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Income inequality. Literature review

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Abstract
There is little consensus amongst economists when it comes to income inequality. This study consists of examining existent statistical data on inequality around the world and establish current trends. Furthermore, existing literature and empirical studies is analyzed in order to establish the inequality's effects on society. High levels of income inequality are associated with higher unemployment, slow economic growth, social problems such as high unemployment and crime crime Moreover, there is even evidence about the correlation between inequality and health problems such as obesity, lower life expectancy and infant mortality.

Keywords: Inequality trends, global inequality, inequality's social effects.

1. Introduction

The Word Income Inequality Database defines inequality as the relative position of individuals (or households) within a distribution. The distribution of inequality can be calculated at the global level, country level and even organization level.

According to an OXFAM report (2018), the top 1% of the world income distribution received 82% of the new wealth created last year, with a total amount of $762bn while 0% of that wealth went to the bottom 50%. These statistics can't be explained just by development differences between countries. There is staggering inequality within developed countries and less developed countries alike. For example, in the United States, the three richest people in the income distribution own the same the US own the same wealth as the bottom half of US population, which represents about 160 million people.

2. Problem Statement

High levels of income inequality are associated with higher unemployment, slow economic growth, social problems such as crime and some scholars even argue that it is a threat to the democratic capitalist society. Furthermore, there is even evidence about inequality leading to health problems such as obesity, lower life expectancy and infant mortality. Taking into account the socio-economic implications income inequality pertains, it has received much attention from scholars (Stiglitz, 2013; Piketty, 2014; Milanovic , 2016; Collins and Guidri, 2018).

3. Aims of the research and methodology

The aim of this research is to be analyse the current state of inequality in the world and measure its social effects. First, inequality will be defined, then statistical data will be analysed. Furthermore, prominent literature will be analysed in order to find out what are the effects on inequality on society.

4. 1.Inequality Facts and Trends

4.1.1 Definition of Inequality

Economic inequality or disparity is the difference in well-being among individuals in a group, groups in a population or among countries. In literature, economic inequality is described as income inequality, wealth inequality, or the wealth gap. The vast majority of literature about economic inequality refers to income inequality, thus in this paper the description will be used. The measurement of economic inequality is done in three metrics: wealth, income, and consumption. The most commonly used metric for analyzing economic disparity in the literature analyzed is income. The vast majority of literature about economic inequality refers to income inequality. Since this paper consists of a literature review, for the sake of consistency, the same description will be used.

According to OECD (2018), income is defined as household disposable income over a given period of time, it usually consists of one year. Earnings, self-employment, capital income and public cash transfers are taken into account when calculating income, while income taxes and social security contributions paid by households are deducted. All the members of a household are attributed the same income and it is adjusted after controlling for household size.

As aforementioned in the introduction income inequality is viewed as different individuals which have different degrees of living standards. Inequality entails the relative position of different individuals (or households) within a given distribution. Since citizenship is a very strong predictor of one's income level, people often think first of income inequality within the borders of a country (Corak,2013).However, as the world becomes more integrated due to globalization, the global dimension of inequality becomes very relevant(Corak,2013). Thus, this paper will give further details on how both country level income inequality and global inequality are measured.

4.1.2 Measurement

The OECD (2018) uses five indicators for income inequality. The most common one is The Gini coefficient and it measures the area between the Lorenz curve and a hypothetical line of absolute equality, which is expressed as a percentage of the maximum area under the line. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual. It has an index between 0 and 100. If a country has an index of 0, it would has perfect equality while an index of 100 implies perfect inequality. The main limitation of this measurement is that it indicates just relative wealth and not absolute wealth, which makes it possible for the Gini of a developing country to rise while the number of people in absolute poverty decreases. Another indicator is the "S80/S20", which is the ratio of the average income of the 20% richest to the 20% poorest. Moreover, the "P90/P10 "is also an interesting indicator since is the ratio of the top 10% in the income distribution to that of the bottom 10%. Furthermore, the Palma ratio is the share of the income of the top 10% of the income distribution divided by the share of the income earned by the bottom 40%. Others indicators are often used in research reports; P90/P50, the upper bound value of the ninth decile to the median income; and P50/P10 of median income to the upper bound value of the first decile. In economic literature, the most common measurement for income inequality is the Gini index. However, Atkinson (1987) came up with an addition that could explain more He argues that it is of great importance to include the social welfare function in the measurement of income inequality

The most common indicator for income inequality used in the literature analyzed and research reports from bodies such as the OECD and the World Bank is the Gini index. Thus, this paper will use the Gini index as well.

