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"Rethinking Inequality: Consumption versus Income and Wealth"

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Rethinking Inequality: Consumption versus Income and Wealth

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Abstract

This article examines the evolution of inequality since 1920, highlighting the need to rebalance research and public debate toward the forms of inequality that matter most for social welfare. While income and wealth disparities have received overwhelming attention in academia and public policy circles, consumption inequality, a more relevant indicator, has declined over the last two and a half decades.

The main characteristics of developments in income and wealth inequality over time (since 1920) are presented: the share of the top 1% of earners followed a downward trend until the 1970-79 decade, and an upward trend thereafter, returning to levels comparable to those of the 1920s. The share of the top 10% of earners followed a similar movement.

Despite the prominence of distributional issues in contemporary debates, comprehensive measures of consumption inequality remain underdeveloped. Yet the need for such metrics is urgent. Progress over the past 25 years—led in part by initiatives at Statistics Canada—offers a promising foundation for more accurate and policy-relevant assessments of economic well-being. One important factor has been the development of social transfers in kind (STiK), which add significant resources and benefits to households in the lowest income quintile to a greater extent than to those in the highest quintile.

The question of inequalities in society, their determinants, and their evolution over time is not just a recurring theme but a crucial area of significant research in academia and public policy circles. This research, along with calls for reforming capitalism, is not just a topic of discussion but a matter of great importance that attracts much debate in the public opinion pages of newspapers, magazines, and social media platforms.

This article recalls the main characteristics of the development of income and wealth inequalities over time since 1920. Still, it challenges the current emphasis on income and wealth relative to the socially more relevant consumption inequalities, which have been significantly reduced over the last decades and are likely to have persisted for much longer.

Inequality in income and wealth decreased between 1920 and 1980 and has increased since then, with signs of a possible reversal. Inequality in consumption, arguably the most critical form of inequality, has most likely decreased over that period, but data on a reasonably comprehensive consumption measure are lacking. However, the need for such a measure is urgent and crucial, and we have begun implementing it over the last two and a half decades, with Statistics Canada at the forefront of these developments.

Income and Wealth Inequality: A Historical Perspective

Since Atkinson & Harrison (1978) and Piketty & Saez (2003), the historical perspective on inequality has been revived, attracting many studies. The vast majority of those studies have focused on income and wealth distributions. More recently, some authors attempted to characterize the consumption inequality question with a mitigated success (see below).

Chancel (2019) presents ten facts about income and wealth inequality measures and their associated trends. An important caveat is that it is hard to disentangle and measure different expressions of inequality due to their complex nature and the many forms they can take. Chancel's ten facts are the following.

The data available to measure inequality is scarce, and the quality is often questionable. Over time, comparability between income and wealth inequality measures is lacking across countries as surveys have multiple limitations, especially at the top of the distribution. While tax data is generally better, the tax codes differ across countries, and exclusions/inclusions are not always perfectly matched. There is also the issue of missing sources of information. Although some work is being done to reconcile both data types, it is still in its infancy.

After 1980, income inequality started to rise, after a prolonged decline, albeit at different speeds across countries. The top 1% of earners went from capturing 17-20% of national income in the early 1900s to 8% in the 1970s and 1980s to 10%-20% as of today (see Figure 1). According to Chancel, the pre-1980 decline was probably due to the fall of capital incomes (Piketty & Saez,

2003). Osberg (2018)[1] writes: "The income share of the top one percent in Canada and the United States was very high in the 1920s, fell abruptly during the 1940s, and then edged down marginally during the 1950s, 1960s, and 1970s. Since the 1980s, however, there has been a clear long-run trend upward in the income share of the top one percent (with ups and downs around this trend during booms and recessions)."

Advanced economies have become richer, but the relative size of the government has been diminishing. Public wealth ownership has transitioned to private wealth: in the 1970s, net private wealth (all assets net of debt held by private actors) over national income ratios were about 200-300%, and have recently soared to 400-600%. Conversely, net public wealth (all assets minus debt held by governments) over national income ratios rose from 50% to 100% in the 1970s, then fell to an average of 0% in most developed countries in recent years. Negative public wealth implies that debt exceeds assets (which means private owners own the wealth).

Capital is back at the top of the distribution. Wealth concentration is back to the level observed at the beginning of the 20th century. However, the situation has been less dramatic in Western Europe, which experienced a larger decline in wealth concentration, followed by a less important increase since the 1980s. Also, wealth growth (through capital returns) has been higher for the top (8,9%) than for the average (2,7%). Average incomes grew by only 1% per year. Savings rates display a similar pattern. For the top 1%, the savings rate went from 30% to 35%, while for the next 9%, it went from 30% to 15%. For the bottom 90%, it went from 10% to 0%.

The Great Recession that followed the 2008 financial crisis has not stopped the trend of income and wealth inequality growth in most advanced economies. Top income and wealth shares fell during the recession but returned to pre-recession levels and even rose in some countries. For income, the situation has been much more nuanced.

The nature of inequality has changed: it is more about class than nationality. Income distributions in advanced economies are more in line with the global inequality spectrum.

There is a link between high inequality and low mobility. For Scandinavian countries, with a top 10% income share of 25-30%, the intergenerational income/earnings elasticity[2] is low at

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[1] Lars Osberg (2018), *The Age of Increasing Inequality: The Astonishing Rise of Canada's 1%*, Lorimer and Company, Toronto.

[2] The intergenerational elasticity measures the percentage change in children income over the percentage change in parent income, measured by the income of children and parents at the main stage of the respective lifecycle. For Canada, a recent estimate is 0.32 (Wen-Hao Chen, Yuri Ostrovsky and Patrizio Piraino 2016, "Intergenerational Income Transmission: New Evidence from Canada," Analytical Studies Branch Research Paper Series 11F0019M No. 379, Statistics Canada), somewhat higher than the previous one of 0.2 (Miles Corak and Andrew Heisz 1999, "The Intergenerational Earnings and Income Mobility of Canadian Men: Evidence from Longitudinal Income Tax Data," *The Journal of Human Resources* 34 (3): 504–533).

0,15-0,20, indicating a relatively mobile society. In the US, where the share is 45%, the elasticity is 0,5, indicating a relatively low mobility society. This relationship, called the "Great Gatsby curve," shows that high inequality does not lead to higher intergenerational mobility (which one might assume in theory).[3]

While racial and gender income gaps were significantly reduced in the 20th century, they remain high. Women's workforce participation has risen in the past decades (now over 46% in most advanced countries). This has resulted in a significant reduction in income inequality between genders and across the entire population. However, since the 1980s, the total income gap has not been significantly reduced. The pre-tax income ratio was reduced from 250-200% in the 1980s to 180% in 2014. For full-time workers, the decrease has been a bit steeper, from a ratio of 170% to 130% in 2014 (differences in occupation and industry could account for up to 50% of the pay gap for full-time workers in the US). Also, women are underrepresented at the top of the distribution: only about 25% of the top 10% are women, and representation is even worse at the highest end (10% of the top 0,1%).[4]

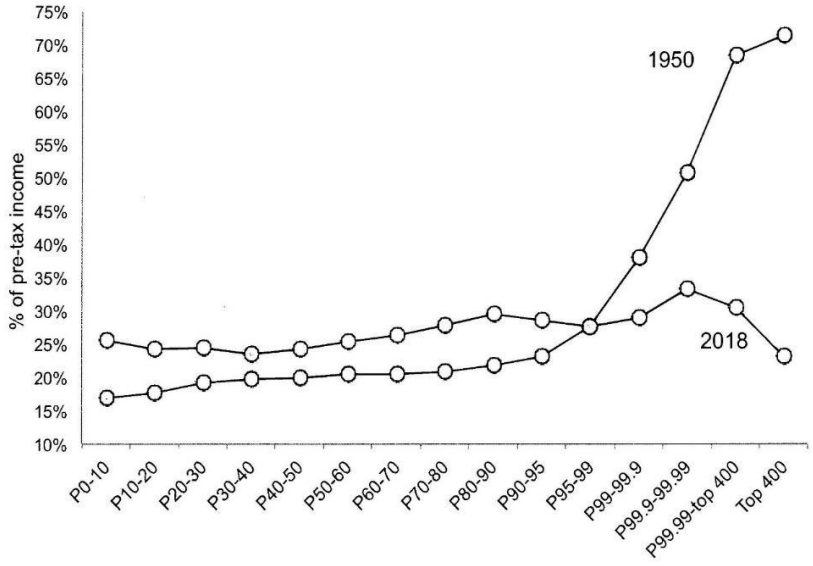
Accessibility to education, health, and high-salary jobs tends to reduce the disadvantages of the individuals at the bottom of the distribution. Since technological change and globalization are key factors in the increase in income and wealth inequality in rich countries (often called the «superstar effect», where access to a larger market means that skilled individuals can set themselves apart even more), highly skilled workers have tended to benefit from this trend. The supply of skills must increase through education to keep pace with demand. The impact of education on future inequalities is high. While tax policies are important, pre-tax income inequality often mirrors post-tax inequality, suggesting that social policies might be more effective than tax policy. For example, Scandinavian countries and most Western European countries have more socially oriented policies and are among the countries with the lowest income disparities. They are also the countries associated with public health systems. In the US, there is a 14-year life expectancy gap between the top 1% and the bottom 1%, suggesting poor health at the bottom of the distribution (reducing productivity and mobility and accentuating inequalities). Those inequalities are not seen in countries with universal public access to healthcare. The minimum wage is also much higher relative to average income than it is in the US. It might be due to the importance of unions, which is correlated with pre-tax income inequality.

[3] The expression "Great Gatsby Curve" (2012) is from the late Alan Krueger, former Chairman of the U.S. Council of Economic Advisers.

[4] According to Osberg (2018), Racial wealth inequalities have also decreased (especially in the second half of the 20th century: the white/black earnings ratio was 250% in the 1960s and 130% in the 1980s. Since then, however, disparities have not decreased further; they have increased. The wealth gap used to be around 500-600% but is now over 700%.

These different impacts suggest that trade growth or technological change might not have been the main factors in explaining the rising trend in inequality.

Tax policies are still important (progressiveness), especially at the top of the income distribution. After the 1970s, top tax rates were significantly reduced, and pre-tax income shares grew across both rich and emerging countries. The figure below, which presents average federal, state, and local tax rates by pre-tax income group in the US between 1950 and 2018 (*Source*: Lucas Chancel 2019, Appendix Figure 15), shows that tax rates have increased by an average of five percentage points, except for the 99th percentile, for which rates have dropped significantly.



Other factors might also drive future trends in income and wealth inequality, such as automation, artificial intelligence, biogenetics, and climate change.

Regarding the last factor, Chancel states that carbon taxes are inherently regressive. But given that carbon taxes are environmental prices, their regressivity is not surprising, as all prices of all goods and services, seen from a taxation viewpoint, are, in a way, unavoidably regressive. It is important to consider public sector actions and policies in a somewhat encompassing framework. Some measures may be regressive, some unavoidably, while others are progressive. Getting rid of small regressive actions may turn out to be welfare destroying, and considering each action or policy in solo does not make sense from a social welfare viewpoint.

The U-Shaped Inequality Curve

The Economist (2019) compares pre-tax Gini coefficient to after-tax Gini coefficient to show how taxes and transfer payments affect the redistribution of income: The difference between the two measures reflects approximately how progressive the system of taxes and

transfer payments is in each country. Since the pre-tax Gini coefficient is high for the United States, it must redistribute more than most countries to have low after-tax income inequality. On the other hand, South Korea must do less to achieve low-income inequality. Also, the after-tax measure is strongly correlated with the size of the government (share of GDP). While France and the United States have close levels of income inequality before taxes, after-tax inequality of France is lower than the United States. The respective shares of GDP of their government are 57% and 35%. For Ireland, the change in the coefficient is the highest, because income taxes are high (while corporate taxes, which represent most of the tax revenue, are low).[5]

Income and wealth inequalities in Canada, France, the UK, and the USA generally decreased from the early 1920s till 1980 and increased afterwards. For Canada (Table 1), we observe that the income share of the top 1% of earners followed a downward trend until the 1970-79 decade, and an upward trend afterwards, reaching in the 2010-19 decade a level similar to that of the 1920-29 decade. The share of the top 10% of earners followed a similar movement.

