Analyzing Income Inequality Trends and Variables for Six High-Income Countries

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Abstract

This report examines the underlying drivers and evolution of income inequality across six high-income countries: France, Germany, Sweden, Canada, the United Kingdom, and the United States. This analysis takes the Gini Coefficient of each country and uses it as an overarching indicator of inequality. Then, pretax and post-tax distribution data is synthesized to determine which aspects of each country's economy are driving income inequality. This study distinguishes between inequality generated by market structures and inequality mitigated through redistributive taxation. The findings demonstrate that similar levels of overall inequality can arise from fundamentally different mechanisms. Countries such as Sweden achieve low inequality primarily through compressed labor-market wage distributions, which limits pretax dispersion, while Canada and France rely more heavily on redistributive taxation to reduce inequality after their market outcomes manifest. Germany's rising inequality is linked to increasing capital-income concentration combined with only moderate redistribution, while the UK's decline in inequality is driven largely by taxation of top earners rather than broad wage compression. The US stands out as the most unequal country, characterized by both high pretax income dispersion and comparatively weak redistribution at the top of the income distribution.

Overview of Relevant Variables

In this project, I will be analyzing income inequality trends between France, the UK, Germany, Sweden, Canada, and the United States. Since the turn of the 21st century, research on the measurements, causes, and effects of income inequality has grown substantially. However, despite this surge in attention, the topic remains highly complex with many nuances yet to be addressed (Sherman et al., 1).

Economists use a wide range of variables to measure inequality. Available datasets track wealth, income, and wages over decades and across countries, often broken down into ratios and subcategories such as household versus individual income, pretax versus post-tax income, and the share of capital versus labor in total income. While all of these variables help researchers identify trends over time, it can be misleading if different measures are compared without proper accounting. For instance, combining individual and household income data may produce false trends because each measure is influenced by distinct confounding factors. For example, household income data may include double or more of the sources of income than individual income data, and the way in which this income accumulates into wealth can also vary significantly due to varying tax structures between individuals and households, along with the sharing of resources by those living together in a household.

To avoid the mistake of improperly synthesizing varying data sets, I am going to keep the quantitative economic analysis aspect of this research relatively simple and straightforward. I have selected several variables that are both easy to understand and strong indicators of income inequality, but before I take a look at these selected variables, I must first explain key inequality concepts and their subsets.

When measuring economic inequality, three fundamental variables are wages, income, and wealth. Wages refer to the money an individual earns directly from labor, measured over a unit of time (Sherman et al., 1). For consistency, this project measures all variables annually. Income is a broader category that encompasses wages or salaries as well as additional sources such as investments, rental earnings, and government benefits (Sherman et al., 2024). For example, if an individual earns a salary of $100,000 and an additional $10,000 from investments, their wage is $100,000, but their income is $110,000. Both wages and income are *flow* variables–in economic jargon–as they depend on the unit of time they are measured–annual wages or income are 12 times larger than monthly wages or income, for example.

Wealth is the accumulation of resources over time, calculated as total assets minus liabilities or debt. In other words, it represents the *stock* of what remains after income has been earned and expenses have been paid (Sherman et al., 15). For instance, if an individual earns $100,000 annually for ten years but spends $90,000 per year, they would accumulate $100,000 in savings ($10,000 × 10= $100,000). If they also own or inherit property worth $500,000, their total wealth would rise to $600,000. In other words, a stock variable like wealth (or debt) is measured at a certain moment in time, not over a period of time.

Now that I have explained these concepts, it is important to explain the subsets that connect these variables to the broader economy. A key subset that implicates inequality is the division of income into labor and capital shares (Piketty, 26). In the broader economy, this division corresponds to how the total market value of all final goods and services, or Gross Domestic Product (GDP), is distributed between those who were part of the product's creation.

Take, for example, the production of an iPhone that sells for $1,000. The $1,000 of output is generated jointly by labor (the engineers, factory workers, and marketers who create and advertise the iPhone) and capital (the people who own the machinery and have investments into Apple). Economists typically divide that value into a labor share and capital share. The labor share includes the wages and salaries paid out to the workers, and the capital share includes the profits, dividends, and investment returns given to the shareholders of the Apple corporation (Piketty, 26). Given that labor and capital shares are constructed as the ratio of two flow variables, they are measured in pure percentage terms. For example, the labor share is measured as wages in $/year over total income in $/year, so the ratio is in fact a pure percentage–even when measured on the national scale.

In virtually every scenario, you have a small number of people splitting the capital returns and a large number of people splitting the labor returns. Suppose Apple gives 50% of the iPhone's output ($1,000) to labor and the other 50% to capital. On the labor side, those wages are spread across many employees–say 20 workers–so each would receive roughly $25 from the production of the iPhone. On the capital side, the profits are distributed only among the corporation's owners/ stakeholders—say 5 major shareholders—so each receives roughly $100.

This example illustrates one of the fundamental causes of income inequality, namely the fact that capital ownership is far more concentrated than labor income. While wages are dispersed across a broad workforce, capital returns are concentrated among a small group of owners. Even if labor and capital each receive the same share of a product's output, the inequality in ownership makes the distribution amount per person vastly different. That said, economists like Piketty regard the unequal ownership of capital as the fundamental cause of inequality (Piketty, 26). In fact, and as shown below, the labor share of income tends to be higher than the capital share (usually 2-to-1): but given the concentration of capital incomes, income shares can be seen as providing a top-line measure of inequality.

By synthesizing national income and tax data, economists can estimate the shares of labor and capital across an entire economy. In other words, rather than analyzing the distributional structure of a single corporation such as Apple, they can assess these dynamics on a national scale. For this reason, the labor-income share serves as a crucial variable for measuring inequality and will play a central role in this project.

An equally important measurement of economic inequality is analyzing pretax and post-tax income of a country, which captures the difference between what individuals earn through the market and what they retain after government intervention (Hassel, 2023). Pretax income reflects the market distribution of resources—how profits–broken down into labor wages and

capital returns–are allocated before taxes or transfers. Post-tax income shows how the redistribution of income after wealth transfers, in the forms of taxation, have helped balance out the fundamentals of inequality in a capitalist economy. Measuring both is essential to understanding not only the extent of inequality but also how effective the fiscal policy is in mitigating it (Hassell, 2023). For example, two countries may exhibit similar levels of pretax inequality but diverge significantly after taxes and transfers, as seen when comparing the US and Germany (Hassell, 2023). Pretax measures reveal structural imbalances such as wage stagnation or capital concentration, while post-tax measures show how much governments correct—or fail to correct—those imbalances. Therefore, analyzing both pretax and post-tax income allows for a more comprehensive understanding of the forces driving inequality and the role of public policy in shaping its outcomes.

