

Inclusive growth

Altruistic and non-altruistic aspects, and the role of public policy

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Summary:

The illusion that benefiting the rich will necessarily carry a proportionate advantage to the lower strata of the society has gradually been unraveled. The trickle-down theory has held the global economy in awe for several decades, especially the United States'. We have observed in the last few years that it has only disproportionately enriched the upper stratum of the society, almost to the exclusion of the lower-income society, exacerbating inequality. Indeed, there is rationale - both moral and economic - to include all sections of the society in growth. With a higher incremental dollar volume of the poor going to consumption, thereby boosting output growth, it is not just the right thing to do, but also doing things right. For all those reasons, and more, it is time for us to focus on a granular and objective approach to determine the extent of a redistributive bias in our public policy.

Abstract:

There has been considerable said about the lack of conscience in the world of finance. ‘The rapid growth of the few at the expense of the many’ sounds like a hackneyed phrase stemming from the perceived excesses on Wall Street. Leaving Main Street behind. The danger in sweeping generalizations is that they lack a sense of objectivity and pose a lost perspective. These views gather moss either via conspiracy theories - so rampant, thanks to social media - or by way of unfounded polemics.

To gain credibility, a deep-rooted and granular drill-down is necessary. One that looks at both sides of the argument and disproves a hypothesis, even if it does not fit the narrative or proves it to make a point and let the case rest.

There are indications that point towards greater inequality, with lower upward mobility chances in a legacy-oriented world. There are also, concerning, data points on climate change that seem to go unheeded by the powers that be, and the perpetrators, for the sole benefit of the present at the expense of the future. The increasing globalization initiative as a policy of the last few decades, while a good trend for the world, might not have delved deeper into negatively reinforcing Slave Labor, unfair subsidies, anti-dumping, and displaced employment of the hardworking workers at home, giving rise to socio-economic disparity. On the corporate side, lending to, and fostering unwarranted growth in, areas of the energy domain that exacerbate climate challenge is not only unhelpful but defies the very principle of the institution that engages in it. The role of fiscal policy

cannot be overstated in the equalizing process and the progressivity of the tax structure needs a relook, especially in the rich world.

The preceding encapsulates some of the current tests the world is confronted with viz a viz the sustainability goals identified on a universal basis. We find that effective public policy can positively impact the incidence of inequality and that there is a dire need to increase social connectedness among children and introduce a synopsis of the practical aspect of financial literacy for effective financial planning, an imperative for family sustenance. In addition, it also surfaces that economic growth need not be exclusive.

The purpose of the paper is to determine the extent of the issue before suggesting a representative and proportionate cocktail of the appropriate solutions, be they by way of public policy, financial literacy, microfinance facility, or any other suitable tool.

Keywords:

Financial literacy, globalization, inequality, minimum wage, economic mobility, sustainability, fiscal policy

Introduction:

The trickle-down theory has been used to purportedly benefit the economy under the ‘high tides lifting all boats’ adage. The idea is to use public policy with a view to providing an advantage to the rich with the expectation - mostly unsubstantiated - that the wealth will spread down the stream to the underprivileged. Granted, during the Industrial Revolution, and till around the middle of the 20th century, a such hypothesis could hold water. In the post-industrialization period, especially

with services dominating a greater part of the developed economies, the argument has shifted to regressive policies achieving similar outcomes. It has been tried and tested since then and has only exacerbated the plight of the lower stratum of society. Of course, that carries its own risks of social unrest and is fodder for the generation of populism as a political philosophy. And we have seen the seeds being planted all over the developed world.

Brexit, the emergence of the ultra-right (and in some cases, left) movements, and the Scottish aspiration to secede from the union, followed, perhaps, by the Sinn Fein loyalists from Northern Ireland are some of the issues right in the heart of Europe. In addition, France is undergoing a political transformation of its own, with the ultra-right La Penne gaining in popularity. Italy's unrest is clear as day, with the latest being the fifth government in as many years, if not fewer. In the United States, the political environment is being challenged like it has not been in several decades. The division in the fundamental cultural and social beliefs poses a dangerous picture, with some going to the extent of predicting that the country is teetering on a civil war.

The question one needs to ask and then attempt to answer is: what has precipitated it? Has the world leadership failed at navigating the changes brought about by all the advancements in the global economy? Has it been able to keep perspective in the growth mode of its economies? Have the leaders of the developed world been fair to the less developed countries, and more so, to its own constituents, or have they overlooked the long-term benefit of inclusive growth in a race to grow, and grow, at any cost, be it climate change, displaced workers, and inequity, etc?

We start with methodology and then move on to results/discussion, which entails findings as well as some of the prevalent emergent trends, before offering our conclusions and venturing out to

some soft, macro recommendations. Of course, we will also outline some of the limitations of our research and any possible potential topics to study in the future that might not have been addressed here.

Methodology:

This is a desk-research study, based on secondary data. The first step was to read up in detail on the subject, from early sources with their beginnings in the early 60s through 2022 to ensure a complete context and avoid recency bias. We based our search on Google using keywords and terms generically related to equitable growth and sustainable economics. We, unsurprisingly, received most sources from articles published by the Equitable Growth Organization and found useful several articles from other reputable organizations and publications, as listed.

After pruning the initial pool of sources for relevance, we were left with a total of 37 sources.

Total sources by type

<i>Source Type</i>	<i>Count of Sources</i>
<i>Academic Institution</i>	<i>5</i>
<i>Book</i>	<i>1</i>
<i>Government Agency</i>	<i>1</i>
<i>Journal/Newspaper/Publication</i>	<i>9</i>
<i>Organization</i>	<i>17</i>
<i>Private Bank</i>	<i>1</i>
<i>Total</i>	<i>40</i>

Table 1: Total sources used by type

Total organization sources

<i>Publication</i>	<i>Count of Sources</i>
<i>Brookings Institute</i>	<i>1</i>
<i>Capital Monitor</i>	<i>1</i>
<i>Economic Policy Institute</i>	<i>2</i>
<i>Equitable Growth Organization</i>	<i>5</i>
<i>Foundation for Economic Education</i>	<i>1</i>
<i>Global Financial Literacy Center</i>	<i>1</i>
<i>IZA World Labor</i>	<i>1</i>
<i>Nature.com</i>	<i>1</i>
<i>ODI</i>	<i>1</i>
<i>OECD</i>	<i>3</i>
<i>OXFAM</i>	<i>1</i>
<i>The Hamilton Project</i>	<i>1</i>
<i>Washington Center for Equitable Growth</i>	<i>1</i>
<i>World Bank</i>	<i>1</i>
<i>World Economic Forum</i>	<i>1</i>

Table 2: Sources from organizations

We then concentrated on financial literacy and education and how its relationship to financial equity and equality, and its impact on personal wealth.

We wanted not only to focus on sustainability from a human perspective but also from a global standpoint, so we found sources of information that were focused on climate change and how investments in sectors like oil contribute to climate impact and inequality. We believe these subjects are not independent and are all part of the same theme.

Results & Discussion:

In the United States, we have seen a concentration of wealth among the upper stratum of society increasing since the middle of the 20th century. This has further aggravated the *income inequality* factor. The figure below (**Figure 1**) shows that the top 10% of society in around 2015 earned 52% of the national income as opposed to 33% in the 1950s.

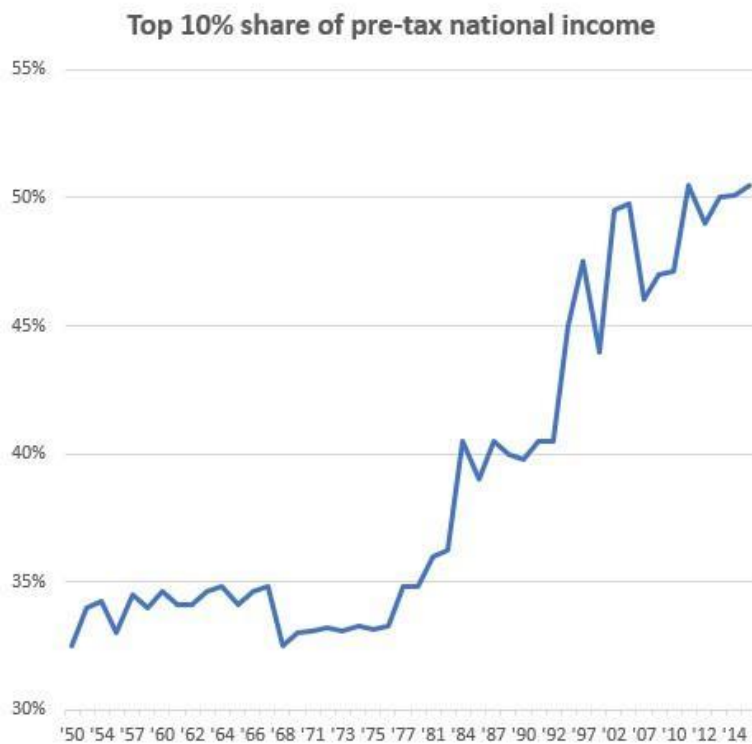


Figure 1: Top 10% of individuals' wealth as a share of pre-tax national income (J.P. Morgan Asset Management, 2021)

Similarly, a look at the *wealth gap* is equally chilling. **Figure 2** shows numbers from 1989 to around the end of 2020, with a galloping yawn of 250%, translating to a 4:1 ratio, in the cumulative growth of wealth between the top 1% and the bottom 50% as time progressed. It is also interesting to note here that it was the bottom 50% of the stratum that bore the greatest brunt of the Great Financial Crisis.