Table 1: Pre-tax income shares – some decadal averages (Canada)
(WID - World Inequality Database https://wid.world/data/, as of August 2025)

	Income share top 10%	Income share top 1%
1920-1929	37.01%	10.92%
1930-1939	45.29%	13.15%
1970-1979	28.79%	6.76%
1980-1989	29.62%	7.87%
2010-2019	35.36%	11.21%
2020-2023	36.00%	11.38%

For France (Table 2), we observe that the income shares of the top 1% of earners followed a downward trend until the 1980-89 decade and an upward trend afterward, without reaching in 2010-19 period a level similar to that of the 1920-29 and 1930-39 decades. The share of the top 10% followed a similar movement, if less pronounced. As for wealth distribution, we observe similar trends: a reduction in the top 1% and the top 10% wealth shares between 1920 and 1990, followed by an upward trend.

[5] Source: The Economist. (2019, April 12). American inequality reflects gross incomes as much as taxes. *The Economist*. https://www.economist.com/graphic-detail/2019/04/12/american-inequality-reflects-gross-incomes-as-much-as-taxes

Table 2: Pre-tax income and wealth shares – some decadal averages (France)
(WID - World Inequality Database https://wid.world/data/, as of August 2025)

	Income share top 10%	Income share top 1%	Wealth share top 10%	Wealth share top 1%
1920-1929	46.98%	20.92%	80.34%	47.82%
1930-1939	44.83%	17.19%	77.30%	43.85%
1970-1979	32.85%	9.22%	55.18%	18.87%
1980-1989	29.14%	7.60%	50.53%	16.68%
2010-2019	33.36%	10.63%	58.39%	25.25%
2020-2023	34.23%	11.95%	59.31%	26.73%

For the UK (Table 3), data on income inequality are missing before 1980. Between 1980 and 2009, the trend is positive and the shares of the top 1% and the top 10% of income earners are increasing, followed by a downward trend until today. As for wealth distribution, we observe a negative trend in the top 1% and the top 10% wealth shares between 1920 and 1990 followed by an upward trend.

Table 3: Pre-tax income and wealth shares – some decadal averages (UK)
(WID - World Inequality Database https://wid.world/data/, as of August 2025)

	Income share top 10%	Income share top 1%	Wealth share top 10%	Wealth share top 1%
1920-1929			92.14%	59.39%
1930-1939			91.48%	55.88%
1980-1989	29.58%	7.55%	56.19%	19.25%
1990-1999	33.84%	9.97%	54.24%	19.60%
2010-2019	36.02%	12.81%	56.63%	21.28%
2020-2023	36.20%	13.10%	57.07%	21.16%

For the USA (Table 4), we observe that the income shares, measured in the WID database, of the top 1% and the top 10% of earners followed a downward trend until the 1970-79 decade and an upward trend afterwards, reaching in the 2010-19 period a level similar to that of the 1920-29 decade. The corrections proposed by Geloso et al. (2022) reduce the USA pre-1950 income inequality but do not change the picture in a significant way. As for the wealth distribution, we observe similar trends, a reduction in the top 1% and the top 10% wealth shares between 1920 and 1980 or 1990, followed by an upward trend to a level just below the level of the 1920-29 decade.

Table 4: Pre-tax income and wealth shares – some decadal averages (USA)
(WID - World Inequality Database https://wid.world/data/, as of August 2025)

	Income share top 10%	Income share top 1%	Wealth share top 10%	Wealth share top 1%
1920-1929	46.41%	20.14%	82.07%	41.99%
1930-1939	47.77%	18.84%	83.26%	41.98%
1970-1979	34.07%	10.67%	66.95%	24.31%
1980-1989	36.30%	12.31%	63.76%	25.24%
2010-2019	45.19%	18.78%	72.93%	35.48%
2020-2023	46.08%	19.88%	70.27%	35.28%

Geloso (2018)[6] argues that most studies treat inequality as an aggregate, whereas it arises from many subcomponents. The general narrative is that inequality in the US plummeted from the late 19th century to the 1960s, then rose after 1975 (in between, it seems to have plateaued). What different authors have called « The great-levelling » (convergence in the shares of income) comes down to multiple factors, such as geography, gender and ethnic gaps, immigration, and much more.

Overall, leading writers on the subject, such as Piketty, have argued that inequality fell due to the rise of the welfare state. While this rise could have played its part, Geloso notes that a lot of the government decisions were regressive (Jim Crow laws, taxes that the blacks were forced to pay even if they were not benefiting from social programs, etc.). Evidence is also unclear after 1970, when government spending was high and redistributive policies flourished, but inequality rose. He also disagrees with Piketty's view that the rise in inequality was because the return on capital was higher than the growth rate, which would, in turn, imply higher revenue growth for the rich.

Geloso attributes the rise and fall of inequality to the following factors: immigration, relative factor prices, discrimination, regulation, international trade, urbanization, labour force participation, skill-biased technological change, market integration, etc. Before the 1970s, inequality measures were based on tax data, which is prone to tax evasion. Thus, those measures would be understating inequality in this period.

Also, the income gap between whites and blacks was huge. Throughout the 20th century, blacks started migrating from the South to the North of the United States, making regions more homogeneous (reducing inequality). For example, the income ratio (blacks/whites) increased

[6] Vincent Geloso (2018), "The Fall and Rise of Inequality: Disaggregating Narratives", chapter 10 in Austrian Economics: The Next Generation, Advances in Austrian Economics, Volume 23, 161–175 (Emerald Publishing Limited).

from 25% to 40% by 1940 and 55% by 1970. The income gap between men and women also fell, primarily because technological advances made work more accessible for women (such as contraception, running water, appliances, and many others). Immigration restrictions during this period also played a significant role in reducing inequality, since immigration is inherently inequality-inducing (if individuals diverge from the median, they increase inequality). The fact that the share of immigrants in the entire population fell from 13.2% to 4.7% between 1920 and 1970 convinces Geloso that this effect has been considerable.

After 1970, except for shrinking gender differences (greater workforce participation), most factors reversed trends and began contributing to rising inequality. For example, the immigration share went up, as did regional differences, which are mainly related to price variations across groups. While controversial, the income gap between whites and blacks might have started to rise, but surveys may not paint an accurate representation since they skim the population in prison, which earns mostly nothing. Housing and zoning laws are another suggestion, since owners benefit from rent increases. At the same time, renters have a larger share of their income dedicated to rent as the limited supply increases prices. Since renters tend to be at the lower end of the distribution and owners at the higher end, this could have increased inequality.

All in all, when analyzing inequality, it is important to look not only at aggregated measures but also at measures grounded in micro foundations to avoid broad statements that could miss the true nature of inequality. However, the general U-shaped movement in income and wealth inequality appears to withstand criticism, though the exact curvature remains at issue.

Figures 1 and 2 illustrate the U-shaped curve of the top 1% of national income and wealth shares worldwide.

Figure 1: Income (pre-tax NI per adult) inequality U-shape curve over time
Top 1% national income share across the world, 1900-2018
(Source. Lucas Chancel 2019, Figure 3; Western Europe: average of France, UK, Germany, and Sweden)

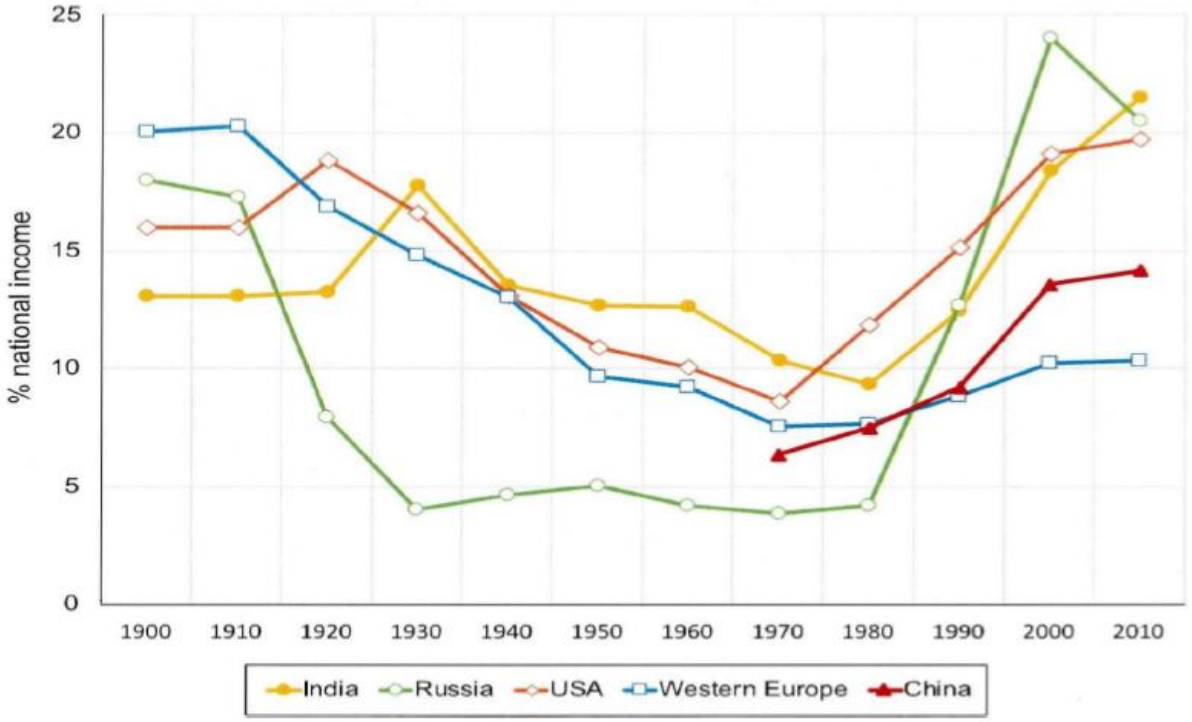
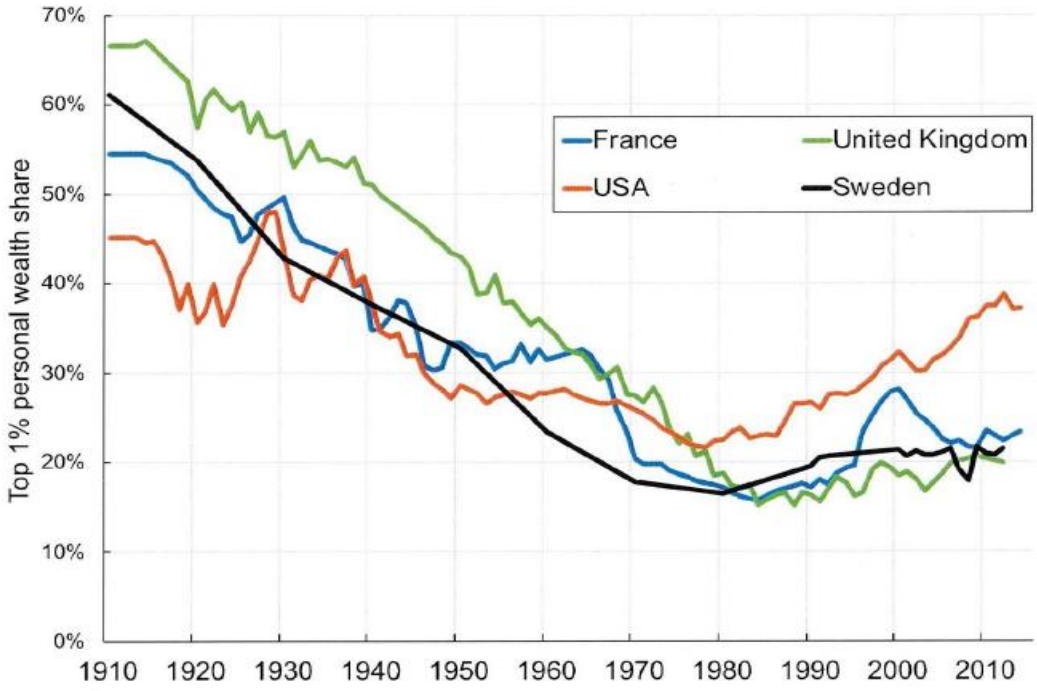


Figure 2: Wealth inequality U-shape curve over time
Top 1% personal wealth share in rich countries, 1915-2014
(Source. Lucas Chancel 2019, Figure 6)



The effect of taxes

One expects that taxes and transfer payments will reduce income inequalities. Indeed, taxes do so significantly. The following figure and table shed light on this reality, and their information complements that conveyed in the previous figures.

This figure shows the effect of taxes and transfer payments on the ratio of the top 10% to the bottom 50% average income in four non-intersecting regions of Europe. We observe that "pre-tax and transfer payments" inequality, measured by the [(top 10%) / (bottom 50%)] ratio, is higher in Western Europe than in the other regions. However, the effect of taxes and transfer payments is more important in Western Europe, as it reduces the ratio by 29%, compared to 15% in Eastern Europe, 23% in Southern Europe, and 23% in Northern Europe. After taxes and transfer payments, income inequality is lower in Western Europe than in Eastern Europe, but remains higher than in Southern and Northern Europe.

