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ECON 105- The History of Economic Thought

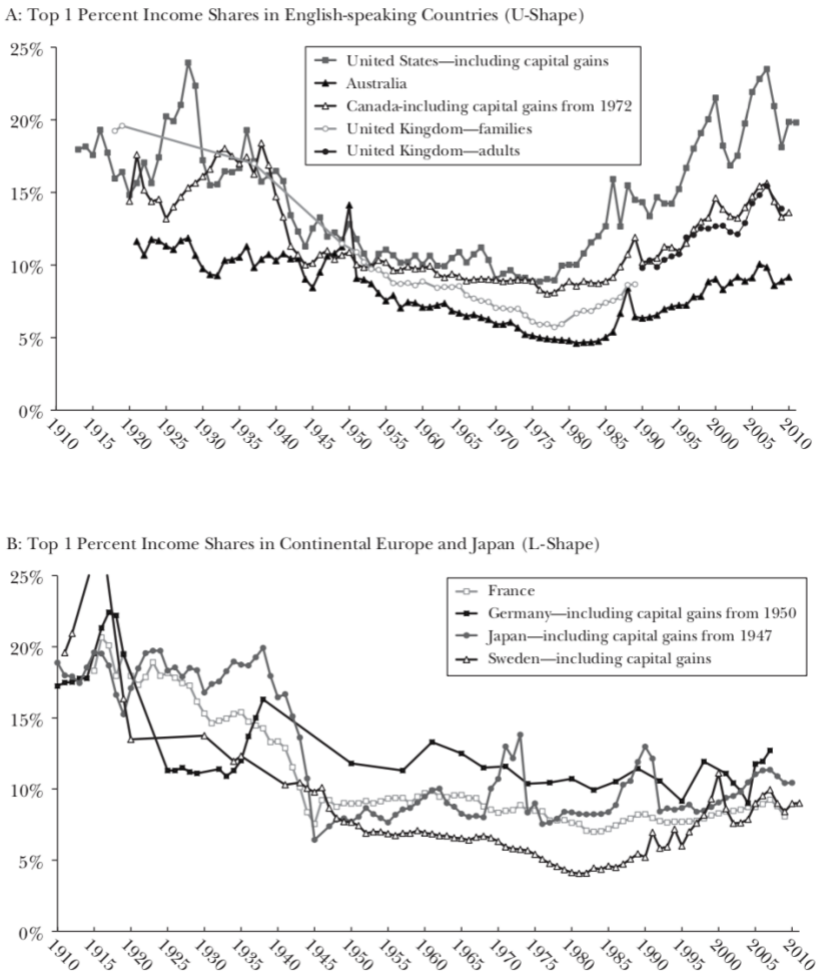
Final Paper

The Origins of Inequality Understood through the Evolution of Top Income Shares

A long standing prevailing opinion about the rising income inequality in the US, and by and large the developed world, has been on the premium put on wages for educated workers. The increase in demand for such college schooled workers has been attributed in varying degrees to skill-biased technological change and globalization pressures. (Katz 1999: 1548) The dispersion, and therefore inequality of income, will rise or fall based on which process occurs faster - demand or supply of skilled workers. Based on this logic, inequality trends should mirror in countries with similar technological and productivity developments. However, the rise of labor income inequality from the 1960's has been relatively limited in Europe (and Japan) compared to the United States. (Piketty and Saez 2014: 838) Therefore, an approach based on the supply and demand for skills is not enough to explain the diverging income equality among similar nations; nor is it enough to look only at 'earned' incomes. (Alverado 2013: 3) Among different theories presented by authors like Simon Kuznets, Joel Slemrod, Lawrence B Lindsey, it is Thomas Piketty and Emmanuel Saez's proposition - addressing both 'earned income' and 'capital income' - that makes the most sense in explaining what has happened in the United States and other high-income countries over the past hundred years. (Jones 2015: 29)

Figure 2

The Evolution of the Shares of the Top 1 Percent in Different Countries



*Source (*Alverado 2013), *Original Source (*The World Top Income Database)