Cumulative Wealth Growth



Figure 2: Cumulative Wealth Growth over time by wealth percentile (The Fed - Distribution: Distribution of Household Wealth in the U.S. since 1989, 2021)

The fact that we have the lower stratum getting poorer carries not only a moral hazard but also has an adverse impact on the economy. As we show below, in **Figure 3**, the ‘marginal propensity to consume’ of the bottom 90% of the earners is over 50% higher than those in the top 10%. With our economy in the US and mostly those in the developed world hovering around the 65-70% domain on consumption/consumer spending, we can see the drag it can create if the incomes were not equitably distributed.

Spending as a share of income after tax

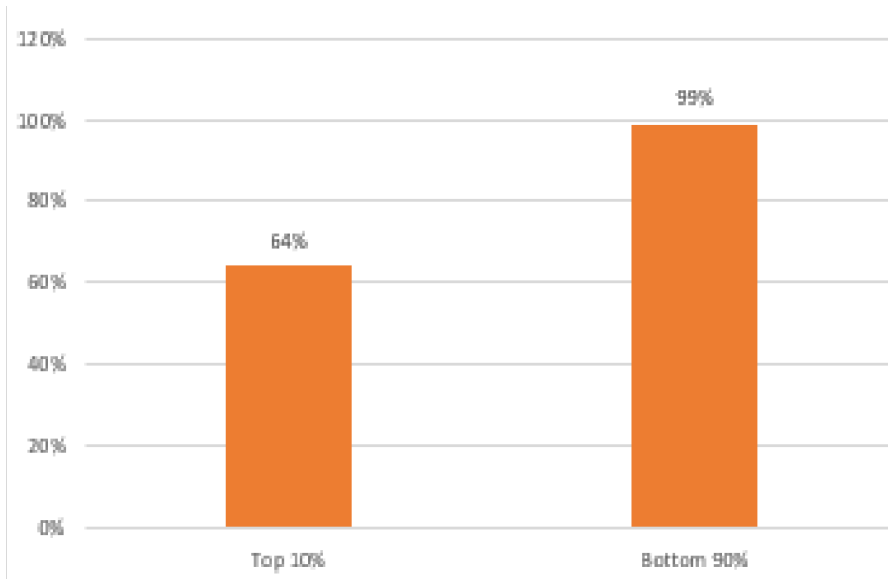


Figure 3: Spending as a share of income after tax by wealth percentile (J.P. Morgan Asset Management, 2021)

As earlier observed, the inequality alluded to above is not unique to the US. Let's look at the Gini coefficient across the OECD, up to 2008 as compared to the mid-1980s, as in **Figure 4** below:

Gini Coefficient of Income Inequality; OECD

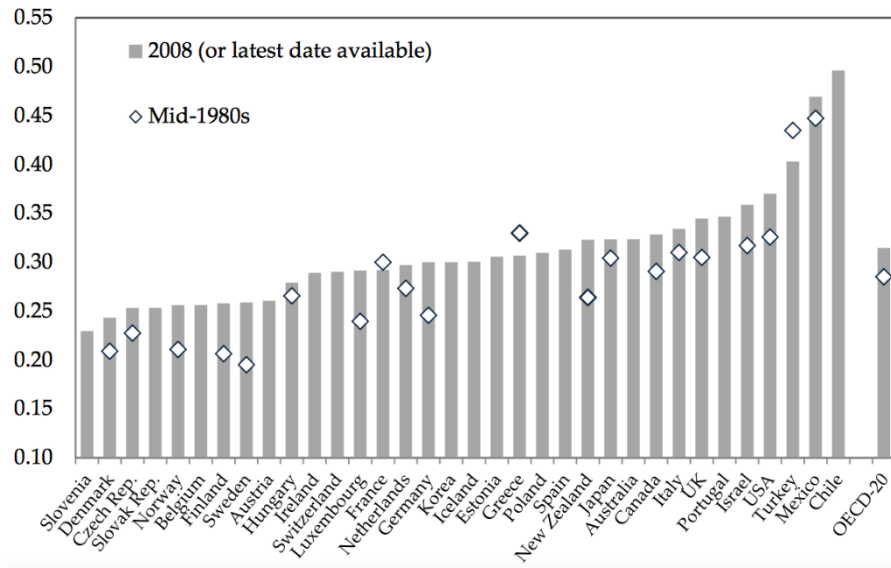


Figure 4: OECD, 'Divided We Stand: why inequality keeps rising', 2011

Post-2008, the picture becomes even gloomier as we can see in **Figure 5**, where the subject coefficient has moved even higher; this might have to do with the loose monetary policy which,

again, was oriented to the ‘trickle-down’ hypothesis which only contributed to high asset inflation and no real money circulating in the economy for the common good. No wonder then that the economy stayed stagnant for long.

The figure carries numbers as of 2021 and has shown an increase in the US Gini coefficient from 0.37 to 0.43, the UK from 0.33 to 0.39, Germany from 0.29 to 0.35, and the rest of the countries look much in the same vein.

Gini Coefficient of gross income inequality, latest year available

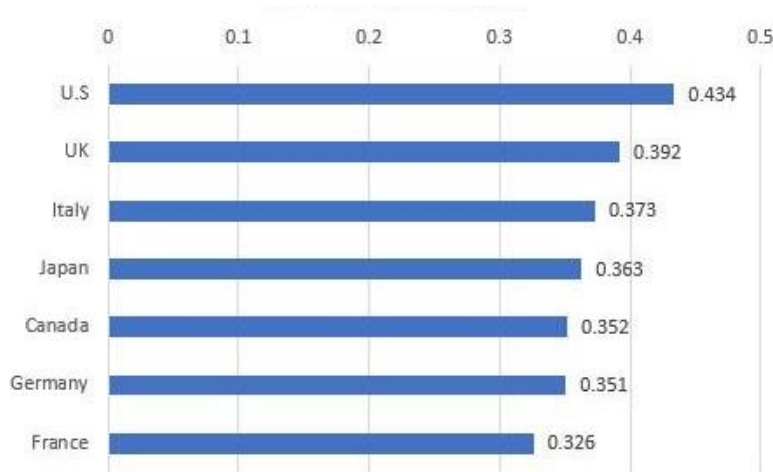


Figure 5: Gini coefficient by country (Trends in U.S. income and wealth inequality, 2021)

Specific to the US, the following graphic below (**Figure 6**) shows the median wage increase compared to productivity up to 2013.

Wages and productivity, United States (1957-2013)

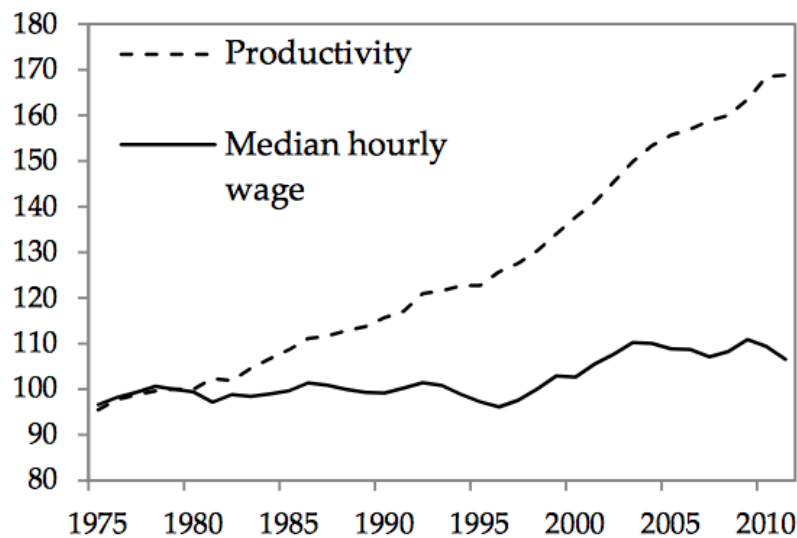


Figure 6: The State of Working America, 12th ed. by the Economic Policy Institute (left panel); T.Piketty and E.Saez (right panel)

We have, however, seen a healthier wage increase in the last year, albeit a lower real increase given the high rate of inflation. We do expect inflation to come down but at the expense of loss of jobs, or at the very least, a decline in hiring, which would carry with it the cost of lower wage increases as a corollary. The latest graph below (**Figure 7**) shows the spike in wages since 2021 and **Figure 8** negates the minimal increase after accounting for inflation and reflects a negative real growth.