Figure 4: Pre vs Post tax/transfer payments income inequality in Europe, 2017
(Source. Blanchet et al., 2019, Figure 20)
The boxed percentages represent the reduction in inequality due to the tax-transfer system

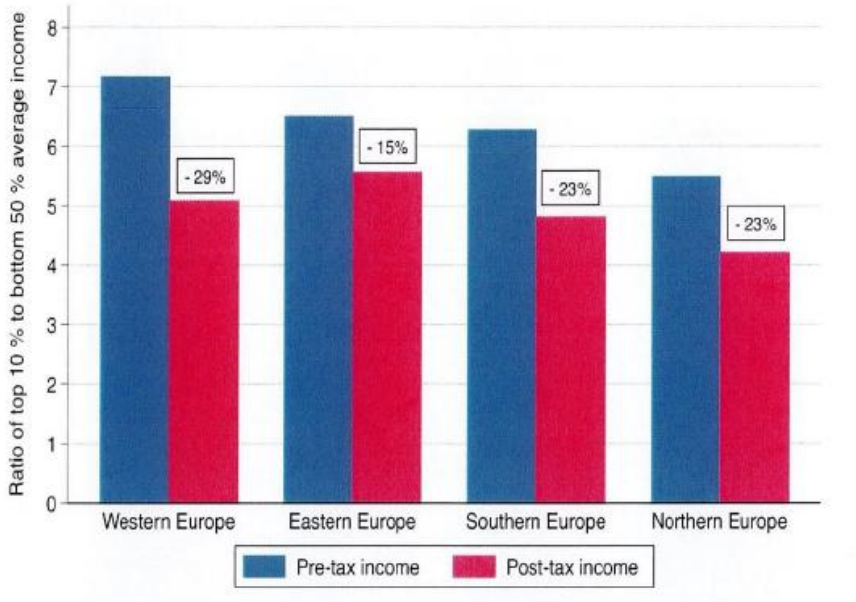


Table 5 indicates that for Canada, the share of total taxes paid by the highest quintile increased by two percentage points between 1999-2000 and 2022-2023. Meanwhile, the shares paid by the lowest quintile increased by 1.5 percentage points after 2020.

Table 5: Share (%) of taxes paid per quintile, Canada 1999-2023 (some years) (as of August 2025)

	Lowest	Second	Third	Fourth	Highest
1999	1.3	6.3	14.1	22.9	55.5
2000	2.1	6.4	13.9	22.3	55.3
2001	1.1	6.1	13.7	22.2	56.9
2010	1.2	5.1	12.7	22.9	58.2
2015	1.2	6.0	13.2	22.7	56.9
2020	2.0	7.0	13.6	22.4	55.0
2021	3.1	6.5	13.2	21.5	55.7
2022	2.5	6.2	12.7	21.3	57.4
2023	2.4	6.2	12.7	21.4	57.3

Source: Statistics Canada. Table 11-10-0193-01 https://www150.statcan.gc.ca/t1/tbl1/en/cv!recreate.action?pid=1110019301&selectedNodeIds=2D2,2D3,3D2,3D3&checkedLevels=0D1,3D1,3D2&refPeriods=19990101,20170101&dimensionLayouts=layout2,layout2,layout2,layout2,layout3&vectorDisplay=false; additional calculation by the authors

The Economists' Debate on Income and Wealth Inequalities

The issue of income and wealth inequalities, and their evolution over time, is a central theme in both academic research and public policy discussions. It sparks widespread debate in newspapers, magazines, and social media. Over the last few years, economists have debated the significance of trends showing a widening gap between the richest and the least wealthy.

The dominant framework for growing income inequality

There is a commonly accepted narrative of a significant rise in income inequality, often relayed by the media. Some economists have frequently highlighted their work in support of these views, notably the working group composed of French economists Thomas Piketty, Emmanuel Saez, and Gabriel Zucman (PSZ), which has been producing sustained work for more than 20 years that tends to yield such results. Their conclusions about growing inequality between the highest and lowest ends of the income and wealth distributions resonate strongly with the general public, political parties, and activist groups, thereby influencing policies and public opinion.

But there are economic studies, some of which have been echoed by the press, that question such assertions, particularly in the case of the United States. According to a recent article

from The Economist[7], despite growing skepticism towards free markets, the evidence supporting the claim of rising inequality in rich countries is weakening. Wage disparities are narrowing, with real weekly earnings for lower-income Americans outpacing those at the top since 2016. The COVID-19 pandemic has accelerated this trend, potentially reversing 40% of the pre-tax wage inequality from the past 40 years. Similar positive shifts are observed in Britain and continental Europe, where wage growth is healthier for lower-paid workers. Contrary to long-standing beliefs, after accounting for post-tax and government transfer payments, American income inequality has scarcely increased since the 1960s.

In the case of the United States, while the recent studies by PSZ indicate a significant increase in income inequality in the country from the 1960s to 2019, with the top 1% seeing a notable rise in its share of after-tax income, recent work by American tax specialists Gerald Auten and David Splinter (AS) tends to challenge this assertion (Auten & Splinter, 2023)[8]. Findings from AS suggest that inequality has remained relatively stable over that same period, with only marginal changes in the top 1% share. Despite utilizing the same income concept and dataset, the differing conclusions prompt questions about the accurate characterization of income inequality (The Economist, 2023b). This opposition between PSZ and AS underscores the need for improved, consensus-based measures to assess the distribution of personal income and draw conclusions about rising inequality.

The following paragraphs present this PSZ-AS exchange of views, based on their academic publications.

In their earlier studies of the case of the United States, (Piketty & Saez, 2003)[9] indicate, based on individual tax returns data compiled annually by the IRS from 1913 to 1998, a U-shaped trend in top income and wage shares throughout the century, with top wage shares remaining stable before World War II, plummeting during the war and bouncing back from the late 1960s,

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[7] (The Economist, 2023a). "A new age of the worker will overturn conventional thinking." https://www.economist.com/leaders/2023/11/30/a-new-age-of-the-worker-will-overturn-conventional-thinking?utm_medium=cpc.adword.pd&utm_source=google&ppccampaignID=18798097116&ppcadID=&utm_campaign=a.22brand_pmax&utm_content=conversion.direct-response.anonymous&gad_source=1&gclid=EAIaIQobChMImcTU7ML6hAMVpEhHAR2snQrfEAAYASAAEgLBIvD_BwE&gclsrc=aw.ds

[8] Gerald Auten and David Splinter, "Income Inequality in the United-States: Using Tax Data to Measure Long-Term Trends", first issued in 2019 (https://davidsplinter.com/AutenSplinter-Tax_Data_and_Inequality2019.pdf) and updated in 2023 (https://www.davidsplinter.com/AutenSplinter-Tax_Data_and_Inequality.pdf).

[9] Piketty, T., Saez, G. (2003). Income Inequality in the United States, 1913-1998. *The Quarterly Journal of Economics*, Volume 118, Issue 1, February 2003, Pages 1–41, https://doi.org/10.1162/00335530360535135 . https://eml.berkeley.edu/~saez/pikettyqje.pdf

then surpassing pre-war levels. The authors suggest a shift from wealthy capital owners to high-earning workers at the top of the income distribution.

In the 2018 update of their 2003 study[10], Piketty, Saez, and Zucman (PSZ) assessed the distribution of pre-tax and post-tax national income in the country over the 1913-2014 period. The results for both distributions indicate an increase in inequality from the 1960s onwards, especially during the 1980-2014 period.

On the pre-tax income side, despite a 60% increase to $64,500 in constant 2014 dollars for the average pre-tax real national income per adult from 1980 to 2014, stagnation was observed for the bottom 50% at $16,200 per adult, meaning a drop from around 20% to 12% of their share in total national income. At the same time, the middle class, defined as individuals between the median and the 90th percentile, experienced a 42% increase in pre-tax income, partly due to tax-exempt fringe benefits. With an average pre-tax income of $65,300, this group made up 40.4% of total pre-tax national income in 2014. As for the 1% highest earners, their average pre-tax income rose from $420,000 to $1.3 million, accounting for 12% to 20.2% of pre-tax national income. This surge was initially driven by labor income, but after 2000 it was dominated by capital income.

Compared to the pre-tax income distribution, inequality was less pronounced in the post-tax income distribution due to the progressive tax and transfer system. Transfers significantly benefited the bottom 50%, with post-tax income averaging $24,900 per adult and accounting for 19.2% of total income in 2014. Government efforts had a minimal effect on the middle-class post-tax income, or the "middle 40%," which averaged $67,200 and accounted for 41.6% of national post-tax income in 2014. Among the top 1%, the average income and share of national income were $1,010,000 and 15.7%, respectively.

Distributing national income components beyond those reported on tax returns across households, such as unreported income and government transfer payments, is a daunting task. From a methodological point of view, choices must be made about how to allocate these sources across the income distribution. Also, economic and societal factors that have marked the period under study must be considered.

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[10] (Piketty et al., 2018). PSZ research on inequality has evolved from using raw tax records to a more comprehensive framework referred to as **Distributional National Accounts (DINA)**. Aligned with the System of National Accounts (SNA), DINA provides harmonized international series that track the distribution of income and wealth across all percentiles of the population, both within and across countries. Main types of income series for households include ***Pre-tax national income series***, which comprises a labour and a capital income component, **Post-tax disposable income series** that measure inequality in individuals' actual spending capacity after taxes and cash transfers, excluding in-kind benefits such as health, education, and other public services, **post-tax national income series** incorporates both in-kind transfers and public spending (collective consumption) as well as government surpluses or deficits, so that aggregate post-tax national income aligns with total national income.

This latter point has been raised by tax experts Auten and Splinter (AS). As they note in their article, projecting long-term income distribution is complex due to numerous factors, including evolving social conditions over the past six decades, such as decreasing marriage rates and changing household structures, demographic shifts, such as age distribution, and the effects of higher education delaying workforce entry. Among other factors that shaped this period are the expansion of Social Security benefits and the shift from defined benefit to defined contribution plans, which affected retirement incomes, and high inflation periods that altered income measurements.

Following the same data source and methodology as in the PSZ 2018 study, AS proposes a revised version with adjusted data to account for the societal factors mentioned above and the changing tax rules brought by the Tax Reform Act of 1986. According to AS, overlooking these trends and factors could contribute to an inflated perception of top income shares in recent years. AS has also made several corrections to the way in which tax income is converted into national income.

Compared to PSZ, AS yields more moderate results regarding the evolution of inequality in the United States, finding that after-tax income inequality has grown only modestly since the 1960s. In particular, the addition of transfer payments to pre-tax income reduces the share of income earned by the top 1%, and the magnitude of this effect has increased over the last 60 years. In 1960, the top 1% of income earners accounted for 10.3% of total pre-tax income. The inclusion of transfer payments brought this share to 9.8%, i.e., a decrease of 0.5 percentage points. In 1985, the effect was a 0.8 percentage-point reduction in the top 1% pre-tax income share, and by 2019, the decrease amounted to 1.7 percentage points. The impact of transfer payments was mainly driven by social security benefits (-0.7 percentage points), other non-cash transfers (-0.5 percentage points), and Medicare (-0.4 percentage points).

While PSZ and AS agree on the direction of inequality evolution over time, their differences lie more in the magnitude of widening gaps. PSZ's efforts to compute disaggregated distributional national accounts for the United States first, though valuable, proved highly challenging. Deaton (2020) noted that only about half of national income is reflected in individual tax filings. Assigning income from tax data is complex, given that tax units do not align precisely with either individuals or households. The allocation process for the remaining half of national income can prove even more complex, necessitating the reliance on unsupported or arbitrary assumptions that can lead politically motivated critics to select alternatives that support their preferred narrative on trends in the inequality debate.

In sum, the divergent results between PSZ and AS are primarily explained by differences in how unreported income is treated, and in the assumptions underlying government expenditure allocation.

Regarding the treatment of unreported income, it is clear that tax returns, while valuable, are incomplete because people do not report all their income, whether legally through untaxed sources like employer-provided benefits or illegally through intentional tax evasion. The methodology used to estimate and distribute this unreported income among individuals explains much of the difference between PSZ and AS observations. PSZ allocates unreported income proportionally to reported income, whereas AS uses IRS tax audit studies to impute income, suggesting that middle-income households are more likely to have unreported income (Gale et al., 2023). Besides highlighting the difficulty of defining a consensual approach to this task, these differences in handling unreported income may be critical when drawing conclusions regarding income distributions. While PSZ suggests that this unreported income is attributable to high-income earners, such as corporate executives with offshore accounts, AS tends to consider that low-income earners, like cash-paid plumbers or housekeepers, are those who evade taxes the most, suggesting that the actual wealth of the bottom 99 percent might be underestimated (Karma, 2024).