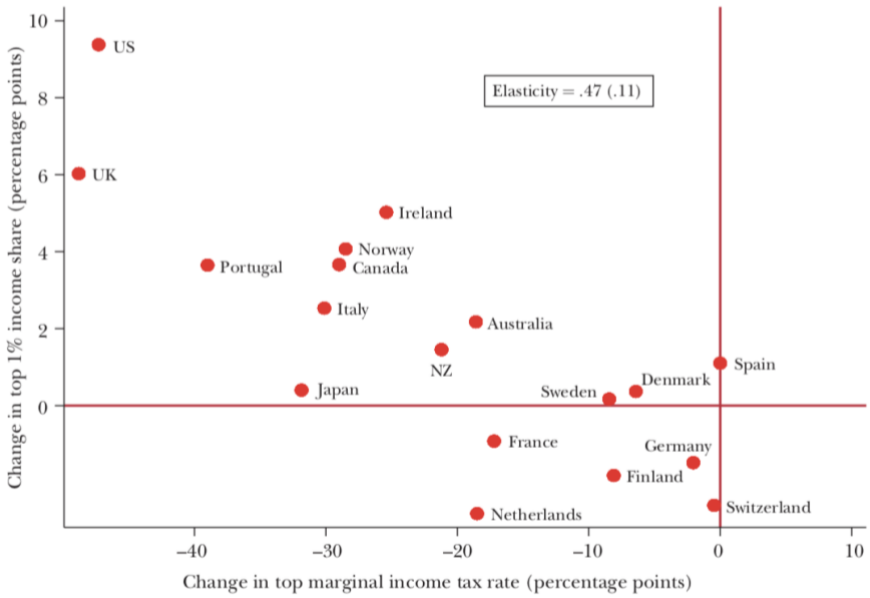
Out of comparable high-income countries with similar technological changes, the United States has had the largest increase in top 1% income share since 1970's to match their early 1900's levels, forming U curve. Continental Europe and Japan have had a stabilized to a lower level of top 1% income share. Even the UK, which mirrors the USA more than its European peers, has had a much smaller increase since the 1970's. This supports the view that institutional and policy differences play a key role in changes in income shares, and that technology based approaches cannot fully account for the diverging patterns seen across countries. (Alverado

2013: 5)

One major policy factor in top income shares has been top marginal income tax rates. Top income tax rates were consistently above 60 percent from 1932 to 1981. But when international competition began to cut into marginal returns, Europeans, Japan and Canada elected to spread the burden of the decline more broadly. In the US however, policymakers eased the burden on the wealthiest.

> "The United States experienced a reduction of 47 percentage points in its top income tax rate and a 10 percentage point increase in its top 1 percent pre-tax income share. By contrast, countries such as Germany, Spain, or Switzerland, which did not experience any significant top rate tax cut, did not show increases in top 1 percent income shares. Hence, the evolution of top tax rates is strongly negatively correlated with changes in pre-tax income concentration." (Alverado 2013: 8)

Changes in Top Income Shares and Top Marginal Income Tax Rates since 1960
(combining both central and local government income taxes)



*Source (*Alverado 2013), *Original Source (Piketty, Saez, and Stantcheva 2011)*

Lindsey (1987) and Feldstein (1995) have proposed a standard supply side theory where a reduction in tax rates incentivizes top earners to work more and thereby stimulate economic activity and growth. With this approach, the data should suggest that the US, with the largest tax cuts, should have grown much faster compared to Germany. However, the fault in this methodology is that more or less, over the past four decades, most high-income nations have all grown at roughly the same rate, despite the huge differences in taxation rates. The aggregate numbers show no apparent correlation between growth rates in real per capita GDP and cuts in top tax rates. (Piketty, Saez, and Stantcheva 2011)

> "This lack of correlation is more consistent with a story that the response of pre-tax top incomes to top tax rates is due to increased bargaining power or more individualized pay at the top, rather than increased productive effort." (Alverado 2013: 11)

Simply put, in the surplus created by employment of a high paid executive, the employee takes a share γ. Thus, the employer gets $(1- \gamma)$. High marginal tax rates had deterred a higher level of surplus extraction in the past. But, at the same time when improved information and communications technology, globalization, and the deregulation of finance and of other industries allowed for higher compensation at the extreme top of the earnings distribution, marginal tax rates were reduced. (Piketty, Saez, and Stantcheva 2011).