Twelve-month percent change, current dollar, private industry workers

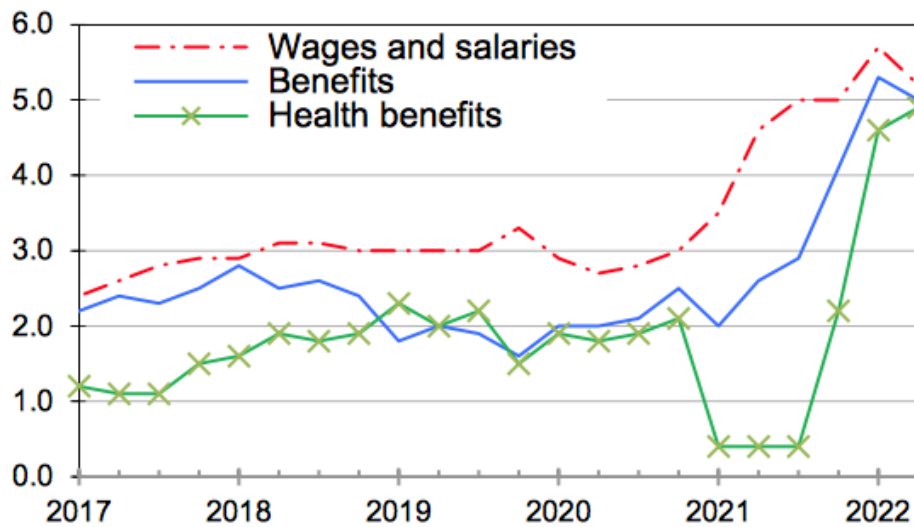


Figure 7: Bureau of Labor Statistics; Employee Cost Index, September 2022

Twelve-month percent change, constant dollar, private industry workers

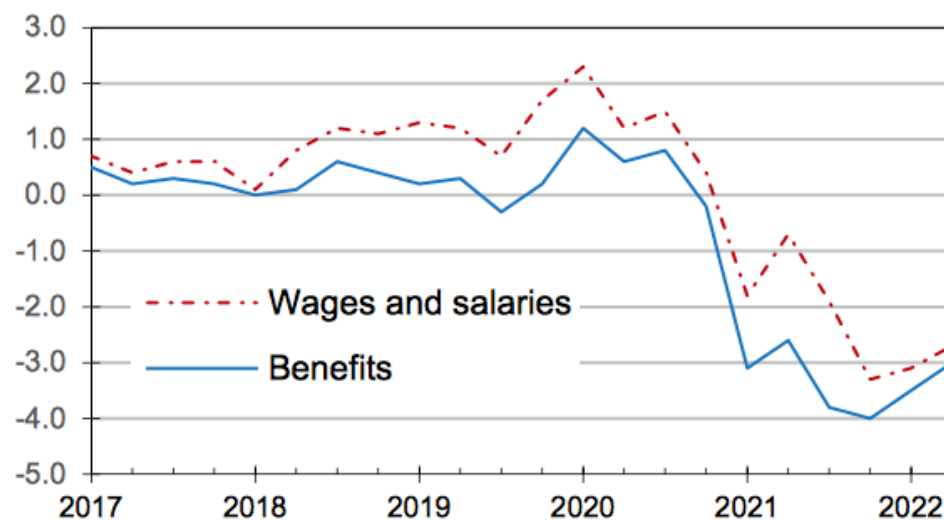


Figure 8: Bureau of Labor Statistics; Employee Cost Index, September 2022

To offer some comparison, and possible objectivity, let us also look at the poverty situation around the world and see how that juxtaposes with the overall topic of inequality. **Figure 9**

suggests that absolute poverty got wiped out around the 1980s, around the time that inequality became a topic.

Twelve-month percent change, constant dollar, private industry workers

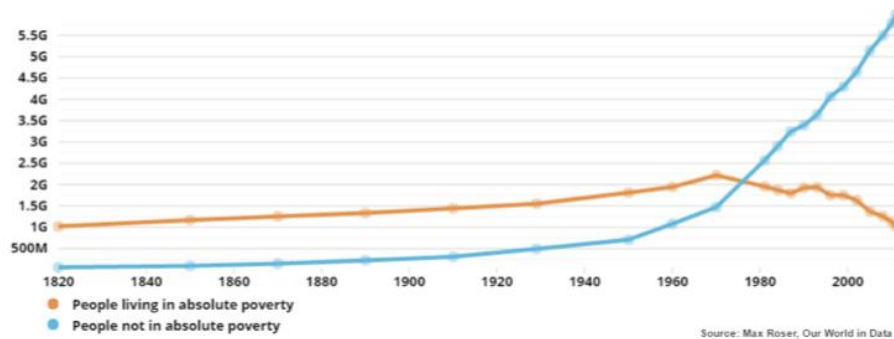


Figure 9 Fee.Org; Max Roser, Our World in Data

Is there a conflict of facts here? Can we have inequality and poverty converge?

Moving on to the accrual of benefits following crises, we observe a trend. **Figure 10** shows the strength or otherwise of the disposable income over/under the average growth in personal disposable income which shows the most benefit going to the top decile of income earners.

Average U.S income growth over the past two decades has been stronger for incomes in the top 10 percent



Figure 10: Equitable Growth; Austin Clemens, Feb 2022

Percent of growth during each economic expansion that accrued to the bottom 50% of earners, the upper 40%, and the top 10%

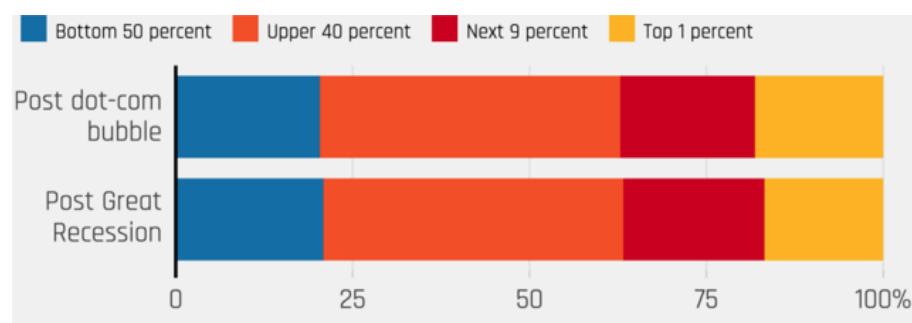


Figure 11: Equitable

Growth; Austin

Clemens, Feb 2022

Figure 11 shows a similar trend in terms of growth of income collated by income earners. As we can see, the post-Dot-Com and Great Recession periods saw the bottom 50% of earners benefit only up to 20% of the overall growth, whereas the top 10% took the lion's share. Let it also be noted here that the top 1% accounted for almost anywhere between 16-18% of the expansion.

Stock of Excess Savings by Income Quartile

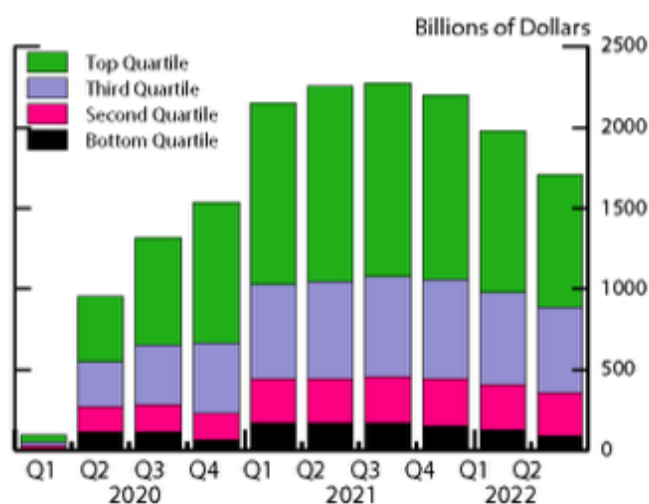


Figure 12: Federal Reserve.Gov;

Alidatya Aladangady, David Cho et al

While currently the 'distribution of personal income' data is not available for the post-pandemic period, we, however, do have a fair indication by way of observance of trends that are not too dissimilar. **Figure 12** reflects the amount of excessive savings by income quartile. Again, we see that the two top quartiles account for almost 80% of it. We also see the excessive amount of

tapering as consumer expenditure increases; however, there is still a healthy amount at play that boosts the consumer, the inflation notwithstanding.