Regarding divergent assumptions about government expenditure allocation, the disparity between AS and PSZ top income shares after taxes is significantly influenced by how each treats government consumption spending on goods and services, such as defense, infrastructure, and education. PSZ allocates this spending proportionally to after-tax income, which does not change the distribution. In contrast, AS splits it, allocating half proportionally to after-tax income and half on a per capita basis, which better reflects reality, especially concerning education spending (Gale et al., 2023).

Other recent perspectives on growing inequality

The scope of the PSZ–AS debate on income inequality can be expanded by incorporating other perspectives beyond tax-based data. This section examines four recent contributions that add to the PSZ-AS discussion with the introduction of different notions and metrics: Mathieu Gomez article "Macro Perspectives on Income Inequality" (2025)[11] on the importance of choosing among several income concepts and the role of capital income for entrepreneurs and business owners; Florian Hoffmann, David S. Lee, and Thomas Lemieux paper "Growing Income Inequality in the United States and Other Advanced Economies" (2020)[12] on the role of factors such as education and occupation; OECD's report *To Have and Have Not – How to Bridge the Gap in Opportunities* (2025)[13], which shifts the attention from disparities in outcomes to inequality of opportunity; and finally Joseph E. Stiglitz et alii *The G20 Report on Global Inequality* (2025)[14], for which inequality

[11] (Gomez, 2025)
[12] (Hoffmann et al., 2020)
[13] (OECD, 2025)
[14] (Stiglitz et al., 2025)

results from policy choices, ethical attitudes and morals as well as from globalisation driven by both the benefits of economic integration and the power of large corporate and financial interests.

In his article, Gomez underscores the importance of definitions and measurement choices in interpreting trends in income inequality. He starts by contrasting and showing the limitations of several "conventional" empirical income concepts:

- *Distributed income* (defined as Wages + Rents + Interest received + Dividends), counting actual cash flows but missing retained earnings and unrealized gains.
- *Factor income* (Distributed income + Retained earnings), including retained earnings, but being too dependent on accounting standards.
- *Haig–Simons income* (distributed income plus capital gains), including all changes in wealth through capital gains as income. The main drawback of this approach is that not all wealth changes (changes in asset valuation) may translate into future consumption possibilities: an increase in asset valuation due to a sudden fall in interest rates may inflate this "income" while not providing new resources for consumption.

Instead of theses conventional definitions, he suggests the use of welfare-based income concept by economist John Hicks, or "*Hicksian income*" (distributed income + present value of anticipated changes in distributed income + present value of anticipated changes in the price of assets expected to be sold), broadly defined as an individual's ability to consume or save for future consumption in a period while not impairing his wealth. The benefit of this "ideal" income concept from a welfare perspective is that it reflects actual capacity to enjoy future consumption streams, not just accounting flows or paper gains. The limitation is that it is impractical to quantify since it requires subjective forecasts of future cash flows and asset sales.

Then, examining patterns of rising top income shares (top 1% and 0.01%) over recent decades using PSZ data (2018), Gomez finds that they are driven less by labor income inequality or declining labor share, and more by the growing concentration of capital and entrepreneurial income, especially after 2000 and for the very top. He suggests that these trends are attributable to a combination of higher returns on capital, explained in part by technological advances, lower external financing costs, and lower effective tax rates that benefit business owners.

Florian Hoffmann, David S. Lee, and Thomas Lemieux (HLL) seek to assess the respective contributions of labor income, capital income (interests, dividends, and rental income), and factors such as education and occupation to the overall rise in income inequality in the country over the past four decades. Data on labor and capital income are drawn from the Annual Social and Economic Supplement of the U.S. Current Population Survey (CPS) for individuals aged 25 to 64 in full-time employment, covering 1976 to 2019. Consistent with PSZ (2018) study, their findings indicate that while capital income as a share of total income has increased substantially at the very top of the distribution, its contribution to overall inequality growth remains secondary to that of labor market dynamics. In other words, the major driver of income inequality growth

in the U.S. over the past four decades is the dispersion of labor earnings, rather than capital income, suggesting that efforts to reduce overall inequality should focus primarily on labor income.

They examine the role of education and, subsequently, the contributions of occupation, industry, and geography in explaining these trends. To this end, overall income dispersion is decomposed into three components: between-group inequality, within-group inequality, and composition effects, the latter referring to the increase in overall inequality caused by a growing share of workers in groups with greater income dispersion (especially college-educated workers). Results for the U.S indicate that most of the rise in labor and capital income inequality over the last four decades comes from between-group education gaps (high-school vs. college-educated workers), accounting for 37.5% and 30.5% in the variance of total income for men and women, respectively, followed by composition effects in the labor force (the expansion of higher education in the labor force amplified inequality by concentrating a greater share of income among high-earning groups). Occupational and geographic factors magnified the effect of educational differences on the evolution of income inequality over time, especially for women.

Their cross-country comparisons reveal that Germany, Italy, and the United Kingdom experienced increases in earnings and income inequality that were similar in direction to those in the United States, with France as the exception. However, the underlying drivers for these countries differ. Compared to the United States, education seems less central to inequality growth in Europe, except in Germany. Moreover, the contribution of capital income to inequality growth was even smaller in the European countries studied than in the United States.

The OECD (2025) report proposes a measure of inequality of opportunity. The analysis explores how inherited and external factors affect individuals' economic prospects. Household market income rather than disposable income is used as the leading indicator of welfare, capturing income-generating capacity and living standards. Circumstances beyond an individual's control are examined, including sex, country of birth, parents' migrant status, and parents' socioeconomic background at age 14, measured through their education level and occupation. It also considers elements of the childhood environment at age 14, such as parental presence in the household, homeownership status, and the degree of urbanisation of the area of residence. Based on the Gini coefficient, the measure of inequality of opportunity is built drawing on machine-learning techniques by grouping individuals among people aged 25–59 according to these circumstances and then producing a counterfactual distribution of outcomes, i.e., a simulated distribution that reflects only the differences between these groups, with the effects of those external factors removed.

Applying this measure to a set of 32 OECD member and accession countries, overall findings suggest that people's relative economic advantage depends on inherited factors rather than individual effort or talent. Results show that more than a quarter of income inequality

among these countries stems from these circumstances, such as gender, country of birth, and parental socioeconomic background, the latter being by far the most important factor, accounting for more than 60% of inequality of opportunity observed at the household level in most cases. As for the gender factor, differences become more pronounced when considering individual earnings rather than household income, accounting for about one-quarter of earnings inequality on average in OECD countries. The highest levels of relative inequality of opportunity are observed in several European countries, including Belgium, Poland, and Portugal, as well as in the United States, representing more than 35% of total income inequality.

Geographic disparities also play a significant role in shaping people's opportunities in terms of education, employment, and essential services, depending on where they are born and where they grow up. Across and within countries, residents of wealthier or metropolitan regions, generally enjoying better infrastructure and services, tend to have better outcomes. At the same time, those in poorer, remote, or disadvantaged areas face persistent barriers to upward social mobility.

Considering all these circumstances and their lasting impact on social mobility, the report concludes with a set of tailored policy interventions to address the specific barriers individuals face throughout the life cycle, from early childhood to labour market entry and beyond, including early education, financial support, tax-benefit measures, access to housing and services, and anti-discrimination efforts. All in all, the last three factors show that focusing solely on income and wealth measures can yield an incomplete picture in the current debate over inequality. At the same time, other aspects would be far more relevant for grasping this reality from a social perspective.

In their G20 Report on Global Inequality (2025),[15] Joseph Stiglitz, Adriana Abdenur, Winnie Byanyima, Jayati Ghosh, Imraan Valodia, and Wanga Zembe-Mkabile claim that "Inequality causes people's lives to be more fragile, leading to perceptions of unfairness that spark frustration and resentment. That, in turn, undermines social and political cohesion, eroding citizens' trust in authorities and institutions. The consequences are political instability, decreased confidence in democracy, enhanced conflicts and diminished appetite for international cooperation. Inequality also affects our ability to deal with planetary challenges." The authors claim that inequality stands as one of the world's most pressing concerns, fueling societal fragmentation, eroding trust, undermining global cooperation, and hindering efforts to address planetary challenges. Furthermore, this issue is not an unavoidable phenomenon but rather a direct outcome of policy choices influenced by ethical considerations, moral values, and economic trade-offs.

[15] The South African Presidency of the G20 commissioned the report to comprehensively examine the interconnected dimensions, causes, consequences, and recent trends of global inequality, to propose policies to mitigate it.

The authors are particularly concerned by the global increase in incomes and wealth at the upper end of the scale, with those at the top getting an increasing share of national income and wealth, especially the top 0.01%.[16] They emphasise that long-term structural drivers of inequality include the shift from manufacturing to service-sector economies, technological change, and globalisation. Those same forces are seen as explaining the *increase* in inequality within the advanced countries observed in the early stages of industrialisation, the *decrease* in inequality during World War II and the two decades after, and the later era of marked *increase* in inequality.

According to Stiglitz et al., existing inequalities are rooted in two primary factors: the distribution of market incomes (influenced by asset ownership, skills, and power dynamics between labor and capital) and public policies for income redistribution (such as progressive taxation and public expenditures on healthcare and education). Sources of inequality include market power wielded by corporate owners, excessive carbon emissions from the profligate consumption of the very rich, the political power of the rich, which generates biases in public policy in favor of the wealthy, in particular the liberalisation of financial markets, the weakening of competitive policies, and the development of regressive taxation such as value-added taxes, as well as marriage and inheritance patterns that perpetuate elites. Without intense public action, these factors can create vicious cycles in which low-income individuals lack access to essential services, while the wealthy accumulate and pass on fortunes, especially in the absence of effective inheritance taxes. The report implicitly suggests that reversing these trends requires a global commitment to policy reforms.

The authors argue that globalisation in all its dimensions is a significant source of inequality: “The international economic and legal architecture developed over the past few decades has contributed to within-country and global inequality in important ways”; “One explanation is that more integrated trade, greater mobility of capital across borders and new technologies used in production have lowered the bargaining power of less-skilled workers everywhere, affecting both wages and working conditions. Higher variation in wages has gone hand-in-hand with higher job insecurity and informality for workers at the lower end of the spectrum.” These structural policies, often accompanied by austerity measures, have further deepened inequality, with particularly adverse effects on women and other marginalized groups. The authors emphasize that the international financial architecture itself contributes significantly to both within-country and between-country inequalities. Global trade, finance, investment, and knowledge rules are key determinants. Globalization, while offering benefits, has also facilitated financial liberalization, which has often favored creditors over debtors, leading to crises in developing countries. At the same time, the outdated international tax system allows multinational corporations and the ultra-wealthy to avoid equitable taxation, exacerbating illicit

[16] « Data from the World Inequality Lab show that the richest 10% of people in the world account for 54% of total global income and 74% of total global wealth. » (Stiglitz et al., 2025), p. 6.

financial flows. The privatization of essential services like energy and healthcare has increased consumer costs, negatively impacting the poor and marginalized. Intellectual property rues are also a major culprit. For instance, international intellectual property (IP) agreements can hinder developing nations' access to critical technologies (such as vaccines during COVID-19), creating a "health-inequality cycle."

Arguing that, contrary to past beliefs, reducing inequality can actually enhance economic performance, the authors of the report call for concerted global action and identify two main areas for intervention: reforming policies that determine market incomes (e.g., strengthening asset ownership, labor rights, and regulating corporate power) and enhancing public policies for income redistribution (e.g., progressive taxation, robust social protection, and universal public services). A central recommendation is the establishment of an International Panel on Inequality (IPI), modeled after the IPCC. This proposed body, led by the South African G20 Presidency, would provide authoritative, data-driven analyses of global inequality trends, drivers, and policy impacts, thereby informing and empowering policymakers. Beyond the IPI, the authors advocate for comprehensive international reforms, including rewriting IP and trade rules for equitable gains, global coordination to rein in corporate power, redesigning investment and bilateral taxation agreements, reforming international financial institutions for better global representation, increasing IMF liquidity (SDRs) for developing countries, combating illicit financial flows, ensuring climate finance, and expanding access to critical medical, food, and digital resources. In conclusion, the report firmly states that extreme inequality is a societal "choice" and can be reversed through political will and global coordination.

