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Inequality and Financialization

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By Oscar Soons

Abstract.

This paper analyzes economic inequality in the United States and makes a connection between rising inequality and "Financialization" since the 1970's. I provide an overview of how and why income and wealth inequality have changed over time. The increase in inequality since the 1970's is correlated with an increase in Financialization, measured by a Financialization index that I created. Financialization, defined as the increasing size, power and influence of the financial sector in the economy and politics, has changed the economic and political landscape in the United States in a way that increases economic inequality.

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Introduction

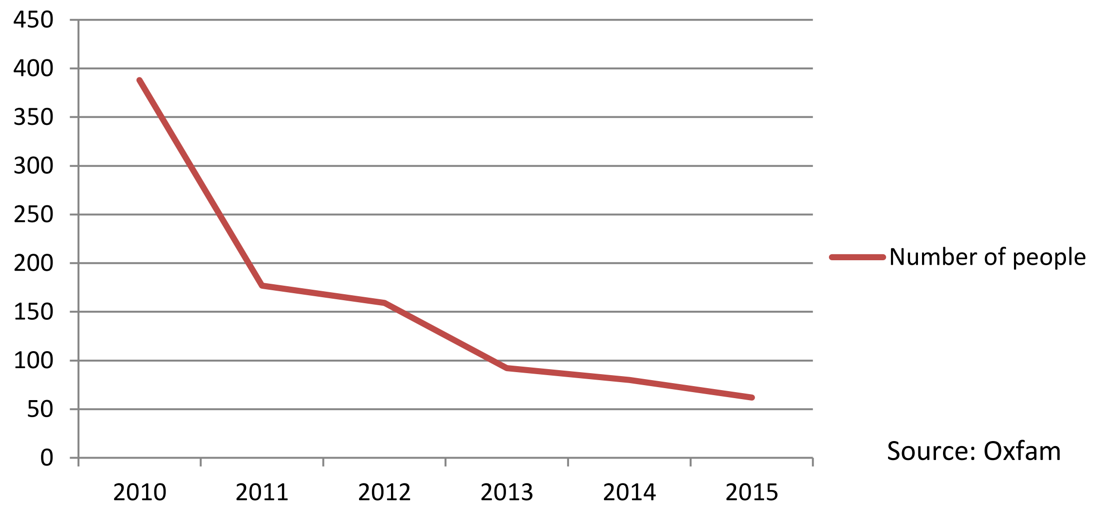
Economic inequality is one of the most important issues of our time. In 2011 and 2012 the Occupy Movement received substantial attention worldwide with their peaceful protests and their slogan "We are the 99%". Piketty's book on income and wealth inequality "*Capital in the Twenty-First Century*" (2014) has sold over 1.5 million copies in French, German, English, Chinese and Spanish, reaching number one in *The New York Times* Best Seller list and becoming Harvard University Press's greatest sales success ever. Rising income inequality was one of the main issues addressed in President Obama's 2015 Economic Report. According to a Lexis Nexis search the number of articles in major U.S. newspapers mentioning inequality increased from only 5 in 1985 to 77 in 2005 and as much as 2,244 in 2015. And both the Democratic 2016 presidential election candidates Hilary Clinton and Bernie Saunders have used the promise to decrease inequality as a major point in their campaigns. Even though no one knows for sure what the eventual outcomes of continuously rising economic inequality will be, overall we have come to realize that it is becoming a major problem. How to decrease economic inequality has become a pressing question many are trying to answer.

In almost every country, rich and poor, economic inequality is very high and increasing. As Piketty shows, current economic inequality in multiple countries approaches or surpasses the highest levels of inequality ever recorded, in pre-revolution France (1780's), in Russia before the Bolshevik revolution and in some European countries prior to World War I. Recent OECD data shows that in 2012 the richest 10% of the population in OECD countries[1], on average, earned 9.6 times the income of the poorest 10%, compared to

[1] The 34 OECD Countries are Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands,

7.0 times in the 1987. This is an increase of 37% in 25 years. In 2015 the 62 richest billionaires in the world owned more than the poorest half of the world population (3.6 billion people, which is 3,600,000,000 people). This number is down from 388 people in 2010, a decrease of 84% (Oxfam, 2016). The change of this measurement over time can be seen in figure 1.

Figure 1: Number of people who own more than half of the world's population



Today economic inequality is not something that is only observable in the poorer and less developed, "third world", countries. The opposite is true. It could be argued that the United States today is one of the most economically unequal countries ever seen in modern history. What can be said for sure is that, out of the countries[2] The World Wealth and Income Database has collected fairly complete time series data for, the top 10%'s share of

New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

[2] World Wealth and Income Database includes the following 23 countries: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Korea, Malaysia, Mauritius, Netherlands, New Zealand, Norway, Singapore, South-Africa, Spain, Sweden, Switzerland, Taiwan, United Kingdom, and the United States.

labor income in the United States in 2010 was only topped by South-Africa top 10%'s share. In other categories, for example the share of total income of the top 1% and wealthier income groups, the United States leads all countries with ease. OECD data shows approximately the same situation. The only countries doing worse than the United States in recent OECD measurements of income inequality are Mexico and Chile.

Furthermore, the inequality of accumulated wealth in the United States compared to other countries is even larger. Data collected by the OECD show that the top 10% wealthiest U.S. households own 76% of all wealth in the U.S. The following 40% of the wealth distribution essentially owns the rest, leaving nothing for the bottom 50% (OECD, 2015).

Another widely used measurement of inequality, the GINI index, shows the same thing. Out of the 34 OECD countries, only Chile, Mexico and Turkey have a higher GINI index. All in all, although the United States has one of the biggest and most developed economies in the world and is often celebrated, by especially it owns citizens, as being the greatest country in the world, it has also grown to be one of the most economically unequal countries in the world, no matter what measurement is used.

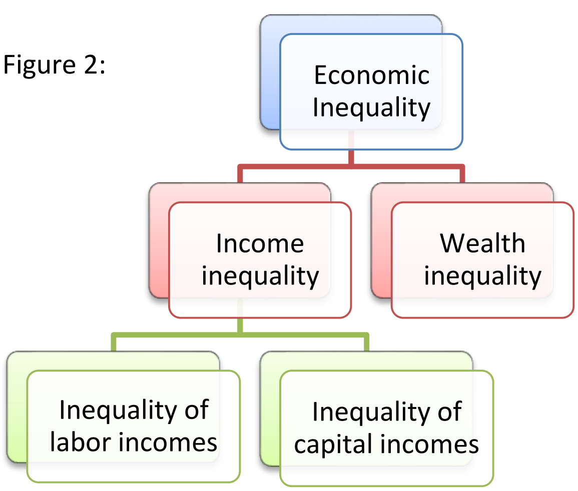
How has it come to this point? In the following paper I will discuss the history of economic inequality in the United States and what forces fueled the changes in economic inequality over time. I will specifically focus on what could be causing the trend of increasing economic inequality in the United States that started in the 1970's and continues today.

Changes in economic inequality do not have simple straightforward causes. Many large and small factors play a role, which combined create forces powerful enough to alter economic inequality over time while individually they might seem irrelevant. Forces generally blamed for causing the increase in economic inequality since the 1970's are increasing globalization and technological change. However, these two forces do not provide a satisfying explanation for the recent rise of economic inequality in the United States. I suggest that adding financialization greatly improves this explanation.

What is economic inequality and how can it be measured?

Economic inequality is a measurement of social inequality that relates to one's income and wealth. It can be split up into income inequality and wealth inequality. I will also make the distinction between income inequality excluding capital gains (labor income + capital income) and income inequality including capital gains (total income). Income inequality including capital gains consists of labor income, income from capital such as interest income and dividends and capital gains income such as a profit that resulted from an increase in stock price. Figure 2 shows a visual picture of economic inequality's build-up.

Figure 2:



A change in economic inequality over time could be caused by different trends. A change in economic inequality does not necessarily mean that an income class is becoming worse or better off in absolute measurements. Economic inequality measures the relative economic position of income classes. For example, economic inequality would increase if the absolute return on wealth increases. In this scenario the income of the higher income classes would increase more than the income of lower income classes because the wealth distribution is highly upwardly skewed. Or if the income of the bottom 50% income increases but not as quickly as the income of the top 10%, economic inequality increases. Even though the bottom 50% might be better off than before in absolute terms, relative to the top 10% they are worse off. Both of these scenarios have as a result that the gap between the rich and the “not as rich” increase, which is the same as an increase in economic inequality.

Note also that the level of income inequality and wealth inequality are strongly related. An increase of income inequality generally, over time, causes wealth inequality to increase. This is because our saving rates increases when we move up in the income distribution (Dynan, Skinner and Zeldes, 2004). If income inequality increases, meaning the rich are receiving relatively higher incomes than the “not as rich”, the rich are also likely to save more, increasing their wealth. This will lead to an increase in wealth inequality.

Economic inequality can be measured in different ways, regionally, nationally or globally. The GINI coefficient mentioned in the introduction is a widely used measurement of income inequality. In my analysis of economic inequality I will use publicly available numerical time series data from The World Wealth and Income Database[3] (formerly called The World Top Income Database) on income shares of different income groups. Specifically, I will use measurements of the top 10%'s, top 1%'s, top 0.1%'s and top 0.01%'s share of income during the period 1917-2014. For the period before 1917, I will refer to data approximated by Piketty and available on his website. For my analysis of wealth inequality I use data approximated by Piketty using multiple studies. This data is also publicly available on his website[4].

On a side note, I will not discuss poverty in this paper. Economic inequality and poverty are definitely related, but are also very different from each other. As defined by the Census Bureau poverty rates in the U.S. are estimated by using "a set of money income measures thresholds that vary by family size and composition. If a family's income is less than the family's threshold, then that family, and every individual in it, is considered in poverty". Poverty is an absolute measurement, while economic inequality is a relative measurement. An increase in economic inequality could be followed by a higher poverty rate, but this does not have to be true. Also, a country in which poverty is a very large problem could be less economically unequal, by having a smaller economic gap between the rich and the "not so rich", than a country in which poverty is not as much of a problem. For example, South Africa has a much larger poverty problem than the United States, but the United States has a larger economic gap between the very rich and the not so rich.

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[3] The World Wealth and Income Database was created in 2011 by F. Alvaredo, A. Atkinson, T. Piketty, E. Saez and G. Zucman with the help of an extensive network of researchers. The database has the overall objective "to be able to *produce Distributional National Accounts*, that is, to provide annual estimates of the distribution of income and wealth using concepts of income and wealth that are consistent with the macroeconomic national accounts".

[4] For links to data sources, see Data Sources at the end of the paper.

Economic inequality over time

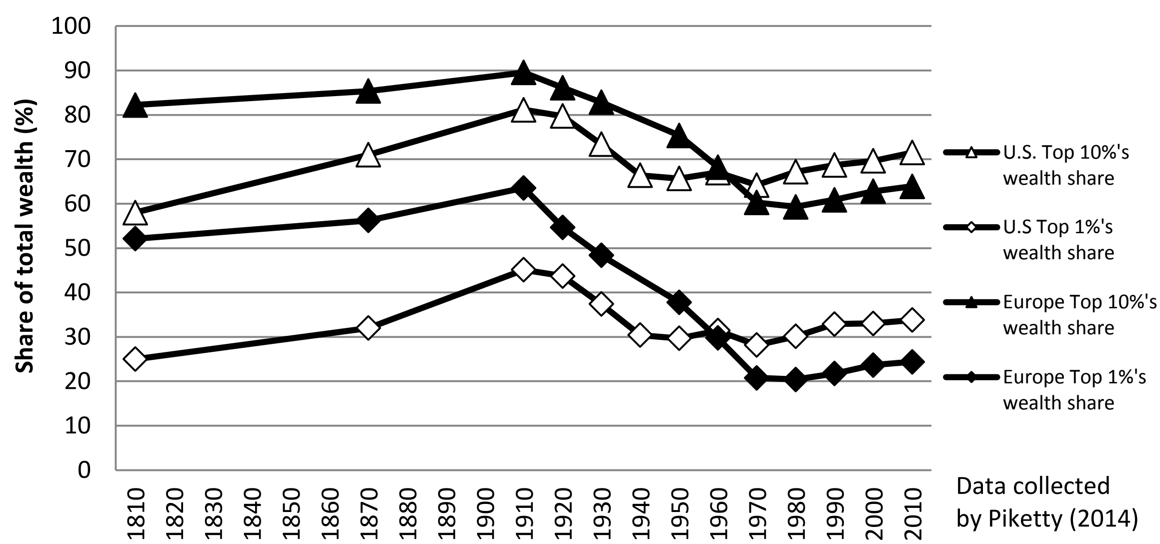
Economic inequality in Europe and the United States during the period 1700-1930

In modern history there have been three periods of time during which economic inequality was very high in the now developed countries: before the French Revolution, during the first decades of the 20th century and during the most recent decade, including today. In 18th century Europe, before the French revolution (1789-1799), income and wealth are estimated to have been extremely unequally distributed. Unfortunately, accurate data on income distribution only goes back to 1918 and accurate data on wealth distribution to 1810. Although this makes it impossible to make exact statements on the economic inequality in Europe at the time, it is very possible that the top 10% of the wealth distribution owned at least 90% of society's total wealth. This socio-economic class received most of its income as return on these large amounts of capital it owned in the form of rents.

During this time, technological advancements and the industrial revolution changed many countries' economy from mostly consisting of farmers to mostly consisting of factory workers. The early industrial working class barely made enough to stay alive while working nearly the entire day. Child labor and 70-90 hour work weeks were the rule instead of the exception. Even when working this much, most families could barely survive and their living conditions were very poor, while the top of society was very wealthy and had a very high standard of living for that time

During the French Revolution, shocks to aristocratic fortunes such as the forced redistribution of agricultural land caused a decrease of economic inequality in France and in Europe in general as seen in figure 3 and 4[5]. However, economic inequality slowly increased again during the entire 19th century. Nothing had truly changed. The gap between wealth owned by the top 10% or top 0.1% and the rest of society continuously increased. Working conditions and the standard of living had slowly started to improve, but almost everything was still owned be a select few.

Figure 3: Wealth inequality in the U.S. and Europe



The only way to escape from the lower class and improve your and your family's standard of living was through marriage. Piketty nicely portrays the economic inequality in France at this time by using the following section from the novel *Le Pere Goriot*, which is written by Balzac in 1835. In this section a man called Vautrin explains to a young student

[5] Europe in Figure 3 and 4 is an equally weighted average of data for France, Sweden and the UK, the only countries for which the data is available throughout the period.

