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Drivers and consequences of income inequality

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Abstract
There is little consensus amongst economists when it comes to income inequality. This study consists of examining the existing literature and empirical studies and answer the following question: "What are the most important drivers of income inequality and its consequences?" The most prominent literature in the field is analyzed, conclusions are made, and this paper can be a starting point of an empirical study. The findings of this paper suggest that the main drivers of inequality are differences in wages, technological development, wealth concentration, redistribution policies and deregulation of the financial sector.

Key words: Income Inequality, Drivers of Inequality, Inequality and Economic Growth, Wealth Concentration

JEL CODE: F23, F15, P18

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 .Many economists argue that global inequality can easily be explained by different historical trajectory and geopolitics. However, when it comes to inequality within a country, there are more contradictory arguments. Thus, when analyzing drivers and consequences of inequality, the focus will be on within country inequality.

When it comes to what drives inequality and its consequences, the literature is rather mixed. On one hand, there is the Marxian argument about exploitation, which implies that inequality is driven by the rich robbing the less fortunate.(Roemer, 1982; Wright, E., & Perrone, L,1977) One the other hand, neoclassical economists claim that individuals bring different contributions to society, thus they would be compensated differently and reach different outcomes. This is known as the marginal productivity theory, which suggests that the individuals at the top of income distribution are just getting what they are adding. (Mankiw, 2013).

By examining the existing literature and empirical studies, the goal of this paper is to answer the following question: "What are the most important drivers of income inequality and its consequences?".

1. Drivers of Inequality

If we look at the global distribution of income among individuals, the strongest predictor of one's income is the country of birth or residence. It is far more important than skills or exercised effort for one's position in the income distribution (Milanovic, 2013). However, as observed in the section above, there is an ascendant trend of inequality across developed countries and less developed countries alike. It is interesting to see which are the most important factors of income inequality between individuals living in the same country in the same economic conditions / macroeconomic conditions.

The context of this analysis will be developed countries because it is easier to draw conclusions about income inequality if I take into account just countries that have a similar level of economic development.

1.1. Explaining Inequality

In literature, there has been contradictory arguments about what drives income inequality since the 19th century. Nassau Senior, a classical economist argued that inequality is explained by the returns to capital being a reward for capitalists abstinence from consumption, thus those returns are justifiable in his view. Later on, Marx talked about exploitation, arguing that the individuals at the top are actually enriching themselves by taking away from those at the bottom. This can occur as a result of monopoly power or discrimination (Roemer, 1988) .Neoclassical economists counter this argument with the marginal productivity theory which suggests that the individuals at the top are receiving just what they add. Taking into account competition, everyone has an income which is equal to his marginal productivity (Murray, 2002). Furthermore, they even argue that in a competitive market, exploitation cannot persist and workers would be better off because the savings and innovation of those within the top income distribution would lead to wage increase for them.

This theory is very important to analyze because it can justify and more lenient tax requirements for top earners since it associates a higher income with a higher contribution in society. The two main views that explain income inequality have been described and these two theories will be referred to later on in this chapter and a detailed analysis of the factors that contribute to income inequality will be given.

1.2. Difference in Wages

There are several factors which contribute to the fact that people reach different levels of wealth and income within a country. The first factor that comes to mind is that people are paid different wages. There are many reasons which explain how these differences arise. In this section, the reasons for the wage differences will be explored.

First of all, wages are determined by the labor market. In context of a free market, which is the case for most developed countries the price of a certain skill is dependent on supply and demand. Thus, the wage for exercising a skill required for a job is low when there is a large number of members of workers that can provide that skill but there is a low demand for it. Whilst, there is a high wage for a skill that few workers have it and there is a high demand on the market for it.

Education is a very important factor which affects wages because it provides necessary skills to perform a job but it also functions as a signaling mechanism on the job market for the level of productivity of workers. Thus, individuals holding a high level of education degree are perceived as high productivity workers and have more specialized skills which will bring a higher wage.