Whereas the top quartiles own most of the excessive savings, let it not escape that the bottom half also accounts for around \$350 BN of it, albeit dwindling over time.

Moving on, it is not hard to see the lack of *economic mobility* given the inequality, where the total income increases with the share of the bottom earners contracting. The picture below, **Figure 13**, goes to show the point.

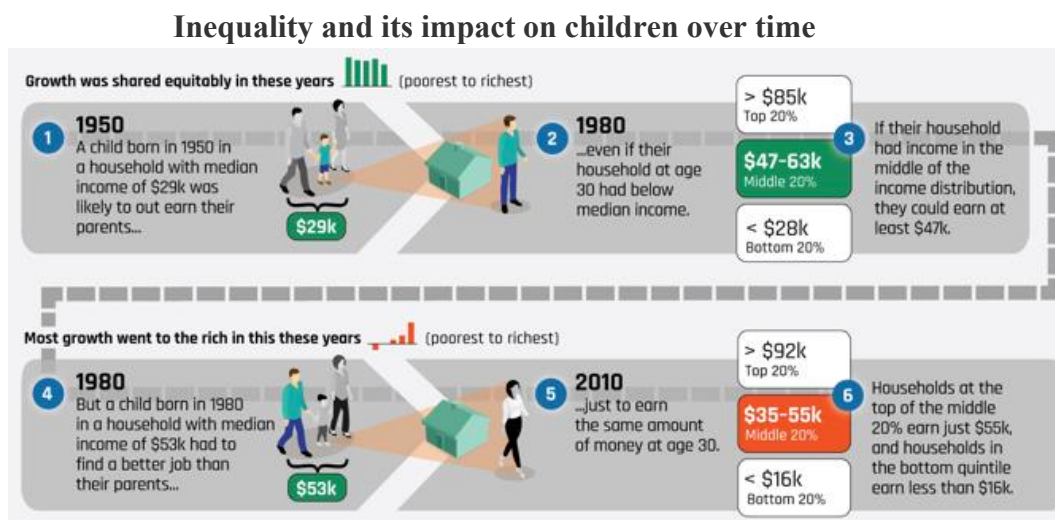


Figure 13: Piketty, Saez, Gucman's Distributional National Accounts dataset; Equitable growth

As can be observed, with total income higher, pushing the median up with it, it is getting harder for children to keep up with their household income when they were born.

It is interesting to note that intergenerational mobility is helped by not just diligence in school for better career opportunities but also by exposure to socioeconomic diversity and friending bias. In other words, the 'economic connectedness' or EC- which allows for children of low SES

(socioeconomic status) to assimilate with those of high SES - plays a critical role in bridging the gap. **Figure 14** shows us that EC - the strongest predictor of upward mobility - has college as its most conducive factor.

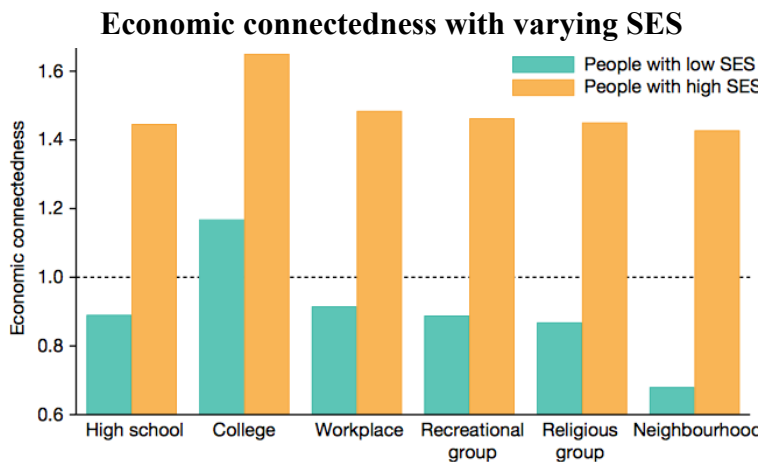


Figure 14: Social Capital II: determinants of economic connectedness; Chetty, Jackson, Kuchler, Stroebel; August 2022

Despite the high incidence of EC in college, there are reasons to believe that the upper-income group tends to stick together, further exacerbating the income divide and equality across the frontiers. The following graph, **Figure 15**, demonstrates the disturbing picture of the lack of inter-class friendship.

Who's Friends with Whom, by Income Group

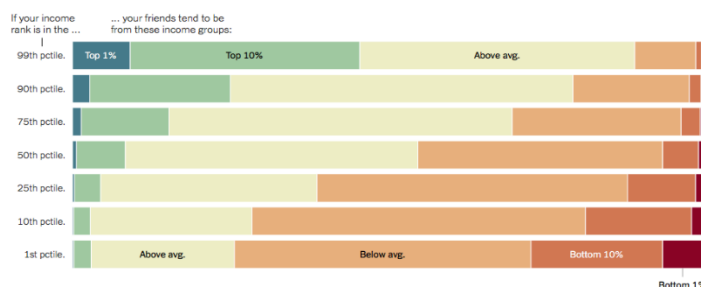


Figure 15: NYT, Vast new study show a key to reducing poverty, Miller, Katz, Paris, Bhattia; August 2022

On the aspect of *wages*, as indicated in the foregoing lines, we have seen a robust increase in the recent past; however, adjusted against inflation, the real benefit is negative. The US has seen a

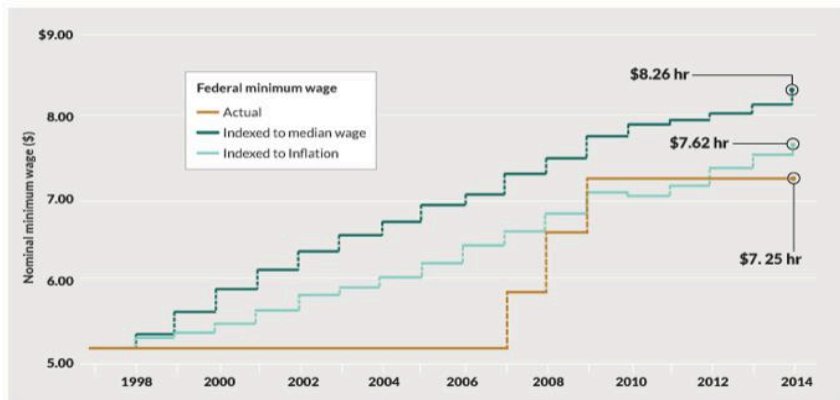
very slow increase in the minimum wage. Some states are still at the same level as they were decades ago. The economic rationale is purely theoretical and loses sight of the nuances that need to be considered. Higher minimum, in isolation, wage does tend to be anti-employment, as it purportedly suppresses employment. Several indications challenge the veracity of such a claim as a generalization.

Alan Krueger and David Card, in their famous 1993 research on fast-food restaurants in New Jersey and comparing them to Pennsylvania (as a control experiment), show that increasing the minimum wage from \$4.25 to \$4.99 had no difference in employments levels; it was only among the high-wage stores where employment decreased but that was consistent in a drop in employment in the control state of PA. The experts engaged in this study believe that the recession of the period during which the research was conducted was responsible for the unemployment rising among the high-wage stores both in NJ and PA. **Appendix Table 1** shows the details.

It is noteworthy that the minimum wage is best put in perspective along with the median wage and not just considered in isolation for comparison purposes. The latest numbers available for the OECD countries give us a global view of where each of the countries stands over time, both in relation to the mean and the median wage. **Appendix Table 2** shows where the US is versus the rest of the developed world.

The US has among the lowest ratio of minimum wage to median wage, representing income inequality and a possible avenue to a remedy. Furthermore, a study completed by Washington Center for Equitable Growth based on the BLS inflation rates and the median wages extracted from the Center for Economic and Policy Research (CEPR), an agency, we can see the trend of the minimum wage indexed to the median number as compared to the other variables. **Figure 16** compares the minimum wage (control) dynamic indexed to both inflation and the median wage for a fairer representation. This provides food for thought in terms of public policy.

Federal Minimum Wages, Indexed to Inflation and Media Wage



*Figure 16: BLS, CEPR;
Washington Center for
Equitable Growth; June 17,
2015*

If we look at the level of *financial literacy*, or lack thereof, we report some interesting findings. There are three basic questions related to financial services knowledge. When asked these questions, shown in **Figure 17**, only half of all Americans could answer two of the three questions. In addition, while the education level of the respondents did have a positive effect on the correctness of the answers, as in **Figure 18**, it was also observed that it was minimal, leading to the disturbing inference that education did not automatically translate to being financially savvy.

Research Questions on Financial Literacy

The “Big Three” Financial Literacy Questions

1) Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

More than \$102**

Exactly \$102

Less than \$102

Do not know/Refuse to answer

2) Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

More than today

Exactly the same

Less than today**

Do not know/Refuse to answer

3) Please tell me whether this statement is true or false. “Buying a single company’s stock usually provides a safer return than a stock mutual fund.”