Wealth is far more concentrated than income. In the US, for example, the top 1 percent received roughly one-fifth of all income in 2022, yet they controlled nearly one-third of total wealth (Sherman, 15–16). This disparity highlights how wealth inequality exceeds income inequality, and why relying on income measures alone can understate the severity of economic inequality. Though wealth inequality is often much more extreme than income inequality, I will only be looking at income trends in this paper.

The last variable I will mention in this section is the Gini Coefficient, which is one of the most common ways to measure the overall inequality in a country (Catalano et al., 4). It is based on the Lorenz curve, which uses calculus and a variety of variables to determine inequality based on certain populations (it can factor-in wealth, income, or both). If the Lorenz curve follows a straight line, that means everyone has the same income. But the more the curve bends downward—and the Gini value rises above 0—the more unequal the society is (Catalano et al., 5).

The Gini Coefficient measures inequality by calculating how far the Lorenz curve bends below the line of perfect equality (Catalano et al., 5). The number always falls between 0 and 1: a Gini of 0 means complete equality, and a Gini of 1 means one person has everything (Catalano et al., 5). Because it condenses the entire income distribution into a single number, the Gini Coefficient provides a quick, broad, and effective way to compare inequality across countries. However, while it reflects overall inequality, it does not identify which part of the income distribution is driving the inequality. That said, when paired with other variables, the Gini Coefficient can serve as a base indicator of inequality, and the other data can show what aspects of economics contribute most to inequality in a society.

In the analysis that follows, Gini Coefficient values representing income inequality from the World Bank will serve as the overarching indicator of inequality for each country, while the more detailed variables I have mentioned will help explain the structural and policy-driven forces that produce each country's level of inequality. This layered approach allows for a comprehensive understanding of how both market dynamics (pretax) and government policies (post-tax) contribute to overall inequality as reflected in the Gini Coefficient.

Looking at the Data

Having established the relevant economic concepts, I will now apply these measures to the six countries in order to compare their inequality trends. By presenting comparative data, this project seeks to illuminate the systemic forces that have shaped the evolution of income inequality since the 1980s.

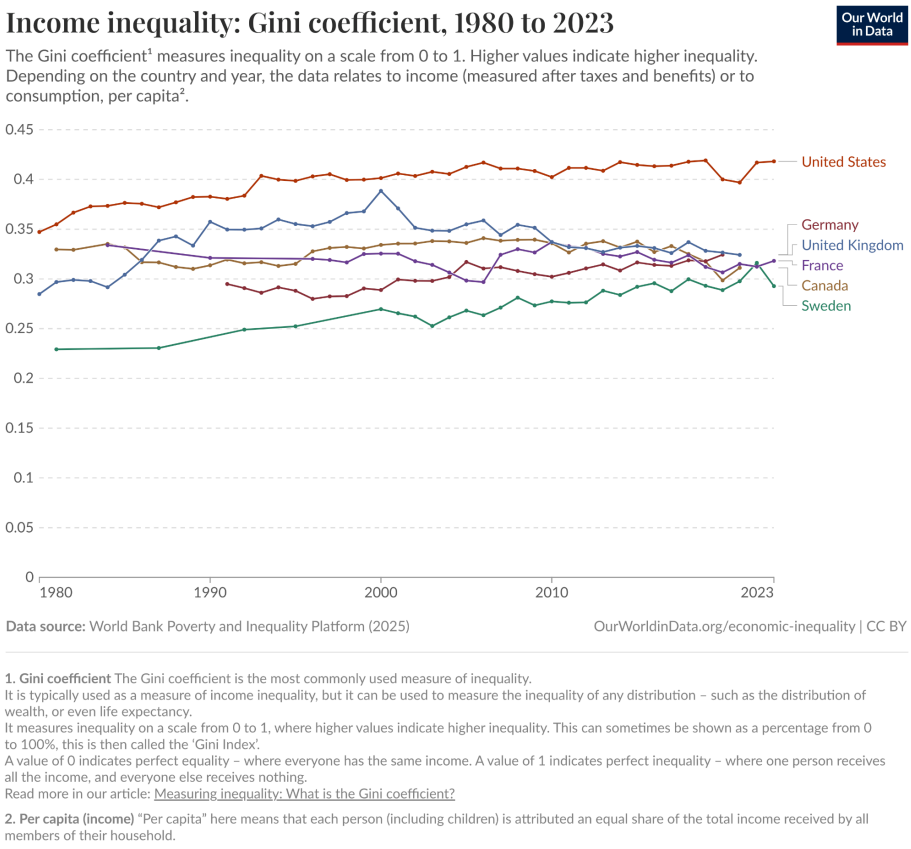

Figure 1: Gini Coefficient (from Our World in Data)

Fig. 1 shows the evolution of Gini Coefficient values for each country. The US has the highest Gini Coefficient in the dataset, and the value steadily increases from 1980 to 2020. At the opposite end, Sweden and France maintain the lowest overall inequality, with Sweden starting at very low levels and gradually rising, and France remaining relatively stable around 0.30 across the entire period. Germany, Canada, and the United Kingdom all fall in the middle range, though each shows a noticeable upward trend over time. Germany and Canada experience steady increases and the UK rises sharply in the 1980s before slowly declining in more recent decades. Overall, the key pattern is that the US stands out as the most unequal country, while Sweden, Canada, and France remain the most equal. France, the UK, and Canada show moderate but clear decreases in inequality over the past four decades, whereas Sweden, Germany, and the US show clear increases.

Now that I have established the base consensus of inequality in each country, I will measure and synthesize more specific inequality measurements to get a better idea of what economic aspects contribute to inequality the most.