Shifting the Debate to Consumption Inequality

As shown above, the debate over rising inequality in developed countries most often focuses on income, wages (earnings), and wealth, particularly at the top of the income and wealth distribution. The current fixation on income and wealth inequalities and the associated neglect of the more socially relevant consumption inequalities can be considered as a mishap of public policy research by economists and other social scientists. Although economists typically view individuals' well-being (utility, welfare, quality of life) as depending on consumption, including leisure, rather than on income or wealth, which are considered somewhat secondary as constraints on consumption, few researchers have examined these consumption inequalities. Examining consumption inequality components also allows shifting the analytical focus to the lower end of the distribution, which has stronger public policy relevance. Consumer spending data from expenditure surveys can be used to examine consumption components, such as

spending on food and durable goods, leisure, and intergenerational consumption mobility. To fully grasp inequality in well-being, it is imperative to consider a comprehensive welfare analysis[17].

Compared to income and wealth, measuring and quantifying consumption profiles and individual well-being pose greater challenges. Consumer expenditure surveys often do not accurately reflect actual consumption. First, consumption of durable goods or goods with lasting effects is inaccurately reported because purchases are timed, appearing higher for those who buy durable goods now and lower for those who bought them earlier. Besides, surveys typically lack detailed information on the existing household stock of these durable goods. Secondly, non-monetary consumption from various sources, such as friends, relatives, or government programs, including food and rent subsidies, health insurance, as well as home-produced consumption like family-provided childcare, is often overlooked. Lastly, converting spending to consumption requires knowing the prices paid for the goods and assuming uniform pricing across households. This assumption fails for non-tradeable goods like housing or for other tradeable goods due to shop-specific pricing. Additionally, survey nonresponse and measurement errors add to the inaccuracies in reporting consumption.

Measures of income inequality are mainly based on disposable income. However, there is more to well-being than disposable income, insofar as consumption of health, education, access to public goods, the quality of the environment, public safety, etc., may not require financial outlays and are not, in general, included in "income".

[17] The South African G20 report discussed above never discusses consumption except through « profligate consumption of the very rich » and its impact on carbon emissions. Nothing else. Another recent important work is the 2021 report *Major Future Economic Challenges*, produced by an international commission convened by the French government (https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs-2021-rapport-anglais-les grands defis economiques-juin 1.pdf). Chaired by Olivier Blanchard and Nobel economic science laureate Jean Tirole, the commission aimed to address three long-term structural challenges: climate change, economic inequalities, and the demographic challenge. Surprisingly, the report's second chapter, "Economic Inequality and Insecurity: Policies for an Inclusive Economy" (authored by Dani Rodrik and Stefanie Stantcheva), remains totally silent on consumption inequalities. Moreover, the authors conducted a survey of French citizens' attitudes toward inequality, and found that "73% of respondents believe that inequality in income is a serious or very serious problem; 62% believe the same about inequality in wealth. 70% of our sample believes that inequality in opportunity is a big issue." No question on and no mention of consumption inequality. Finally, in the Deaton Review of the UK Institute for Fiscal Studies, led by Nobel economic science laureate Angus Deaton, no mention is made of consumption inequalities besides consumption expenditures, even though consumption is much more than consumption expenditures (https://ifs.org.uk/inequality/trends-in-income-and-wealth-inequalities/ and https://ifs.org.uk/inequality/inequality-and-the-future-of-capitalism/)

A short review of research on consumption inequality

Gravel et al. (2005)[18] aim to expand the notion of inequality beyond disposable income. They write: "Disposable income is not the only ingredient of well-being. Also important are health, education (or information) and free access to various public goods such as roads and public transportation, quality of the environment, public safety, etc. Hence a mere focus on the distribution of disposable income fall quite short of providing us with an adequate picture of the distribution of well-being in the population."

They first introduce besides disposable income two public goods: infant mortality, a proxy for health system efficiency and coverage, and pupil/teacher ratio at public schools, a proxy for education spending. In spite of significant data challenges, they conclude that "a comparison of standard unidimensional inequality indices based on the distribution of disposable income alone with multidimensional ones suggests a strong correlation between the behavior of the indices. This at least suggests that the widespread practice of focusing only on unidimensional income inequality does not provide a too bad information of the overall performance of the OECD countries in terms multidimensional inequalities with respect to both disposable income and public good."

They then use a dataset containing national household surveys for nine countries to analyze the inequality of opportunity compared to the disparity of outcomes. They find that "there is a correlation between the ranking of countries based on disposable income and that based on the equality of opportunity approach. This at least suggests that the standard practice of focusing on income inequality alone does not provide a bad approximation of the ranking of countries that would emerge from an equality of opportunity view point. Yet the correlation is not perfect."[19]

Meyer and Sullivan (2017)[20] claim that inequality is often measured with income data, while consumption data shows a view more reflective of overall economic well-being. Indeed, income is more variable than consumption because of saving and dissaving factors depending on individuals' current state. It also does not reflect the flow of consumption that ownership of

[18] Nicolas Gravel, Arnaud Lefranc, Nicolas Pistolesi, Benoit Tarroux, Alain Trannoy (2005), "Appraising Inequalities in the Western World: Is individual disposable income all that matters?" mimeo.

[19] They add: "And the imperfection seems to take place in the set of countries that appear to show a 'middle-ground' performance in terms of both inequality of disposable income and inequality of opportunity. Specifically, it appears that countries like France, Italy and Spain do worse in terms of equality of opportunity than in term of equality of disposable income while a somewhat converse verdict holds for countries like Netherlands and Germany."

[20] Bruce Meyer and James Sullivan (2017), "Consumption and Income Inequality in the US Since the 1960s", NBER Working Paper No. 23655.

houses or cars might give. Consumption measures give a better picture of the effect of changes in the value of assets or of debt burden and access to credit.

However, concerns with consumption measures reside in data quality. For consumption, under-reporting is an issue, and different surveys yield different results, as a recall survey is less of a burden than a diary survey for participants. To avoid this problem, the authors suggest focusing on consumption categories that are well-measured and equally important across households, such as food at home, gas expenses, the rental value of housing or vehicles, etc., while taking into account price changes to reflect changes in overall spending.

The difference between income and consumption measures stems from low-income families' under-reporting of income and its growth over time. Also, for groups that receive high transfer income, such as single-parent families, a difference is expected. Changes in asset values could explain why consumption inequality fell after 2006, as data show that consumption rose for the lowest quintile but fell for the other four.

Norris and Pendakur (2015)[21] provide an estimate of the evolution of consumption inequality in Canada from 1997 to 2009. Using consumption to measure inequality is better in theory because the level of consumption is a choice by the household that depends on past, current and future income. So, it is more representative of permanent income. It is also seen as the main generator of well-being. From an empirical point of view, survey data on consumption might be better than on income, most notably in the tails of the distribution (tax avoidance at the top and multiple sources of income at the bottom).

However, measuring consumption inequality introduces some technical problems. It is not as simple as adding expenditures of households because it would not accurately capture the consumption of durables, such as houses and cars. For example, owner-occupiers of houses don't report their shelter expenditures by year, which would represent the « flow » of consumption provided by the utilization of the house. This correction is important if we want to compare inequality as the ownership rate is different between groups of people. The authors use the Surveys of Household Spending (SHS) from 1997 to 2009 to impute rent from an estimator that corrects for selection bias and then to estimate inequality using the Gini measure. They also use price data to see if the Gini coefficient is sensible to adjustments in prices. In theory, it should not, but if growth in prices has been asymmetrical between groups of households, there could be differences.

They find that consumption inequality rose from 1997 to 2006, from 0,251 to 0,275 Gini points, an increase of 2,4 percentage points, but declined between 2007 and 2009, from 0,275 to

[21] Sam Norris and Krishna Pendakur (2015), "Consumption Inequality in Canada, 1997 to 2009", Canadian Journal of Economics, 48(2), pp 773-792.

0,264 Gini points, a decrease of 1,1 percentage point. They also find that while income inequality increased from 1997 to 2006, the decrease afterward compensated for it, which means that during the entire period 1997-2009, income inequality has essentially been flat. Considering this post-2006 decline in inequality, they speculate that the minimum wage increases and the solidity of the labour market could have contributed to a higher growth in wages at the bottom of the distribution than at the top. The poor stock market performance during this period might also have contributed to a reduction in inequality: asset prices fell and since most assets are held by individuals at the top of the distribution, inequality fell.

Sarlo (2016)[22] states that income inequality depends on the measure of income used, market revenue, total income, after-tax income, household size-adjusted after-tax income, etc., and that consumption is a better measure since it is a direct proxy of choices that agents make to maximize their well-being.

Trends in consumption and income are essentially explained by age: the young (0-25) and the old (65+) have lower incomes than individuals 25-65. In relative terms, it is in this age range that income is at its highest and expenses are at the lowest. This means that savings are at their highest. The young and the old, on the contrary, have the tendency to save and dissave to smooth consumption while taking into account their intertemporal wealth. Thus, following this hypothesis, consumption is less volatile and sensitive to demographic changes than income. It is also less affected by transitory shocks that impede income earning (job loss, promotions, separation, and illnesses, to name a few).

Underreporting is also less of a problem than for income (through fiscal avoidance and evasion, mostly in percentage from low-income individuals), implying that inequalities might seem more important than they are. However, consumption still has notable problems: low response rate in surveys and measurement errors (recalling the exact amounts of spending is unlikely). However, if these errors are random, they should not affect inequality measures.

Sarlo does not use a consumption flow (imputed rent) instead of punctual purchases. For example, buying a house in 2015 gives utility not only in 2015 but also in 2016, etc., so that the present value of the flow is equivalent to the 2015 purchase. The reasoning for not using this concept is that if there are not enough differences in time that would skew inequality towards one direction more than another, his simpler approach would make sense.

Other studies sometimes adjust for price changes to obtain a real consumption inequality measure. However, finding decent regional price indexes is arduous and not readily available. A major problem with consumption as a measure of inequality is substitution (buying similar products at lower prices) and price-searching. It is known that the poor tend to have a lower

[22] Christopher Sarlo (2016), “Consumption Inequality in Canada: Is the Gap Growing?”, Fraser Institute.

opportunity cost of time than individuals at the higher end of the distribution, which implies that they might tend to search for better deals while using less money to buy the same goods as the rich. Not adjusting for this problem would imply greater measured inequality than realised. Another issue is that data ignores improvements in quality for appliances, cars, electronic devices, etc., which would tend to benefit the poor, thereby overstating inequality.

To adjust for these considerations and get pure results (untainted by unnecessary adjustments), Sarlo uses an adjustment for the size of the household, namely the square root of the household size. This correction is applied because individuals' actual consumption is lower than the consumption of the household but higher than if they were living alone.

Using data from the survey of family expenditures (1969-1997) and the survey of household spending (1997-2009), [23] arguably the most comprehensive surveys available in Canada, Sarlo finds that consumption inequality is lower than income inequality. More interestingly, income inequality has risen by 11% over the 40-year period up to 2009 using after-tax-adjusted income, while consumption inequality has risen by 3% over the same period.

It would then be unwise to argue that the living standard is more unequal in 2009 than in 1969, which is surprising considering all of the changes that occurred within society, namely demography, population aging, higher divorce rates, and more single-parent families, higher labour force participation of women, the expansion of the tertiary sector of the economy, higher college attendance, more two-salary families, etc. While the 11% increase in income inequality is significant, it might overstate real inequality if we were to consider quality improvement and substitution behaviours of low-income consumers. While these results are interesting, Sarlo warns the reader that one should not make definitive conclusions because the data used is not without major flaws.

Using Social Transfers in Kind (STiK) in Measuring Consumption Inequalities

The OECD advocates for identifying social transfers in kind (STiK) in different countries to obtain a more comprehensive measure of disposable income. STiK represent roughly 20% of the typical household's actual final consumption expenditures (HAFC), defined as the sum of household final consumption expenditures (HFCE) and social transfers in kind (STiK), but this percentage differs significantly between income quintiles.