4.1.3 Measurement of Global Inequality

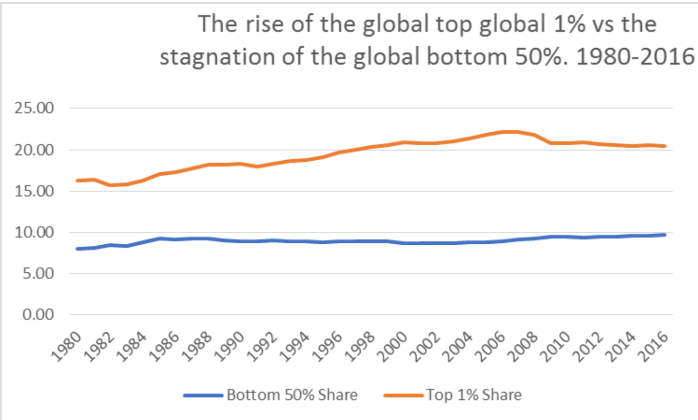
Measuring country level Income Inequality is straightforward. It usually relies on tax returns or household survey data. However, measuring inequality at the global level is more complex because it entails more definitions. In this section methods of measuring global inequality will be described in detail.

According to Milanovic (2013) there are three concepts of inequality. The first one measures inequality between countries and entails calculating the Gini coefficient by taking into account just GDP data. The second concept takes into account GPD as well but also weighs in the total population of each country, thus being more informative. The third concept implies measuring global inequality by looking at each individual income and calculating the Gini coefficient and is based on household survey data.

4.1.4 Data about Inequality at the Global and OECD level

In this section, facts and trends about inequality will be described in detail. The data is derived from the most recent World Income Report(2018), compiled by leading economists in the topic; Thomas Piketty, Emmanuel Saez, Gabriel Zucman and others. Furthermore, data about inequality within developed countries (OECD) is derived from OECD recent reports. Given the fact that the methodologies used are similar, the data is comparable. Facts and trends about both global inequality and within country inequality will be given.

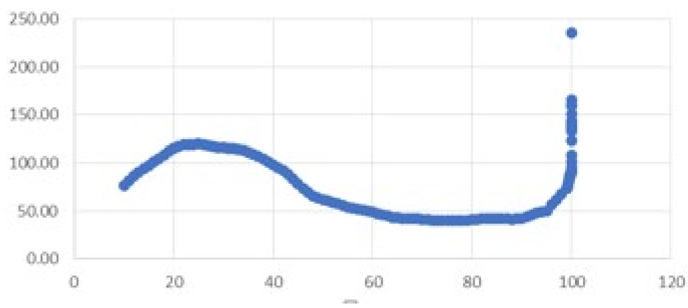
4.1.5. Global Inequality Rising Trend



Source: World Inequality Report.2018

The graph above exhibits the income difference between the global top 1% and the global bottom 50%. In 1980, the global 1 % received 16% of the global income while the bottom 50% received 50% less than that, a global income share of 8%. Until 2016, the difference in income share between the two groups has risen dramatically. The top 1% got a share of 22% of the global income while the bottom 50% has raised its share with just 2% , reaching a total share of 10% in 2016.

4.1.6 Global Inequality and Growth 1980-2016 Cumulative Growth Rate

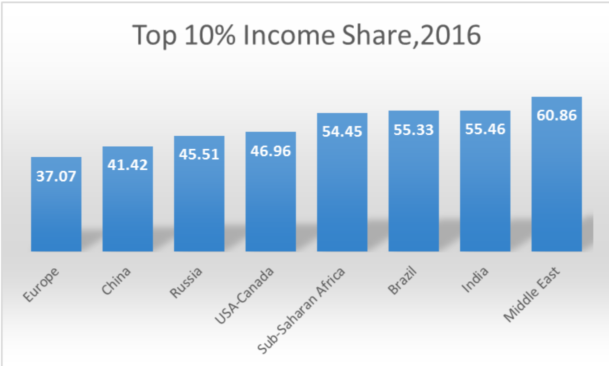


Source: World Inequality Report.2018

On the horizontal axis, the world population is divided into a hundred groups of equal population size and sorted in ascending order from left to right, according to each group's income level. The Top 1% group is divided into ten groups, the richest of these groups is also divided into ten groups, and the very top group is again divided into ten groups of equal population size. The vertical axis exhibits the total income growth of the average individual in each group between 1980 and 2016. Differences in the cost of living between countries are taken into account and values are net of inflation. The data shows the difference between the poorest 10% and the world's richest 1%), growth was 74% between 1980 and 2016. The Top 1% captured 27% of total growth over this period.