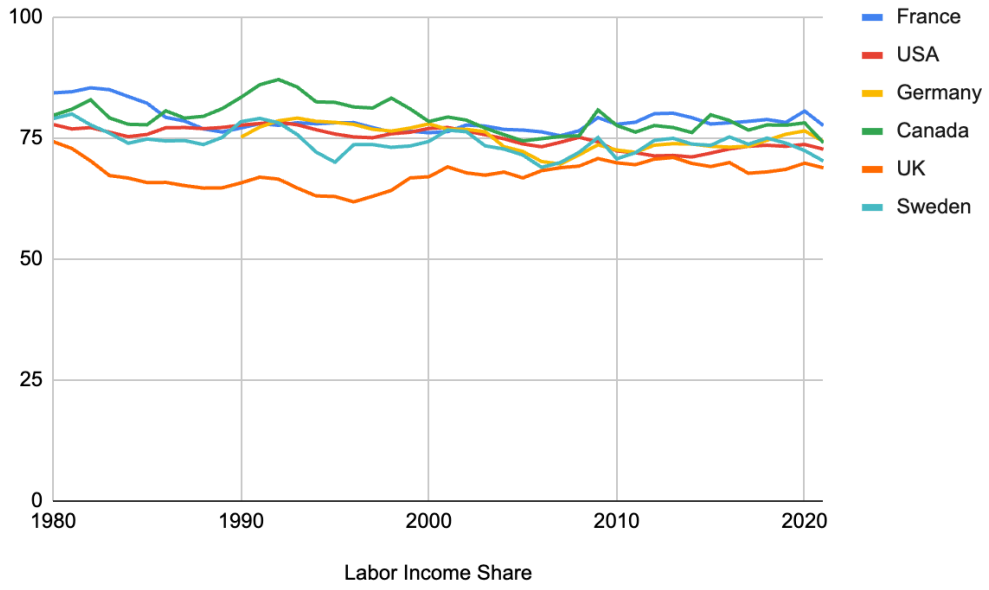

Figure 2: Labor Income Share (from the World Inequality Database)

Fig. 2 shows the share of labor compensation in total income across the six countries. As noted earlier, income can be divided into capital and labor income. Since capital ownership is concentrated among the few, the labor share serves as a key indicator of inequality: a decline in the labor share means that a larger portion of GDP is going to capital owners rather than workers.

Over the past four decades, the labor-income share has declined in countries all except Germany–where it has stayed relatively equal. In 1980, Sweden (79.07%), France (84.39%), and Canada (79.75%) had the highest percentages of labor in the share of income. If we were to ignore other variables, this essentially would indicate these countries have the least inequality. In 2020, France (80.64%) and Canada (78.19%) remained the countries with the highest labor-income share, but Sweden (72.47%) dropped below that of the US and Germany.

Income Factor Concentration (IFC)

While the labor-income share provides insight into how national income is divided between workers and capital owners, it does not reveal how concentrated capital income is among those who receive it. For that, we turn to the Income-Factor Concentration (IFC) index, which measures the extent to which capital income is concentrated among top earners. Higher IFC values indicate that a larger proportion of capital income is captured by the wealthiest individuals.

By examining labor-income shares alongside IFC values, economists can develop a more comprehensive understanding of economic inequality that stems from capital gains. A country with a declining labor share and a high IFC is one in which income is shifting from workers to a relatively small group of capital owners. Conversely, a declining labor share paired with a low IFC suggests that capital income, while growing in importance, is more broadly distributed. Together, these indicators help clarify both the structural drivers and the intensity of inequality. When combined with post-tax measures such as Gini Coefficients, they also show how effectively government policies mitigate or reinforce this inequality.

Because the IFC is a relatively new measure, long-run data are available only for a few countries. For this project, I obtained IFC values for France, Germany, and the US, along with data on the shares of capital income held by the top 10% in each country.

In 2000, France (76.15%), Germany (77.99%), and the US (77.05%) had nearly identical labor-income shares. However, despite similar labor-share levels, their capital-income distributions differed substantially:

Country	Top 10% (2000)	IFC (2000)	Top 10% (2010/2016)	IFC (2010/2016)
Germany	41.80%	0.28	56.69% (2016)	0.46 (2016)
France	45.69%	0.38	41.75% (2010)	0.33 (2010)
United States	54.73%	0.41	57.24% (2016)	0.46 (2016)

Figure 2 (from the World Inequality Database)

Fig. 2 shows that Germany and the US experienced substantial increases in capital-income concentration between 2000 and 2016. Germany's top-10% share grew from 41.8% to 56.7%, while the US's rose from 54.7% to 57.2%. By 2016, both countries had nearly identical IFC values of 0.46, indicating similarly high levels of capital-income concentration among top earners. France, by contrast, saw its top-10% share decline from 45.7% to 41.8%, with its IFC falling from 0.38 to 0.33—reflecting a more stable and broadly distributed capital-income structure.

90/10 Income Ratios

To assess how these structural patterns translate into broader income inequality, the next step is to examine each country's pretax P90/P10 ratio. Economists use the P90/P10 ratio to measure inequality across the broader population; it is one of the most common tools to measure inequality within the US (Trapeznikova, 2019). It captures the disparity between the highest and lowest income groups by comparing the income level at the 90th percentile to that at the 10th percentile. A higher P90/P10 ratio indicates greater inequality between the top and bottom segments of the population. For example, if the P90 income threshold is $100,000 and the P10 threshold is $20,000, the resulting P90/P10 ratio would be 5.0—meaning the top earners make five times as much or more. Unlike the IFC, which focuses exclusively on capital income, the

P90/P10 ratio measures inequality across total income–taking capital gains and wages into account.

Relation Between the Labor Share, the IFC Index, and the Pretax P90/P10 Ratio

Based on each country's labor-income share and IFC values, we can form expectations about which economies should display the highest pretax P90/P10 ratios. In 2016, the US and Germany had nearly identical labor-income shares and IFC values, indicating that similar proportions of national income were flowing to workers and that capital income was comparably concentrated in both countries.

France's labor share and IFC value was lower than that of Germany and the US. If we were to consider only these structural indicators, we would expect the US to experience the highest degree of inequality, followed by Germany and then France, reflecting their respective levels of capital-income concentration and IFC values.

Fig. 3 presents each country's estimated pretax P90/P10 ratio.

NOTE: Because this measure is not reported directly, I approximated it using the averages of the P10/P11 and P90/P91 income thresholds. It is important to note that the P90/P10 ratio measures the income levels required to enter the 90th and 10th percentiles, while the decile-based D90/D10 ratio reflects the average income earned within those groups. As a result, Figures 2 and 3 differ slightly, but the discrepancies are small and do not affect the broader interpretation.