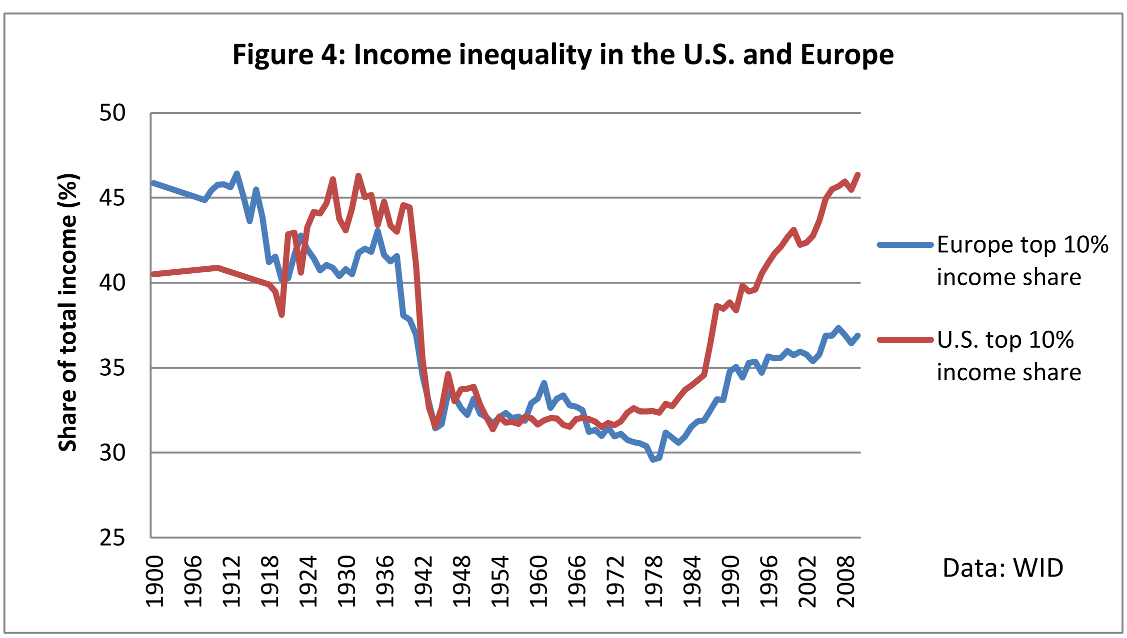
named Rastignac that it is foolish to think that economic success can be achieved through study, talent and effort. He explains that if Rastignac would be top of his class and achieve a brilliant career in law, he still won't become truly wealthy.

"Would Baron de Rastignac like to be a lawyer? Delightful! You will need to suffer ten years of misery, spend a thousand francs a month, acquire a library and an office, frequent society, kiss the hem of a clerk to get cases, and lick the courthouse floor with your tongue. If all of this would lead to anything, I wouldn't advice you against it. But can you name five lawyers in Paris who earn more than 50,000 francs a year at the age of fifty?"

On the other hand Vautrin explains that Rastignac could marry an heiress to a large fortune. An inherited fortune of a million francs will immediately give him an income of 50,000 francs a year (a return of 5%). He would immediately earn the same annual salary by marrying as he would if after years of hard work he managed to achieve the best possible law career in Paris (Piketty, 2014, p240). As you can understand, it is very tempting for Rastignac to not live up to his potential as a top lawyer, but to put his time and energy into stealing the heart of a young woman with a large family fortune. Of course, this level of economic inequality and lack of class mobility is very undesirable for a country's economy, to say the least.

In the United States during the 18th and 19th century much changed socially and economically. The United States, being relatively recently colonized, started this period under developed compared to European countries. However, the economy quickly modernized. Because of the lack of data, the rapid development of the economy, and history-changing events such as the American Revolution, I am unable to make claims comparing economic inequality in the United States to Europe's or France's. However, approximations for wealth inequality in the 19th century (figure 3) show that the United States had a far less unequal wealth distribution than Europe at the start of the 19th century. However, over the course of the 19th century the gap between wealth owned by the rich and the rest of society was slowly increasing. By 1900 wealth inequality had increased to a level close to Europe's wealth inequality.

From 1900 and on there is data available on the distribution of wealth and income in the United States and Europe (figures 3 and 4). We have arrived at the second period in history during which economic inequality was at an all-time high: the first decades of the 20th century. Around 1910 in Europe the top 10% owned as much as 90% of the wealth, 64% owned by just the top 1%. The United States is estimated to have had a slightly more equal wealth distribution with 81% of wealth belonging to the top 10% and 45% to the top 1%. These levels are comparable to wealth inequality in France before the French Revolution. Income inequality was very high as well. The top 10% in Europe received an all-time high of 46% of total income in 1913. The U.S. didn't reach its most unequal distribution of income until 1932 when the top 10% also received 46% of total income.



Economic inequality in the United States during the period 1930-1970

Between 1930 and 1970 economic inequality in the United States and Europe significantly decreased, as seen in figure 3 and 4. Economic inequality in both continents decreased for different reasons. In the rest of this paper I will focus on economic inequality in the United States.

In the aftermath of the stock market crash (1929), Great Depression (1929-1939) and during World War II (1939-1945), the government of the United States had taken the responsibility upon itself to manage the economy. After the stock market crash in 1929 and the following Great Depression the economy needed reviving and the then current classical economic theory provided no scientific-evidence to support any cure. The free market economy, and in particular the financial markets, had shown that they were incapable of self-regulation. The United States went through a long period of economic depression and the government was forced to step in in an attempt to stabilize the economy, especially because a stable economy at home was necessary to win World War II.

During the Great Depression capitalism became understood as systematically unstable among economists. There was something wrong with the system itself. "Unemployment –this kind of unemployment – was simply not listed among the possible ills of the system; it was absurd, unreasonable, and therefore impossible. But it was there." (Cassidy, 2009, p253). Unemployment was rising to highs never imagined possible, wages were dropping rapidly and inequality was at an all-time high. The laissez-faire ideals of market self-regulation, a small government and low taxes were widely blamed for causing the Great Depression. There seemed to be no end to the terror caused by the Great

Depression. The economy was stuck in a state of prolonged depression and there was no "recovery medicine" available.

Exactly this medicine is what Keynes provided in his revolutionary masterpiece *The General Theory of Employment, Interest and Money* (1936). In this book Keynes explained the classical theory as a specific case of his general theory, switching the level of economic analysis from the individual to the economy as a whole. He laid out an argument in which he explained the possibility of a depression to be a stagnant state of the economy. The economy could be at an equilibrium level while having high levels of unemployment. He explained that if the economy is at this equilibrium, it is up to the government to stimulate the aggregate demand of the economy to kick-start the recovery process. Keynes identified the government as the helping hand needed by the economy.

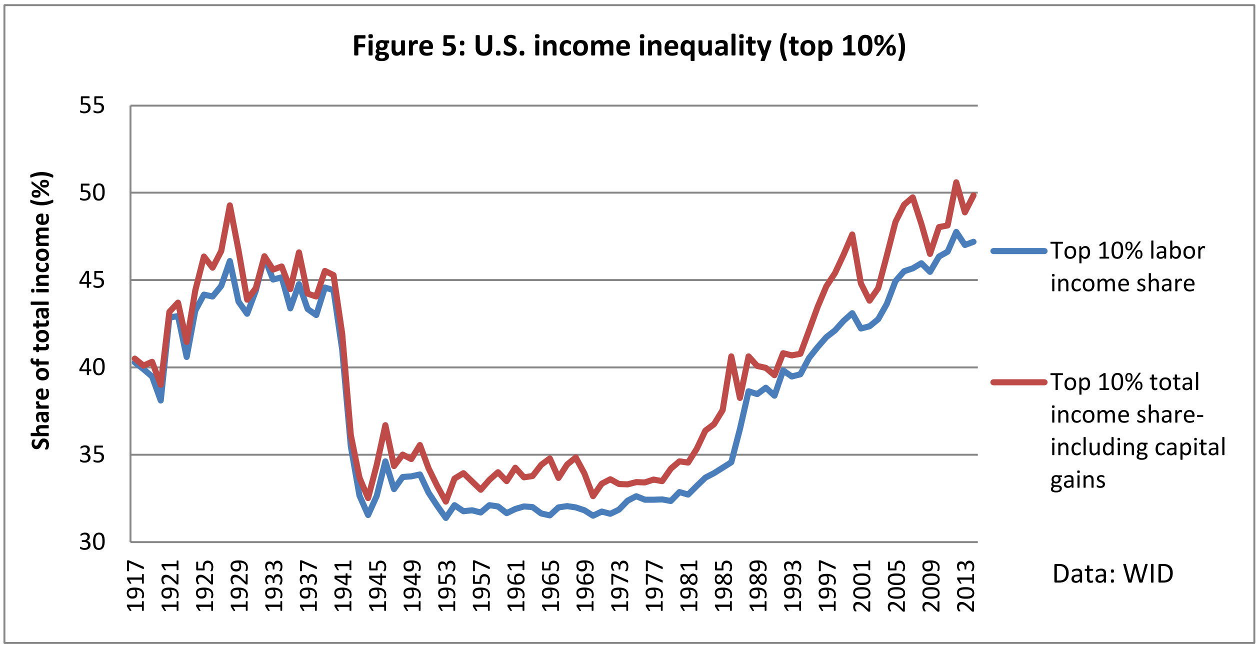
In the United States the government had already been increasing its role in the economy with the New Deal and by necessity during World War II. Keynes had now provided a theoretical framework that supports this increased role of the government. After World War II had ended, the government continued to perform a regulatory role in the economy. The government played an important role in regulating aggregate demand, strengthening the workers unions, regulating businesses life, controlling financial markets and developing an extensive social welfare system.

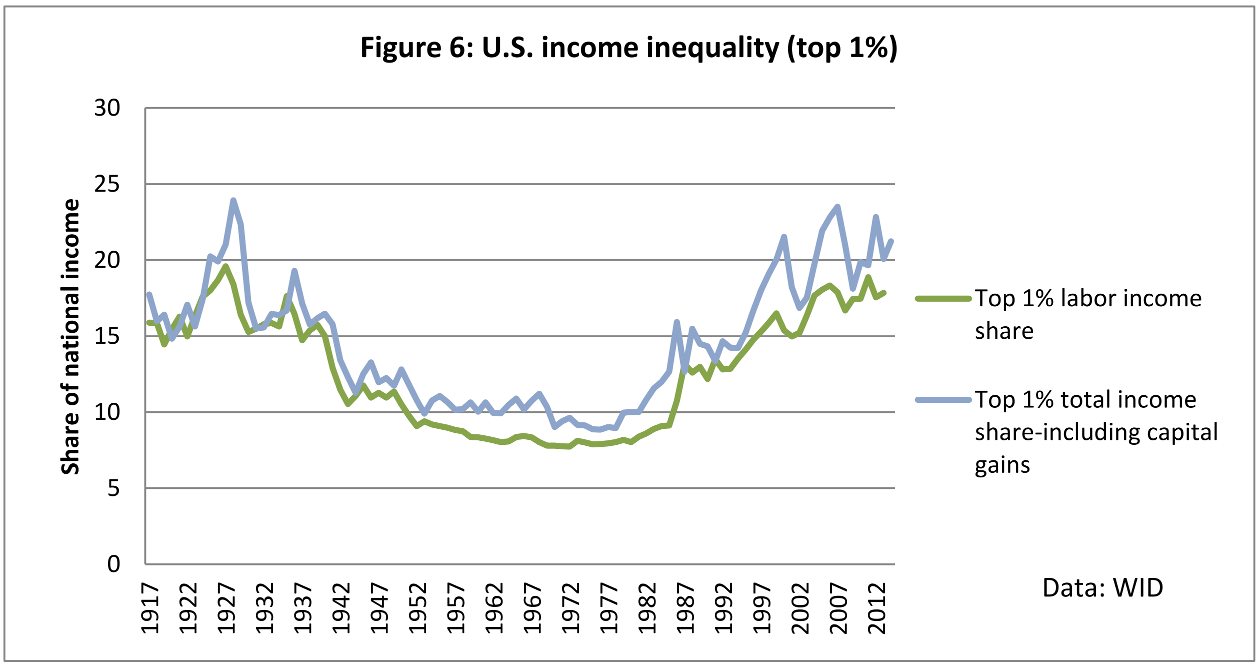
During the 30 years after the wars had ended (1945-1975), this "mixed economy" showed itself to be able to provide great prosperity to everyone. These thirty years were characterized by high economic growth, close to full employment, high wage growth, a developed system of social benefits and a seemingly endlessly increasing standard of living for everyone. Economists believed they had unraveled the mysteries of the world economy.

They believed that they were able to actively fine-tune the economy to their liking through government spending and tax changes, based on their interpretation of Keynes's work. With the help of the government capitalism was going through its "Golden Age".

Economic inequality first decreased rapidly and then remained fairly stable at a significantly lower level than ever before recorded in the United States. Figure 5 shows that the top 10% share of labor income stabilized at 32-34% (down from 46%) of total labor income and their share of total income at 33-36% (down from 49%) of total income. Figure 6 shows that the top 1%'s shares of income were equally low. The top 1%'s share of labor income stabilized at 8-11% (down from 20%) of total labor income and their share of total income at 9-12% (down from 24%) of total income. In these 30 years the top 10%'s share of total wealth steadily decreased to less than 60% of total wealth (down from 75%). These 30 years are also called "*Les Trente Glorieuses*" by the French, which translates to "The Great Thirty". Overall, life was good or at least getting better for almost everyone.

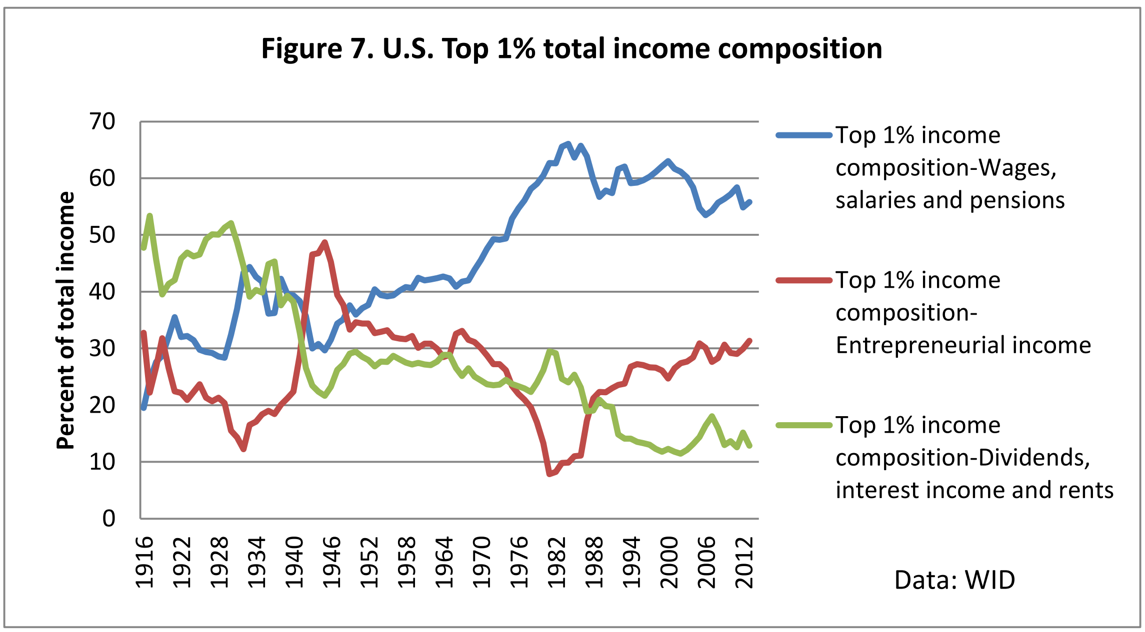
As a result of the decreasing economic inequality a new class emerged. Some of the wealth of the very rich, especially the top 1%, had been redistributed to this new middle class. A large "middle" segment of society had been able to accumulate some wealth for the first time in history. Individuals and families started owning houses and saving money. Piketty calls this new class the patrimonial or propertied middle class. This emergence of a middle class was a development never seen before and deeply altered the social landscape and political structure of society. This new propertied middle class is the base of the "American Dream".