True

False**

Do not know/Refuse to answer

Figure 17: Pension

Research Council, The

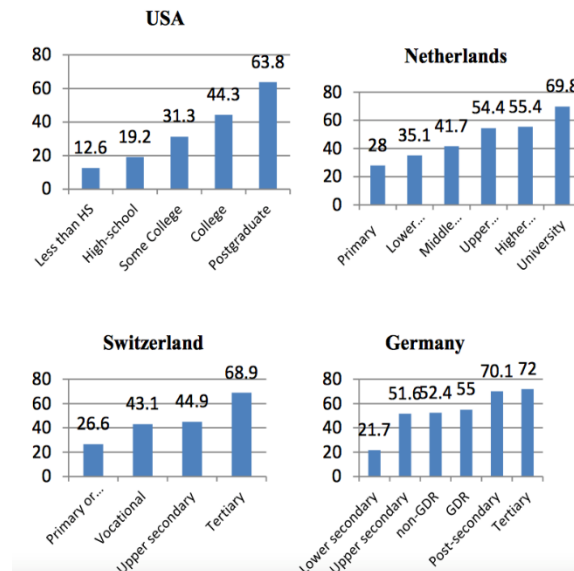
Wharton School,

University of

Pennsylvania, January

2015

Financial Literacy by Education, globally



*Figure 18: Pension Research Council, The
Wharton School, University of Pennsylvania,
January 2015*

As can be seen above, while the US scored the lowest, the other developed countries did not fare that much better.

The matter of financial literacy carries vast significance in the overall global macroeconomic environment and the fast-changing socioeconomic order. In the US, specifically, with most firms abandoning the pension benefits, as in Defined Benefit Plans, and moving on to Defined Contribution Plans, with the investment risk borne by the employees, it is even more important for both those approaching retirement as well as the younger lot to be financially aware of the nuances of the financial world. The findings also show that the disparity in socioeconomic status was responsible for the relative lack of financial literacy. To put it differently, inequality in financial literacy, already apparent in high school, tends to only exacerbate in later years.

It is a matter of concern that in a study completed on High School students across the globe, the results were dismal, with the US, the global economic powerhouse, coming in the middle of the pack, and lower than the OECD average, and trailed way behind some of the other major economies. For the US, it is particularly discouraging given the high level of school debt and retirement benefits that pale compared to the same measures of other countries. **Figure 19** bears testimony to the foregoing.

High School Student Performance on Financial Literacy Scale; Mean by Country

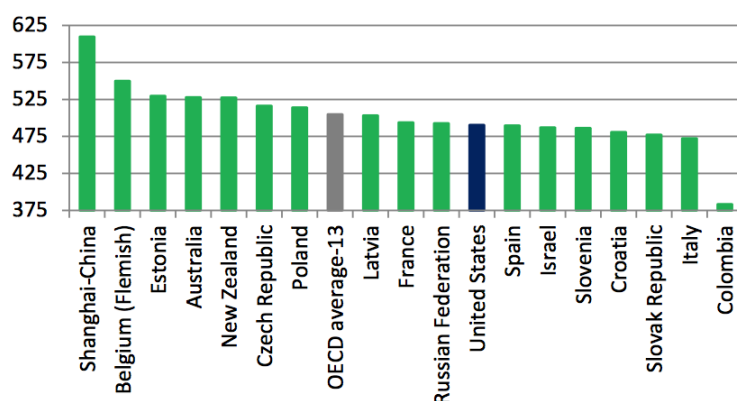


Figure 19: OECD; Pension

Research Council, The Wharton

School, University of Pennsylvania,

January 2015

On *climate*, and its impact on the less privileged globally, the facts are quite well known. We have had almost two hundred years of CO₂ emissions, with a high correlation to production and consumption. **Figure 20** shows the current emitters. However, that's not the entire story as a look back reveals that while the US and Europe are now responsible for about a quarter of the total CO₂, with China leading the pack, the cumulative amount of CO₂ emitted by the Americas and Europe since the Industrial Revolution is an embarrassingly high figure of almost 50%. Till the year 1950, right after World War II, Europe, and the US accounted for 85% of the total CO₂ emission. The picture has changed now with Asia, particularly China, emitting significantly more as a share of the world, as demonstrated in the paper. **Figure 21** reflects the cumulative CO₂ emissions in the last two hundred years, as alluded to in the aforementioned narrative.

The current culprits

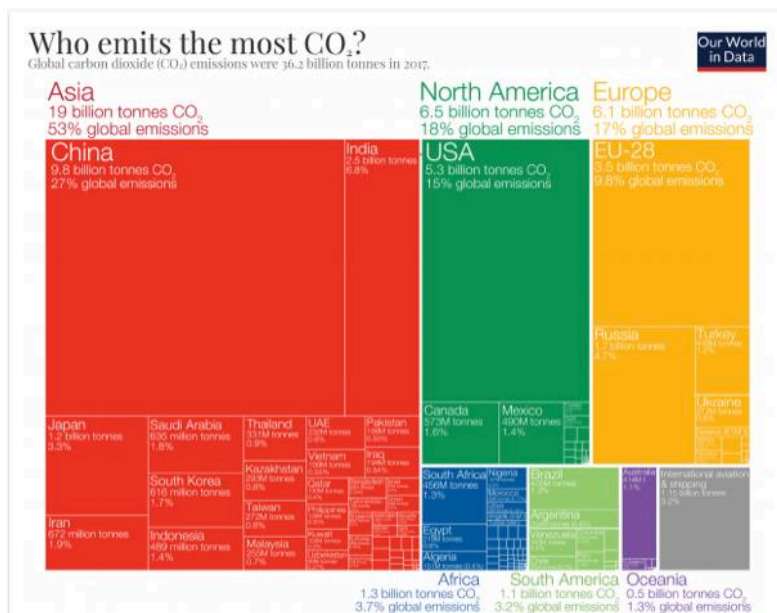
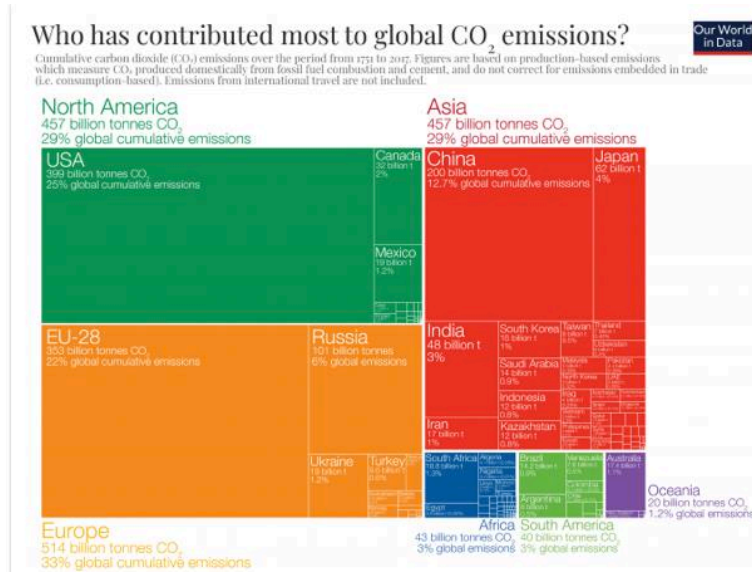


Figure 20: CO₂ emissions, Or World in Data; Global Carbon Project GCP (2022)

The cumulative culprits



*Figure 21: CO₂ emissions, Or
World in Data; Global Carbon
Project GCP (2022)*

What is also very interesting to note

here is that the cost of renewables has dropped quite significantly as can be seen in **Figure 22**. This is encouraging as there is hardly any incentive greater than a lower cost of capital. Furthermore, the share of renewables as a source of energy has climbed as well but not quite as robustly as would be expected to reach the global climate emission reduction target. While Europe has a share of 25%, leading the pack, the corresponding global number is a mere 13% (**Figure 23**).

