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Income Inequality and Economic Growth in the OECD Countries

Abdelkader Belarbi* Hirech Nawel[2]
1. Department of Management, Tahar Moulay University, Saida, PO box 138, Algeria
2. Department of Economics, Abou Bekr University, Tlemcen, PO box 119, Algeria

Abstract:
Recent researches [Atkinson, Piketty and Saez, 2010, 2013] have shaken the foundations of income inequality that, for three decades, monopolized economics. In this paper, we will try to summarize this work, to study the role of the tax system in reducing income inequality and analyze the impact of the latter on economic growth in the OECD countries.
Keywords: Income inequality, Taxation, redistribution of income, economic growth
JEL classification: D23, P1, H23, O17, Q49.

Introduction

Since the beginning of the 20th century the income inequalities made up the core of economic debates. Indeed the Western world, including the United States, has experienced significant income inequality between 1900 and 1930. Economists explain this level of inequality by low pay for workers and lower or non-existence of the tax burden on gains and profits in this period. Between 1930 and 1970 Western countries have experienced a significant drop in income inequality mainly due to confiscation and destruction of property during the Second World War. Since then, for three decades, economists assume that income inequality is caused by the technological change and employee qualification. Recent studies [Piketty and Saez Athikson, 2010] have pushed these advancements by giving us another vision of the reasons for the concentration of wealth at the top of the social pyramid. In their research they were interested in the US and other Western countries such as France, the United Kingdom, Germany, Spain, and Australia ... etc. In our research we will try to synthesize these works and see how the tax system can reduce income inequality and what effect does it have on economic growth in Western countries?

1. Definition and measurement of income inequality

1.1. Definition

Theorists have begun to address the inequalities of income and their measurement since the early years of the 20th century especially with the works of Pigou [1912] and Dalton [1920]. But, it was only in the 1970s that the field of economic theory took off with the work of Kolm [1976], Atkinson [1970] and Sen [1973]. Income inequality marks the disparity between the incomes of "rich" and those “poor individuals”. This disparity is the result of the analysis of a comparative income of a single country or people of different nations.

The type of income taken into account in general in the study of inequality is disposable income. This is defined by INSEE as "a household income including earned income, property income, transfers from other households and social benefits (including retirement pensions and unemployment benefits) net of direct taxes. Four taxes are generally considered: the income tax, residence tax and the generalized social security contributions and contribution to the social debt reduction. "

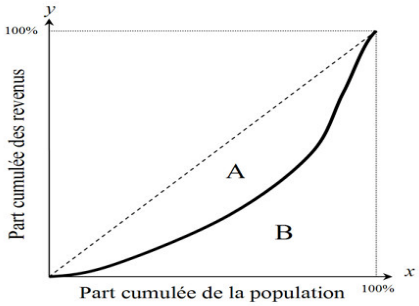
This definition is intended households, therefore, it takes into consideration family size, type of income received and taxes and transfers. In his studies, the OECD considers the available revenues adjusted household after deducting the costs of health and housing.

2.2 Measuring inequality incomes

There are two categories of income inequality indicators. The first indicator consists of a single number and indicates the distribution for the entire income spectrum. In the second category it is a compilation of information on income distribution in data points as the ratios between different percentiles.

The Gini index is the most used in the first category. The Gini coefficient is a number ranging from 0 to 1. "0" means perfect equality and "1" means total inequality, that is to say an individual or household receives all the revenue and others do not receive anything. The calculation of this coefficient is done by estimating the inequality gap at the Lorenz curve of equal distribution which is dotted on the figure below:

Figure 1: Lorenz curve



(Source: Lorenzo Giovanni Bellu et Paolo Liberati, 2006 : 4)

The horizontal axis represents the cumulative percentage of the population in order to increase their income. The vertical axis represents the increasing cumulative percentage of the variable, in our case it is the disposable income of a country.

The diagonal line represents an egalitarian distribution of income (example: 10% of the poor receive 10% of revenues). Over the curve is hollow or from the diagonal, the higher the concentration is the higher the income inequality is. Over the curve is close to the diagonal distribution is more egalitarian.

It is therefore the ratio of the area A between the Lorenz curve of the situation studied (in bold) and the triangle of A + B.