<u>The U.S. after 1970</u>

In the 1970's economic inequality changed. After remaining stable at a fairly low level for decades it started systematically increasing (figures 3, 4, 5 and 6). Income inequality in 2000-2010 regained the record levels observed in 1910-1920 and wealth inequality has been increasing as a result. If we look at how the top 1%'s income composition has changed between the start of the 20th century and now (figure 7), we see that society has changed from having an upper class consisting of rentiers (landowners and capitalists) to an upper class consisting of top managers. Labor income has gained relative importance over income from capital in the current top centile's income compared to the top centile's income a century ago. However, the top centile's income from capital in absolute values didn't decrease. The difference is that now they receive an additional high income from labor instead of mostly income from capital, pushing economic inequality to all-time highs.



Top incomes have exploded in the last decades. The other parts of the income distribution have not seen this explosion and so the rich have increased their share of total income. At the recent peak of economic inequality in 2012 the top 1% received 19% of total labor income and 23% of total income. The top 10% received as much as 48% of total labor income and 51 % of total income. But not only top incomes have been increasing. Figure 3 also shows that wealth has been becoming increasingly unequally distributed. The patrimonial middle class, and with it the "American Dream" is slowly starting to disappear.

These levels of economic inequality are comparable to the levels found in France at the time of Balzac's novel "*Le Pere Goriot"* and to the previous peak of inequality at the beginning of the 20th century in Russia and Europe. Compared to the first decades of the 20th century the top 1%'s share of income is back to the levels found then and the top 10% even received a higher percentage of total income in 2012.

What has caused this increase in economic inequality in the United States since the 1970's? Before I discuss the forces of divergence[6] behind the increase in economic inequality during the previous decades, I will explain why we should even worry about these extreme levels of economic inequality. Doesn't everyone in the United States today own and earns as much as they deserves, based on their effort?

Why should we worry about economic inequality?

I find myself agreeing with the following passage by A. Atkinson in this book "*Inequality, What Can Be Done?"* (2015). He states "Let me begin by removing one possible misconception. I am not seeking to eliminate all difference in economic outcomes. I am not aiming for total equality. Indeed, certain difference in economic rewards may be quite justifiable. Rather, the goal is to *reduce* inequality below its current level, in the belief that the present level of inequality is excessive" (Atkinson, 2015, p9).

This leaves the question: how do we determine whether a certain level of economic inequality is excessive? The answer is that we can't be sure. Some inequality of income and

[6] I use the term force of divergence as Piketty in "*Capital in the Twenty-First Century*" (2014).

wealth is very natural and even essential for a society to prosper. For as long as we know humanity has had some kind of economic hierarchy. Just as in the past, some economic inequality comes naturally in today's society. Imagine today's society but with everyone earning and owning the same amount of money, regardless of their intelligence, skill, experience and work effort. In this scenario no one would be motivated to improve their knowledge or skill nor would they strive for better. The economy would stagnate or even be destroyed and the world would be in chaos.

Certain occupations should have a higher reward than others. It is easy to come up with perfectly justifiable reasons for a difference in income, such as required skill level, hours of work, experience and level of responsibility. Adam Smith already recognized this in the 1800's. He wrote that "men educated at the expense of much labor and time should be compensated with a wage greater than that received by common workers to replace to him the whole expense of his education" (Smith, 1904 (1776)). However, note that Smith recognized that the amount of extra compensation depends on the time, labor and costs associated with a worker's education. If that's the case, the difference in income is justifiable.

It is impossible to determine an exact level at which economic inequality turns excessive. However, there is strong evidence that in today's society we have reached a level of economic inequality that not only can be classified as excessive and unfair, but is also harmful for society as a whole by putting a break on economic growth. There are three separate ways of arguing that economic inequality has reached a level that we should worry about: the moral argument, the macroeconomic argument and the historical argument.

The moral argument

Every person is made out of flesh and blood. Today's moral values consist of the belief that black or white, rich or poor, every life in essence has equal value and is equally important. In contrast, during the middle ages it was believed that there was a natural human hierarchy and up to the 20th century a colored life was seen as less valuable than a white life. These ideas were contested and eventually overthrown by society as a whole. Today, all human beings are presumed to be equal and to have natural rights.

Since everyone's life caries the same value, we should feel some responsibility for each other's well-being. Regardless of how an individual became part of the lowest income classes of society, we should feel a sense of responsibility to help him or her in reaching a certain standard of living. Everyone in the lowest income class of society has their own story. Often they were unsuccessful in earning a sufficient income because of circumstances in their lives that were out of their own control such as the poverty they were born into, poor parenting, early orphanage, and mental problems. As a society we should help them live a decent life.

More generally, if we can improve the well-being of many by giving up a fraction of our own income, we should. Wealthier people can improve the life of the poorest in society disproportionally by only giving a minimal amount of their income, especially when economic inequality is as extreme as it is today. A five percent decrease in income for someone who earns a top income and has large savings would hardly be noticed, while that same amount of money could make all the difference to many less well-off and change many people's prospects in life.

I realize that especially in the United States this moral sense of feeling responsible for the less well-off in society does not sufficiently convince some that economic inequality is something to worry about. The deeply embedded ideals of the "American Dream" cause many wealthier American citizens to regard this argument as unconvincing and to even argue for lower taxes. As a response to this argument, I have heard people say things such as: "Why should I give away some of my income that I earned by hard work?" or "Why should they get free money from the government? It is their choice to be poor. They should work harder, as I have worked hard in my life, and then they will get where I am". Those who said this have had the privilege to never experience life on an "unequal playing field" and are unable to imagine or care for individuals who aren't as well off.

The macroeconomic argument

However, what they don't realize is that decreasing today's level of economic inequality is not only morally the right thing to do, but is also in everyone's best interest. Studies have shown that high economic inequality hurts long-term economic growth in multiple ways. As Joseph Stiglitz concludes in his work "The Price of Inequality": "we are paying a high price for the inequality that is increasingly scarring our economy — lower productivity, lower efficiency, lower growth…." (Stiglitz, 2012). As Christine Lagarde, managing director of the IMF, said during her speech at the 2012 Annual Meeting of the IMF and the World Bank: "less economic inequality is associated with greater macroeconomic stability and more sustainable growth" (Atkinson, 2015). Research by the OECD also shows consistent evidence that the long-term rise in economic inequality observed in most OECD countries has put a statistically significant brake on long-term growth (OECD, 2015). The reasoning behind the relation behind high economic inequality and lower economic growth is not hard to grasp.

Firstly, an increasing inequality of opportunity, a likely result of high economic inequality, stops society from reaching its full potential. Inequality of opportunity means that people with different family backgrounds do not have the same opportunities. "If some people work hard at school, pass their exams, and get into medical school, then at least part of their higher salary as a doctor can be attributed to effort. If, on the other hand, their place at medical school is secured through parental influence, then there is inequality of opportunity" (Atkinson, 2015, p10). The more "level the playing field" the more society will live up to its full potential and the higher future economic growth will be. For example, an unequal playing field could have as a result that someone who is more talented and has the potential to better the world as an engineer could never be able to do so strictly because he can't afford a good education, while someone who isn't as talented but can afford an expensive school will take that person's place.

Secondly, limited class mobility, another likely result of economic inequality, will also stop a society from achieving its full potential. As the previously mentioned section from the novel *Le Pere Goriot* illustrated, low class mobility has as a result that people are not motivated to live up to their potential. The next Bill Gates might reason that he could live a wealthier and much easier life by trying to marry a daughter from a rich family instead of living up to his intellectual potential.

Thirdly, high levels of economic inequality are also harmful to economic growth in the long run since they increase the likelihood and severity of recessions and crises in at least three ways. First of all, Bordo and Meissner (2012) explained that in the consumer economy we live in economic inequality caused the less wealthy to borrow beyond their limits to sustain their consumption growth. This excessive borrowing partly caused the unsustainable debt levels that caused the global financial crises in 2007-2008. Secondly, high levels of wealth inequality decrease the amount of profitable and low risk investment opportunities (OECD, 2015). The more concentrated wealth is, the more excess saving the rich have and the less sound investment opportunities there are. This fuels speculative investments and causes financial bubbles. Thirdly, the more concentrated wealth is the more political power the wealthy have. As we will see later, this power can be used to loosen regulations on especially the financial sector, which has been shown to lead to bubbles, crises and financial instability in general.

Finally, there are two more ways high economic inequality significantly impacts economic growth. The rich spend a smaller fraction of their income than the middle class or the poor. This means that rising economic inequality reduces total consumer demand in the economy, which hurts long term growth (Kenworthy, 2015). Also, high levels of economic inequality cause workers dissatisfactions and could cause an increase in the number and length of costly strikes.

All these factors caused by high economic inequality together keep a country from reaching its full economic potential. Although it is almost impossible to quantify the exact loss of economic growth due to the recent economic inequality, the OECD estimated that the rise of economic inequality knocked on average 4.7% off cumulative growth between 1990 and 2010 across OECD countries for which long time series are available (OECD, 2015). This might not seem that much, but in terms of economic growth, for which decimal changes make the daily economic news, it is a very significant knock-off.

<u>The historical argument</u>

A last and highly speculative argument as to why we should worry about the recent high level of economic inequality in combination with the upward trend of increasing inequality is based on the lessons history teaches us. Economic inequality can be argued to have been a significant factor in fueling conflicts that destabilized society in the past. Although economic inequality hasn't necessarily been the deciding cause of major conflicts, it certainly increases tension between classes, population groups and countries.

If we compare today's level of economic inequality to the historical all-time highs of economic inequality, we see that today's level is comparable or exceeds the historical all-time highs. Economic inequality was at an all-time high in Europe before the French revolution; it then decreased and became very high again in Europe and Russia around World War I. At this point it took World War I, World War II, and around 80 million casualties for economic inequality to decrease to more desirable levels.

Previous all-time highs of economic inequality have been followed by the largest conflicts the world has ever seen. High levels of economic inequality come hand in hand with large dissatisfaction of the largest class of society: the working class. This dissatisfaction historically has been a way to mobilize large groups of people for revolutions, resulting in bloody conflicts and wars. Economic inequality in the United States today is close to or even surpasses the levels found in Russia before the Bolshevik Revolution, France before the French Revolution and Europe at the time of the two World Wars.

What caused the increase of economic inequality since the 1970's?

As said before, in the period 1970-today economic inequality in the United States has risen to all-time highs. Many factors played a role in causing this rise of economic inequality. The rise has mainly been explained by a change in economic and political ideology in combination with two major causes: technological change and globalization. I suggest we should put more weight on the change in ideology and add financialization to these causes. The change in ideology, financialization, globalization and technological change are all heavily connected and together provide a fairly strong explanation for the increase in inequality.

Starting with the invention of electricity and the steam engine, new technologies have arguable changed our lives more than anything else in the last 200 years. The high inequality at the start of the 1930's was definitely partly caused by the technological advancements that allowed for the replacement of human laborers by machines with higher productivity. The further improvement of these labor replacing technologies together with many other technological advancements, such as the rise of the internet, unarguably once more played a role in the recent increase of inequality.

Technological advancements have also allowed for the rapid globalization of the economy and specifically of trade. Technological advancements and globalization together have for example allowed for the replacement of domestic production by cheaper imports, the move of many blue-collar jobs to cheap labor countries, and an increase in profitable investments. As a result, downward pressure on wages together with a larger return on wealth has increased economic inequality.

Although technological advancements and globalization certainly played a big role in increasing income inequality, they cannot fully explain the rise in economic inequality since the 1970's. They do not explain why specifically in the 1970's economic inequality started rapidly increasing, while in the decades before it remained fairly stable. Moreover, these factors do not explain why economic inequality in the United States has increased substantially more than in countries with equally developed economies that experienced similar advancements in technology and are more open to trade and investment, such as Western Europe, Japan and the United Kingdom. I argue that the financialization of the United States allowed for by the change in political economic ideology explains why the United States has reached today's all-time high of economic inequality.

The rise of finance

Especially the rich, the large corporations and the financial sector were not as happy with the decreasing inequality during the "*Trente Glorieuse*" as the rest of the society. Their taxes and regulations had increased and as a result their relative wealth and power was decreasing. The increased grip of the government on the economy had changed their profitable free market economy in a way that was not in their best interest. In their search for an alternative political economic ideology to support with their immense resources, Friedman and his scholars at the Chicago School were recognized as the perfect candidates. "The Chicago Boys" dreamed of economies in their most "natural state", opposing almost all forms of government regulation and trade barriers, reducing taxes and confronting union power. Their ultimate goal was a free market economy saved from all forces interrupting natural market forces.

The rich, the large corporations and the financial sector recognized that they would benefit greatly from these neoliberal free market ideals and they continuously donated large amounts of money to the Chicago School. "The enormous benefit of having corporate views funneled through academic, or quasi-academic, institutions not only kept the Chicago School flush with donations but, in short order, spawned the global network of right-wing think tanks that would churn out the counterrevolution's food soldiers worldwide" (Klein, 2007). This continuous monetary support allowed for the Chicago School to gradually create a climate of opinion in support of free-markets through the media, universities and other organizations.

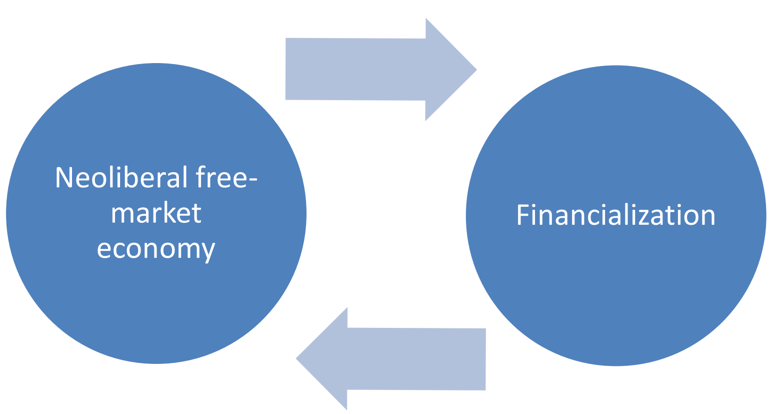
However, the market crash of 1929 and the subsequent Great Depression were still fresh on people's minds in the immediate post World War II period. As a result, there was no general interest in Friedman's free market ideology. Besides waiting until the public's bad memories of the Great Depression were forgotten, Friedman actively tried to cleanse free market economics from the blame for the Great Depression by pointing at someone else. He argued that the depression was caused by mismanagement of the money supply by the Federal Reserve Board instead of by free market forces (Friedman and Schwartz, 1963). Nonetheless, for as long as Keynes's mixed economy politics were still very successful in providing economic growth, Friedman had to wait patiently for his free market ideals to become widely accepted in mainstream economics once again.