The falling renewables cost; global weighted average levelized cost(USD/kWh)

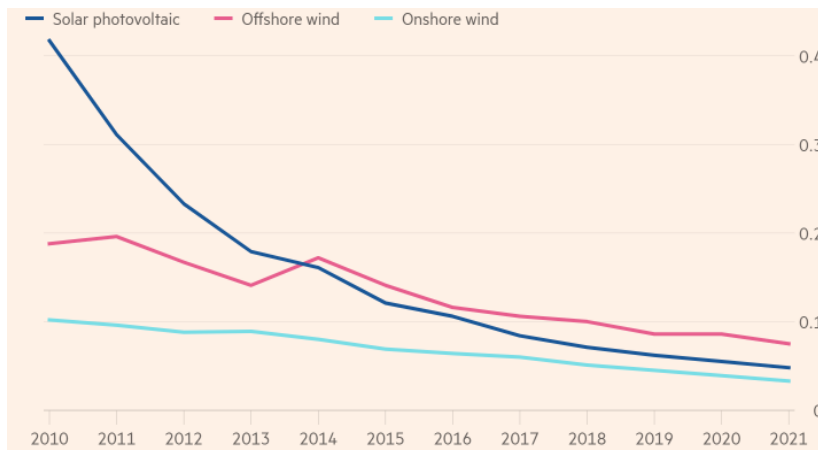


Figure 22: The market can deliver the green generation - not just fast enough, Martin Wolf, FT; IREA; November 2022

Clean energy generation; Region-wise

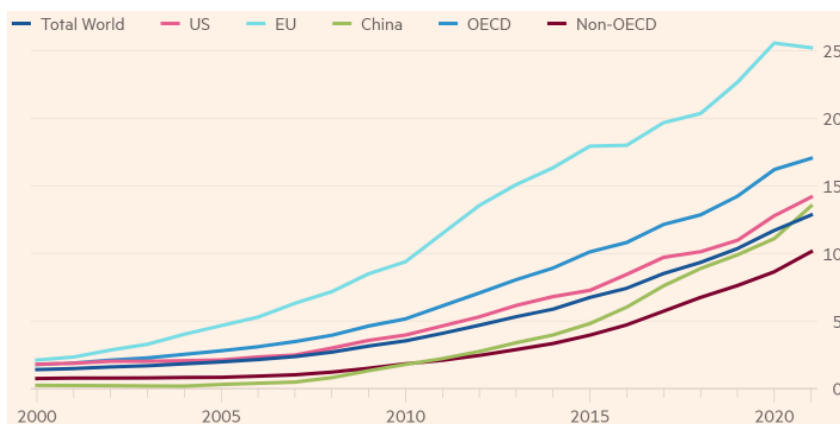


Figure 23: The market can deliver the green generation - not just fast enough, Martin Wolf, FT; BP Statistical Review of Energy; November 2022

Another stumbling block that the critics quote as being a fly in the climate initiative ointment is the unmitigated financing of the fossil-fuel industry, facilitated by the big banks. Despite the rhetoric, the banking institutions continue their support, lending \$742 BN in 2021, which is the same as the year before and higher than a few years prior. It is interesting to note here that the banks with higher policy scores on climate ended up lending lower amounts, as reflected in **Figure 24**.

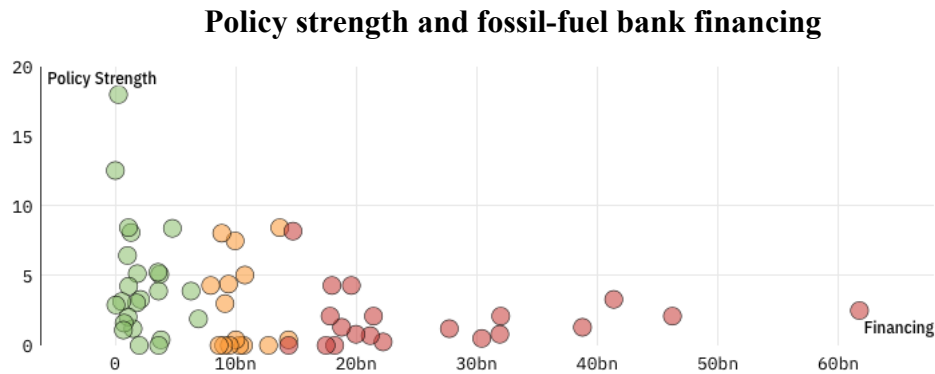


Figure 24: Capital Monitor; Rainforest Action Network and Reclaim Finance; April 2022

In addition, with all the fanfare that the Paris Accord brought globally, the follow-through to it has been dismal as far as bank financing to the fossil-fuel industry. The graph below, in **Figure 25**, shows us the total fossil-fuel financing from 2016 through 2021, indexed to 100.

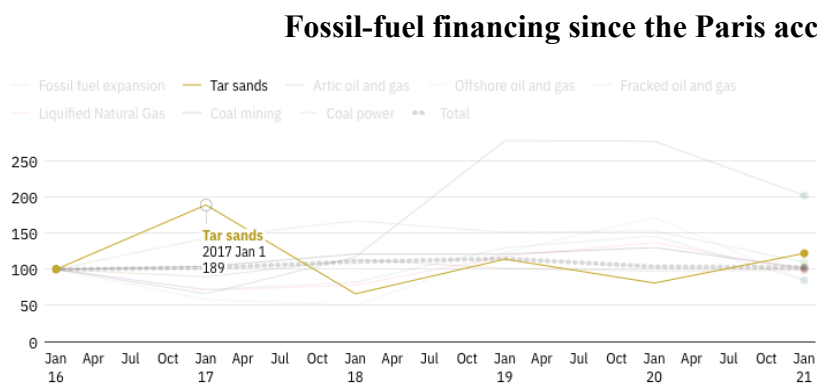


Figure 25: Capital Monitor; Rainforest Action Network and Reclaim Finance; April 2022

As can be seen, the total financing to the fossil-fuel industry has not only not decreased, but it has edged up by a little over 2.5%.

There are various and divergent views on *globalization and trade*, some of which have espoused political ideals; policies have been designed to reflect the sentiment of the constituents. It has given rise to protectionism as a form to preserve a political legacy.

For perspective, we looked at the value of exported goods as a share of global GDP. **Figure 26** below shows that since the 1970s, we have had a visible spike in the value being measured till around 2009/2010, at which point it plateaued out at around 25%.



As far as the economic benefit in the shape of global output increment is concerned, we need to see what **Figure 27**, shows. The advancement in globalization from the end of the 2nd World War to around 2018 was instrumental in adding about 5% incremental global income; given the value of global GDP was about \$85Trn, that is a whopping \$4.3 Trn.

Economic Gains from Trade, 1870-2007(GDP-weighted)

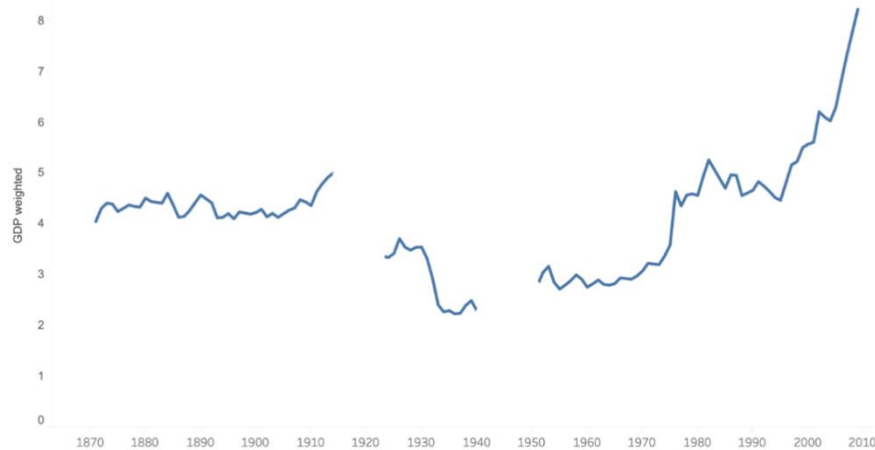


Figure 27: The Economic Consequences of Globalization in the United States; Petri, Manga, January 2020

There has been considerable debate on the disadvantages of trade and globalization related to the labor market. It is simplistic to assume that the outsourcing practice has caused an upheaval in the domestic labor market and attribute it to low-wage competition. And that this competition is responsible for the sluggish wage growth which has caused inequality in terms of income. The same critics also link unemployment to trade when little connection is seen.

US Trade Deficit and Unemployment Rate, 1990- 2019



Figure 28: The Economic Consequences of Globalization in the United States; Petri, Manga, January 2020; US BEA and US Census Bureau

Figure 28 shows us the negative correlation between the trade deficit and unemployment and clearly reflects no link between the labor market slag and economic openness, leading to trade deficits for an economy like the United States. Surely, the unemployment rate is a function of economic robustness and other policy measures.

In a world as dynamic as today's, it is not hard to see the labor market changing in terms of its characteristics. With technology advancing and the economy becoming more sophisticated - and automated - the demand for education has gained more significance. We can infer that there is growing inequality; however, what we cannot conclude is that it is purely globalization or trade that is responsible. **Figure 29** shows that education level stands out as a determining factor in the growth, or otherwise, of wages.

