using FRED (2013) data.

systems will have to go through a substantial restructuring for the living standards not to drop.

On the other hand, the notion of unemployment becoming structural due to technology has become known as the Luddite fallacy (Edwards, 2012). Brynjolfsson and McAfee (2011) argue that this view may become obsolete as most of the recent labour automation is due to digital technologies and artificial intelligence. This makes a huge difference as compared to the classical advancement, because the process is much faster and the implementation of software solutions (once they are available) is much cheaper than in the former case.

In addition, as suggested by “The Economist” (2011), there is a far greater incentive for businesses to adopt such kind of automation. It replaces knowledge-based workers who are much more costly as compared to their blue-collar counterparts. After all, the main argument against the Luddite fallacy (humans are required to operate machines, and most of workers can learn to operate them) is becoming weak because modern machines require less human input. The displaced workers are increasingly no longer needed as artificial intelligence takes their place or significantly reduces the need of maintenance. Spence (2013) highlights that this happens in addition to the classical automation, i.e. there is a disintermediation in the process of adopting modern technology.

Consequently, the capital-biased productivity growth increases inequality. Findings of Acemoglu and Autor (2012) provide a further support of this view. In their review of Goldin and Katz (2010), they argue that the spreading automation of medium-skill-requiring jobs leads to an increasing supply of skilled workers as well as those with the least skills. The outcome is a higher employment in the occupations that are hard to automate. On the one side, there are the low-paying jobs such as janitors, on the other – high-paying jobs such as software developers. As a result, the middle of the income distribution is shifted to the low and top ends (Fig. 5).

The ideas of technology skeptics are intuitive and rather easy to comprehend; thus, they have become popular in the media and in the mainstream (Davidson, 2013; Tilford, 2012; Smith, 2013; Lohr, 2011). Nevertheless, however dim the future is portrayed, the ideas are not yet being widely accepted in the academia. The disagreement ranges from a complete denial of the capital-biased technological progress to doubts that technology can account for the major part of increase in inequality.

A research by Schmitt and Jones (2012) shows that the rising inequality and the loss of good-paying jobs in the US cannot be associated with workers being not able to keep up with the technological progress. Their analysis suggests that by late 2000s people with a college degree and more than 4 years of education are less likely to have a “good” job than in the late 1970s not because of the capital-biased technological progress. They argue that the economy lost its ability to produce well-paying jobs due to the deterioration of the bargaining power of workers. Schmitt and Jones (2012) highlight that the fall in