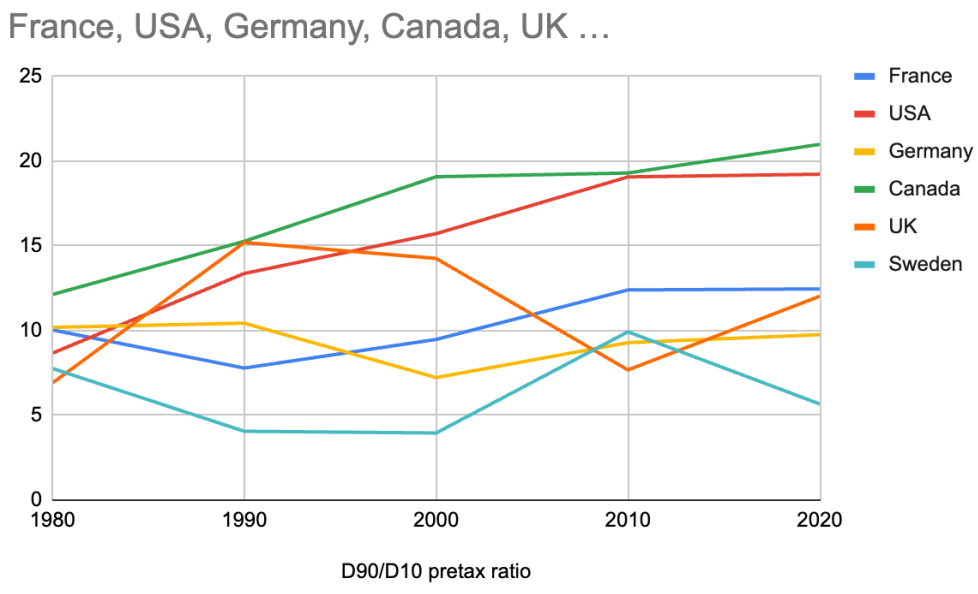

Figure 3 (from the World Inequality Database)

Figure 3 shows that France has a higher pretax inequality ratio than Germany, even though the data on capital-income concentration would indicate otherwise. This means the primary source of France's pretax inequality is not capital-income concentration but the structure of its labor market. In 2010, France's approximate pretax P90/P10 ratio was 12.4 compared with Germany's 9.29. In 2020 France again remained more unequal (12.46 vs 9.76). These gaps reflect a consistently wider spread between high and low earners in France.

It appears that France's labor market produces significantly more inequality than Germany's. The D90/D10 data show that wages in France are more dispersed, while Germany's wage distribution is comparatively tight. Germany's labor-market institutions tend to compress wages at both the top and bottom of the distribution, which helps offset the inequality implied by its more concentrated capital-income structure. As a result, Germany's higher capital-income concentration does not translate into equally high pretax inequality.

France, by contrast, has a more equal distribution of capital income but a far more unequal distribution of labor income—and it is this wider wage dispersion that drives its higher pretax P90/P10 ratios. Thus, the key difference between Germany and France is that labor-market inequality is the dominant force in France, whereas in Germany it plays a much smaller role because wage compression counterbalances concentrated capital ownership.

When comparing the European data to the American data, the US stands out sharply. It has the lowest labor-income share and the most severe concentration of capital income, placing the US at the extreme end of capital-driven inequality. The US also exhibits the highest pretax P90/P10 ratios, increasing from 15.72 in 2000 to more than 19 by 2020. Unlike France—where inequality is driven primarily by labor-income dispersion—and unlike Germany—where wage compression offsets concentrated capital income—the US shows substantial inequality in both capital income and labor income.

Another interesting comparison to make is between Sweden and the UK. When looking at labor-income share data, Sweden and the UK both have the lowest income shares, which indicates more capital-income is going into the hands of the few. When we connect this data to the pretax P90/P10 ratio data, we can see that Sweden maintains the lowest ratio, while the UK's aligns with that of France. Given this pattern, it seems that while Sweden's labor-market likely compresses wages similar to that of Germany's, the UK's labor market is much more dispersed, like France.

The Role of Redistributive Taxation

Having examined the structural, pretax drivers of income inequality, the next step is to assess how much of this inequality is reduced through redistribution. To do this, I turn to post-tax P90/P10 ratios, which provide a clearer picture of how effectively wealth-transfer mechanisms—such as taxation and social benefits—offset the disparities generated by market incomes.

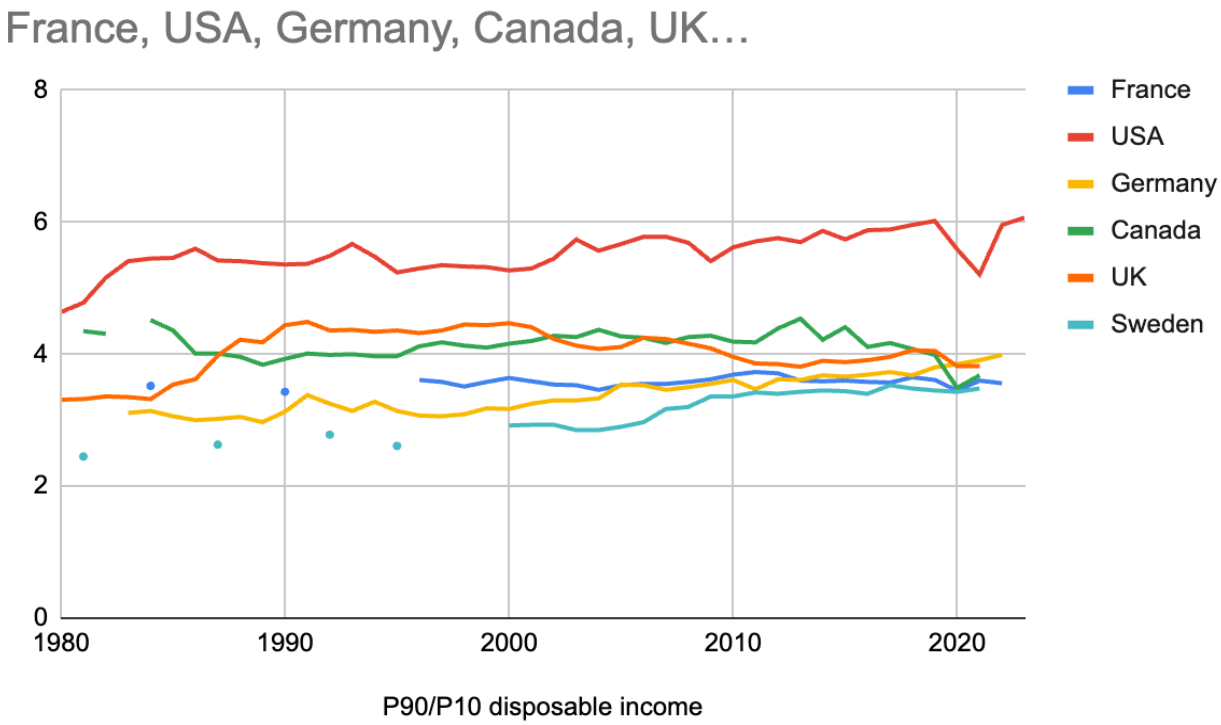

Figure 4: P90/P10 Post-Tax Income (from the World Inequality Database)