> "Tax cuts may have led managerial energies to be diverted to increasing their remuneration at the expense of enterprise growth and employment." (Alverado 2013:16)

Instead of investing additional capital in high risk manufacturing and job creation, investors could get same return in say through lobbying for deregulation.

In these conditions, higher incomes for the top 1% do not reflect higher economic growth—a major deviation from the supply side theory of Lindsey and Feldstein. A cut in top income tax rate would bring about an increase top 1 percent incomes at the expense of the other 99 percent, thereby increasing inequality. (Alverado 2013:10)

In another perspective on the relation between tax and inequality, Slemrod has argued that the rise in US top income shares occurred because with a reduced tax rate, those at the top had lesser incentives to seek top avoidance strategies. (Slemrod 1996) As such, effectively, there has been no difference in inequality in the real world, but just on reported terms. However, this really hasn't been consistent with evidence. Since a major portion of top income shares includes increased capital gains, tax avoidance strategies have also risen concurrently. (Alverado 2013:9) Much of the research around inequality has centered around 'earned' income or income received in compensation for work. But capital income is also a major part of the top income share. Capital income is majorly classified as rents, dividends, interest, and realized capital gains. The data suggests that it the "decline of top capital incomes [that] is the main driver of the falls in top income shares that occurred in many countries early in the twentieth century." (Alverado 2013:12)

Kuznets (1955) famously hypothesized that income inequality first rises with economic growth when new high-income sectors develop. It is followed by a decline in inequality as additional bodies participate the high earning sectors. This postulate is not consistent with the data from 1910's to 1950's that support other explanations for decline in labor income inequality in developed countries. (Alverado 2013: 5)

> "The compression of incomes occurred primarily because of the fall of top capital incomes induced by the world wars, the Great Depression, and the regulatory and

fiscal policies developed in response to these shocks. In particular, there was no structural decline in the inequality of labor income." (Piketty and Saez 2014: 842)

*Source (*Alverado 2013), *Original Source (*Piketty and Saez 2003)

As the figure suggests, capital income as part of the total income has risen sharply in recent decades. Increase in wealth (or capital) inequality exacerbates total inequality. Thus, any explanation of inequality must include explanations for wealth inequality instead of just explaining labor income inequality; let alone an income inequality theory centered around just premium put on wages for educated workers.

Wealth inequality is much more severe than labor income inequality. While labor income inequality can be high, it is relatively less contentious due to some of its merit based attributes.

> "On average, members of the bottom half of the population (wealth-wise) own less than one-tenth of the average wealth, while members of the bottom half of the population (income-wise) earn about half the average income." (Piketty and Saez 2014: 839)

In the discussion of wealth inequality, the Wealth-to-Income ratio is of critical importance as it measures the overall importance of wealth in an economy. In Europe, wealth

was 6.5 times the income in 1920. It fell to around 2.5 times in 1950 but has risen back to 5 times the income in 2010. The US has more or less remained constant at wealth being 4 times the income with a small dip around 1940. Europe, as well as Japan, has followed a U-shaped curve for the wealth-to-income ratio. The US on the other hand shows a U-shaped curve for income inequality. These are two separate happenings, consisting of distinct economic policies occurring in different regions of the developed world. (Piketty and Saez 2014: 840) Analysis of these divergent trends provides better explanations of total income inequality as opposed to analyzing technology based trends.

The decline in European wealth-to-income ratio between 1914-1945 can be explained by the following factors. Firstly, due to the war, there was physical destruction of factories, machinery and other domestic capital assets. Secondly, war financing absorbed a large portion private savings causing a lack of investment and enormous public deficits. Thirdly, there was a drop in relative asset prices.