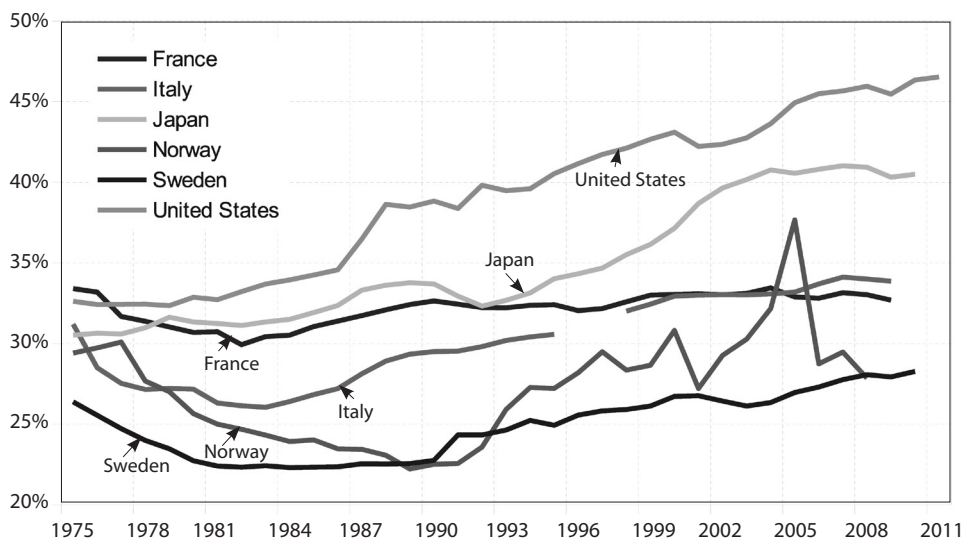


FIG. 5. Top 10 percent income share in selected countries

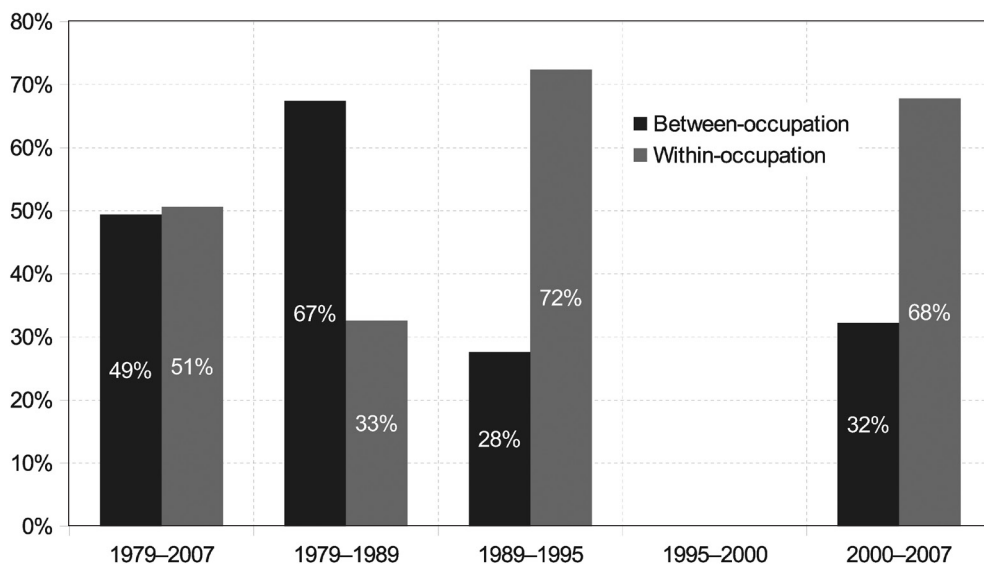
Source: composed by the author using The World Top Incomes Database (2013) data.

the real value of the minimum wage, high unemployment, diminishing importance of unions and trade deals all contribute to the reduction of workers' bargaining power.

Mishel (2013) adds to the discussion by arguing that research in favour of capital-biased productivity growth fails to provide evidence that job polarization has caused wage polarization. Mishel et al. (2013) argue that wage inequality and labour market trends in the US throughout the 1990s to late 2000s are entirely circumstantial and have no robust linkage between them. They show that changes in wage inequality in the bottom half happened suddenly and were relatively sporadic.

Another piece of evidence they present is that between-occupation inequality has not changed much since 1989. This means that the bulk of inequality growth has been caused by the increase of income dispersion within professions and not between low- and high-paying positions (Fig. 6). This, on the other hand, may just prove that skills started mattering so much that they added significantly to the income variability within occupations.

In their study of West German workers' wage inequality, Card et al. (2012) provide one more alternative explanation which does not support capital-biased productivity growth. They show that firms matter very much in determining a worker's wage. If a skilled worker is moved to a better-paying firm, his remuneration is significantly increased, although no skill change is involved in the process. For this reason, better educated workers are increasingly concentrated in high-paying establishments, while less educated workers are increasingly concentrated in low-wage firms. From this perspective, the story is still sound for the old-fashioned skill-biased productivity growth.



**FIG. 6. Share of wage inequality growth in the US due to between- and within-occupation group inequality, women, 1979–2007**

*Note:* wage inequality declined during the period 1995–2000.

*Source:* adapted from Mishel et al. (2013) by the author.

The process is mediated in the education system, because a worker’s educational background is easy to check. However, when high-skill workers are not short in supply, education is measured in the qualitative dimension. In other words, employers discriminate applicants informally not on whether they have some particular level of education (as people with that kind of education become abundant), but on where it was obtained. This notion is supported by some recent studies which show that human capital inequality is not correlated with income inequality (Castelló-Climent, Doménech, 2012). Since 1950, skills inequality has fallen, but income inequality has not. Obtaining equivalent skills in a “better” or “worse” institution may be the cause of the increase in within-occupation inequality discussed above.

To conclude,, it seems that skill-biased as well as capital-biased productivity growth can be associated with the increase in inequality. They both fall short from telling the whole story. Technological innovations do have an impact on the labour market. Among other things, they affect workers’ wages but leave a lot of puzzles.

While the increase in inequality is quite apparent, its consequences and policy implications are as controversial as the debate on the causes of inequality itself. Some even argue that a higher inequality causes the economic growth to decelerate. I turn to this issue in the next section.