The economic instability Friedman was waiting for began in the late 1960's and continued throughout the 1970's. Two OPEC oil price shocks, the collapse of the Bretton Woods fixed exchange rate system and stagflation in the U.S. economy triggered the need for an alternative economic ideology. The Keynesians had no explanation or solution for these economic problems, especially the impossibility of increasing unemployment and high inflation, which calls for respectively an increase in government spending and a decrease in government spending, at the same time. This discredited the Keynesian fine-tuning of the economy. Stagflation was considered impossible in their framework and couldn't be explained or fixed.

From this time on, free market economics started gaining ground in the political and economic landscape in the United States. By the time inflation in the United States spiraled out of control in 1979, the Chicago school had enough admirers in positions of power to successfully have the United States' and United Kingdom's government, the IMF and the World Bank fully accept their free-market policies as a "cure" for economies all over the world. With the support of the large corporations and the financial sector the paradigm was successfully changed from mixed-economy to free-market economics. The reforms established during the New Deal-era and the "*Trente Glorieuse*", including taxes on business and the rich, regulation of the economy and strong unions, were gradually weakened. Friedman's neoliberalism had become the orthodox policy.

The increasingly neoliberal political mindset since the 1970's created the conditions that allowed for the financialization of the United States. This process reinforces itself (figure 8). The decreasing influence of the government together with the deregulation of the economy allowed and helped the wealthy and the financial sector to use its increasing resources towards advancing their own interest in more efficient ways than before. The process shown in figure 8 created a "Wall Street ideology" in the United States. Step by step the role of the government has diminished while corporations, the very rich and especially the financial sector have taken over as the ones in charge. This process of financialization played an important role in the increase of economic inequality to all time-highs.

Figure 8:



Financialization today

The impression that today we live in a “world of finance” is easily acquired. Most of the daily news is about stock market trends, oil prices or companies. Financial products such as credit cards, student loans and mortgage or car payments are on everyone’s mind on a daily basis and banks or other financial institutions are everywhere. However, the study of financialization is relatively new and it is often not mentioned as such in the explanation for the current economic inequality. Economists are still divided on how to define financialization and the data on financialization is relatively limited.

Financialization can be broadly defined as the growing weight of finance in the American economy (Krippner. 2005). This means that finance or the financial sector has been able to increasingly dominate the economy in the United States and has been increasingly able to utilizing this domination by exercising more control over the economy. Lin and Tomaskovic-Devey (2013) add to this definition the increasing participation of non-financial firms in financial services and investment markets, which they back up with a financial statement and analysis of tax account data. Epstein’s (2005) definition of financialization is a combination of these two. He defines financialization as meaning the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of domestic and international economies. More specifically financialization could be defined as for example the shift to ‘shareholder value’ as a mode of corporate governance, the growing dominance of capital market financial systems over bank-based financial systems or the increasing political and economic power of the rentier class.

I agree with the broader definitions of Krippner, Lin and Tomaskovic-Devey and Epstein as opposed to defining financialization more specifically. However, my preferred definition of financialization should not only entail the role of the financial sector in the domestic and international economies, but in all aspects of society, economic as well as social, political, educational and cultural. Financialization is a development in today's world, especially in the United States, that abstractly can be thought of as the increase of the size, power and influence of the financial sector in all aspects of everyone's life. However, in order to be able to quantify financialization I depart from my preferred definition and define financialization as the increasing size, power and influence of the financial sector in only the economy and political scenes.

The financialization index

To quantify financialization and show its change over time I create two financialization indexes: the first one for the period 1947-2014 consisting of 5 variables and the second one for the period 1984-2014 consisting of 6 variables. The goal of these indexes is to show the process of financialization in the U.S. over time in one figure as the cumulative change of all variables included. I have chosen the following 5 variables to quantify financialization in the United States between 1947 and 2014. All variables are all equally weighted[7] and the index has a value of 100 for the year 1947.

- Financial sector's total financial assets as a percent of GDP

[7] As D. Kahneman writes on page 226 in "*Thinking, Fast and Slow*" (2011): "formulas that assign equal weights to all the predictors are often superior, because they are not affected by accidents of sampling". And "Simple equally weighted formulas based on existing statistics or on common sense are often very good predictors of significant outcomes".

- Financial sector's total corporate profits as a percent of total domestic corporate profits
- Financial sector's full-time equivalent employees as a percent of total domestic full-time equivalent employees
- Financial sector's total employee compensation as a percent of total domestic employee compensation
- Total outstanding consumer credit owned and securitized as a percent of GDP

For my second index showing the financialization of the United States during the period 1984-2014 I have added the following variable. This index has a value of 100 for the year 1984.

- Total assets per commercial bank

The financial sector has massively increased in size during the last decades. Financial assets as a percentage of GDP have increased by factor 2.5 since the 1980, after remaining fairly constant between 1945 and 1980 (Figure 9). Financial assets are now approximately 85 trillion dollar, or about 480% of GDP. But not only has the total assets held by the financial sector increased, the number of banks has decreased at the same time, increasing the assets per bank (Figure 10). This has created gigantic financial companies that are talked about in the news today as "too big to fail" and that are labeled by Johnson and Kwak (2010) as "too big to exist' and "the American oligarchy". These financial giants are very powerful in both the U.S. economy and political scenes, which I will discuss more thoroughly later.

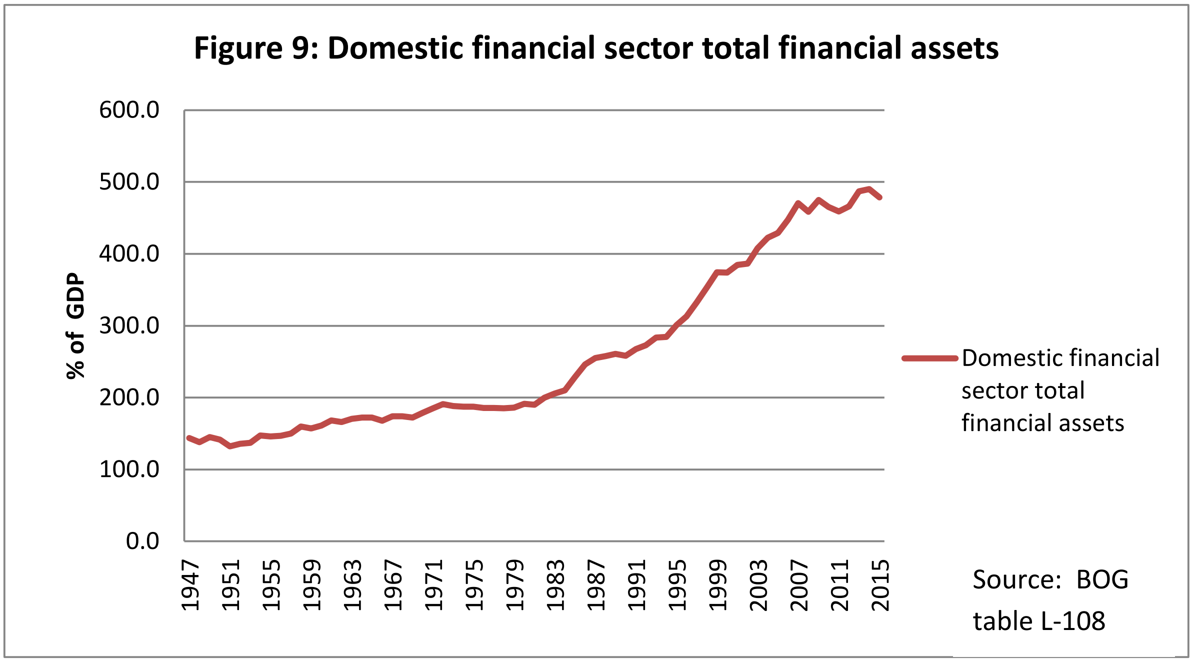


Figure 9: Domestic financial sector total financial assets
% of GDP
600.0
500.0
400.0
300.0
200.0
100.0
0.0
1947
1951
1955
1959
1963
1967
1971
1975
1979
1983
1987
1991
1995
1999
2003
2007
2011
2015
Domestic financial sector total financial assets
Source: BOG table L-108

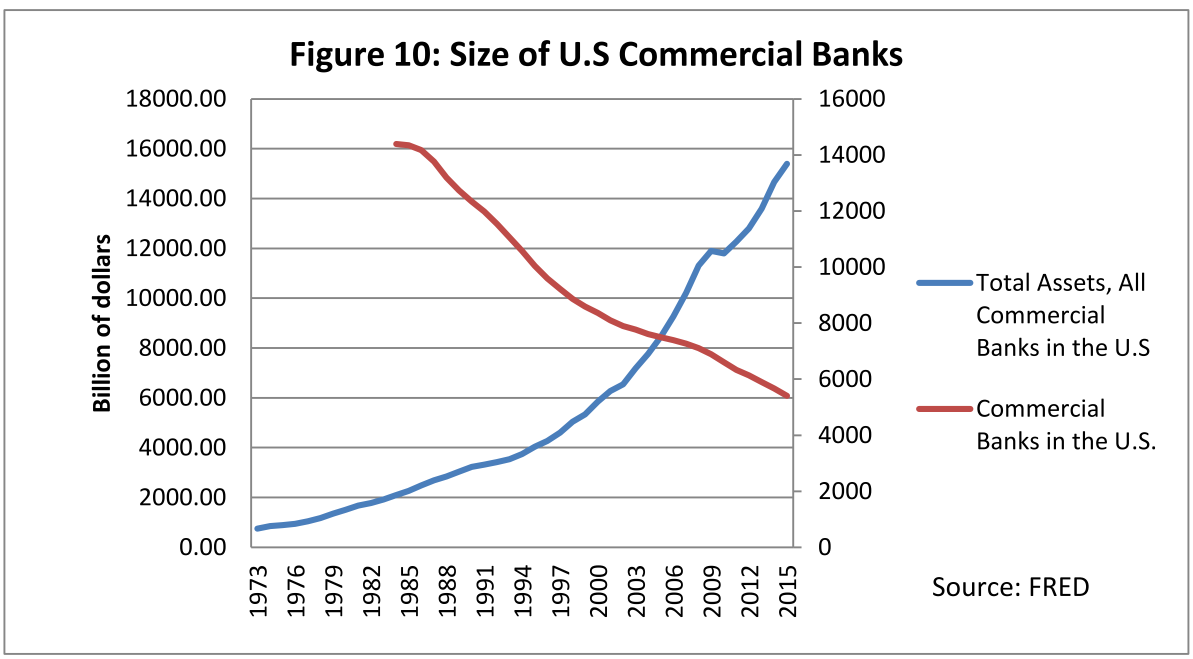
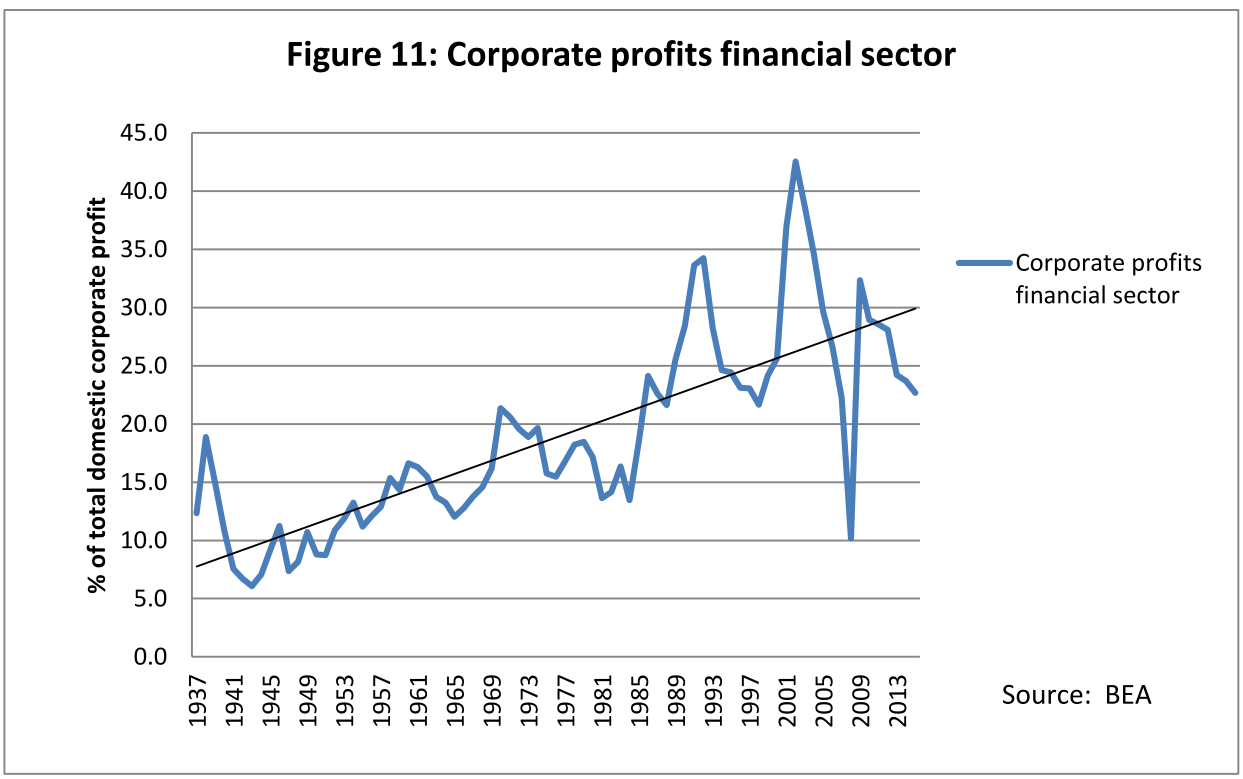