Literature shows that education has a strong effect on income inequality. In most developed countries, primary and secondary education are offered for free to all citizens, however, education levels vary for individuals for two reasons. First, there are differences besides financial possibilities, innate abilities such as intelligence which is a strong predictor of attainment of tertiary education and having a tertiary education diploma has a strong effect on lifetime wages (Murray, 1998). This is in line with the neoliberal view on income inequality presented earlier in this paper. Secondly, although for free, there are strong differences in the quality of primary and secondary education individuals receive. Durlauf (1996) argues in his empirical study that wealthy families tend to cluster together in " better " neighborhoods where there are schools with a higher quality of education and poor families tend to be isolated from the rest of the population in worse neighborhoods with " worse" quality schools. Their children will receive a lower quality education and it is likely that they will have low paying jobs once they reach adulthood. Thus, parents transmit economic status and income inequality becomes persistent. This leads to a decrease in economic mobility and exacerbates inequality. Such empirical evidence makes the neoliberal arguments about income inequality weaker.

1.3. Technological development

Technological development is another important factor that explains the income inequality trend in developed countries. Technological breakthroughs leads to jobs loss at all skill levels. Computers and developed machinery can perform a major share of the tasks that were usually performed by unskilled workers in a more efficient manner. For instance, manufacturing and packaging industries have replaced unskilled workers with machinery extensively (Levy and Murnane, 2012). Moreover, given the fact that there is currently a rapid development in artificial intelligence, knowledge based jobs might soon be performed by computers and robots. Thus, skilled and educated workers can expect to be affected as well and income inequality to be exacerbated. However, the most concerning aspect of technological development is the fact that unskilled workers will be more vulnerable to this period of major changes in the job market. It is expected that there will be a shift in demand for skilled labor while the unskilled labor will be made redundant. Thus, it is expected that the income gap between the two types of workers will increase considerably because unemployment will increase which it would lead to a stagnant or decreasing wage for most workers due to high supply and low demand for labor. Furthermore, for a relative small number of people, owners of capital would the share of the economy which is controlled by them would increase. Consequently, this would exacerbate income inequality (Acemoglu, 2002).

1.4. Wealth Concentration

Wealth concentration is a process which implies accumulation of wealth in the possession of individuals or companies that are already wealthy. As the concentration increase, the number of individuals decreases. This theory implies that those who are already wealthy have the resources to invest in new opportunities of creating wealth. For example, people that own several properties arguably be considered wealthy, they could rent some of the properties and accumulate even more wealth over time. On the contrary, people that do not own houses must spend part of their income on rent. Moreover, upper-income groups can save a significant part of their income while lower income groups use most of their earnings to cover consumption and saving only a small fraction. Thus, over time the savings of the upper income group will be considerably higher than the ones of the low income group and lead to wealth concentration. As the concentration of wealth increases, inequality exacerbates.

Furthermore, wealth concentration is linked with low mobility. Miles Corak (2013) argues that Inequality lowers mobility and exacerbates the income variation due to innate abilities because it has an influence on the opportunity to acquire wealth or a high quality education which increases the chances of having a high wage. Roemer and Corak (2004) describes that there are two ways in which parents pass down income advantages besides innate abilities which lead to better prospects in the labor market. Firstly, as aforementioned in this paper, they are in a position to ensure that they children have access to good quality schools and later on facilitate their access to good universities. Secondly, they can influence their children through monetary and non – monetary investments that leads to attitudes and behavior that has a positive effect on their income. Nonetheless, the wealthy often pass on to their children wealth, which can give a considerable edge to the accumulation of wealth which makes inequality a vicious cycle.

1.5. Redistribution policies

Meltzer and Richards (1981) build their model on Romer(1975) and Roberts(1977) and argue that when the median voter moves towards the poorest in the income distribution of a country redistribution increases and thus inequality is reduced. They developed a general equilibrium model in which people as voters, decide on income redistribution or the (average) tax rate. The person with the median income is the decisive voter. Their model explains how the size of government changes with the ratio of mean income to the income of the decisive voter and with the voting rule or qualifications for voting. When the number of voters who benefit from income redistribution increase, the size of government and redistribution increases. On the other hand when changes in productivity, or in labor force participation arise that lower mean income relative to the income of the decisive voter, the size of the government decreases.

Later on, Branco Milanovic (2000) ran an extensive empirical study to test the median voter hypothesis and the evidence that the median voter hypothesis adequately describes the collective choice mechanism is however weak. The study is based on, with79 observations drawn from household budget surveys from 24 democratic countries. There are other studies which find weak support for the median voter hypothesis. (Dalgaard et al., 2005).