Furthermore, the global top 1% has captured 50% as much of that growth as the 50% poorest individuals. We can notice that the bottom 50% has registered important growth rates. However, the global middle class (including all of the poorest 90% income groups in the EU and the United States) has stagnated.

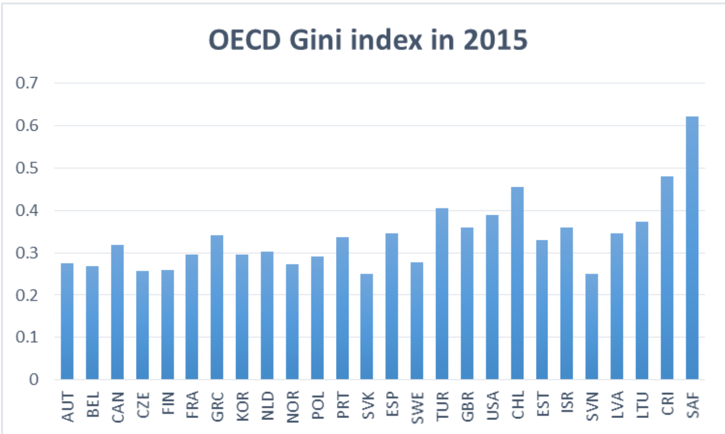
4.1.7 Inequality variation between world regions



Source: World Inequality Report.2018

As we can see from the data provided by the World Inequality Report for 2016, inequality varies greatly across world regions. Europe is the world region with the lowest top 10% income (37.07) and the Middle East is the most unequal area in the world with a top 10% income share of over 60%!. The share of income held by the top 10% in the distribution is 41% in China, 46% in Russia, 47% in US-Canada, and around 55% in sub-Saharan Africa, Brazil, and India.

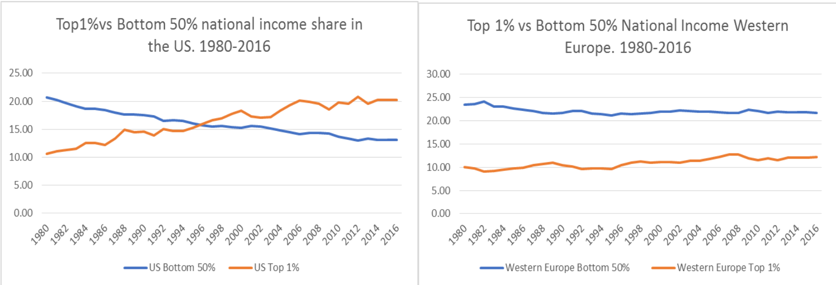
4.1.8 Income Inequality in OECD countries



Source: OECD

Income inequality in OECD countries reached its peak for the past 50 years. The richest 10% in OECD have an income that is nine times higher than the poorest10%. Inequality is exhibiting an ascendant trend, 25 years ago the income of the richest 10% was only seven times higher. There are outliers, such as Turkey, Chile and Mexico where inequality has fallen but they also exhibit very high levels of inequality. Addressing income inequality has become a priority for policy makers in developed countries.

4.1.9. Income Inequality variation in USA and Western Europe



Source: OECD

It is very interesting what the data illustrates. In 1980, between USA and Western Europe, there was almost no difference between the income share of the Top 1%, while by 2016 there is a major difference between these two areas of the world. In Western Europe the Top 1% has registered only a slight increase in the total income share over the years, while in the US the Top 1% income share has nearly doubled between 1980- 2016, reaching 20%. It is very interesting to look at what explains the difference in inequality between the two regions. However, this is out of the scope of this paper.

4.2. Social outcomes of inequality

4.2.1. Health and Well being

There is a substantial amount of literature that studied the social effects of inequality. There are stark differences between more equal and less equal countries when it comes to the presence of poor health and social problems. Besides the already established link between income and health, there is a growing amount of literature which shows evidence for the fact that relative distribution of income has an effect as well on poor health outcomes. Richard Wilkinson (1990; 1996) has undertaken extensive across developed countries on this topic and makes solid claims, about the effect of relative inequality on poor health outcomes. He analyzed societies which experienced at some point either a strong decrease or increase in income inequality within a short time span. In the case of Britain, a decrease in income inequality was associated with a greater sense of solidarity, social cohesion and consequently a stark rise in life expectancy. On the other hand, in the 1960's an Italian- American community of Roseto, in Pennsylvania, experienced a stark widening of the gap between the poor and rich. The social cohesion was much weakened and was followed by a mortality increase from coronary disease.