## Inequality and economic growth

For a long time, economists have thought that economic inequality is inevitable in the early stages of development, but it should diminish with the further development (Kuznets, 1955). Also, it was commonly suggested that some degree of inequality might be beneficial for economic growth because it provides incentives to work and increases investment from wealthier individuals (Okun, 2011). These notions have always been contested, but only recently the criticism has started attracting more attention. The main reason for the turnaround in public debate is that, contrary to the previous beliefs, there is not only no evidence of inequality wearing off in later stages of development (or the further development of advanced economies), but also it seems that income disparity is increasing. Furthermore, it looks like the widening gap between the rich and the poor is taking a toll on economic growth.

One way how higher inequality can hinder growth is through aggregate demand. As the rich tend to save more<sup>3</sup> than the poor, concentrating income in the former's hands depresses economies (see Carroll, 1998; Dynan et al., 2004). There are limits to how much the rich can consume (e.g., one cannot eat indefinite amounts of food). Therefore, bigger redistribution is needed in order to bring economies on a higher growth track. This implies taxing the rich more and transferring the revenue to the poorer layers of society. Even if such policy implications are right, they are hard to implement because politicians' campaigns are financed by the people who are able to do it, i.e. the rich.

The importance of saving rates for economic growth has recently been studied by the IMF (2012). It showed that an increase in the saving rates of households with a larger share of assets in housing (usually such individuals are relatively poorer) after the 2008 financial crisis in the US had a significant effect on the mean saving rate and dampened the recovery. This means that, unless their incomes (or housing prices) improve, consumption is not likely to be robust enough to boost economic growth rates to their historical average.

According to Stiglitz (2013), sluggish recovery and inequality are not separate phenomena. The smaller middle class means not only a slower growing economy, but also a lesser ability to invest in education; this dampens the future even more. Because those with the top incomes are much better equipped to avoid taxes and are taxed less most of the time (the bulk of their income comes from sources taxed with lower rates such as financial assets), the increasing inequality also worsens the fiscal position of the country. The lower revenue undermines the government's ability to invest into the infrastructure, education, research and development, thus potentially endangering the future economic growth.

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<sup>3</sup> Their savings are not loaned out in full because not all of them are held in a loanable form, and some of those who might benefit from borrowing are too risky for banks to trust.

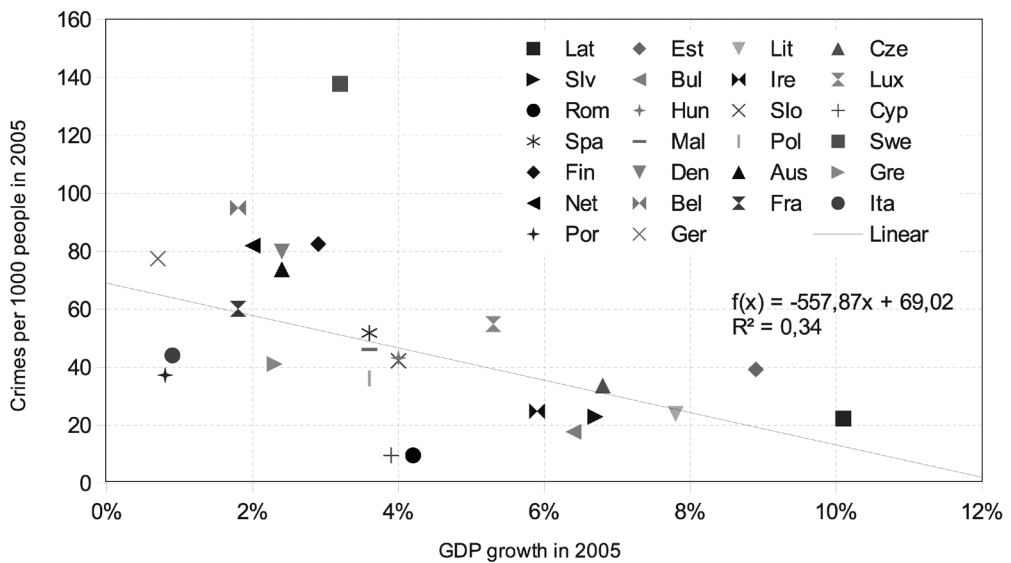


FIG. 7. Crimes recorded by the police and GDP growth in the European Union in 2005

Note: Sweden is a clear outlier because of the specifics of its crime recording practices; therefore, the linear relationship is calculated without it.

Source: composed by the author from calculations using the Eurostat (2013) data.