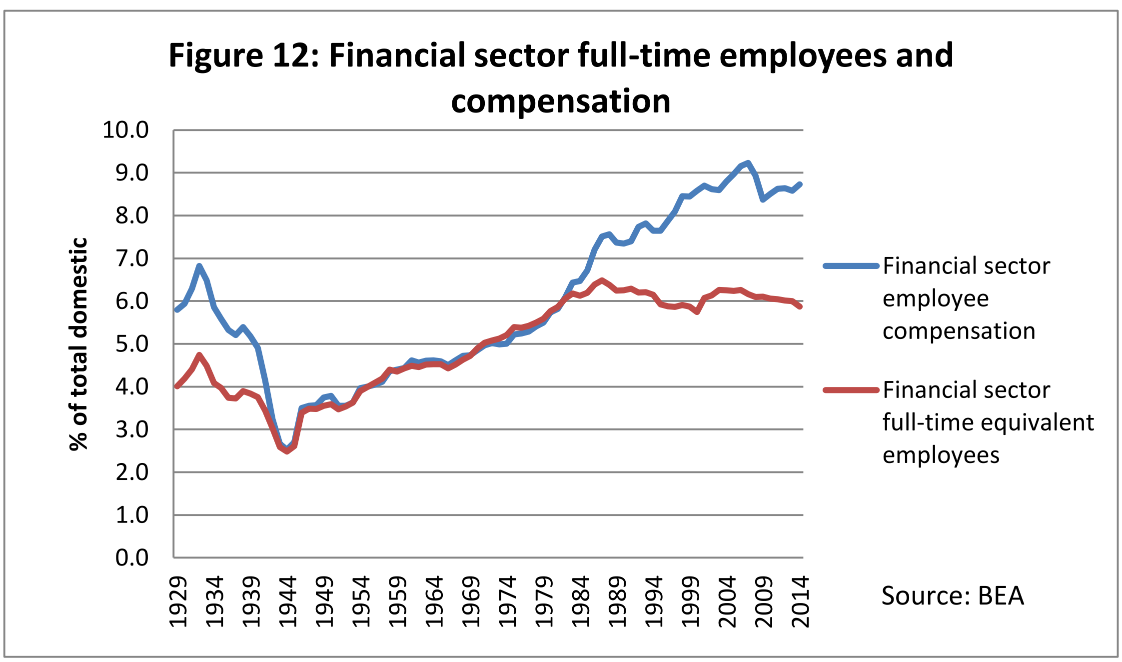
Figure 10: Size of U.S Commercial Banks
Billion of dollars
18000.00
16000.00
14000.00
12000.00
10000.00
8000.00
6000.00
4000.00
2000.00
0.00
16000
14000
12000
10000
8000
6000
4000
2000
0
1973
1976
1979
1982
1985
1988
1991
1994
1997
2000
2003
2006
2009
2012
2015
Total Assets, All Commercial Banks in the U.S
Commercial Banks in the U.S.
Source: FRED

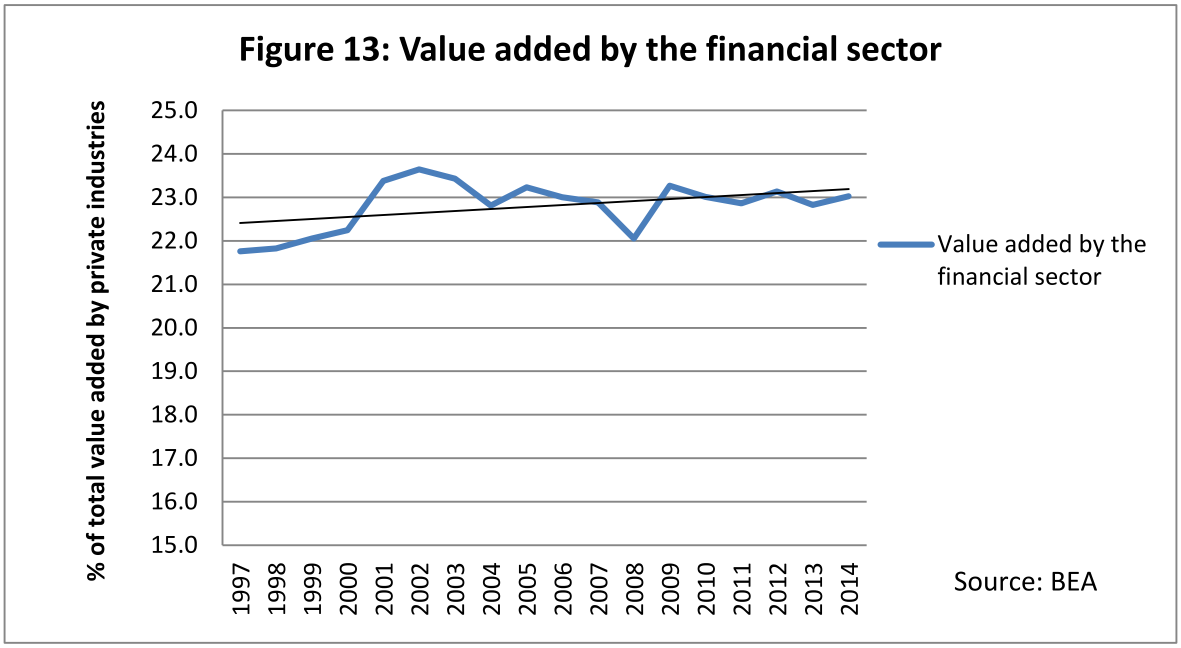
Not only has the financial sector seen an explosive increase in size, but also in relative profits. The financial sector's share of total corporate profits in the U.S. economy has approximately tripled since 1945 and doubled since 1980. In 2002 the share of total profits going to the financial sector was at a high of 43% (Figure 11). This means that 43%, or almost half, of all profits generated in the United States in 2002 went to the financial sector. The other sectors of the economy, manufacturing, transportation, public utilities, wholesale trade, retail trade and automobile services, or "the real economy", only received the other half of profits. Keep in mind again that this increase in profits is paired with a decrease in number of financial institutions as shown in figure 10, meaning that the data shows an underestimation of the real increase in profits per financial institution. More profits are going to fewer financial institutions.



In addition to an increase in size and relative profits, the compensation paid to the workforce of the financial sector also increased (figure 12). Even though the percent of total full time employees in the United States that works in the financial sector has remained fairly constant since 1980, the share of total compensation paid to these employees has increased by 50%. This means that on average the compensation paid to employees in the financial sector has increased relative to other sectors in the economy.

By itself this doesn't necessarily have to be a surprising number. Increased productivity could explain higher employee compensation. However, as figure 13 shows, the value added to the economy by the financial sector as a percent of total value added has remained fairly constant since 1997. The data only goes back to 1997, but there is no reason why we should expect that the years before 1997 would tell a drastically different story. Together this means that employees in the financial industry have seen an increase in compensation relatively to other sector of the economy although they have not added more value to the economy.





Altogether, the financial sector as a whole and per institution increased its assets held, increased its relative profits and increased relative compensation paid relatively to the "real" economy. In addition, total consumer credit outstanding (figure 27) has also increased drastically. I will discuss consume credit outstanding later on in this paper.

Figure 14 combines this change into the Financialization Index #1. The figure can be split up in three time periods. The period 1929-1970 in which the financial sector maintained a relative steady position in the U.S, the period 1970-1990 in which the financial sector increased its importance slightly and the time period 1990-now in which financialization clearly took off. Figure 15 shows the Financialization Index #2 for the period 1984-2014. The Financialization Index #2 is a "zoomed-in" picture of the Financialization Index #1 with an extra variable added.

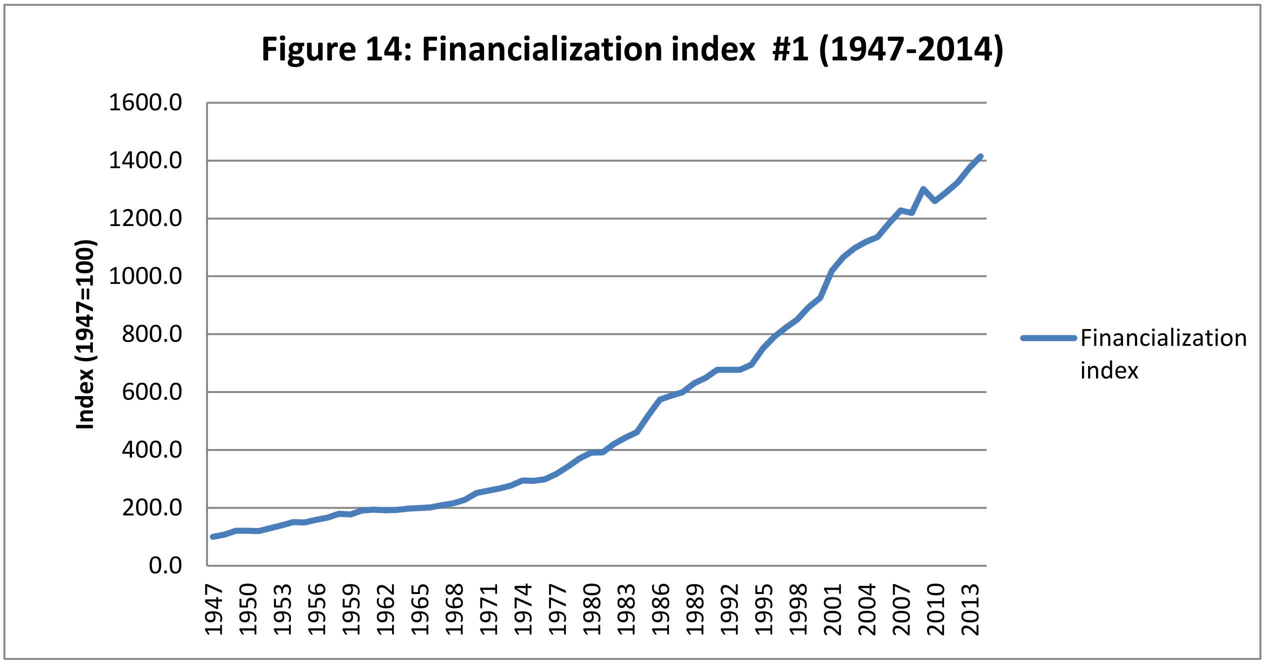


Figure 14: Financialization index #1 (1947-2014)
Index (1947=100)
1600.0
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
1947
1950
1953
1956
1959
1962
1965
1968
1971
1974
1977
1980
1983
1986
1989
1992
1995
1998
2001
2004
2007
2010
2013
Financialization index

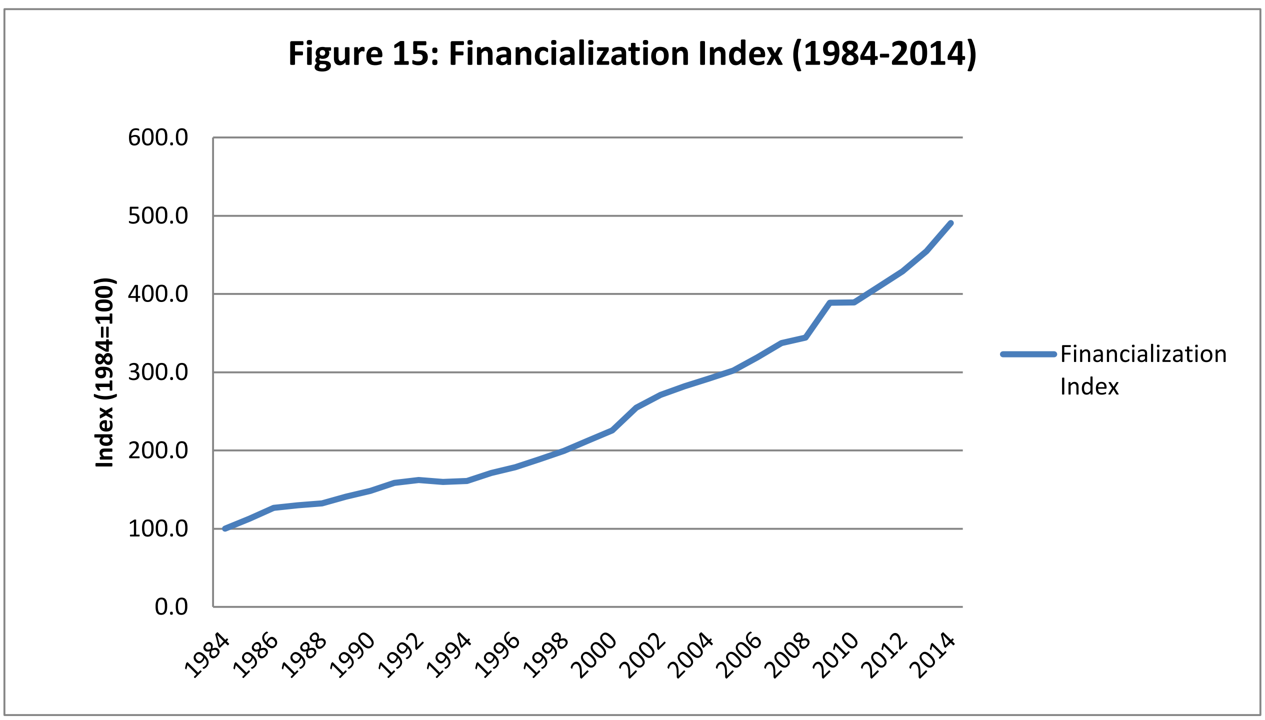
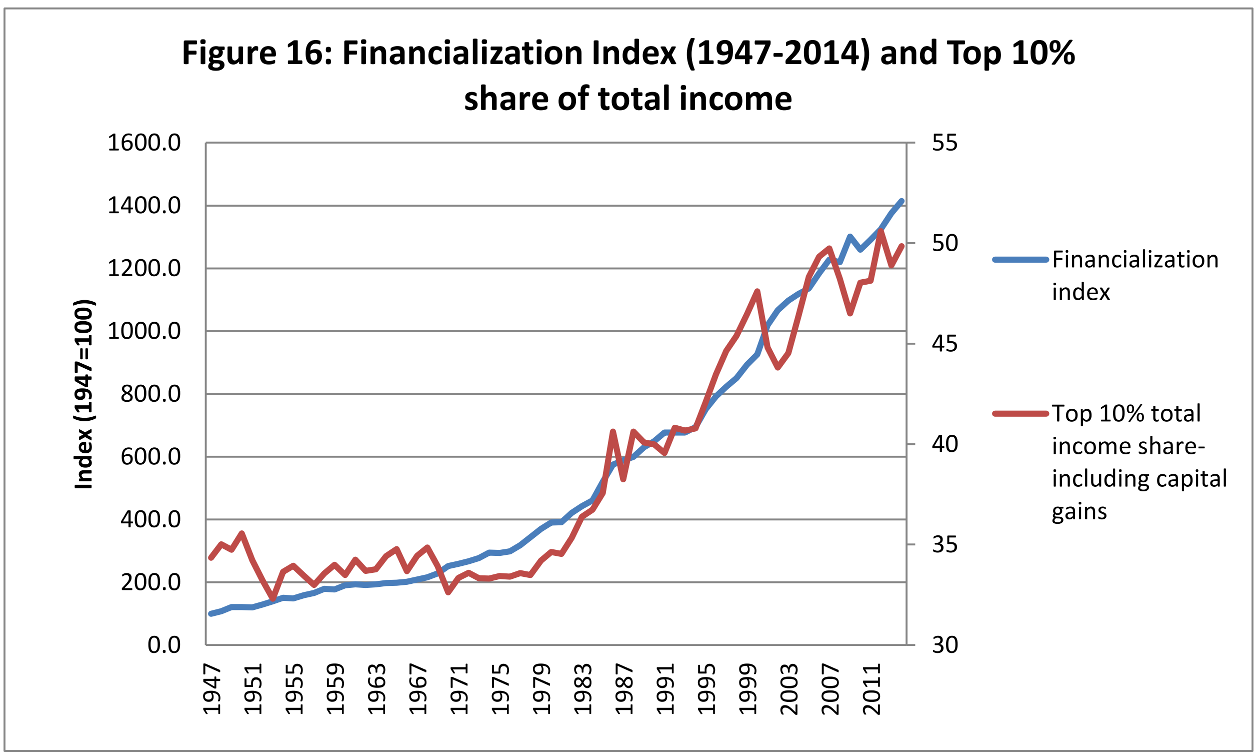
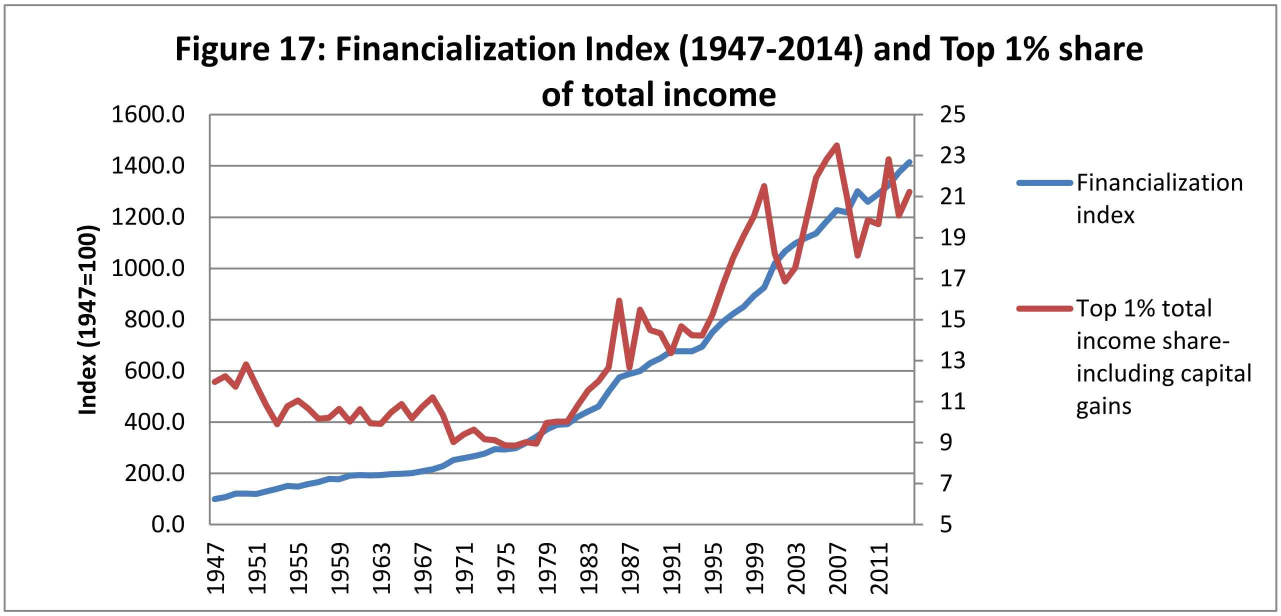