Kawachi and Kennedy (1999) analyzed the relationship between income distribution and health outcomes in the United States. They hypothesize that individuals are better off when it comes to health if they live in a society with a more equal income distribution. This effect is effects of income inequality on health may mediated by low investment in the public sector, specifically in education and health care; Other mediating factors are the disruption of social cohesion by erosion of social capital and the consequently harmful psychosocial effects of social comparisons.

On the other hand, Leigh et al. (2009) emphasizes that note that the direction of causality is unknown. It might be the case that poor health could lead to greater inequality or the other way around. The mentioned literature clearly established that there is a strong correlation between health outcomes and economic inequality, the exact causal mechanisms are more difficult to pinpoint

4.2.2 Social Cohesion

Analyzing the impact of income inequality on society emphasis why inequality is a very important topic for economists, policy makers but also for people in general to know why a high level of disparity is not socially desirable.

Inequality has a strong spillover effect on the overall quality of life within a country, even for people that are not prone to have financial problems. Empirical evidence suggest that large income disparities leads to stress, frustration, family problems which exacerbates the rates of crime, violence and eve homicide.

Wilkinson et al (1998) use data from the Unites States and analyze the relationship between income equality and indicators of social cohesion and social trust, it also accounts for the relationship between greater income equality and lower population mortality rates. Their findings indicate that violent crime, but not property crime, is closely associated with income inequality, social trust and mortality rates, excluding homicide. They analyze further and antecedents of violence such as feeling shamed, humiliated and disrespected, they explain how wider income differences likely to deny access to traditional sources of status and respect. They argue that low social status is central to the psychosocial processes which links inequality, violence, social cohesion and mortality.

There is more empirical evidence which shows the negative social outcomes of inequality, such as lack of trust (Uslaner 2002), teenage births (Gold et al. 2001), drug abuse (Wilkinson & Pickett 2009) poor educational performance of schoolchildren (Pickett and Wilkinson, 2007). All these negative social effects are more prevalent in more unequal countries.

Furthermore, Putnam (2005) examines the social capital decline in the United States and argues in his paper that income inequality leads to social cohesion problems and ultimately undermines democracy. As aforementioned, inequality leads to low levels of civil trust which is transmitted into a lack of trust in the government. For example, there is research about The United States elections which indicates a strong correlation between lack of civic trust and low voter turnout. Furthermore, the votes of the poor are underrepresented, inequality is even further enhanced by political campaign donations. There are rough estimates that indicate that the top 3 % of the income distribution are offering 35% from all the campaign donations. Putnam goes on and warns that once a society's 'social capital is eroded, is facing the risk of entering a vicious cycle in which lack of trust and civic engagement leads to a democratic system in which public policy doesn't arise anymore upon a collective deliberation but more likely the result of a campaign strategy.

5. Conclusions

In this paper, statistical data and literature was analyzed in order to establish what the inequality trends are and what are its effect on society. It is noteworthy the global middle class (including all of the poorest 90% income groups in the EU and the United States) has stagnated. Income inequality has reached a peak in most OECD countries. The richest 10% in OECD have an income that is nine times higher than the poorest10%. Income inequality has become an issue which needs to be addressed. According to the literature we analyzed, high levels of inequality has a negative effect on society.

Furthermore, a strong democratic system is not enough to reduce inequality but sustained inequality over time might lead to the deterioration of the social fabric and a weakened democracy as Putnam argues it is the case of the United States. It is a very interesting country for looking at the effects of inequality because its level of inequality stands out from all developed countries, which explains the vast amount of literature about inequality in the United States

6. Limitations

This paper provides statistical data and a literature review on the consequences of income inequality. However, there are some limitations to it. As it is observed, there is a stronger representation of articles that outline the negative consequences of inequality. It can be argued that there is a larger share of such literature because indeed, there is more evidence for the negative side of inequality or perhaps this difference in due to the fact that the academics that would choose this area of research are more inclined to see the negative sides of inequality, thus the conclusions made might be slightly biased. Another limitation is that the literature which analyzes inequality from an equity perspective is not included in the analysis. The concept of fairness is actually inherent in the topic when analyzing the inequality within a country. Considering equality of opportunity it is very helpful in order to make an argument whether inequality is harmful or not.

Furthermore, several important papers that I am referring to are analyzing inequality within the United States. The limitation of this is that it might be difficult to generalize their conclusions. For instance, the literature that look at the health effects of inequality because USA is really an outlier when it comes to their health care system.

Further research

In this paper I analyzed the drivers and consequences of inequality and the overall concise conclusion is that at least at some point inequality becomes indeed harmful for the economy. That raises the questions of state interference in tackling inequality. When should the state intervene and how?

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