Relying on the OECD Income Distribution Database to characterize the global income distribution between all individuals living in the developed world, Hermansen (2017)[24] shows that

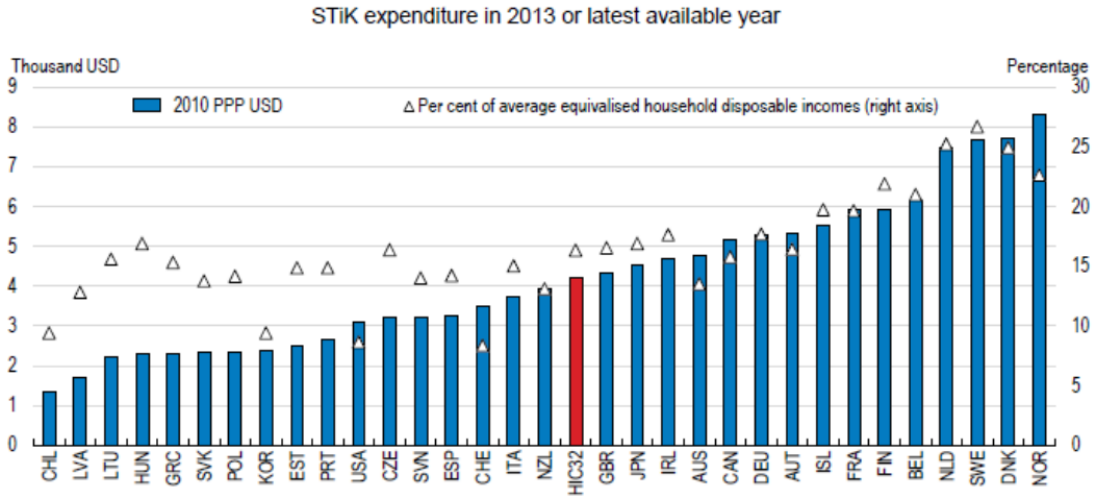
[23] The survey of family expenditures has been integrated into the survey of household spending as of 1997.

[24] Mikkel Hermansen (2017), "The Global Income Distribution for High-Income Countries," Economics Department WP no. 1402, OECD ECO/WKP(2017)34.

global inequality for the group of high-income countries, as measured by the Gini coefficient, has increased by almost 3 Gini points from 1995 to 2013, in contrast to global inequality at the world level estimated to have fallen by more than 2 Gini points from 1988 to 2008 (Lakner and Milanovic, 2016).

Hermansen's result is "mainly driven by top 10% incomes growing more than middle and lower incomes and the bottom 10% falling behind. Rising inequality within the United States drives almost half of the inequality increase among high-income countries, a combination of a sizeable rise in inequality and a population share around a third in the sample." The result also reflects the impact of the 2008-09 crisis and is sensitive to the inclusion of Japan, which experienced a substantial decline in real incomes.

Furthermore, to check for robustness, Hermansen analyzes explicitly the inclusion of STiK in the framework. STiK can be useful because they are sizeable, and differences between countries are important. For example, in Nordic countries, STiK represent about 25% of average household disposable income, more than twice what they represent in the US. Using national accounts aggregates indicates that adding STiK to household disposable incomes may lift household income growth substantially. Decomposing the rise in global inequality for high-income countries into within- and between-country contributions shows that the bulk of the increase is due to the increase in within-country inequality in a majority of high-income countries.



Source: (Hermansen, 2017), Figure 10 - Spending on social transfers in-kind according to the national account

Statistics Canada: A more sophisticated treatment of STiK

Statistics Canada released new measures of household actual final consumption (HAFC) in March 2019,[25] by adding to household final consumption expenditure (HFCE) the social transfers in kind (STiK). Statistics Canada defines social transfers in kind as transfers to households made by the various levels of government and non-profit institutions serving households (NPISH). Those transfers include off-market production of goods and services financed by governments and non-profit institutions but consumed by households at zero or insignificant prices. They also include the purchase of goods and services intended to be consumed by households. Using the data from Statistics Canada will allow a better characterization of consumption inequality.

The provision of these goods and services to households can also be considered as income, provided to the user in kind rather than as a money transfer. The broader income concept is referred to as household adjusted disposable income (HADI). Statistics Canada: "These new measures are in line with international standards, which recommend including social transfers in kind to calculate supplementary measures of consumption and income. The measures facilitate cross-national comparisons, as social transfers in kind consumed by households are financed to varying degrees across countries."

Table 6 shows that social transfers in kind in Canada increased steadily from $141 billion in 1999 to $237 billion in 2008 to $337 billion in 2018 and to 495 in 2024, in nominal terms. Governments finance most social transfers in kind (about 90%). As a proportion of total household consumption, social transfers in kind have remained relatively stable at about 20%, a significant amount.

Table 6 shows how STiK from governments and non-profit institutions are distributed by expenditure items. According to Statistics Canada latest study on HAFC released in 2023[26], " STiK […] measures the value of in-kind goods and services provided to households by governments and non-profit institutions serving households (NPISH), such as through in-hospital care to patients, education for children, and social housing." In 2024, social transfers in kind from governments were primarily composed of health and education services, which accounted for 81% of the government transfers in kind. Health services represented 52.0% of the total amount of STiK in 2024, followed by education services with a share of 29%. Other categories are housing, recreation and culture, and social protection.

Although the nominal value of the services they provided in kind is smaller in relation to governments, NPISH generally offered different types of services. These include social protection, such as childcare and old age protection, as well as other services, such as religious services and those provided by grant-making and giving organizations. In the same study, Statistics Canada

[25] Released at 8:30 a.m. Eastern time in The Daily, Wednesday, March 20, 2019

[26] https://www150.statcan.gc.ca/n1/en/daily-quotidien/230328/dq230328a-eng.pdf?st=tKW-ZF8s

mentions: “Although governments accounted for 9 out of every 10 dollars contributed through STiK, NPISH increased its share of overall support at the fastest pace on record, reaching a total of $40.3 billion in 2022, up 11.5% from a year earlier.”

Table 6: Composition of total social transfers in kind (STiK) in $ millions and their share in the household actual final consumption (HAFC)
All households, Canada as a whole, 1999-2024[27] (some years)
(as of August 2025)

Year	Social Transfers in kind (STiK)	STiK Education	STiK Health	STiK Other	Household final consumption expenditure HFCE	**Household actual final consumption expenditure HAFC = HFCE+ STiK**	**Share STiK/HAFC in %**
1999	140 533	49 473	62 634	28 426	553 506	694 039	**20.2%**
2000	150 110	51 623	68 086	30 401	589 026	739 136	**20.3%**
2001	160 186	54 355	73 275	32 556	615 180	775 366	**20.7%**
2022	430 987	122 378	227 260	81 349	1 488 875	1 919 862	**22.4%**
2023	456 267	127 737	239 502	89 028	1 572 103	2 028 370	**22.5%**
2024	495 433	143 327	257 713	94 394	1 654 821	2 150 254	**23.0%**
2024/1999	*352.5%*	*289.7%*	*411.5%*	*332.1%*	*299.0%*	***309.8%***	

STiK data come from a variety of aggregated sources. STiK from governments are taken from the Canadian Classification of Functions of Government (CCOFOG), which separates the proportions of government spending according to whether it is collective spending (such as defense) or individual spending (health, education, etc.). These data come from the Canadian Government Finance Statistics (CGFS), which collects public data through various administrative files.

We learn from Statistics Canada[28] that the distinction between individual and collective consumption expenditure was introduced in SNA 1993. Individual services or consumption expenditure is the amount spent by an institutional unit during an accounting period to purchase consumption goods and services for the benefit of a specific individual or group of individuals that could, in principle, be identified. Collective services or consumption expenditure is the amount

[27] Statistics Canada. Table 36-10-0588-01. Distributions of household economic accounts, income, consumption and saving, Canada, provinces and territories, annual (x 1,000,000)

[28] https://www150.statcan.gc.ca/n1/pub/13-606-g/2016001/article/14618-eng.htm

spent by an institutional unit during an accounting period to purchase consumption goods and services for the benefit of the collectivity living within or visiting a local community, a city, a province, or the country as a whole.

Individual consumption expenditure includes both households' purchases of goods and services for their own use and the provision of goods and services to specific households or groups of households by government and NPISH units. The former includes households' purchases of food, clothing, transportation, and a wide range of other consumer products. The latter consists of, for example, the provision of elementary and secondary education to children and health care services.

Collective consumption expenditure, in contrast, corresponds broadly to the economic concept of the 'public good'—products that an individual cannot be effectively excluded from using and for which one individual's consumption does not significantly reduce the availability of the good or service for others. Examples of collective consumption expenditures include spending on policing, defence services, and Parliament and general public administration.

Thus, the aggregated individual services expenditure (IS) data represent the STiK of the various levels of government. For example, in the health category, the particular expenditure categories are: "Medical products, appliances, and equipment," "Outpatient services," "Hospital services," and "Public health services." For education, the categories are: "Primary and Secondary education," "College education," "University education," "Education not definable by level," and "Subsidiary services to education."

Statistics Canada's objective is to estimate the social transfers in kind (STiK) to households from government and NPISH[29]. The estimates are then added to household final consumption expenditure (HFCE) to get household actual final consumption (HAFC).

It is helpful to recall the definition of household actual final consumption HAFC, which can be summarized as the sum of household final consumption expenditure (HFCE), social transfers in kind from governments, and social transfers in kind from NPISH. Moreover, social transfers in kind exist only for specific household expenditure categories: Housing, water, electricity, gas, and other fuels; health; recreation and culture; education; miscellaneous goods and services (including social protection); other services (religion, political parties, labour and professional organisations, environmental protection)[30].

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[29] https://www150.statcan.gc.ca/n1/pub/13-607-x/2016001/1390-eng.htm

[30] For STiK coming from NPISH, Statistics Canada uses final demand data between 2008 and 2018, as estimated with the "Supply Use Tables" (SUT), which make it possible to obtain the amounts that the NPISH spent to provide services to households, which is considered equal to the total consumption of their services by households. To obtain more

To obtain data for 1999-2024 (in accordance with DHEA[31]), Statistics Canada uses OECD data to measure STiK retroactively. So, with the total of government STiK and NPISH STiK, it only remains to show how these data are allocated to the different economic agents. Statistics Canada has survey data on disposable income and consumption (mainly from the Survey of Household Spending (SHS)). In this way, it obtains an estimate of the distribution of income and consumption in the population. With this distribution, households are grouped by income quintile.

The distribution of STiK across quintiles

To distribute STiK, Statistics Canada uses proxy variables to estimate the proportions of STiK going to different types of households. Then it assigns this data to the previously defined income quintiles.

It uses various socio-demographic information sources to refine allocations by quintile. For instance, the Canadian Institute for Health Information is used to differentiate spending proportions by age, sex, and geography. If no proxy variable is available, it separates STiK uniformly into quintiles; this is a tiny proportion, so it shouldn't have a significant impact. The following table presents some proxy variables used to distribute the STiK to the different quintiles.[32]

DHEA STiK category	Distribution variable/proxy
Education	• Post-secondary tuition fees • Number of kids attending elementary and secondary schools
Health	• Provincial government average health care expenditures by age, sex and province or territory
Other	• Union dues • Presence of housing subsidy • Number of household members • Number of adults aged 18 and over
Source: Statistics Canada: System of Macroeconomic Accounts, Social Policy Simulation Database and Model, Survey of Household Spending; Canadian Institute for Health Information, National Health Expenditure Database.	

recent data, Statistics Canada also uses NPISH T4 “wages and salaries” to estimate the growth in final demand for their services.

[31] The Distributions of Household Economic Accounts (DHEA) data available from Statistics Canada. Tables 36-10-0585-01, 36-10-0586-01, 36-10-0589-01 and 36-10-0590-01 contain the data related to the wealth distributions, tables 36-10-0587-01 and 36-10-0588-01 contain the distributions related to income, consumption and saving, and table 36-10-0101-01 contains the distributions related to household counts.

[32] Although STiK data exist for most advanced countries under OECD methodological instructions; see Mikkel Hermansen (2017) cited above #15. Statistics Canada is the first government statistics institution to rigorously allocate STiK spending (in total and by component) across groups of households, more precisely across quintiles at

Source: (Statistics Canada, 2025)

Table 7 shows how STiK from governments and non-profit institutions are distributed across expenditure items for the first and fifth quintiles (we show only these quintiles). We observe that the most important STiK expenditure item in 2024 is health for both the lowest quintile (48%) and the highest quintile (54%). We also observe that between 1999 and 2024, STiK expenditures on education increased by 114.2% and 93.5% respectively, for the lowest and highest quintiles, while STiK expenditures on health increased by 194.7% and 195.6% respectively, for the lowest and highest quintiles.[33]

Table 7: Allocation of social transfers in kind (STiK) across quintiles
Value ($) per household, Canada as a whole, 1999-2024[34] (some years)
(as of August 2025)

TABLE STiK DETAILS (lowest and highest quintiles)									
	L	K	M	N	O	P	Q	R	S
	STiK			STiK: education		STiK: health		STiK: other	
	lowest	highest		lowest	highest	lowest	highest	lowest	highest
	N+P+R	O+Q+S	L/K						
1999	10 775	10 766	1.00	3 912	3 492	4 516	4 905	2 347	2 369
2000	11 222	11 400	1.02	3 844	3 702	4 928	5 164	2 450	2 534
2001	11 866	11 941	1.01	4 081	3 785	5 179	5 510	2 605	2 646
2002	12 539	12 286	0.98	4 388	3 776	5 356	5 691	2 795	2 819
2021	24 018	22 466	0.94	6 404	5 727	12 995	12 152	4 620	4 586
2022	25 566	23 384	0.91	7 027	6 241	13 413	12 289	5 126	4 853
2023	26 146	24 950	0.95	7 425	6 217	13 118	13 451	5 603	5 282
2024	27 529	26 700	0.97	8 380	6 758	13 308	14 499	5 841	5 443

Combining STiK data, disposable income, and consumption data

Finally, the STiK are added to the disposable household income (it is as if the STiK were an income that the government gives to households, which makes it possible to buy the STiK consumed) as well as to the final consumption expenditure to obtain the "Adjusted household

this time. The standard procedure until now (and still used in most if not all empirical studies) is to distribute STiK spending equally across all households.