In practice we use the following formula to calculate the Gini coefficient, taking people with no income there. For i from 1 to n, indexed in ascending order (yi yi ≤ + 1)

$$G = \frac{2\Sigma_{i=1}^{n} iy_i}{n\Sigma_{i=1}^{n} y_i} - \frac{n+1}{n}$$

As for the second category of indicators of income inequality, the system used is a system of tranches. Households are classified according to their income brackets. This allows us to compare between the highest bands in comparison with the lowest income. If this classification is by 10% increments, deciles are obtained. The first decile is the income for which 10% of the population receive less, making 90% more rich. This division gives us quantile. Although the decile is the most used quantile there are others, quartiles (distribution into 4 groups / 25% effective for each group), Quintiles (distribution in 5 groups / 20% of the workforce), the vingtiles (distribution groups in 20/5% of the workforce), percentiles (distribution 100 groups / 1% of the workforce).

To facilitate the use of deciles, the first decile is called D1, D2 by the second ... until D9. To measure inequality, we use the D9-D1 interval, that gives us how many of the 10% richest households are paid more than 10% of the poorest households.

Despite the great interest in these indicators, they offer information that has limitations. Indeed, the OECD believes that (1) The rich often do not answer (questions relating to household surveys) and when they do, they tend to understate their income, so that the poor are sometimes too marginalized to meet, (2) the rate of non-response and misreporting vary by country, (3) data on income excluding certain items such as home production and values leasehold charged, (4) household income and wealth taxes and social contributions paid by employees are included, but the social security contributions paid by employers, direct taxes, indirect taxes, income taxes and corporate profits are not, which makes it difficult to establish international comparisons regarding the importance and the impact of tax systems on the basis of household surveys "[OECD, 2012: 4].

1. Inequality of income, tax system and economic growth: what is the relationship?

Several explanations have been given to income inequality. Indeed, Simon Kuznets [1953] who we owe the "Kuznets Curve" believes that technological progress in economy promotes the development of industrialization, which will push the low-productivity workers to be oriented towards more productive and better paying jobs. This will increase the inequality between rural agricultural and industrial city dwellers. Following this trend, thereafter, traditional activities will gradually erase the benefit of the extensive use of modern and productive methods to all spheres of activity. This will cause the elimination of low-income jobs, which will reduce second time income inequality. This analysis provides us with an inverted U-shaped curve that has long dominated the explanation of the change in income inequality.

More recently, Cohen [1998] believes, however, that technological changes have favoured the demand for highly skilled workers, to the detriment of those who are not, which highlights the importance of university degree in the distribution of income.

Supporters of neoclassical school [Friedman, 1967, Becker and Tomes 1979] explain the increase in income inequality by the same mechanisms of the market, such as competition and globalization.

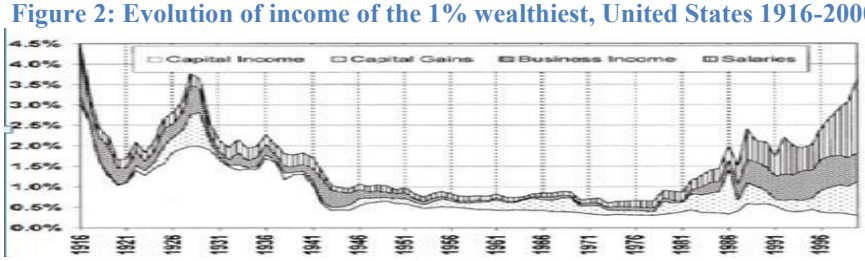
Institutionalists question the trickle-down theory which postulates that the wealth accumulated by high-income individuals will be re-injected into the economy through investments that will create jobs and thus

income for the poorest. This theory calls for the reduction of tax levies in order to increase the wealth of the wealthy. This argument has been advanced to justify liberal policies undertaken by Margaret Thatcher in the 1980's; the policy has not only generated the desired results. On the contrary, it has led to a budget deficit that has worsened the situation of the lower strata of society. Institutionalists [Stiglitz] claiming the role of the State in strengthening social protection and income redistribution programs.