Berg and Ostry (2011) and Berg et al. (2012) provide additional evidence that income inequality plays a major role when it comes to economic growth. In particular, it is determinant of how long a “growth spell” (what they call a long period of high economic growth) can last. Their main finding is that “growth spells” are more likely to end in countries with bigger income disparities. According to the study, closing the income gap by half in Latin America or Asia would more than double the expected duration of the fast economic growth period. Stiglitz (2012) supports these claims by showing that income inequality is associated with unstable economies and unsustainable economic growth. Consequently, these findings put the long-term benefits of moderate income inequality under doubt.

Prevalence of crime is another channel through which income inequality can transmit its effects on the growth rates of an economy. For developing economies, it is arguably an even more serious issue. Lowrey (2012) argues that big differences in earnings in such countries lead to political instability which in turn results in violence. The recent series of revolutions in the Arab world (dubbed the Arab Spring) seems to support her statements. Moreover, Pickett and Wilkinson (2011) show that inequality directly correlates with crime rates and it is known that high crime rates hamper the economic growth (see Fig. 7) by discouraging investment and capital accumulation (see Josten, 2003).

The rise in inequality may also have some unexpected channels through which it affects the economic growth. Waldman (2012) argues that in the modern world

wealth has not so much to do with consumption because it is mostly about insurance. Consumers' requirements are limited, but the possible sources of risks are virtually infinite. Thus, buying real estate in foreign countries or holding money in such ways that are commonly referred to as avoiding taxes most of the time can be considered as a form of insurance. Indeed, revolutions, wars, expropriations, etc. happen and often pose a threat to all members of society. However, the incentive to accumulate wealth (and as much as possible of it) does affect the growth rate of an economy since the wealth used to insure is used neither for investment nor consumption. If not for this desire of insurance, it would be possible to have high levels of inequality and full employment. In unequal societies, the rich does not employ all the people who are looking for a job, because marginal consumption of a new hire is lower than gains from retaining wealth for insurance.

Finally, there are studies arguing that inequality affects economic performance not only through macroeconomic channels. The microeconomic competition of firms for the most skilled workers can damage the economy as a whole. The importance of some jobs may get underestimated in terms of the pay, and the best talents might be diverted to better-paying jobs.

Bénabou and Tirole (2012) show that highly competitive labour markets make firms offer less to low-skill workers in order to offer more to high-skill ones in the form of high performance bonuses. Robin et al. (2012) elaborate the point further by showing that short-term bonuses can contribute to asset bubbles greatly. They find that the bonus contracts do not change the likelihood of the bubbles but increase the severity of their consequences. In addition, such short-termism leads to a higher inequality as shown by Hein (2013). He argues that it is welfare destroying<sup>4</sup> and thus impeding economic growth rates (see Bénabou and Tirole, 2012). Caps on bonuses and progressive taxation may help fight the mentioned imbalance, but these instruments can create distortions, too.

As is almost always the case in economics, new findings and ideas are contested. By conducting a meta-analysis of empirical literature on inequality and growth, Neves et al. (2012) show that on average the effects of inequality on economic growth are insignificant. They come to this rather unexpected conclusion by correcting for the fact that most of empirical literature is biased towards publishing statistically significant results. However, statistical approach in such case can be deceiving, because there seems to be a bit more of studies that report a negative relationship between inequality and growth. Furthermore, the OECD (2012) reports that the relationship is significant but highly depends on policy instruments used and could go either way, i.e. inequality can induce or reduce economic growth. This might be the reason why researchers publish mixed results on the matter.

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<sup>4</sup> It also has negative effects on such things as work ethics which are not easily monitored using commonly available statistical data but can possibly decrease welfare by reducing barriers for risky behaviour.

Neves et al. (2012) point out that in the early 1990s the mentioned tendency of reporting mostly negative effects of inequality on the growth rates was briefly reversed. It is probably not a coincidence that during that short period inequality was actually decreasing in the US which most of the time leads research efforts in economics. This makes the authors conclude that research on the inequality and growth relationship suffers a bit from the publication “fashion” bias.

Summing up the recent developments regarding the inequality and economic growth nexus, it is rather clear that the older ideas of healthy and beneficial inequality are losing support. In essence the Kuznets curve scenario has not occurred (at least so far): most of the world has witnessed further widening gaps between the richest and the poorest parts of societies since 1980s. Studies of the causes of this phenomenon seem to be leading economics to a new version of support for economic inequality – a much milder one. While some inequality is beneficial for its incentive mechanisms, more equal societies can attain longer periods of fast economic growth as well as more sustainable economic expansion.