[33] These results show the importance of path-breaking efforts by Statistics Canada to allocate STiK spending across households.

[34] Source: Statistics Canada. Table 36-10-0587-01. Distributions of household economic accounts, income, consumption and saving, by characteristic, annual (x 1,000,000)
DOI: https://doi.org/10.25318/3610058701-eng

disposable income" (AHDI) and "Household actual final consumption" (HAFC). Since STiK are added to the two measures, net household savings remain unchanged. HAFC is the sum of household final consumption expenditure, individual consumption of goods and services from government, and individual consumption of goods and services from NPISH.

HAFC is an essential component of Canadian macroeconomic statistics. It enables a more meaningful understanding of living standards by accounting for household consumption, not only from their own final expenditure but also from the final expenditure of other sectors that benefit them. Health care and education are high-cost services that Canadians benefit from through policies and programs funded by the tax system. These types of consumption are important considerations, as they enhance understanding of Canadians' economic well-being.

Corrected consumption inequalities

In Table 8, we observe that STiK accounted for about 74.0% of households' disposable income in the lowest quintile in 1999 but only about 11.6% in the highest quintile. In 2024, those percentages reached 89.3% and 12.6%, respectively. Clearly, STiK will impact consumption inequality measures based on HAFC and income inequality based on HADI.

Table 8 presents partially corrected changes in consumption inequality over the last twenty years or so. We see that the traditional measure of disposable income indicates that the ratio of average disposable income (highest quintile over lowest quintile), C/B in Table 8, has increased by 8.5% from 6.36 to 6.90. However, the household-adjusted final consumption (HAFC) ratio, L/K, in Table 8, has decreased by 25.3% from 2.46 to 1.84. This is a rather significant change in just two decades.

The change in disposable income has been less significant for the lowest quintile (+111.8%) than for the highest quintile (+129.8%). That is, the change in disposable income of the highest quintile has been 116.1% higher than that of the lowest quintile, suggesting a slight increase in income inequality over the last two decades.

However the change in consumption (HFCE) has been much less important for the highest quintile (+89.6%) than for lowest quintile (+167.4%), that is, the increase for the highest quintile has been 53.6% of the increase for the lowest quintile, which is in line with the original hypothesis of this paper: the rich were consuming a lot already at the beginning of the period and there is a limit to consumption, so the gains in wellbeing have been more important for the lowest quintile.

In addition, we have STiK whose increase has been more important for the lowest quintile (+155.5%) than for the highest quintile (+148.0%). The total increase in consumption (HAFC) has therefore been more important for the lowest quintile (+163.7%) than for the highest quintile (+96.9%). That is, the increase for the highest quintile has been 59.2%, while the rise for the lowest quintile has been 163.7%, which is a significant development. It suggests both a substantial

increase in wellbeing for both quintiles, but mainly for the lowest quintile, and a substantial decrease in consumption inequality over the last two decades.

The distribution of government common spending across quintiles

In addition to social transfers in kind distributed across income quintiles, we have government spending, which is common to all and cannot be distributed or assigned to individual households. As shown in Table 9, the level of such expenditures increased substantially by 104.9% at an annual rate of 4.90% between 2008 and 2023.

Clearly, these expenditures contribute to the well-being of the population, although their allocation among households (quintiles) cannot be done with confidence. As for information goods and services and assets in general, the allocation would require estimates of how the typical household in each quintile values those expenditures, through some form of Lindahl pricing or value[35], that is, through some form of willingness to pay estimates and cooperative game allocation procedure, which cannot be done with confidence at this time. The most one could do at this time is to allocate the general government common spending on items 707-710 in the same way as STiK were distributed across quintiles. It is not done here.

[35] See Marcel Boyer and Anne Catherine Faye (2018), "Music Royalty Rates for Different Business Models: Lindahl Pricing and Nash Bargaining," In: Marciano A. and Ramello G. (eds) Encyclopedia of Law and Economics. Springer, New York, NY, 2018. DOI: https://doi.org/10.1007/978-1-4614-7883-6. And Marcel Boyer (2019), "The Three-Legged Stool of Music Value: Hertzian Radio, SiriusXM, Spotify", pp. 13-40 in Ysolde Gendreau (ed.), Copyright in Action: International Perspectives on Remedies, Proceedings of the 2018 World Congress of ALAI (Alliance littéraire et artistique internationale), Éditions Thémis, Montréal 2019, 490 pages.

Table 8: STiK and HAFC

Value per household – Canada as a whole 1999-2024[36] (some years)

CANADA: Household Income and consumption by quintile

Income quintiles are assigned based on the equalized household disposable income.

This accounts for differences in household size and composition. The Oxford-modified equivalence scale is used.

It assigns a value of 1 to the first adult, 0.5 to each additional person aged 14 and over, and 0.3 for all children under 14.

HFCE (Household Final Consumption Expenditures), STiK (Social Transfer in Kind), HAFC (Household Adjusted Consumption Expenditures)

	Disposable Income			**HFCE**			**STiK**					**HAFC**		
	Lowest	Highest	Ratio	Lowest	Highest	Ratio	Lowest		Highest		Ratio	Lowest	Highest	Ratio
	B	C	C/B	E	F	F/E	H	H/B	I	I/C	I/H	K	L	L/K
1999	14 555	92 502	6.36	24 102	75 203	3.12	10 775	74.0%	10 766	11.6%	1.00	34 877	85 969	2.46
2000	14 731	99 880	6.78	25 810	79 655	3.09	11 222	76.2%	11 400	11.4%	1.02	37 032	91 055	2.46
2001	15 985	102 327	6.40	25 104	81 051	3.23	11 866	74.2%	11 941	11.7%	1.01	36 970	92 992	2.52
2002	16 110	105 850	6.57	27 210	84 998	3.12	12 539	77.8%	12 286	11.6%	0.98	39 749	97 284	2.45
2021	31 693	173 984	5.49	55 862	121200	2.17	24 018	75.8%	22 466	12.9%	0.94	79 880	143 666	1.80
2022	31 069	186 728	6.01	60 627	134039	2.21	25 566	82.3%	23 384	12.5%	0.91	86 193	157 423	1.83
2023	29 353	200 886	6.84	62 377	138 255	2.22	26 146	89.1%	24 950	12.4%	0.95	88 523	163 205	1.84
2024	30 822	212 554	6.90	64 442	142615	2.21	27 529	89.3%	26 700	12.6%	0.97	91 970	169 315	1.84
Change 2024/1999*	***111.8%***	***129.8%***	***8.5%***	***167.4%***	***89.6%***	***-29.1%***	***155.5%***	***20.6%***	***148.0%***	***7.9%***	***-2.9%***	***163.7%***	***96.9%***	***-25.3%***
Change High/Low			***116.1%***			***53.6%***					***95.2%***			***59.2%***

[36] Source: Statistics Canada. Table 36-10-0587-01. Distributions of household economic accounts, income, consumption and saving, by characteristic, annual (x 1,000,000)
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Table 9: Consolidated Canadian General Government Spending (millions)
Canada as a whole 2008-2023[37] (some years)

Canadian Classification of Functions of Government (CCOFOG)	General Public Services [701] + Defence [702] + Public order and safety [703] + Economic affairs [704] + Environmental protection [705] + Housing and community amenities [706]	Health [707]	Recreation, culture and religion [708]	Education [709]	Social protection [710]	SUM 701-710	SUM 707-710	STiK from GG in 707-710	STiK from NPISH	STiK total	GG common spending in 707-710	TOTAL GG common spending
2008	204 431	125 458	14 547	72 348	123 892	540 676	336 245	209 016	23 467	232 483	127 229	331 660
2009	210 951	133 246	14 527	76 766	134 802	570 292	359 341	220 282	22 659	242 941	139 059	350 010
2010	221 853	138 998	14 796	80 145	137 155	592 947	371 094	229 298	22 435	251 733	141 796	363 649
2011	227 879	145 819	15 707	83 711	140 713	613 829	385 950	240 513	23 901	264 415	145 437	373 316
2020	386 409	212 767	19 763	111 552	318 780	1 049 271	662 862	327 196	34 665	361 861	335 667	722 076
2021	349 386	230 612	20 761	117 324	253 034	971 117	621 731	357 463	36 063	393 526	264 268	613 654
2022	358 512	239 695	22 769	126 145	237 126	984 247	625 735	382 490	39 444	421 934	243 245	601 757
2023	389 648	253 196	23 395	131 176	286 427	1 083 842	694 194	404 265	42 491	446 755	289 929	679 577
2023/2008	***90.60%***	***101.82%***	***60.82%***	***81.31%***	***131.19%***	***100.46%***	***106.45%***	***93.41%***	***81.06%***	***92.17%***	***127.88%***	***104.90%***
Annual rate	**4.39%**	**4.79%**	**3.22%**	**4.05%**	**5.75%**	**4.75%**	**4.95%**	**4.50%**	**4.04%**	**4.45%**	**5.64%**	**4.90%**

[37] Source: Statistics Canada. Table 10-10-0005-01. Canadian Classification of Functions of Government (CCOFOG) by consolidated government component (x 1,000,000)
Release date: 2023-11-28
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1010000501

Adjusted disposable income, Consumption (HFCE, HAFC), and Savings.

In the comprehensive Table 10 below, we present macroeconomic accounts (MEA) data on employee compensation, mixed income, property income received and paid, dollar transfer payments to and from governments (hence including taxes paid), disposable income, social transfers in kind (STiK), household adjusted disposable income (HADI), consumption (both HFCE and HAFC), and net savings. These data are of significant importance for understanding the economic landscape of households, particularly lower-income households.

The table presents the most complete and inclusive data available as of July 2025, in particular regarding the STiK accounts, for which Statistics Canada is one of the first statistical agencies, if not the very first, to distribute those on a household income quintile basis. Such a distribution is essential for characterizing the evolution of consumption inequalities.

The estimate of employment income includes wages and salaries as well as the broader concept of employers' social contributions, including social contributions such as those to the CPP or QPP, workers' compensation plans, pension plans, and other benefit plans. It is closer to global compensation. Scholarships, bursaries, and research grants are included as current transfer payments in dollars to households paid by governments.[38]

In addition to including actual rental income from property owners as part of mixed income from self-employment, the MEA also include an imputed rent calculation equivalent to the rental income homeowners would receive if they rented their dwelling.

The MEA includes investment income from life insurance and pension plans, savings deposits, and other types of insurance. Actual rental income is included under mixed income. Although property income received includes investment income earned in pension plans, this amount is subsequently transferred out in current transfer payments paid. Also,[39] property income paid includes interest payments on consumer credit, as well as interest on mortgages and non-mortgage loans.

Government transfer payments include all transfer payments from federal and provincial government programs intended to provide income support to particular groups, such as seniors, families, and those injured in the workplace. The MEA also include scholarships, bursaries, research grants, and corporate transfer payments for pension plan benefits.

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[38] https://www150.statcan.gc.ca/n1/pub/13-607-x/2016001/944-eng.htm

[39] The following paragraphs on term definitions of terms are taken from he following paragraphs on term definitions of terms are taken from https://www150.statcan.gc.ca/n1/pub/13- 607-x/2016001/944-eng.htm

The MEA include transfers from non-profit institutions serving households (NPISH) and transfers received from non-residents, mainly through pensions paid by foreign governments and from non-resident households for purposes such as providing financial assistance.

Current transfer payments paid by households represent income tax paid. For practical and quality reasons, the macroeconomic reference period for income taxes is on a cash basis rather than an accrual basis, reflecting the period of economic activity: all amounts paid during the year as income tax are counted, whether for past, current, or future liabilities.