The median voter hypothesis implies that when it comes to redistribution policies, it is the number of the poor vs rich that matter. On the contrary, Karabarbounis (2011) propose a "one dollar, one vote" hypothesis which suggests that the economically stronger the group (poor, middle class, or rich), the more influence its redistribution preferences. The study estimates re-examines the relationship between inequality and redistribution in developed countries (OECD). Based on a panel data analysis, he finds a non-monotonic relationship between pre-tax-and-transfer distribution of income and redistribution. This indicates that relative to mean income, a more affluent rich and middle class are associated with less redistribution and a richer poor class is associated with more redistribution. Thus, when the income of a group increases, the redistributive policies move towards this specific group preferences.

In line with this argument Acemoglu et al (2013) argue that there is a negative relationship between democracy and inequality. They substantiate this claim by undertaking a cross country study and show robust empirical results for this negative relationship. They first explain why democracy is expected to increase redistribution and lessen inequality, however this theoretical expectation may fail to materialize if democracy is captured by the people that are situated at the top of the income distribution. They find evidence that indicate a rise in inequality after democratization when the economy has experienced significant structural transformation, when property inequality is high, and when the gap between the middle class and the poor is small. Their results are not consistent with the traditional median voter theory of democratic redistribution because based on their results, democracy does not lead to an even decline in the level of inequality after tax.

Taking into account the literature mentioned in this section, it can be concluded that the argument which claims that rising inequality will be adjusted by redistributive policies which will be democratically imposed is limited and actually inequality might be a vicious cycle.

1.6. Deregulation of the financial sector

According to an analysis of Atkinson and Piketty (2007), the top income shares in the income distribution of many OECD countries have increased significantly. Anglo- countries stand out because the share of total income of the top 10% has nearly doubled in the 1980-2010 period. There are several explanations for this significant increase. One of the contributing factors for income inequality that makes anglo- saxon countries stand out is the deregulation of the financial sector

Kaplan and Rauh (2010) made a link in their research between financial markets and top incomes. They conclude that individuals working in the financial sector such as Wall Street top employees, partners of firms in the private equity, hedge fund, and venture capital businesses and find that they make up a large share of the substantial share of the top 0.1% of the income distribution in the US. Moreover, Bell and van Reenen (2010) found a similar trend for the UK, where 40% of those in the top 10% in the income distribution are active in the financial sector.

There is a link between deregulation and increased wages in the financial sector. Philippon and Reshef (2012) are actually arguing that a major part of the relative wage increase in the United States since the 1970'S is due to attribute most of the observed relative wage increases in the US since the 1970s is due to financial deregulations. Furthermore, they explain that the share of the individuals in the top10% of the income distribution who were working in the financial industry has risen from one hundredth in 1980 to about one in ten, which exhibits the increase in generously paid employees in the financial industry. Boustanifar et al. (2016) ran a similar study, using a cross-country sample and found consistent results that the financial deregulation is the most important factor that drives up relative wages for people working in the financial sector. Furthermore, deregulation of the financial sector exacerbates inequality also because it is expected to raise capital gains and these are more significant for people that are already wealthy. Thus, it can be argued that deregulation is a driver of inequality because it drives up the incomes of top earners.

2. Consequences of Income Inequality on Economic Growth

In this section the economic consequences of inequality will be analyzed. The arguments for and against the negative consequences of inequality will be reviewed and conclusions will be drawn. The focus will be on the effect of inequality on economic growth.

The relationship between income inequality and economic growth has received much attention from academics and policy makers alike. Some argue that inequality hampers growth and others claim that inequality is just a natural consequence of growth. Simon Kuznet (1955) is one the most prominent advocate of the latter view. He argues that economic development goes together with a natural cycle of inequality and follows an inverted U shape curve (see Fig. 1). As an economy develops, the level of inequality rises, once it reaches a certain level development it decreases. He explained this cycle by accumulation of wealth by capital owners that take on the investment opportunities enhanced by early development. In the early phase of economic development there is also an influx of cheap rural labor to towards the cities which leads to a decrease in wages. Thus, in the early development of an economy, there is a spike in inequality. In the same line of thought, he goes on and argues that once the economy reaches maturity, due to democratization, redistribution policies will be adopted and inequality will decrease.