Figure 15: Financialization Index (1984-2014)
Index (1984=100)
600.0
500.0
400.0
300.0
200.0
100.0
0.0
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
Financialization Index

The financialization index of the United States very strongly correlates with the increase in economic inequality during the last decades. Figures 16, 17 and 18 strongly suggest that financialization and income inequality are significantly positively related. These figures combine the previously presented data on top income shares with the Financialization Index #1. A correlation test (figure 19) shows that the correlation between the top 10% share of total income and the financialization index is 0.97, between the top 1% share of total income and the financialization index is 0.92, between the top 0.1% share of income and the financialization index is 0.93 and between the top 0.01% share of income and the financialization index is 0.93. In the remainder of this paper I will investigate the causal relationship between financialization and inequality.





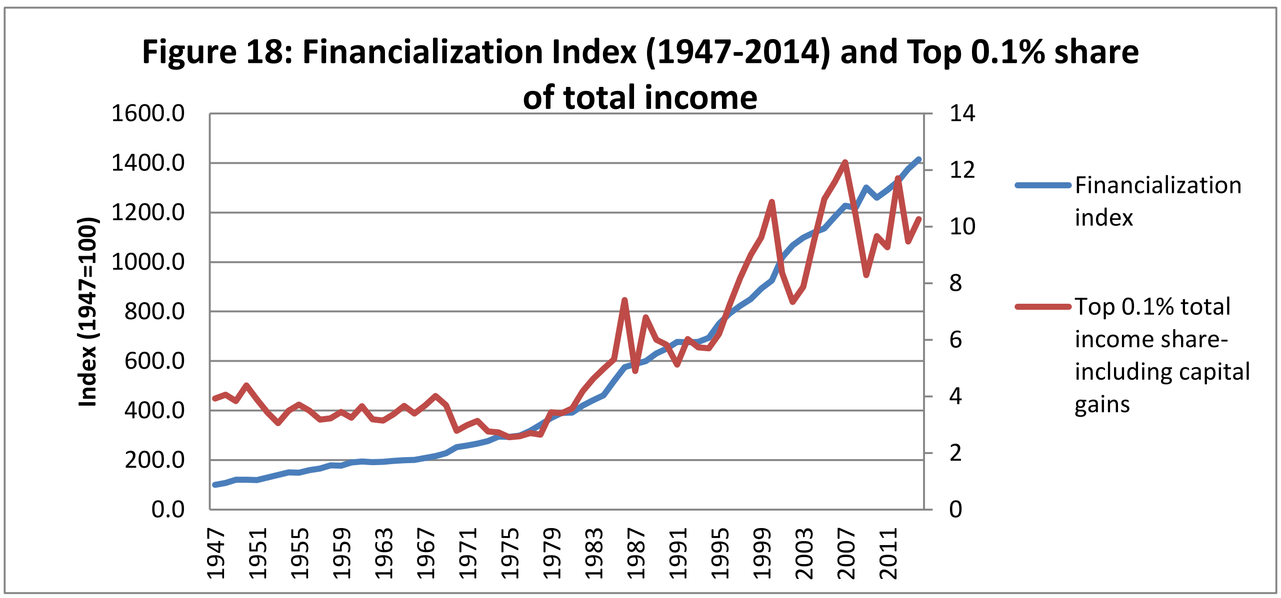


Figure 19: Correlation Financialization index #1 and top shares of incomes	Top 10% share of total income	Top 1% share of total income	Top 0.01% share of total income
Financialization Index (1947-2014)	0.97	0.92	0.93

How has financialization increased economic inequality?

The financialization indexes in figure 14 and 15 clearly show the financialization of the United States. Financialization Index #1 increased by a factor of 7 between 1970 and 2014 and Financialization Index #2 doubled since 2000. The financial sector has increased its economic size and power and with that has become an increasingly powerful player in the U.S political scene. This rise in power of the financial sector has increased economic inequality in multiple ways. Individually some of these forces might not seem as significant in explaining the increasing economic inequality since the 1970's. However, all together they are a powerful force for divergence.

The financial sector has been spending increasingly large sums of money on campaign contributions and lobbying. As a result politicians with increasingly favorable ideas for the financial sector have made it to positions of power. The financial sector is by far the greatest donor to the campaigns of federal candidates and parties. In the last 16 years (1990-2016) the financial sector has contributed a total of $4.3 billion to federal candidates and parties. Its contributions increased from $70 million in 1990 to as much as $686 million in 2012. As a comparison: the health sector, which is the second that is the second largest contributor to campaigns, spent a total of $1.5 billion, about one third of the financial sector total contribution, in the same time period. It only increased its yearly contributions from $26 million in 1990 to $270 million in 2012[8].

If the financial sector is spending all this money on campaign contribution, they must be getting something in return for it. If these investments were not profitable over time, they wouldn't have continued to make them, let alone increase the amount of money

[8] Data found on opensecrets.org. Last updated 4/12/2016.

invested. These political contributions are a very profitable investment because they have allowed the financial sector to place itself in a position of structural political power. This has provided the financial sector with the ability to influence politics and push for reform bills that are favorable to them and push against unfavorable ones.

In addition to political contributions, there is a second way the financial sector has increased its political power. During the last decades a large number of politicians in positions of power were either formerly employed in the financial sector, or are likely to be employed by the financial sector in the future, making millions. Some examples are Henry Paulson who headed Goldman Sachs for 7 years before becoming George W. Bush's Treasury secretary and Frank Newman who was CFO at the Bank of America before becoming undersecretary for domestic finance and later deputy secretary (Johnson and Kwak, 2010). Other Goldman Sachs alumni that have held position of power include Gary Gensler, Robert Steel, Senator Jon Corzine, Stephen Friedman, William Dudley, Joshua Bolton, and Neel Kashkari (Johnson and Kwak, 2010). Many more politicians came from other financial institutions. Many of these people didn't only come from a financial institution, but also returned to the financial sector after leaving politics. Now imagine if you are in a position of power in which you have a say on a bill that increases regulation of the financial sector. This bill will not only hurt the profitability of your former and future employer, but also make the life of your friends harder and if passed will make it less likely you'll be offered a job making millions after your political career. How hard would you push for the bill to be passed?

Some of the bills containing reforms that made it through Congress arguably because of the power and influence of the financial sector include: lower taxes on high incomes, capital gains, inheritances and corporate profits and loosening of existing regulations. The financial sector's political power arguably also played a role in the failure of government agencies to regulate financial innovations before the financial crises and the failure to significantly increase regulation of the financial sector since the crises. All of these reforms, or lack of reforms, increased the profitability of the financial sector, the incomes of its most important members and helped in strengthening the financial sector's position of power. And they also significantly increased economic inequality.

As said before, top incomes have exploded in the last decades causing income inequality to increase. The top 10% received an all-time high of 48% of total labor income and 51 % of total income in 2012. There is no logical explanation based on marginal productivity to explain this explosive rise of top incomes. A way one could try to explain and justify the explosion of top incomes is by pointing at the change in technology which have caused unproductive stockholders to be replaced by talented managers, who deserve their high salaries based on their marginal productivity. However, although it is impossible to measure the marginal productivity of these top managers, it is definitely not close to the incomes they are receiving.

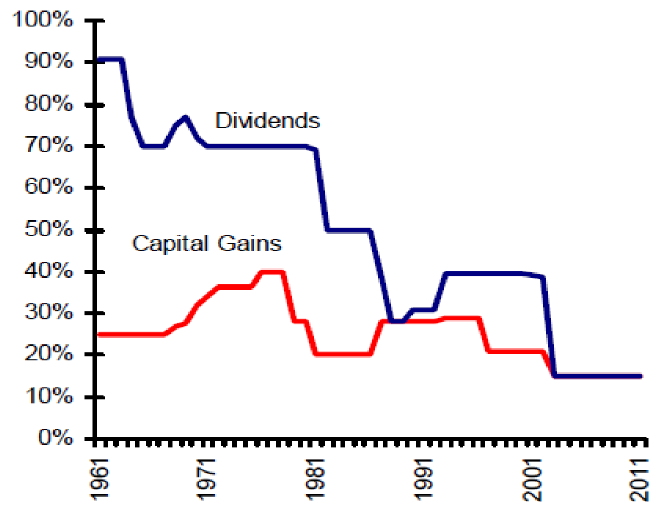
The fact that United States' executive paychecks are much larger than the paychecks of Western European or Japanese executives disproves this explanation. All these executives' jobs are comparable, meaning they have approximately the same marginal productivity. Also, if we look at incomes paid to executives related to the performance of their company, we don't find a significant correlation. Bertrand and Mullainhatan (2001) refer to this phenomenon as "pay for luck". By comparing companies in the same sector they found that executive salaries are more closely related to "luck" than to "talent". Executive pay is highly correlated with the performance of the economy as a whole and not with the executives' skill level or decisions. The explosion of top incomes cannot be explained by an increase of marginal productivity.

A better explanation of the explosion of top incomes is based on the existing power structures in combination with the lower top marginal income tax rates. Most executive have significant power over deciding the size of their own paycheck. Their compensation packages are either directly set by themselves, or by committees whose members are chosen by executives. If we add to this the added incentive to desire a higher income due to a decrease in top marginal income tax rates, we have a much better explanation for the explosion of top incomes.

Both the tax on labor income and capital income are important because top incomes consist of both wages and stock options and awards. For example: in 2012 the 500 highest-paid executives named in proxy statements of U.S. public companies received on average $30.3 million each; 42% of their compensation came from stock options and 41% from stock awards (Lazonick, 2014). Only 17% of their compensation came from their wages. Also, the higher in the income hierarchy someone is, the more important stock options and awards are and the more profitable lower taxes on income on capital incomes are.

The financial sector has used its political power to push for lower taxes on income from capital. This has increased their profitability by increasing the difference between interest rates and return on investments and by allowing them to spread their motives throughout the whole economy. Exhibit 2 shows that they have been very successful in lowering taxes on dividends and capital gains. In 2011 taxes on dividends and capital gains were 15%, down from highs of 90% and 40% respectively. As a result of these lower taxes, the financial sector's profitability and economic reach increased, strengthening its position of power. A second result is that the wealthy now receive a higher return on their investments and pay less tax over their pay packages that partly consist of stock options. This increases the gap between the rich and the "not as rich".