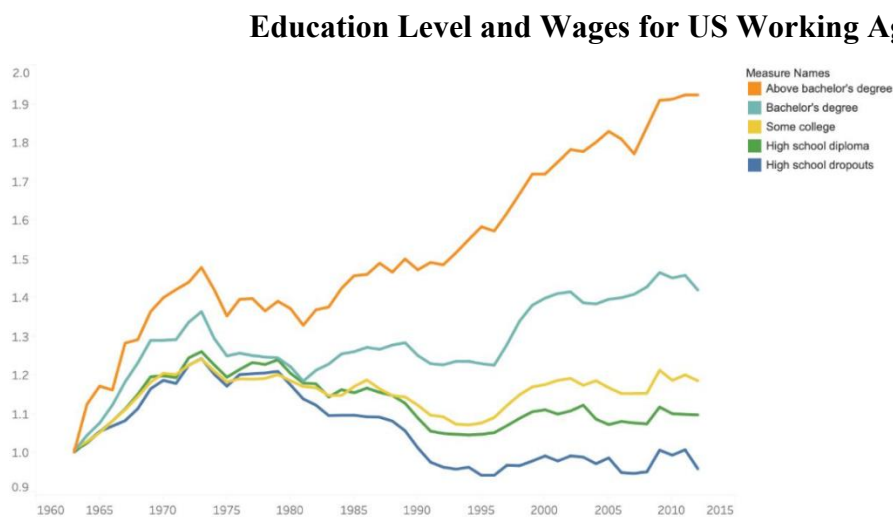


Figure 29: The Economic Consequences of Globalization in the United States; Petri, Manga, January 2020; US Current Population Survey

While inequality is so often ascribed to trade only, we see that those who have an advanced degree experienced a rise in real wages relative to those with just a college degree earning about the same; those who did not have at least a college-level education lost out in terms of real wages.

Productivity improvements require CAPEX and human capital investment; CAPEX implies technological outlay so that more can be produced per man hour; it has the potential of displacing workers with either automation or a complete recalibration of the assembly line.

Table 3 reflects the impact of productivity improvement and trade on job losses, and the evidence shows a far higher loss associated with productivity than with trade.

Trade and Productivity Effects in Manufacturing

Sector	Production change per worker	Actual job losses	Job losses due to trade	Job losses due to productivity	Job gains due to demand
All manufacturing	67.5%	5,647,700	13.4%	87.8%	1.2%
Durable goods manufacturing	82.9%	3,737,200	12.3%	88.2%	0.5%
Wood products	47.0%	274,900	14.4%	81.9%	−3.6%
Non-metallic mineral products	6.5%	177,000	12.8%	90.4%	3.2%
Primary metals	39.1%	248,500	−3.3%	76.7%	−26.7%
Fabricated metal products	8.9%	478,200	6.9%	97.7%	4.5%
Machinery	39.9%	447,400	0.8%	99.6%	0.4%
Computer and electronic products	350.3%	694	18.8%	117.7%	36.5%
Electrical equipment, appliances, and components	57.3%	233,700	19.0%	88.1%	7.1%

Table 3: The Economic Consequences of Globalization in the United States; Petri, Manga, January 2020; US Census Bureau

The part played by *fiscal policy* in mitigating inequality is assuming momentum, especially since the pandemic has seen some definite traces of redistribution. While the redistributive impact of such policy is greater in the high-income countries, justifying the call for more stringent action, we do see encouraging numbers in terms of the equalization process among the lower-income countries as well. For a more meaningful discussion, we provide an overview of the trends in

inequality across the income spectrum. **Table 4** shows that while the upper-income countries deteriorated in terms of inequality, as gauged by the Gini coefficient, from 1980 to 2019, the relatively low-income states fared better.

Pre-tax income Gini coefficients, country by income groups average

Country income group	1980 Gini coefficient	2019 Gini coefficient	Percentage point increase (decrease)
HICs	46.2%	50.0%	3.8
UMICs	56.1%	57.4%	1.3
LMICs	59.5%	58.6%	(0.9)
LICs	61.8%	59.7%	(2.2)

Table 4: Granger, H., Abramovsky, L. and Pudussery, J. (2022) *Fiscal policy and income inequality: the role of taxes and social spending*. ODI Report. London: ODI

It is also important to look at the revenue collection as a share of GDP for the various countries grouped by income levels. As can be seen from **Figure 30**, the high-income countries have a greater revenue collection as a share of GDP than the lower-income states; however, since 1990, the lowest-income earning countries have been seen to have grown their collection share more on a relative basis than their higher-income counterparts.

Average domestic revenue collection as a share of GDP

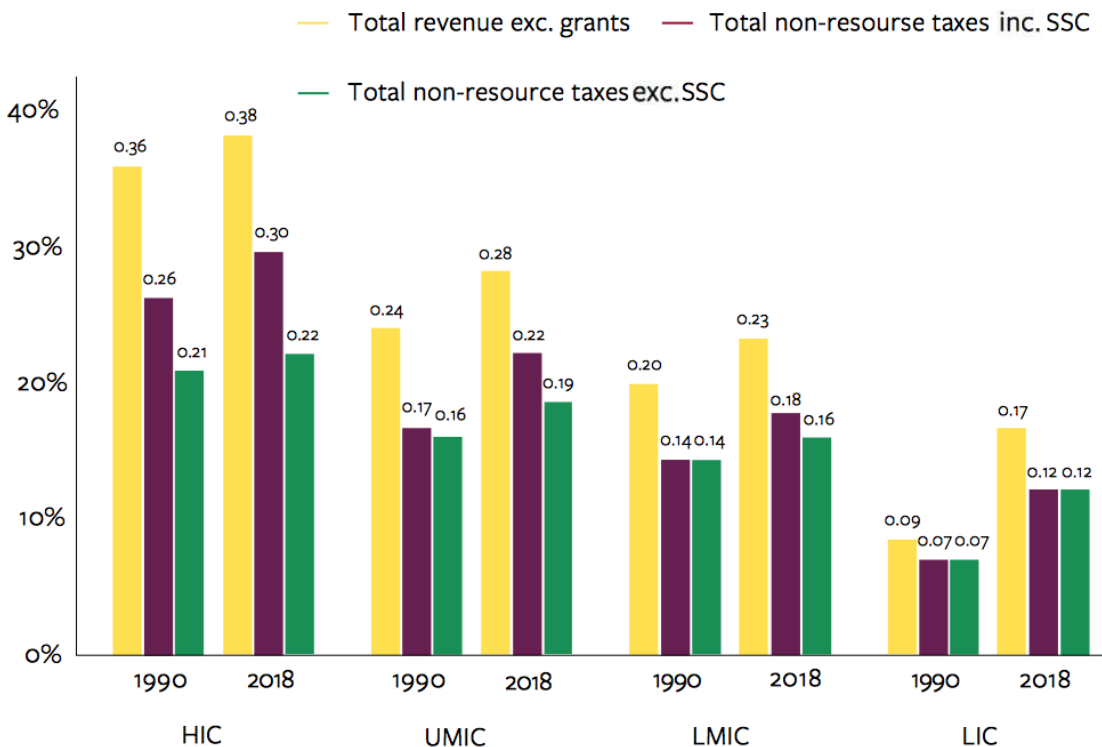


Figure 30: Granger, H., Abramovsky, L. and Pudussery, J. (2022) *Fiscal policy and income inequality: the role of taxes and social spending*. ODI Report. London: ODI; UNU-WIDER GRD, 2020

In addition, as can also be seen in Figure 30, the incidence of social security contributions has a definitive positive correlation to income earned by countries.

As part of fiscal and public policy, the social expenditure by the state as a share of GDP has been on the increase for all countries grouped by income in the last three decades, or, to be more specific, 1990-2017, as can be observed in **Figure 31**. Moreover, we also see that the

expansion in the relative social spending is more eminent at almost 50% (7.3% to 10.9% and 7.8% to 11.6% of GDP, respectively) among the middle-income countries versus the high-income countries.