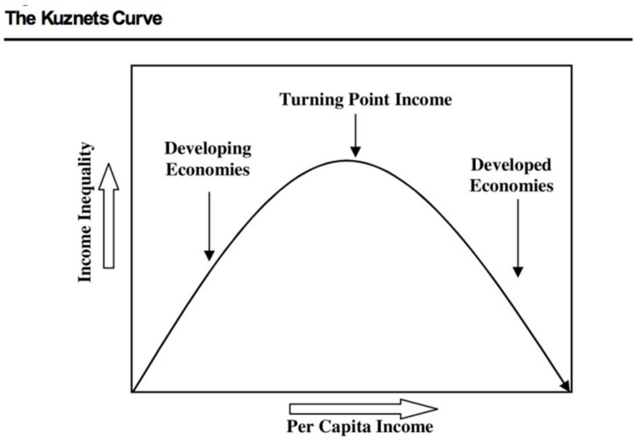

Fig.1. Kuzne't curve

However, Kuznet's theory has limitations , the data sample he used is not exactly a random sample, many of the middle –income countries he studied are from Latin America, which is known for its historically high rate of inequality and he is using cross sectional data. His arguments about inequality have encountered criticisms from scholars. Fields (2001) tested Kuznet's theory on a large panel data and found that it doesn't hold. Alesina and Rodrik(1994) also counteract Kuznet's theory, their empirical analysis indicate that inequality(land and income ownership) are negatively correlated with economic growth.

Furthermore, there is research undertaken by the International Monetary Fund which indicates that high levels of inequality can indeed be harmful for economic growth. One of the IMF analysis in developed countries concludes that once the income share of the top 20% increases, there is a decrease in GDP growth over a medium time perspective. This is a clear indication that the growth does not trickle down. On the other hand, if there is an increase in the income of the bottom 20% which are considered to be "the poor", the GDP growth rate will increase. Thus, it is argued that the poor and middle class are most important when it comes to economic growth because policies meant to support the poor and middle can address harmful levels of inequality. They argue that that policies need to be country specific and consider institutional settings. Regardless of the degree of development within a country, policies meant to improve access to education and health care and finance are expected to mitigate inequality. Furthermore, labor market regulations should not burden the middle class. Developed countries should specifically progressive tax system.

Conclusions

In this paper, literature was investigated in order to find what the most important drivers of inequality are. Several factors have been identified and the mechanism behind them explained. One of the most important one is the difference in wages that is explained by the labor market technological change and education attainment. Furthermore, wealth concentration is another factor that has a strong effect on inequality and can lead to a vicious cycle of income disparities, as it seems to be linked with higher education attainment as well. The rich pass on to their children not just wealth but also the opportunity to have a good quality education. The deregulation of the financial sector is another factor that has a strong effect on inequality because it raises the incomes of top earners by increased capital gains but also by increased wages for individuals working in this sector. Another major driver of inequality is the failure of setting optimal redistributive policies. Limitations of the median voter theory have been found in the literature. Moreover this theory is contradicted by the "one dollar-one vote" theory. It is noteworthy that the latter theory needs to be further developed. The above mentioned research adds a limitation to the neoliberal claim that inequality is just a "natural" effect of economic growth which can be controlled by democratic processes (the median voter theory) and it is expected to be reduced by adoption of redistributive policies

Furthermore, the effect of inequality on growth has been investigated in the literature. There is still unclear to what extent and in what context the Kuznet's theory about income inequality holds. However, it is clear from the literature that in the case of developed countries nowadays does not hold anymore and inequality will not naturally bounce back to optimal levels. Based on more recent theory, inequality does hamper growth when it reaches a certain point and increasing income in the poor and middle class group is positive for growth. According to the International Monetary Fund research, a conclusion is made that inequality represents a risk for advanced economies and policies meant to tackle it should be set in place.

Limitations

This paper provides and exhaustive literature review on the drivers of income inequality. However, there are some limitations to it. As it is observed, there is a stronger representation of articles that outline the rather unfair way in which arises. 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.

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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