> "Real estate and stock market prices were both historically very low in the immediate postwar period, partly due to rent control, nationalization, capital controls, and various forms of financial repression policies." (Piketty and Saez 2014: 840)

The recovery of capital took time because capital accumulation is a slow process. With a saving rate of 10%, it would take around 50 years to save 5 years' worth of income. With the Harrod-Domar-Solow formula, we can show that wealth-to-income ratio (K/Y), converges to ß = s/g, where s is the savings rate and g is the growth rate. So, in a high growth society, savings does not matter as much. But in a slow growing economy, the stock of accumulated capital can become very important. "In short: Capital is back because low growth is back." (Piketty and

Saez 2014: 840)

This simple rationale accounts fairly well for the structural differences in capital accumulation when comparing the US with Europe and Japan with the former accruing less capital relative to its annual income than the latter nations. Due to high immigration rates, U.S. population grows over 1% every year. Adding that to general growth in productivity (usually 1 to 1.5%), the US grows at least 2 to 2.5% annually. By contrast, Europe and Japan have near zero (or even negative) population growth. Therefore, the total growth (usually 1-1.5%) comprises of just productivity growth. The capital accumulation trends are further reinforced as Europe and Japan generally have higher saving rates than the US. (Piketty and Saez 2014: 840)

> "[on the role of population growth] an increase means that inherited wealth gets divided up by offspring, reducing inequality. Conversely, a decline in population growth concentrate wealth. A related effect occurs when the economy's per capita growth rate rises. In this case, inherited wealth fades in value relative to new wealth generates by economic growth." (Jones 2015: 37)

Wealth inequality is lower in the United States today than in 1913 Europe. Nevertheless, total income inequality in the US is currently slightly larger than that in 1913 Europe. The reason being in 1913 Europe, top incomes were predominantly top capital incomes. Europe still has a larger wealth-to-income share than the US. However, modern US inequality has evolved with a very large rise in top labor income inequality such that top total incomes today are composed about equally of labor income and capital income. This generates approximately the same level of total income inequality, but it is not the same form of inequality. Thus, there have been large changes in levels to total income inequality, wealth inequality and labor income inequality, both over time and across countries. This reflects the fact that economic trends are country-specific

and historical and institutional circumstances can lead to very different inequality outcomes. A one-size-fits-all theory of income inequality – such as the premium put on wages for skilled/educated workers – thus, cannot be applied to all countries. Labor and wealth inequality need separate explanations.

Wealth inequality, as Piketty and Saez present, can be modelled through understanding *r* – *g,* where *r* is the (net-of-tax) rate of return and *g* is the growth rate of the economy. Growth in the wealth occurs at *r* (internal rate of accumulation for an individual) as opposed to the aggregate economic growth, *g*. Naturally, a higher *r* – *g* tends to strengthen early wealth inequalities.

> "It implies that past wealth is capitalized at a faster pace, and that it is less likely to be overtaken by the general growth of the economy." (Piketty and Saez 2014: 841)

r – *g* is the key factor in determining the capacity to transmit wealth. As *r* is net of taxes, it means that low income and inheritance taxes can cause the top income and wealth shares to rise. Piketty (2014: 232) summarizes the logic underlying models like this with characteristic clarity:

> "[I]n stagnant societies, wealth accumulated in the past takes on considerable importance."

It is likely that in the 21st century that *r* will rise (due to continuation of tax competition) and that population (and possibly productivity) growth will slow down. *r* – *g* therefore will grow. (Piketty and Saez 2014: 841)

> "Recognizing this increase in wealth inequality might be key in understanding why just 'earned' income differentials might not be enough to explain income inequality in total. in a world where inheritance is quantitatively significant, those

receiving no bequests will leave smaller-than-average bequests themselves and hence should support shifting labor taxation toward bequest taxation." (Alverado 2013: 14)

While wealth concentrations may yet still rise, they may not reach the pre-WWI levels of 90% of wealth with the top 1% of the population. This is because during the 20th century, growth rates were exceptionally high (population growth rates especially, which still comprise of half of today's growth rates). (Piketty and Saez 2014: 842)

To conclude, popular theories about supply and demand of skilled workers are not enough to explain income inequality. We need to consider top income tax rates while evaluating the top tail of the earnings distribution. Lindsey and Feldstein's supply side theories aren't backed up by growth data as Piketty and Saez show. Kuznets's theory is too optimistic. Slemrod's theory fail to account any deviation caused by changes in capital incomes. Hence, we need to look at both labor and wealth inequality theories as presented by Piketty and Saez when trying to understand the origins of inequality.

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