Fig. 4 shows the P90/P10 ratio of post-tax (disposable) income in France, USA, Germany, Canada, UK, and Sweden. When we compare the P90/P10 values of pretax and post-tax income, we see that the P90/P10 ratio falls drastically for every country following taxation. When it comes to pretax income, Canada and the US are significant outliers. After taxation, Canada divides its ratio by almost 5, whereas the US divides its ratio by 3. Before taxation, France had the third highest pretax inequality ratio, but after taxation, its value dropped down to be one of the most equal out of the six countries.

Country	1980	1990	2000	2010	2020
France	—	2.27	2.6	3.36	3.61
USA	1.86	2.49	2.98	3.39	3.44
Germany	—	2.26	2.35	2.75	2.75
Canada	—	3.88	4.59	4.61	6.01
UK	2.01	1.95	1.79	1.97	1.81
Sweden	—	—	1.36	2	1.59

Figure 5 shows the ratio between pretax and post-tax income every decade and for every country. For example, in 1990 in France, the pretax P90/P10 ratio was 7.79 and the post-tax P90/P10 ratio was 3.43, so the 1990 value for France is (7.79 ➗3.43 = 2.27). Essentially, the larger the ratio value in Fig. 5, the more effective redistributive taxes are at combatting income inequality among the broader population, or P90/P10 group.

One interesting part of this data are the values of the US and Sweden. When we reference the Gini Coefficient and the other measurements, the US consistently ranks as one of the most unequal countries, and Sweden conversely ranks as one of the most equal countries. However, in Fig. 5, the US redistribution of income from taxes among the P90/P10 group is one of the most effective. Sweden, on the other hand, seems to reallocate income among this measurement of people—the broader middle-income population—the least effectively. Canada also sticks out as a significant outlier; the ratio value for Canada in Fig. 5 is almost four times that of Sweden.

Based on the data from Fig. 5, we can form a broad conclusion that the upper-middle classes in France, the US, and Canada make more of a sacrifice in the form of taxes than the upper-middle classes in Sweden, the UK, and Germany. In the next section, I am going to analyze the change in pretax vs post-tax income share among the top 1% and top 10% highest income populations among the six countries. The fact that Sweden achieves low overall inequality despite having one of the weakest middle-class tax reductions suggests that its redistributive effort may fall more heavily on the top deciles.

Conversely, the US, which shows strong redistribution in the middle but remains one of the most unequal countries overall, may rely far less on taxing the highest earners. To test these hypotheses, I will turn to the pretax and post-tax income shares of the top 1% and top 10% in each country. These measures reveal how much of each country's overall inequality is shaped by taxation of the richest households rather than the middle class.

Quantitative Data on Richest 1%

Pretax Income Share Percentage Top 1%	1980	1990	2000	2010	2020
France	7.50	9	11.3	11	12.1
USA	10.4	14.7	17.3	17.9	18.2
Germany	9.7	11.4	11.1	12.6	12.8
Canada	7.60	9.3	12.8	12.6	11.9
UK	7	8.2	11.6	12.1	14
Sweden	7	8.1	10.2	11.7	11.5

Figure 6 (from the World Inequality Database)

Post-Tax Income Share Percentage Top 1%	1980	1990	2000	2010	2020
France	5.8	7	7.7	6.8	6.6
USA	8.1	12.5	13.4	14.4	13.8
Germany	7.1	8.2	7.4	9.2	9
Canada	6.1	7.6	9.9	9.5	8.3
UK	5	5.8	7.2	6.4	8.3
Sweden	4	4.7	5.6	7	7.6

Figure 7 (from the World Inequality Database)

Top 1% Proportional Tax Reduction	**1980**	**1990**	**2000**	**2010**	**2020**
France	0.23	0.22	0.32	0.38	0.46
USA	0.22	0.15	0.23	0.2	0.24
Germany	0.27	0.28	0.33	0.27	0.3
Canada	0.2	0.18	0.23	0.25	0.3
UK	0.29	0.29	0.38	0.47	0.41
Sweden	0.43	0.42	0.45	0.4	0.34

Figure 8: Proportional Tax Reduction (Calculated by [Pre-tax – Post-tax] ➗[Pre-tax]) (WID)

Figures 6, 7, and 8 include quantitative information that illustrates how effectively the richest 1% are taxed in each measured country. France and the UK have the highest proportional tax reduction values for the top 1%, as indicated in Fig. 8. Germany, Canada, and Sweden all tax their top 1% at similar proportions. For the four European countries and Canada, the 1% stake in total income is relatively similar: France has the lowest at 6.6% and Germany has the highest at 9%.

The US not only has a significantly low proportional tax reduction rate, but it also concentrates income at the top 1% at a significantly higher level than the other countries. The richest 1% have nearly 20% of the income before tax, and this is only reduced by a rate of .24. I will explore these findings more deeply after looking at these patterns among the richest 10%.