Exhibit 2: Tax Rates on Dividends and Capital Gains in the U.S. (1961 – 2011)

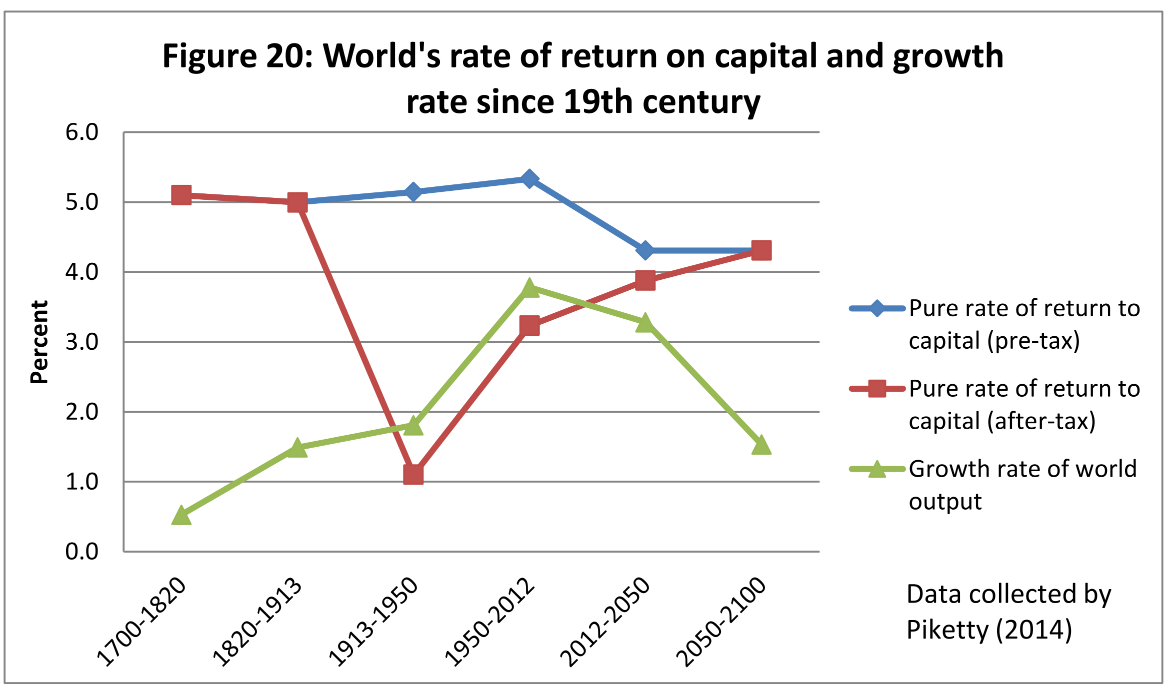


Source: *Michael J. Mauboussin, Legg Mason Capital Management*

More generally, all taxes on different forms of capital combined, (the total rate at which capital is taxed) has decreased causing the rate of return on capital (r) to increase. This is one of the forces of divergence Piketty describes in his book "Capital in the Twenty-First Century" (2014). The rate of return on capital has been becoming increasingly greater than the rate of growth of the economy (g). As a result current wealth and past wealth is growing to be more and more important compared to new wealth creation. This implies that the people who are currently rich will increase their dominance over those who are not, simply because their wealth will grow at a higher pace than the economy as a whole.

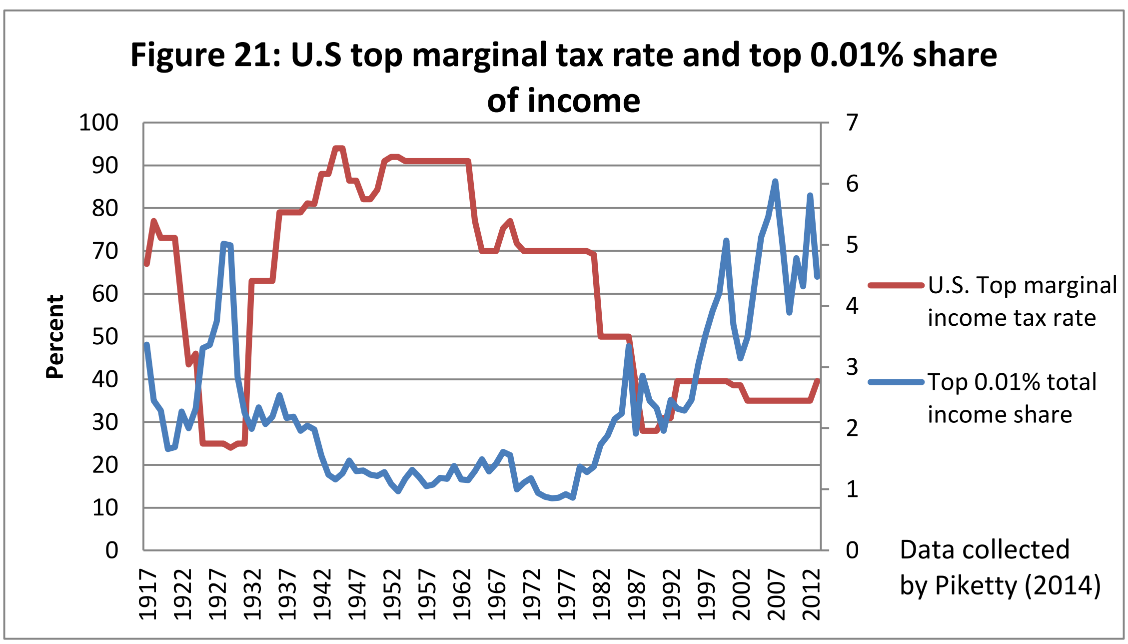
Figures 20 shows that during the "*Trente Glorieuse"* the after tax rate of return of capital was as low as 1%. This was mainly caused by the increasing role of the government, which introduced higher taxes and stricter regulations. The growth rate changed in the opposite direction and increased to almost 4% as much of the developed world went through the "*Trente Glorieuse*". Economic inequality during this period decreased because new wealth was more important than current or past wealth.

Since the 1970's the after tax rate of return on capital increased again to above 4%. Comparing the pre-tax and after-tax rate of return in figure 20 tells us that this is mostly caused by a change in tax levels. The pre-tax rate of return did not increase; it even decreased. The world outputs growth rate was able to keep up with the increase in after tax return on capital for some time, but high levels of growth of around 3-4% are unsustainable in the long run. And thus the rate of return on capital became greater than the growth of the economy (r>g), increasing economic inequality.



An additional force that increases economic inequality is the fact that the magnitude of the inequality r>g increases when we move up the wealth distribution. The richer you are the higher your return on capital is. There is an economy of scale in wealth management. When your capital stock is larger, you have greater means to employ wealth management consultants and financial advisers. A larger capital stock also makes it easier to take risks with alternative investment strategies that result in higher returns. Without the pressure of a having to receive short run returns, you can take more risks and patiently wait for high returns in the long run.

Besides pushing for lower taxes on capital, the financial sector arguably also played a role in decreasing the top marginal tax rates on labor income. The top marginal tax rate on labor income has decreased from a high of 94% in 1945 to a low of 28% in 1990. Today it is still below 40%. Combined with the decrease in top marginal tax rates on capital this has allowed for the explosive rise of top incomes in the United States. Figure 21 shows the change of the top marginal tax rate on total income and the share of income going to the top 0.01% over time.



The decrease of the top marginal income tax rate and the increase of the top 1%'s share of national income after the 1970's are highly correlated. Besides the fact that lower tax marginal tax rates increase economic inequality by working in favor of those who earn a lot of money, they increase economic inequality in a second way. During a period of higher top income tax rates (85% - 95% in the period 1930-1970), there is little incentive for executives to use their bargaining power to convince the board of directors to give them a before-tax compensation package worth $20 million instead of $10 million. This would only increase their after tax income by $1 million while it's a huge expense for the company. However, when the tax rates were lowered to 30-40% after 1970, top executives were given an incentive to desire these very high incomes. At these rates their before tax salary only has to be raised by about $3 million to have the desired effect of an after-tax increase of $1 million. This logic causes top marginal income tax rates and top income shares to be the disproportionally inversely related. This explains why a lower marginal top income tax rate significantly increases economic inequality.

Finally, a last change of tax rates that increased economic inequality during the last decades is the decrease of the top inheritance tax rate (figure 22). Of course, once someone has accumulated large amounts of wealth he would prefer that it doesn't go to the government when he passes away. Using part of your current wealth to lobby for lower inheritance tax rates can be a very profitable investment in the long run. A lower inheritance tax rate will not only save you money, but also preserve family empires from one generation to the next. However, a lower inheritance tax rate also greatly increases economic inequality because it destroys the level playing field.

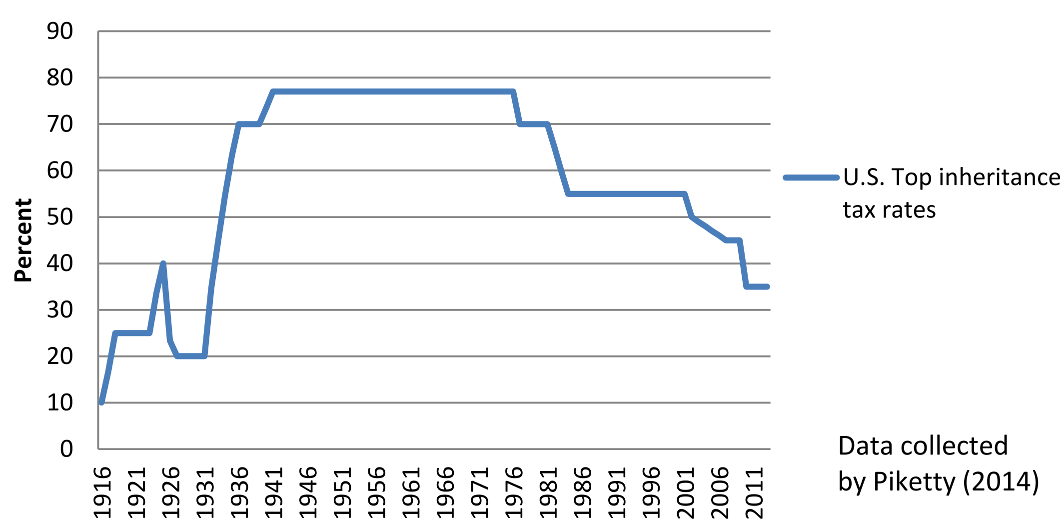
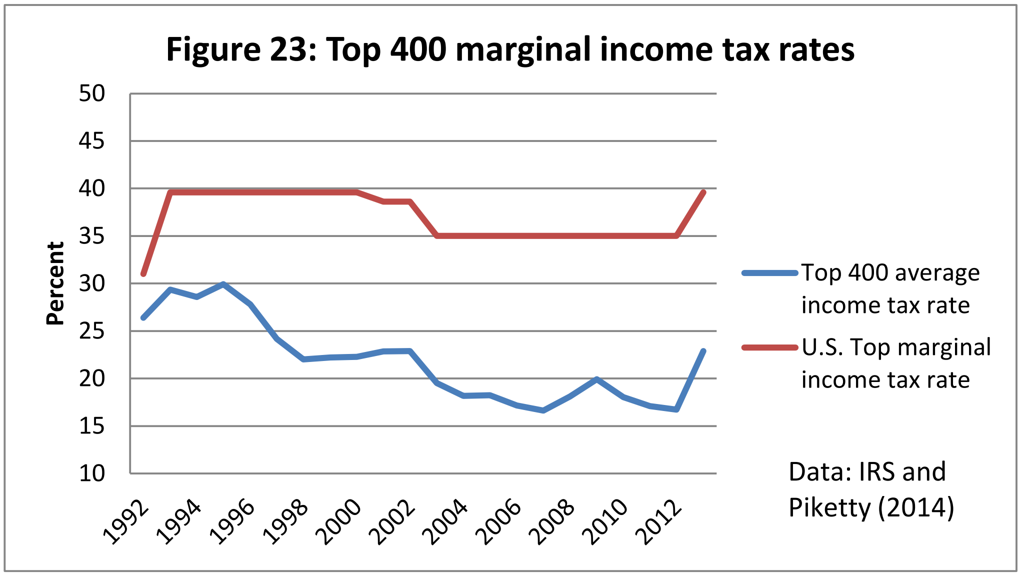


Figure 22: U.S. Top inheritance tax rates

Altogether, the tax system in the United Sates today is closer to being regressive than progressive. Moreover, in addition to lower income taxes the financial sector also uses gray areas in U.S. tax law to increase its profits, its position of power in the United States and the incomes of its (top) employees. For decades the wealthy and the financial sector have combined their money and power to find tax loopholes, keep them available and to push back towards efforts to fight this tax evasion. The financial sector profits by paying less taxes, but at the same economic inequality increases because the wealthy profit as well. Currently this topic is getting much media attention and politicians all ovFr the world are attempting to fight tax evasion.

Due to tax loopholes, the effective marginal income tax paid by the 400 highest earners, reported by the IRS, is even lower than recorded in figure 21. As figure 23 shows, the top 400 incomes paid even less tax than the 30%-40% in figure 21. These very rich took home an average of $336 million in 2012 over which they paid approximately 17% income tax, on average. This is about the same as a family making $100.000 a year. Or as

President Obama said in a speech to the Business Roundtable: "*… folks who are doing very well [are] paying lower rates than their secretaries, [which] is not helping the American economy*".



Although the IRS does not release personal information about these top 400 earners, Scheiber and Cohen from the NY Times identified these top 400 earners as key players in the financial sector (Scheiber and Cohen, 2015). Hedge fund managers, investor, option traders and bankers such as D. Loeb, L. Moore Bacon, S. Cohen, G. Soros, R. Mercer and family, J. Simons and family and J. Yass and family belong to the top 400 earners. Not surprisingly, all these people also belong to the largest donators to political candidates, anti-tax activists, lobbyists and super PAC's. They also spend millions on the best lawyers, estate planners, accountants and investment experts to find and exploit loopholes that save them billions of dollars in taxes.

It is also estimated by Citizens for Tax Justice and the U.S. Public Interest Research Group Education Fund in a recent study titled "*Offshore Shell Games*" (2015) that the 500 largest U.S. corporations together hold more than $2.1 trillion dollars of their profits in overseas tax havens to avoid taxation in the United States. They would collectively owe $620 billion dollars in taxes on these profits and are avoiding an estimated minimum of $90 billion a year in federal taxes.

But not only does the financial sector want to keep the tax loopholes in place to make money helping individuals and large corporations evade taxes using tax havens, which increases economic inequality. They also use the tax loopholes themselves. Although they needed tax money for a bailout in 2008, all large financial institution are holding billions in offshore accounts to evade U.S. taxation: Morgan Stanley holds $7.4 billion, Bank of America holds $17.2 billion, American Express holds $9.7 billion, Citigroup holds $43.8 billion, J.P. Morgan Chase & Co. holds $31.1 billion and Goldman Sachs Group holds $24.9 billion.

All these numbers are estimated using the tax forms and 10-K report filed by individuals, companies and financial institutions to the IRS and SEC. This makes these numbers likely to be largely underestimated since it is likely that many constructions to evade taxes do not show up in individuals' tax forms or company's own 10-K filings (McIntyre, Phillips and Baxandall, 2015).

Another way financialization increases income inequality is by the extent to which the financial sector has expanded its power over the rest of the economy, pushing motives that are profitable for them in the short run. During the previous decades financialization has played a role in the move from an economy based on corporate goals consisting of growing as a company, improving long term competitive capabilities, supplying high quality products and services and improving products and technology together with improving working conditions to one simple goal: maximize shareholder value, today. This shift has become so deeply embedded in the U.S economy that in the first undergraduate class of financial management students are taught that a CEO's main responsibility is to maximize shareholder value[9].

The pressure from Wall Street and the investors it represents, for example through hostile takeovers or stockholder votes, for a continuous increase in profits and earnings per share, year after year, is the root of many changes in the U.S. economy that cause income inequality to increase. Simply put, a company has three things it could do with its money: reinvest it, use it to pay dividends or spend it on stock buybacks. Wall Street pressure has caused companies to move from largely reinvesting their profits as retained earnings to spending most of it on dividends and stock buybacks.