In addition to government income taxes paid, the MEA concept includes both employees' and employers' contributions to those social insurance plans. Employer pension plan income benefits are included in the current transfer payments received from corporations. In contrast, the current transfer payments paid to corporations include all income not received by households (contributions and investment income).

Transfers to NPISH mainly consist of charitable donations, while transfer payments to non-residents are primarily income taxes levied by the foreign government on earnings from investments in foreign securities. Transfer payments to non-resident households for purposes such as providing financial assistance are also included.

Household disposable income is the sum of all revenue sources minus "current transfer payments paid" and "property income paid".

Statistics Canada characterizes the adjustment for changes in pension entitlements as follows. "*The use of disposable income account also contains an adjustment for changes in pension entitlements. The secondary distribution of income account determines gross disposable income. In doing so, it excludes the contributions of employers and employees to pension funds since these contributions, once made, reduce the amount of income that is 'disposable'. However, these contributions are considered additions to the household sector's financial assets and liabilities of the financial corporations and government sectors. They are, therefore, a form of gross saving, adding to households' equity in the pension funds. In addition, there can be other adjustments to households' net equity in these pension funds, such as when pension managers deduct fees from the account balance. Gross savings would be misstated if gross saving were determined simply by deducting final consumption expenditure from gross disposable income, which excludes these contributions and other changes in entitlements.*" (Statistics Canada, 2016, p. 42).

Accordingly, the additional 'resource' (for the household sector) and 'use' (for the financial corporations and government sectors), known as the 'adjustment for changes in pension entitlements,' are added to the disposable income accounts. This brings gross saving back to its proper level. The adjustment is equal to the total value of the actual and imputed social

contributions payable into pension schemes, plus the total value of contribution supplements payable out of the property income attributed to pension fund beneficiaries, minus the value of the associated service charges, minus the total value of the pensions paid out as social insurance benefits by pension schemes.

The household sector's disposable income account includes gross disposable income and the adjustment for changes in pension entitlements as its 'resources' and final consumption expenditure and the balancing item, gross saving, as its 'uses'. The use of disposable income in the government and NPISH sectors also includes gross disposable income as their sole 'resource'. It potentially consists of both individual consumption expenditure and collective consumption expenditure, as well as adjustments for changes in pension entitlements and gross saving as their 'uses'. There are no entries in the disposable income account for non-financial corporations other than gross disposable income and gross saving, which are equal since the sector does not make final consumption expenditures. Finally, the account for the financial corporations' sector, and possibly also for the non-resident sector, includes, as 'uses', in addition to gross saving, the adjustment for changes in pension entitlements, which is the counterpart entry for the adjustment in the households' account.

In Canada, STiK accounted for about 89 percent of the household disposable income (and more than twice the employment income) of the lowest quintile of income and 13 percent of the household disposable income (13 percent of employment income) of the highest quintile. Total STiK grew by 353 percent between 1999 and 2024 (see Table 6). Together with net transfer payments (transfer payments received minus taxes paid), their impact on consumption inequalities is significant.

Table 10 summarizes the main results for Canada. Between 1999-2000 and 2023-2024, the employment income of the poorest quintile increased in real terms ($2012) by 1.5 percent, while it increased by 22.6 percent for the highest quintile. The difference between the highest quintile employment income and the lowest quintile increased by 24.2 percent, indicating an *increase* in employment income inequality.

Net transfer payments (in dollars), which subtract income taxes paid from transfer payments received, are positive for the poorest quintile and negative for the highest. For the poorest quintile, those transfers increased in real terms by 72.1 percent. For the wealthiest quintile, net transfer payments fell further into negative territory by 8.6 percent (in table 10, an italicized positive percentage means that a negative value has become even more negative). The difference in net transfer payments between the two quintiles (highest minus lowest) increased by 15.6 percent from $64,175 in 1999-2000 to $74,184 in 2023-24. This translates into a *reduction* in overall income inequality.

Table 10: Disposable income, Consumption and Savings *per Household* *** Lowest and Highest Quintiles, Canada 1999-2024 (some years), $2012

	1999	2000	2001	2002	2020	2022	2023	2024	Variation
CPI (2012=100)	*76.3*	*78.4*	*80.4*	*82.2*	*116.4*	*124.2*	*129.1*	*132.2*	
PART 1: INCOME									
Employment income (EI)									
lowest (L)	8 894	9 195	9 157	8 540	9 562	9 066	9 230	9 126	1.5%
highest (H)	123 535	133 476	130 673	134 037	155 416	156 463	157 632	157 562	22.6%
diff H-L	114 642	124 281	121 516	125 497	145 853	147 397	148 402	148 436	
avg 2	119 461						148 419		24.2%
Net Mixed Income (NMI)									
lowest (L)	3 051	3 268	2 972	3 220	3 988	4 249	4 164	4 137	31.4%
highest (H)	24 436	24 007	25 060	24 285	22 820	22 631	23 520	25 176	0.5%
diff H-L	21 385	20 739	22 089	21 065	18 832	18 382	19 356	21 038	
avg 2	21 062						20 197		-4.1%
Sum of employment and mixed incomes									
lowest (L)	11 945	12 463	12 129	11 760	13 550	13 315	13 394	13 263	9.2%
highest (H)	147 971	157 483	155 734	158 322	178 235	179 095	181 152	182 738	19.1%
diff H-L	136 026	145 019	143 605	146 562	164 685	165 779	167 758	169 475	
avg 2	140 523						168 616		20.0%
Net property income (PI)									
lowest (L)	-406	-204	-694	-396	-193	-897	-2 199	-2 605	687.3%
highest (H)	28 604	28 823	28 076	25 405	31 657	26 634	36 422	40 246	33.5%
diff H-L	29 010	29 027	28 770	25 800	31 850	27 532	38 622	42 851	
avg 2	29 019						40 737		40.4%
Net transfers (NT: transfers received minus taxes paid)									
lowest (L)	7 530	6 531	8 457	8 242	13 881	12 590	11 544	12 655	72.1%
highest (H)	-55 396	-58 892	-56 476	-54 907	-60 359	-61 212	-61 955	-62 214	*8.6%*
diff H-L	(62 926)	(65 423)	(64 933)	(63 149)	(74 240)	(73 802)	(73 500)	(74 869)	
avg 2	(64 175)						(74 184)		15.6%
Household disposable income (HDI: EI+NMI+PI+NT)									
lowest (L)	19 067	18 792	19 891	19 606	27 239	25 007	22 739	23 313	21.6%
highest (H)	121 179	127 415	127 333	128 819	149 533	150 296	155 620	160 770	27.3%
diff H-L	102 111	108 623	107 442	109 214	122 294	125 289	132 881	137 457	
avg 2	105 367						135 169		28.3%
Social Transfers in Kind (STiK)									
lowest (L)	14 115	14 316	14 766	15 260	20 643	20 578	20 254	20 822	44.5%
highest (H)	14 104	14 543	14 859	14 952	19 309	18 822	19 328	20 195	38.0%
diff H-L	(12)	227	93	(308)	(1 334)	(1 756)	(927)	(627)	
avg 2	108						(777)		-821.6%

Household adjusted disposable income (HADI: HDI+ STiK)									
lowest (L)	33 183	33 108	34 657	34 866	47 881	45 585	42 993	44 135	31.4%
highest (H)	135 282	141 958	142 192	143 772	168 842	169 117	174 948	180 964	28.4%
diff H-L	102 100	108 850	107 535	108 906	120 961	123 532	131 955	136 829	
avg 2	105 475						134 392		27.4%
PART 2: CONSUMPTION									
Household final consumption expenditure (HFCE)									
lowest (L)	31 574	32 925	31 239	33 115	48 011	48 798	48 321	48 742	50.5%
highest (H)	98 517	101 614	100 858	103 443	104 167	107 887	107 101	107 870	7.4%
diff H-L	66 943	68 689	69 619	70 328	56 156	59 089	58 780	59 128	
avg 2	67 816						58 954		-13.1%
Household actual final consumption (HAFC: HFCE+ STiK)									
lowest (L)	45 689	47 241	46 005	48 375	68 654	69 376	68 576	69 563	48.6%
highest (H)	112 620	116 157	115 717	118 395	123 476	126 709	126 429	128 065	11.2%
diff H-L	66 931	68 916	69 712	70 020	54 822	57 333	57 854	58 501	
avg 2	67 924						58 178		-14.3%
PART 3: SAVINGS									
Change in pension entitlements (CPE)									
lowest (L)	216	366	11	-224	-199	-296	-480	-437	-257.4%
highest (H)	7 686	8 949	7 158	7 790	5 681	5 804	5 920	5 672	-30.3%
diff H-L	7 470	8 583	7 146	8 014	5 880	6 100	6 400	6 109	
avg 2	8 026						6 254		-22.1%
Household net saving (HDI-HFCE+CPE = HADI-HAFC+CPE)									
lowest (L)	-12 289	-13 767	-11 338	-13 733	-20 971	-24 087	-26 061	-25 866	*99.3%*
highest (H)	30 348	34 750	33 633	33 167	51 048	48 213	54 439	58 572	73.6%
diff H-L	42 637	48 517	44 971	46 900	72 019	72 300	80 500	84 437	
avg 2	45 577						82 469		80.9%

* An italicised positive percentage means that a negative value has become more negative.

** "Income quintiles are assigned based on equivalized household disposable income, which takes into account differences in household size and composition using a method proposed by the Organization for Economic Co-operation and Development (OECD). The "OECD-modified" equivalence scale assigns a value of 1 to the first adult, 0.5 to each additional person aged 14 and over, and 0.3 for all children under 14." (Statistics Canada)

Sources: Statistics Canada. Table 36-10-0587-01 as of July 16, 2025; Statistics Canada. Table 18-10-0005-01; computations by authors.

Conclusion

Since 1999-2000, and probably for a much more extended period, consumption inequality has decreased, unlike income and wealth inequalities. In Canada, the household actual final consumption (HAFC - the sum of the household final consumption expenditure HFCE and the social transfers in kind STiK) increased by 48.6 percent for those in the lowest quintile and by 11.2 percent for those in the highest. This translates into a 14.3 percent reduction in consumption inequality, measured over 25 years by the difference in household consumption (HAFC) between the highest and lowest quintiles. The social transfers in kind (STiK) increased consumption, for the lowest quintile, by 42.7% in 2024, from 48,742 C(2012)$ to 69,563 C(2012)$. For the highest quintile, the STiK-generated increase in consumption was lower at 18.7%, from 107,870 C$ to 128,065 C$.

Regarding household net saving, one observes that between 1999-2000 and 2023-24, the value of consumption minus the value of incomes/resources (net saving) has increased in real terms by 99.3% for the lowest quintile, while the value of incomes/resources minus the value of consumption (net saving) has increased by 73.6% for the highest quintile: in a sense, the 48.6% surge in consumption of the lowest quintile of households has been made possible by a reduction in their assets. Such a reduction is not observed for the highest income quintile.

Clearly, the lowest income quintile includes, in addition to resource-limited households, a proportion of retired individuals/families who receive low income yet may hold substantial wealth. One explanation for the relatively significant negative household net savings in this quintile is that older individuals often draw on retirement assets rather than income to finance consumption. Further research is underway on the composition of the quintile and the treatment of retirement income and assets.

This is why the overwhelming emphasis on income and wealth inequalities gives us an incomplete, even distorted, view of household realities, particularly those of less well-off households. This leads to needless clamouring about a (perceived) large and growing social divide and unnecessarily exacerbates social conflicts. Fuel is thrown onto the fire of division and conflict when such studies are pursued that, despite their interest, miss the most relevant social target: consumption inequalities.

The current debate on income and wealth inequalities in society, their determinants, and their evolution over time also raises two closely related and essential questions. First, the question of the CEO pay ratio, that is, whether high CEO compensation relative to the median employee compensation is justified. This issue is explored in the paper “Compensation of CEOs – New Perspectives and New Metrics” (Boyer & Panot, 2025a), in which we highlight how different metrics can influence employees’ perceptions of the fairness of CEO pay and why understanding a CEO’s potential and actual contribution to the company is essential.

Second, the question of the social role of inequalities in income and wealth. This question is discussed in the paper "The Social Role of Inequalities: Why Significant Inequality Levels in Income and Wealth Are Important for Our Prosperity and Collective Well Being" (Boyer & Panot, 2025b), where we claim that inequalities in income and wealth develop from two related social needs, namely the need to ensure a proper level of saving and investment and the need to induce the proper but individually costly acquisition of new competencies, both to favor increased levels of productivity and prosperity.

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