Quantitative Data on Richest 10%

Pretax Income Share Percentage Top 10%	1980	1990	2000	2010	2020
France	28.7	31.3	33.4	33.8	34.3
USA	33.8	38.8	42.7	43.8	44.6
Germany	28	32.4	32.2	36	36.8
Canada	30.1	31.7	36.6	36.7	36.5
UK	28.5	32.3	35.7	34.3	36.8
Sweden	25.7	26	30.5	32.2	32.2

Figure 8 (from the World Inequality Database)

Post-Tax Income Share Percentage Top 10%	1980	1990	2000	2010	2020
France	23.7	25.7	25.2	24.4	23.1
USA	29.2	34.6	36.6	37.2	36.4
Germany	22.7	25.6	24.9	28.4	28.2
Canada	25.5	27	30.3	29.9	28.2
UK	22.1	25.4	26.2	23.4	26.2
Sweden	18.4	18.2	20.2	22.6	23

Figure 9 (from the World Inequality Database)

Top 10% Proportional Tax Reduction	1980	1990	2000	2010	2020
France	0.174	0.179	0.246	0.278	0.326
USA	0.136	0.108	0.142	0.151	0.183
Germany	0.189	0.21	0.226	0.211	0.234
Canada	0.153	0.148	0.172	0.185	0.228
UK	0.224	0.214	0.267	0.318	0.287
Sweden	0.284	0.3	0.337	0.298	0.285

Figure 10: Proportional Tax Reduction (Calculated by [Pre-tax – Post-tax] ➗[Pre-tax]) (from the World Inequality Database)

France, the UK, and Sweden impose the strongest proportional tax reductions on the top 10%, indicating that redistribution in these countries relies heavily on taxing upper-income groups. Germany and Canada apply more moderate reductions, though both still redistribute substantially more through the top decile than the US, which exhibits the weakest proportional tax reduction among all countries considered.

Looking at the post-tax income share of the top 10%, Germany and Canada retain higher shares than France, Sweden, and the UK. This suggests that although Germany and Canada do not rely on the top 1% and top 10 % as heavily for redistribution as France, the UK, or Sweden, their systems are much more effective at reducing taxes than the US.

Analysis per Country

In this section, I am going to analyze the data for every country and write a brief analysis regarding what appears to drive or balance out inequality in each country.

Sweden

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.27 → 0.29	-
Labor-Income Share, 2020	72.47%	-
Labor-Income Share Trend, 1980-2020	Gradual Decrease, 8%	-
Pre-Tax to Post-Tax Top 1%, 1980	7% → 4%	0.43
Pre-Tax to Post-Tax Top 1%, 2000	10.2% → 5.6%	0.45
Pre-Tax to Post-Tax Top 1%, 2020	11.5% → 7.6%	0.34
Pre-Tax to Post Tax Top 10%, 1980	25.7% → 18.4%	0.284
Pre-Tax to Post Tax Top 10%, 2000	30.5% → 20.2%	0.337
Pre-Tax to Post Tax Top 10%, 2020	32.2% → 23%	0.285
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	1.36	-
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	1.59	-

Sweden exhibits the lowest overall level of inequality in the sample, with a Gini Coefficient of 0.27 in 2000 and 0.29 in 2020. Although Sweden's labor-income share has gradually declined over the past several decades—suggesting a modest increase in inequality—its overall labor-income distribution remains more equal than that of the other countries. Since 1980, the proportional tax reduction for the top 1% has fallen by nearly nine percentage points, while the proportional tax reduction for the top 10% has increased by roughly one percentage point. Over the same period, the income shares of both the top 1% and top 10% have risen. However, these top income shares remain consistently lower than in all other countries in the sample.

At first glance, several indicators—such as labor-income share trends, proportional tax reductions, and top income shares—appear comparable to, or in some cases less favorable than, those observed in France (a country with a higher Gini Coefficient). Taken in isolation, however, these measures do not account for Sweden's uniquely low level of inequality.

An explanation can be found when looking at Sweden's pretax P90/P10 ratio–this number is significantly below that of the other countries, indicating that income is more equal across the

broader population. This indicates that Sweden's labor-market institutions strongly compress wages across the income distribution, resulting in exceptionally low pretax income dispersion. As a result, income disparities are restrained throughout the workforce, preventing inequality from arising mainly through excessive concentration of income among top earners.

While modest increases in inequality are observable over time—evidenced by declining labor-income shares and rising top income shares—these changes are balanced out by a declining pretax P90/P10 ratio. In effect, Sweden's labor-market structure keeps pretax inequality low, reducing the need for extensive post-tax redistribution. This helps explain why Sweden remains the most equal country in the sample despite having lower redistribution rates than France. In addition to Sweden's labor-market structure being noticeably more equitable than all of the other countries, we can see that Sweden taxes its richest deciles at relatively high rates. The combination of a low labor-market dispersion and effective taxes on the rich explain why Sweden has the lowest income inequality.

Canada

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.33 → 0.3	
Labor-Income Share, 2020	78.19%	
Labor-Income Share Trend, 1980-2020	Sporadic Decrease, 1.5%	
Pre-Tax to Post-Tax Top 1%, 1980	7.6% → 6.1%	0.2
Pre-Tax to Post-Tax Top 1%, 2000	12.8% → 9.9%	0.23
Pre-Tax to Post-Tax Top 1%, 2020	11.9% → 8.3%	0.3
Pre-Tax to Post Tax Top 10%, 1980	30.1% → 25.5%	0.153
Pre-Tax to Post Tax Top 10%, 2000	36.6% → 30.3%	0.172
Pre-Tax to Post Tax Top 10%, 2020	36.5% → 28.2%	0.228
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	4.59	
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	6.01	

In 2020, Canada ranked as the second most equal country in the sample, with its Gini Coefficient declining over the past several decades. Although Canada's labor-income share has fluctuated and trended downward since 1980, it remains among the highest of the countries examined. This indicates that a relatively large portion of total income continues to be generated through labor rather than capital, which serves as an important equalizing force.

Since 1980, Canada has also increased proportional tax reductions applied to the top 1% and top 10% of earners, enhancing redistribution at the upper end of the income distribution. While Canada's pretax income share held by the top 1% is broadly comparable to that of Sweden,

France, Germany, and the United Kingdom, its top 10% income share is higher, signaling greater concentration among upper-middle and high earners. Canada offsets this concentration to a moderate degree, though its proportional reduction values remain lower than those of the other countries, with the exception of the US.

This relatively higher concentration among the top decile helps explain why Canada does not achieve Sweden's exceptionally low level of inequality. Nonetheless, the unequal distribution is significantly mitigated by effective post-tax redistribution across the broader population. This is reflected in Canada's large pretax to post-tax P90/P10 reduction rates, which rise from 4.59 in 2000 to 6.01 in 2020. Such high reduction rates indicate substantial taxation of upper-income groups alongside relatively lighter taxation of lower-income earners, contributing to Canada's comparatively low overall inequality.

Unlike Sweden, where pretax actors help maintain equality, Canada appears to maintain relatively high equality through significant taxing of the upper deciles.