The move towards dividends and stock buyback provides quick financial gains to investors, but undermines the long term economic position of the company. Companies value keeping their shareholders, and their top executives, happy by keeping their stock prices high over improving their products and finding new products through research and development, improving workers conditions and increasing wages, although the later are all investments that improve the company's "real" future outlook and the overall health of the economy in the United States.

The 449 companies in the S&P 500 index that were publicly listed from 2003 to 2012 used 54% of their earnings ($2.4 trillion) to buy back their own stock and another 37% of their earnings on dividend payouts. This left 9% for productive spending. Some companies have even seen years in which it spent more than 100% of their profits on stock buybacks,

[9] From my own experience in BUS320 at the University of Rhode Island

meaning it borrowed money just to buy back its own stock. To compare: in the early 80's 50% was spend on dividends and 50% was reinvested (Lazonick, 2014).

In order to fund this spending on dividends and stock buybacks, companies have been cutting costs by saving on employee compensation. Unions have been successfully fought off and production has been moved to lower wage countries. This has caused most middle income jobs, especially in manufacturing, to disappear from the United States. The lower job supply and lower union density decreased the wages of the remaining jobs. This downward pressure on wages mostly affects the middle- and lower income jobs, increasing the relative difference between high and low incomes.

Figures 24 and 25 show the change of wages, productivity and corporate profits. Before the financialization of the U.S economy started taking off, wages and output were growing closely together and wages and corporate profits were moving within the same bandwidth. An increase in workers productivity meant an increase in corporate profits and an increase in workers' wages. However, after 1980 this relation does not hold anymore. The gap between wages and output has grown and wages did not increase with the increase of corporate profits.

Figure 24:

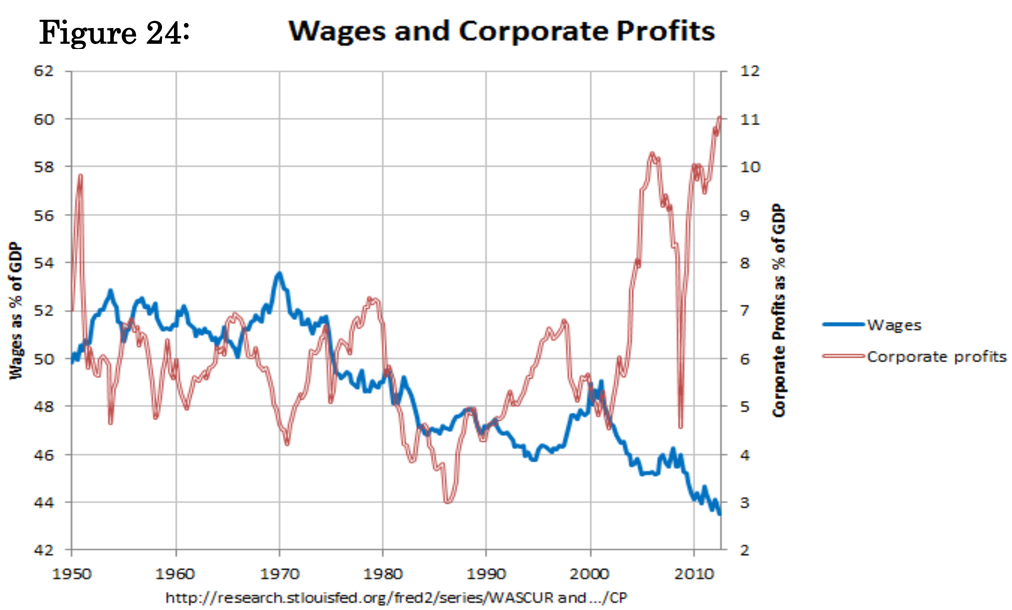
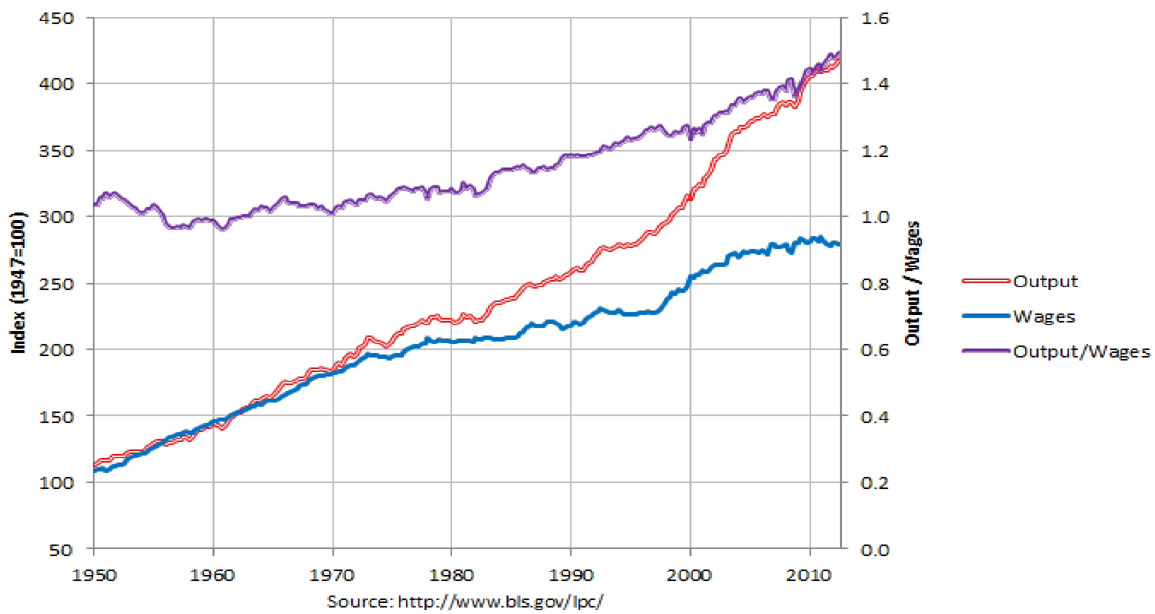
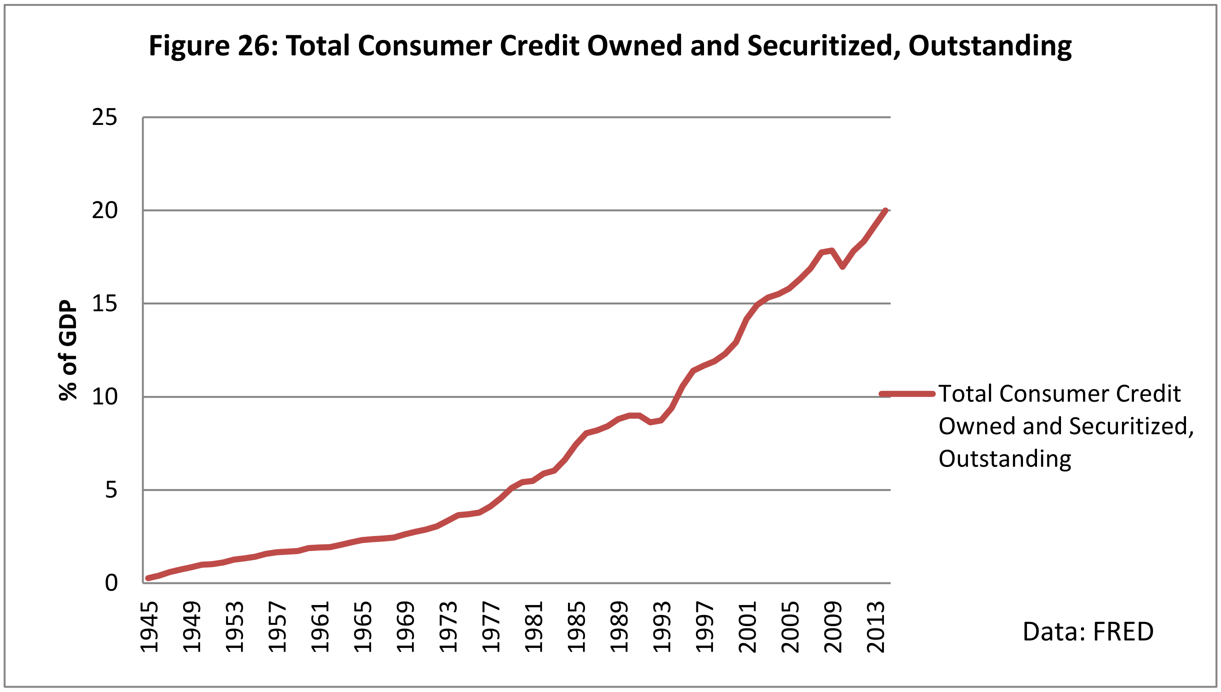


Figure 25: Hourly Output and Real Compensation



The Wall Street pressure to maximize shareholder value has resulted in that "the money has gone from those who would spend it to those who are so well off that, try as the might, they can't spend it all" (Stiglitz, 2009). Those who would spend money, but don't have it, have resorted to credit to make up for their stagnating wages. These consumers, trying to keep up with the growing cost of living, started lending more and more heavily. Total outstanding consumer credit today is at all-time highs. As figure 26 shows, consumer credit has increased from less than 1% of GDP in 1945 ($150 billion) to more than 20% of GDP in 2013 ($3.5 trillion). This measurement does not even include households' mortgage loans.



With credit as readily available as it is today, it is very tempting for consumers to support their consumption by unsustainable lending. This has created an additional increase in economic inequality. Because of the incentive[10] that exist for creditors to loan out as much as possible, many consumers have received loans that they shouldn't have gotten based on their capability to repay. This has resulted in a vicious circle of unsustainable household debt, which could only be paid for by more lending.

This move towards consumer credit increases economic inequality in two main ways. Firstly, the debtors pay interest, and often very high additional fees, on their loans. All this money goes to those who have spare wealth to loan out. This unproductive spending on fees and interest rates redistributes the little income the lower classes have to the top incomes. Secondly, the lower the debtor's income is, the higher their chance of defaulting. These

[10] For example: before the financial crises there was an incentive to give out as many mortgages as possible. Financial innovations allowed financial institutions to move the risk away from their balance sheet, essentially earning "free money" of the interest payments.

debtors might never recover economically from a default on their loans, increasing economic inequality. In the extreme case, as seen in 2008, excess lending leads to increasing economic inequality by causing a financial crises in which the lower incomes are hit much harder than the top incomes.

Moreover, the move towards spending on dividends and stock buyback has not only increased economic inequality by pushing down wages and increasing consumer credit, but also because this increases the income from the wealthy at the same time. The shift in spending redistributes income from the bottom to the top of the income distribution. This effect is increased by the lower top marginal income taxes.

First of all, to profit from stock buybacks and dividends payouts you must have money invested in companies. The bottom of the income distribution doesn't have the wealth to invest (remember: the bottom 50% of U.S wealth distribution has negligible wealth), and so misses out on the shift from wage income towards income from dividends and stock buybacks.

Secondly, executive compensation packages increasingly consist of stock options and awards. As noted before, in 2012 83% percent of the 500 highest paid executives pay consisted of either stock options or award. Stock buybacks increase a company's stock price by increasing its earnings per share, which Wall Street finds a very important measurement. As a result, stock buybacks increase the income and wealth of the employees receiving stock options and buybacks, which are mostly the top earners. On a side note, is it surprising that those who profit from stock buybacks are the ones deciding on doing stock buybacks?

Thirdly, W. Lazonick (2014) points out that instead of retaining its own earnings to fund investments in research and development, corporations have been successfully lobbying for government research subsidies. The argument often used is that subsidies are needed to sustain the competitiveness of the U.S. economy. W. Lazonick (2014) gives three examples:

1) Exxon Mobil receives about $600 million a year in U.S. government subsidies for oil exploration (according to the Center for American Progress) and spends about $21 billion a year on buybacks.

2) In 2005, Intel's then-CEO, Craig R. Barrett, argued that "it will take a massive, coordinated U.S. research effort involving academia, industry, and state and federal governments to ensure that America continues to be the world leader in information technology" (Lazonick, 2014). Yet from 2001, when the U.S. government launched the National Nanotechnology Initiative (NNI), through 2013 Intel's expenditures on buybacks (approximately $6 billion) were almost four times the total NNI budget ($1.5 billion).

3). Through the American Energy Innovation Council, top executives of Microsoft, GE, and other companies have lobbied the U.S. government to triple its investment in alternative energy research and subsidies, to $16 billion a year. Yet these companies had plenty of funds they could have invested in alternative energy on their own. Over the past decade Microsoft and GE, combined, have spent about that amount annually on buybacks.

In conclusion, instead of reinvesting their corporate profits, corporations have spent their money on stock buybacks and dividends. This resulted in decreasing wages and increasing outstanding consumer credit. At the same time companies have also successfully lobbied for government funds to pay for research and development, arguing they need the money to stay competitive. These precious government funds could have been spent on the common good, but now it could be argued that this money goes directly into the pockets of the wealthy. All of this results in increasing economic inequality.

Conclusion

In this paper I have provided an overview of economic inequality in the United States, starting in the 18th century. We have seen that economic inequality today is at levels as high as ever before. The gap between the rich and the rest of society has been steadily growing since the 1970's. We should worry about his for three reasons: moral reasons, macroeconomic reasons and historical reasons.

Furthermore, the rise in economic inequality is strongly correlated with the Financialization Indexes I created. Through multiple channels, the financialization of the U.S. has been a driving force behind the increase in economic inequality. Realizing that and understanding how and why financialization increases economic inequality is essential in the discussion of what policy makers could do to make the country more equal.

My research suggests that policies targeting an increase in regulation for the financial sector, with the goal to de-accelerate the process of financialization could significantly decrease economic equality over time. As a result the United States will improve its global competitive position, improving the long term prospects of its economy. Policies aimed at decreasing the long run rise in economic inequality will not only make society less unfair, but will also make everyone richer. More specifically, I would suggest that new policies should focus on the United States' tax system, executive compensation and new regulations aimed at putting a cap on the unproductive spending by corporations on dividends and stock buybacks.

This paper leaves many future research questions. First of all I would like to invite everyone to improve the Financialization Index. I realize that the index is far from perfect. Two main ways I believe the index could be improved is by adding more meaningful variables and by finding a way to weight each of them. The Financialization Index could also be extended to covering multiple countries. A comparison between the process of financialization between the United States and for example Germany could be very interesting.

I also leave the question what exactly new policies should consist of unanswered. Future research could attempt to answer this question and come up with real policy recommendations. Many of the ideas introduced here are already being worked on by politicians and their policy advisers. However, I believe that the importance of the unproductive spending of corporate profits caused by the pressure of the financial sector in causing economic inequality is generally being undervalued. Although this might be the hardest policy to get through congress because of the push back it will receive from Wall Street, I think it is also one of the most important ones.

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