### **Inequality and happiness**

Ever since Easterlin (1974) published his seminal work on the relationship of income and happiness, growing income for all was known to be unable to improve the general life satisfaction. This is known as the Easterlin paradox. The main conclusion of the paper points to the fact that people understand their social position in relative but not absolute terms. We tend to compare ourselves with other members of society and measure our happiness based on this criterion. If we are generally better off than most of our neighbours, we tend to be more satisfied with our life, and vice versa.

Some recent research started questioning the mentioned stylized fact. Clark et al. (2012) show that since the 1970s within-country happiness inequality has fallen in most parts of the world that experienced a positive economic growth (especially in developing countries). In other words, even if the rising income for all cannot improve the subjective feeling of life satisfaction for all, it can harmonize it. A greater GDP per capita is associated with lesser deviations in happiness. This, according to the authors, happens on one condition – income inequality does not grow much, and the mentioned effect is stronger if it falls. Consequently, increases in income for all seem to reduce the likelihood of extreme unhappiness.

Other researchers, using richer time series, show that there is no paradox with the relationship between income growth and self-reported happiness. Hagerty and Veenhoven (2003) argue that growing economies do improve the feeling of life satisfaction. The authors use a longer time series than those originally used by Easterlin (1974) and add additional countries to the dataset. They also pool the countries into income tiers and show that the increase of happiness is greater in a short term (it happens on average

over two years) and is not that pronounced in a longer term. This means that happiness increases much slower than income, i.e. it requires an adaptation period, but no saturation point is reached after which the feeling of life satisfaction stops improving.

These claims find further support in probably the most recent work on this topic by Sacks et al. (2012). They use the Gallup World Poll data to show that the absolute income matters. The authors find that the better self-reports of happiness are associated both with income growth in a single country and with higher income levels across countries (i.e. richer countries are more prone to report a higher overall life satisfaction than poorer ones). Just like Hagerty and Veenhoven (2003), they find that there is no satiation point above which happiness and income growth are no longer related. The US, however, remains a paradoxical example: the GDP has doubled in the country since 1972, but the self-reported happiness has decreased slightly. Given the relative importance of the US in economic research, this might explain why the Easterlin paradox was able to attract so much support. Maybe the income inequality in the US increased too much during the recent decades for the absolute income growth to matter.

However, Easterlin et al. (2010) defend the paradox. They also include more countries into the dataset and update the time series to include more data points. The study reaffirms that in the long run happiness and economic growth have a nil relationship. The finding holds even for poorer countries such as Eastern European ones which have seen transition from communism to capitalism. However, the authors note that in a short term the income growth and life satisfaction are positively correlated: happiness falls in contractions and rises in expansions.

In the end, it seems that the Easterlin paradox is breaking apart. If the relationship between economic growth and happiness is non-existent, this may suggest that policy makers should not target the “growth for all” objective, and the case for equality looks weak. Instead, as suggested by Skidelsky (2012), governments should focus on maximizing the gross national happiness which has little to do with income growth. However, recent studies show that the absolute income growth and the increasing equality contribute to the overall life satisfaction and should not be dismissed as policy goals. The trouble here is that happiness is a subjective term and is defined differently from study to study (it may contribute to the results on the topic being mixed).

## **Conclusions**

In this paper, I have surveyed some recent literature on income inequality and discussed its implications. I have found that the most attention-attracting fields of research in this sphere are the linkage of income inequality to financial crises, skill- (capital-) biased technological progress, the income and economic growth nexus, and the relationship between income inequality and happiness. All of these fields have seen the conventional wisdom challenged.

Although so far there are no adequately sufficient data points, the recent research argues that high income inequality can contribute to severe financial crises such as the one that started in 2008. Studies show that the levels of inequality comparable to those prior to the crisis have been last seen prior to the Great Depression.

While the skill-biased technological progress is still considered the main reason behind the modern income inequality, some research sprung up arguing that it is as equally capital-biased. The falling share of compensation to employees in income potentially means that employing capital (machines) is more profitable than opting for human labour. This also increases wage polarization by over-incentivizing jobs that are hard to automate (such as software developing).

Rapid economic growth was thought impossible without a considerable degree of income inequality for a long time. However, the Kuznets curve scenario is not supported by the recent evidence, and economics starts to favour only moderate amounts of inequality because it helps to sustain a fast economic growth longer. The Easterlin paradox seems to be also falling apart. The recent studies show that income growth in absolute terms matters, provided there is not much increase in inequality.

The recent findings will definitely be reevaluated in the future. If the evidence supports them, new theories and hypotheses might be constructed. Their policy implications will also have to be considered, because they differ significantly from what the current conventional wisdom suggests.

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