France

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.33 → 0.31	-
Labor-Income Share, 2020	80.64%	-
Labor-Income Share Trend, 1980-2020	Sporadic Decrease, 4%	-
Pre-Tax to Post-Tax Top 1%, 1980	7.5% → 5.8%	0.23
Pre-Tax to Post-Tax Top 1%, 2000	11.3% → 7.7%	0.32
Pre-Tax to Post-Tax Top 1%, 2020	12.1% → 6.6%	0.46
Pre-Tax to Post Tax Top 10%, 1980	28.7% → 23.7%	0.174
Pre-Tax to Post Tax Top 10%, 2000	33.4% → 25.2%	0.246
Pre-Tax to Post Tax Top 10%, 2020	34.3% → 23.1%	0.326
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	2.6	-
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	3.61	-

In 2020, France ranked as the third most equal country in the sample, with its Gini Coefficient declining from 0.33 in 2000 to 0.31 in 2020. A key structural contributor to this relatively low level of inequality is France's high labor-income share, which stood at 80.64% in 2020. Although labor's share of income declined sporadically by roughly four percentage points between 1980 and 2020, it remains high by international standards, limiting the overall role of capital income in driving inequality.

Between 1980 and 2020, proportional reductions in income increased for both the top 1% and the top 10%, indicating a progressively stronger redistributive impact over time. This growing tax burden on upper-income groups has likely contributed to the observed decline in France's Gini Coefficient.

However, evidence from the IFC index suggests that capital income in France is relatively less concentrated than in comparable countries such as Germany or the US. While France's labor-income share is similar to that of these countries, its lower IFC values indicate that capital income is more evenly distributed across the top decile rather than being heavily concentrated among the top 1%. As a result, inequality in France is not primarily driven by extreme capital-income concentration at the very top of the distribution. This implies that strong taxation of the top 1%, while effective in reducing inequality, is not the most effective way France could reduce inequality through taxes.

Despite these favorable characteristics, France remains more unequal than both Canada and Sweden. This outcome reflects the fact that inequality in France is driven less by capital-income concentration or insufficient taxation of top earners and more by dispersion within the labor market itself. France's relatively high pretax P90/P10 ratio indicates a wide gap between high- and low-wage earners prior to redistribution, suggesting that labor-market institutions generate substantial inequality within labor income.

While taxation reduces these disparities, redistribution in France is more concentrated at the top of the income distribution and is less effective at compressing income differences across the lower and middle deciles. This is reflected in France's pretax to post-tax P90/P10 reduction rate, which increased from 2.6 in 2000 to 3.61 in 2020 but remains significantly below Canada's.

Taken together, these findings indicate that although France exhibits favorable values in terms of labor-income share, taxation of high-income groups, and relatively dispersed capital-income concentration, it is less successful at reducing inequality generated within the labor market. In contrast to Canada, France's redistributive system places greater emphasis on taxing upper deciles rather than compressing wage dispersion across the income distribution. This suggests that, in the French case, policies aimed at reducing wage inequality across the broader population would be more effective in lowering overall inequality than further increases in taxation at the very top.

Germany

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.29 → 0.32	-
Labor-Income Share, 2020	76.53%	-
Labor-Income Share Trend, 1990-2020	Sporadic Increase, 1%	-
Pre-Tax to Post-Tax Top 1%, 1990	11.4% → 8.2%	0.28
Pre-Tax to Post-Tax Top 1%, 2000	11.1% → 7.4%	0.33
Pre-Tax to Post-Tax Top 1%, 2020	12.8% → 9%	0.3
Pre-Tax to Post Tax Top 10%, 1990	32.4% → 25.6%	0.21
Pre-Tax to Post Tax Top 10%, 2000	32.2% → 24.9%	0.226
Pre-Tax to Post Tax Top 10%, 2020	36.8% → 28.2%	0.234
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	2.35	-
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	2.75	-

NOTE: Germany is measured from the year 1990 rather than 1980 due to the reunification of East and West Germany in 1989.

Germany exhibits a slightly worsening level of inequality over the period studied, with its Gini Coefficient increasing from 0.29 in 2000 to 0.32 in 2020. This rise occurred despite Germany maintaining a relatively high labor-income share of 76.53% in 2020 and experiencing a small but positive increase in labor's share—approximately one percentage point—between 1990 and 2020.

Germany's tax system exerts a consistent but moderate redistributive effect on the upper-income groups. Between 1990 and 2020, the income share of the top 1% declined substantially from pretax to post-tax levels, with proportional reductions ranging between .28 and .33. A similar pattern holds for the top 10%, whose proportional reductions fell by roughly .21 and .23 across the same period. In this respect, Germany's taxation of upper deciles is broadly comparable to that of other European countries and Canada.

Despite this redistribution, Germany's Gini Coefficient increased over the past few decades, indicating that taxation has not been sufficient to offset changes in the underlying income distribution. Germany's pretax to post-tax P90/P10 reduction rate rose from 2.35 in 2000 to 2.75 in 2020, reflecting some improvement in redistribution across the broader population. However, this level of compression remains moderate and weaker than in more equal countries such as France and Canada. While France exhibits a higher pretax P90/P10 ratio than Germany, it compresses income differences more effectively through taxes, as reflected in its higher P90/P10 reduction rate of 3.61 in 2020 compared to Germany's 2.75.

Evidence from the IFC index further clarifies this outcome. Although Germany's labor-income share in 2000 was nearly identical to that of France and the US, capital income in Germany became increasingly concentrated over time. The share of capital income captured by the top 10% rose sharply, and Germany's IFC increased from 0.28 in 2000 to 0.46 by 2016. This rise in capital-income concentration amplified overall inequality, particularly when combined with growing pretax wage dispersion and only moderate redistribution across the broader population.

Taken together, Germany's worsening inequality can be explained by the interaction of a rising pretax P90/P10 ratio, a pre-tax to post-tax P90/P10 reduction rate that remained only moderate, and increasing concentration of capital income among high earners. Although taxation of upper-income earners has intensified over time, it has not kept pace with the rate at which capital gains have become concentrated among the richest.