The OECD [2012] believes that the transfer systems to households and tax systems reduce income inequality in all countries. Cash transfers such as pensions, family allowances and unemployment benefits account for over three quarters of total redistributive effect in the OECD countries, the remaining quarter corresponds to taxes. In most OECD countries, pensions account for over 50% of public cash transfers to households. But, pensions often do not have a redistributive effect from one person to another; rather they have a redistributive effect on the whole life of one person. Other transfers (unemployment benefits and family benefits) are more progressive. Taking the example of family benefits and allowances housing, they are related to resources, and thereby have a redistributive impact between individuals. As for the redistributive effect of the tax, it varies from one country to another. In 2012, the OECD argues that a country where income distribution is more unequal proceed using a higher redistribution through taxes on households that less unequal countries. Thus, they focus much more on the progressive tax on income than on consumption taxes and social security contributions.

Therefore we can conclude that income inequality before taxes and transfers mainly due to wage dispersion. However, it is the income after taxes and transfers that determines the potential for household consumption, hence the importance of tax systems. That is why many researchers have studied the impact of taxation on income inequality. One of the most important of these studies was conducted by Piketty and Saez in the United States during the period 1916 and 2000. It equipped statistical series constructed from micro tax data to study the evolution of high incomes or more exactly of the wealthiest of the United States 1%. Their results broke the dominant paradigm based on technological change favouring skilled labour as the main source of income inequalities.

Figure 2: Evolution of income of the 1% wealthiest, United States 1916-2000



(Source: Nicolas Zorn, 2012: 4)

Indeed, in Figure 2, the part of the wealthiest percentile in the US has remained remarkably stable during the fifties, sixties and seventies following a fall between 1936 and 1946. From 1980 this shares bullish.

Both economists explain that the part of the wealthy fell after World War II because of the destruction or confiscation of their capital and wage controls. However, they question the stability of the first percentile shares after the war despite the wage controls to be lifted. Piketty and Saez argue that this is a progressive tax; it is not the market mechanisms that are responsible for stability. Comparing with other countries with progressive taxation is lower as Germany; the richest recovered faster their fortunes. Therefore, the wealthiest have accumulated their wealth primarily by their salary.

The work of Atkinson, Piketty and Saez [2010] has led to similar results, and reinforces the assumptions of Piketty and Saez generalizing them to other countries. Indeed, by analyzing the evolution from the first percentile, these economists found that this share dropped significantly between 1914 and 1945. The following 4% and 19% recorded a more moderate decline in their share during the same period because of greater weight of wages in income, while income from the first percentile mainly from the capital, which is causing their decline following the use of progressive taxation.

In this case, this stable trend was broken in the 1970's as the share has again marked an increase. In the US, it has more than doubled from 9% in 1976 to 20% in 2011. The subprime crisis has reversed this trend. The share of the top one percent has declined in 2008 and 2009, but rebounded in 2010 to regain its pre-crisis trajectory.

The rest of the population, particularly the middle class and poor, their incomes have experienced a slight increase resulting in an increase in inequality in the United States.

The explanation for the increase in inequality since the 1970's cannot rely solely on technological change and integration in world trade, since all the countries listed above have had these experiences.

The tax rate may explain why inequality has evolved differently from one country to another in terms of revenue share. Indeed, from 1932 to 1981 in the US, the tax rates on the highest incomes were still above 60%,

which seems to have contributed significantly to the reduction from the first percentile. Currently, many countries have lowered the tax rate; this decline varies from one country to another. For example, in 2010, France noted that 10 points down from the 1950 level, whereas in the US it declined by 47 percentage points. Note that the tax rate on high incomes move in the opposite direction with the share of primary income held by the richest.

This reverse trend can be explained, according to these economists, by strengthening the bargaining power of wealthier employees to increase their wage gains. Indeed, when the tax rates on wages are high executives cannot remove a large profit by negotiating higher pay. By cons, if it is low, these executives will negotiate more aggressively their salaries, which will increase from the first percentile, without these employees have a greater productive effort.

In this context, the reduction of marginal tax rates may have a negative impact on economic growth in contrast to the assumption of runoff theory. These empirical studies have not noted a correlation between the reduction of tax rates and GDP per capita. Economies where marginal tax rates experienced the largest declines have not experienced faster growth than other countries.

Conclusion

The research of Atkinson, Piketty and Saez concluded that the lower tax pressure generates replacement renters by employees in the 1% most wealthy. Through this work we deduce that the tax system has a strong influence on the investment decisions of the richest and, thus, on economic growth. Comparing the US to France for example, the richest 1% of France will be better off in the US than in their countries. This is what makes the US an attractive country for foreign investment, even if modest incomes are heavily taxed in France.

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