UK

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.39 → 0.33	-
Labor-Income Share, 2020	69.86%	-
Labor-Income Share Trend, 1980-2020	Sporadic Decrease, 4.5%	-
Pre-Tax to Post-Tax Top 1%, 1980	7% → 5%	0.29
Pre-Tax to Post-Tax Top 1%, 2000	11.6% → 7.2%	0.38
Pre-Tax to Post-Tax Top 1%, 2020	14% → 8.3%	0.41
Pre-Tax to Post Tax Top 10%, 1980	28.5% → 22.1%	0.224
Pre-Tax to Post Tax Top 10%, 2000	35.7% → 26.2%	0.267
Pre-Tax to Post Tax Top 10%, 2020	36.8% → 26.2%	0.287
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	1.79	-
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	1.81	-

The UK experienced a notable decline in inequality over the period studied, with its Gini Coefficient decreasing from .39 to .33 between 2000 and 2020. This reduction occurred despite a sustained rise in pretax income concentration among the top 1% and top 10% deciles. The UK tax system imposes relatively strong taxation on the highest earners. Substantial pretax to post-tax reductions in the income share of the top 1% indicate that upper-income groups bear a significant share of the redistributive burden. In this respect, the UK resembles countries such as France and Sweden in its ability to tax the very top of the income distribution.

However, redistribution across the broader population is comparatively weak. The UK exhibits a relatively low pretax to post-tax P90/P10 reduction rate, indicating that taxes and transfers do less to compress income differences between high-income and low-income earners than in

more equal countries. This suggests that the brunt of redistribution in the UK falls onto those at the very top, with a limited impact on wage dispersion across the middle and lower deciles.

The coexistence of a declining Gini Coefficient with a low P90/P10 reduction rate implies that the UK's inequality reduction has been driven primarily by top-end redistribution rather than redistribution among the broader population. In other words, taxation of the top 1% has become more effective over time, while inequality generated within the labor market has not been as effectively addressed. If the UK implements labor-market institutions to compress wages among the broader population–combined with higher taxes on the broader population (leading to a higher Pre-Tax to Post Tax P90/P10 Reduction Rate)-its Gini Coefficient would be reduced significantly. The UK therefore represents a case in which overall inequality can decline even when wage dispersion across the broader population remains relatively high, provided that redistribution at the very top is sufficiently strong.

USA

Variable	Value	Proportional Reduction, if applicable
Gini Coefficient, 2000 & 2020	0.4 → 0.4	-
Labor-Income Share, 2020	73.73%	-
Labor-Income Share Trend, 1980-2020	Sporadic Decrease, 4%	-
Pre-Tax to Post-Tax Top 1%, 1980	10.4% → 8.1%	0.22
Pre-Tax to Post-Tax Top 1%, 2000	17.3% → 13.4%	0.23
Pre-Tax to Post-Tax Top 1%, 2020	18.2% → 13.8%	0.24
Pre-Tax to Post Tax Top 10%, 1980	33.8% → 29.2%	0.136
Pre-Tax to Post Tax Top 10%, 2000	42.7% → 36.6%	0.142
Pre-Tax to Post Tax Top 10%, 2020	44.6% → 36.4%	0.183
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2000	2.98	-
Pre-Tax to Post Tax P90/P10 Reduction Rate, 2020	3.44	-

The US exhibits the highest level of inequality in the sample, with its Gini Coefficient remaining high and essentially unchanged at 0.40 between 2000 and 2020. This persistent inequality coincides with a relatively low labor-income share of 73.73% in 2020 and a decline of approximately four percentage points in the labor share since 1980, indicating a growing role for capital income in shaping overall inequality.

The US tax system reduces income shares at the top of the distribution, but the magnitude of redistribution remains modest relative to other high-income countries. Further, the market characteristics allow the upper deciles to receive a significant chunk of total income: the top 1% controlled nearly 20% of total income before taxes in 2020.

Between 1980 and 2020, proportional tax reductions for the top 1% increased slightly, ranging from 0.22 to 0.24. Similarly, proportional reductions for the top 10% rose from 0.136 in 1980 to 0.183 in 2020. While these figures indicate some increase in top-end taxation over time, they remain substantially lower than the increases observed in countries such as France, the UK, and Sweden.

Redistribution across the broader population is more intense than that in Sweden, Germany, and the UK, but it is still insufficient in reducing inequality. The pretax to post-tax P90/P10 reduction rate increased from 2.98 in 2000 to 3.44 in 2020, indicating that taxes and transfers do compress income differences between high- and low-income earners. In other words, those around the 90th decile bear the biggest brunt of taxation. However, this compression has not been enough to counteract the combined effects of high pretax income concentration and declining labor-income share.

With the US having a high IFC value and a relatively low labor-income share, it is clear that increasing taxation on the rich would substantially reduce inequality. Further, labor-market institutions can be implemented to help redistribute wages from the top to the middle deciles. There is clearly lots of room for this, as the pretax P90/P10 ratio in the US is almost 20.

Conclusion

This project set out to explain why income inequality varies substantially among this sample of fully developed economies. By examining both the pretax and post-tax mechanisms of income inequality, this analysis has concluded that inequality is the result of distinct and interacting forces that are both structural and policy-driven. That said, low inequality can be achieved through various pathways.

Sweden represents a model in which strong labor-market institutions compress wages across the income distribution, reducing the need for redistribution in the form of taxes. Canada, conversely, maintains relatively high equality through aggressive redistribution across the broader population, as reflected in large pretax-to-post-tax P90/P10 reductions. France combines a high labor-income share and strong taxation of top earners, yet remains more unequal than Sweden and Canada due to significant wage dispersion due to its labor-market dynamics.

The analysis of Germany highlights how rising capital-income concentration can significantly increase inequality, even in the presence of strong pretax labor-market institutions and heavy taxation. In the case of the UK, where redistribution across the broader population is low, yet inequality has decreased substantially, we have concluded that significant taxes on top incomes alone can significantly balance out inequality. The US emerges as a significant outlier. Extremely high capital-income concentration, wide labor-market dispersion, and weak redistribution of top incomes make the US significantly less equal than the other sampled countries.

These results demonstrate that inequality is not solely a consequence of market forces nor solely a consequence of tax policy. Policies aimed exclusively at taxing the very rich or exclusively equalizing the labor market are unlikely to be sufficient on their own. More effective inequality reduction requires a balanced approach that addresses wage dispersion across the labor market, increasing concentration of capital among the rich, and redistributing wealth through taxation.

The quantitative data from this report provides a good foundation for studying how to reduce inequality in a country. Future research can build on this data by integrating it with analyses of relevant policies to better understand the role of public policy in shaping inequality outcomes.

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