Components of social spending across countries grouped by income, as a share of GDP

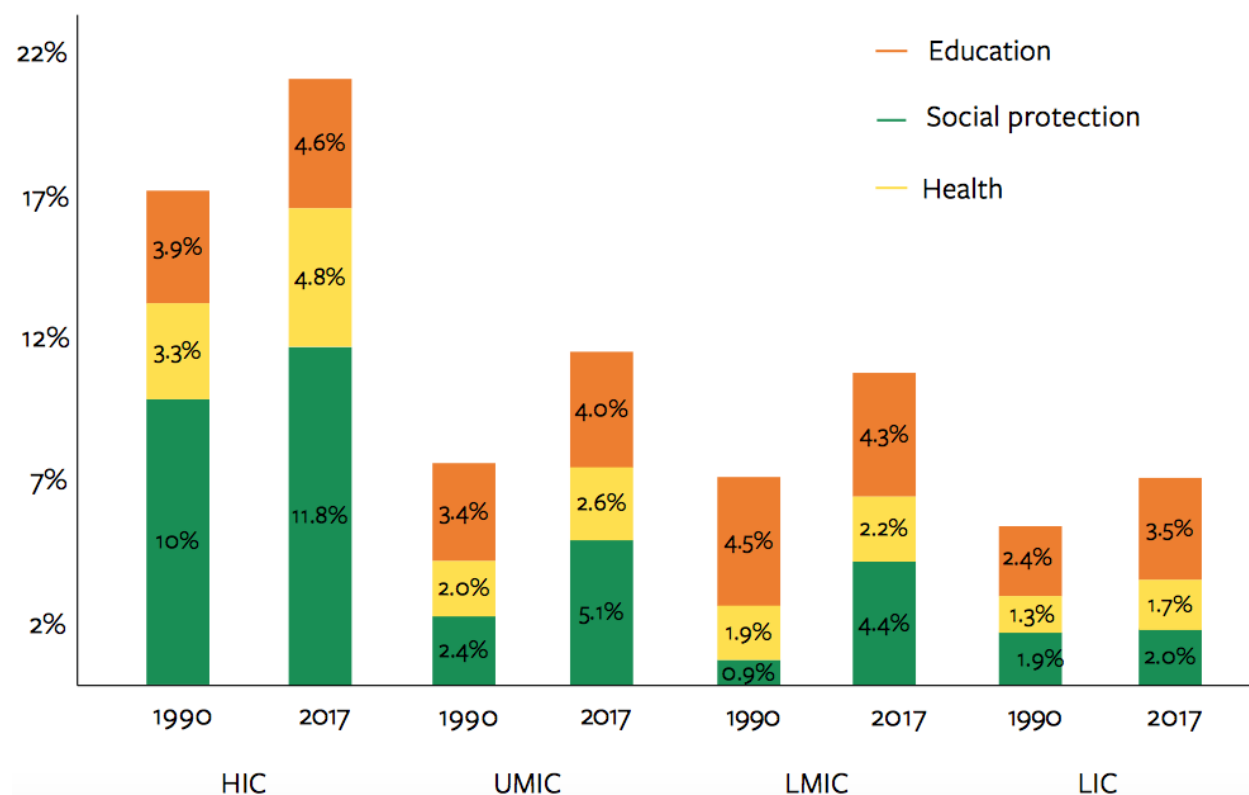


Figure 31: IFPRI Statistics on Public Expenditures for Economic Development (SPEED) 2020; Granger, H., Abramovsky, L. and Pudussery, J. (2022) *Fiscal policy and income inequality: the role of taxes and social spending*. ODI Report. London: ODI

At this stage, it will be interesting to see the redistributive impact of fiscal measures adopted by countries across the income spectrum. We will provide two sets: one with direct taxes and cash transfers, and another with the addition of in-kind transfers. As can be seen, the impact of the ‘final income Gini coefficient’ is more profound, and the overall proportional change is greater for relatively high-income countries, as is apparent from **Table 5**.

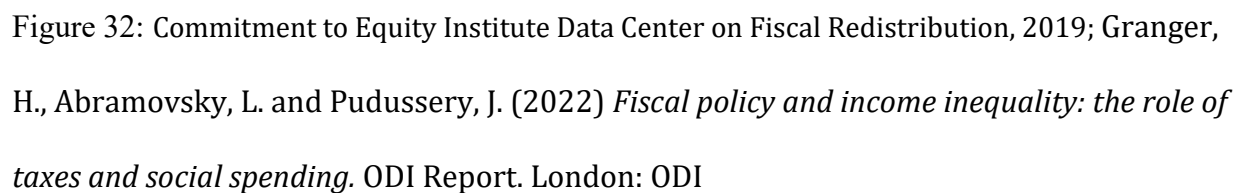
Redistributive impact of fiscal measures by country grouped by income

Country income group	HICs	UMICs	LMICs	LICs
Market income Gini coefficient (1)	47%	48%	43%	38%
Disposable income Gini coefficient (2) [(1) + direct taxes and cash transfers]	42%	45%	40%	36%
Consumable income Gini coefficient (3) [(2) + indirect taxes and subsidies]	42%	45%	40%	36%
Final income Gini coefficient (4) [(3) + in-kind transfers: education and health]	37%	40%	38%	35%
Overall proportional change (5) $[(1)-(4)/(1)]*100$	22%	17%	12%	8%

Table 5: Commitment to Equity Institute Data Center on Fiscal Redistribution, 2019; Granger, H., Abramovsky, L. and Pudussery, J. (2022) *Fiscal policy and income inequality: the role of taxes and social spending*. ODI Report. London: ODI

Figures 32 and 33 provide the graphic representation of Table 7, with the 45-degree line showing the point of the neutral effect of fiscal policy. When the country, identified by a

Redistributive impact of income taxes and direct cash transfers



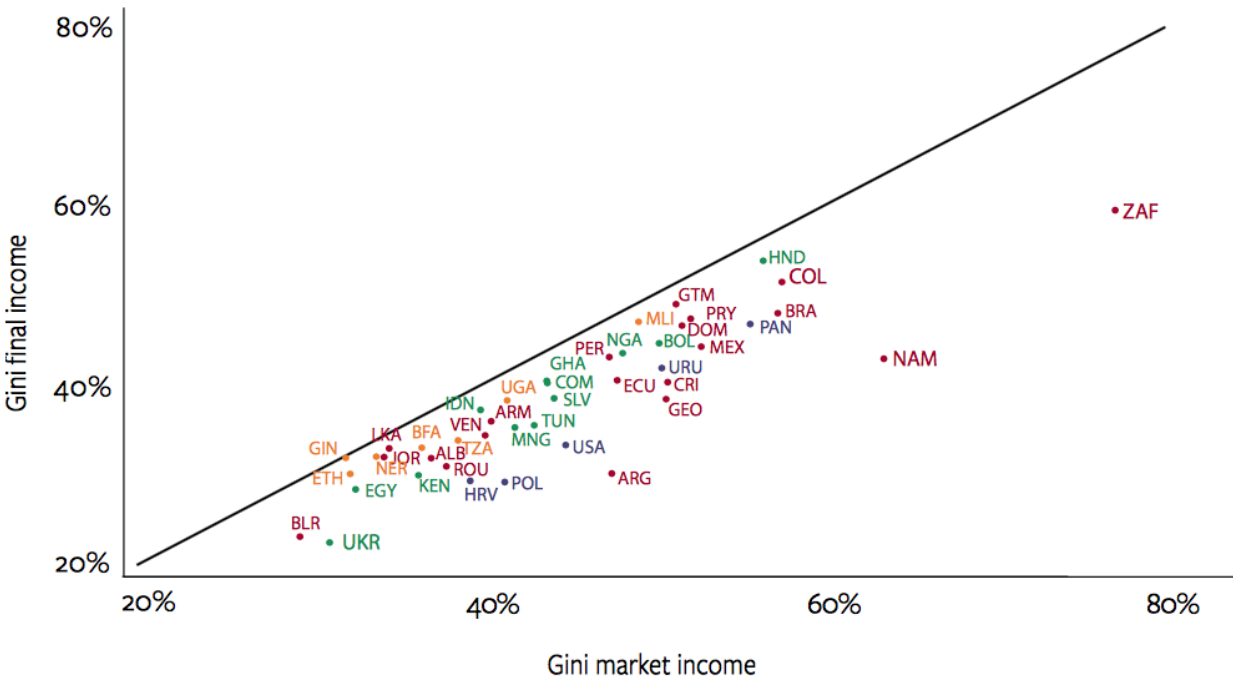


Figure 33: Commitment to Equity Institute Data Center on Fiscal Redistribution, 2019; Granger, H., Abramovsky, L. and Pudussery, J. (2022) *Fiscal policy and income inequality: the role of taxes and social spending*. ODI Report. London: ODI

Limitations and Future Research:

It would be fitting to mention here that the work on this project is not without its limitations and omissions. The paper does not account for an escalation of any geopolitical tension that would likely alter the extrapolation of our analysis. While we have cited climate as a factor, we have not studied in detail the divergence in clean energy generation between Europe (with the benefit) and the US to be responsible for the relatively high inequality in the latter. In addition, the minimum wage debate has been discussed but we have not been able to definitively conclude that the ratio of the minimum wage to the median wage which is the lowest in the US is a determining factor also in higher inequality in the United States.

It would be interesting and revealing to take this project further by looking at the emergence of populism all over the developed world and studying its possible effect on the inequality question. Would it sway the sentiment of the less privileged sufficiently to where policy changes can be expected with a corresponding mitigation of the inequality threat?

Conclusion:

We have presented sufficient evidence of inequality and economic immobility for a certain stratum of society; in addition, we have also discussed some of the factors that might point the policymakers in the direction of a relook.

One of the most critical issues around the world is the ‘zombiism’ that prevails within a section of the population. It could well reflect despair due to a lack of opportunities. The one practice that

has shown promise around the globe in creating economic opportunities is microfinance or the business of offering small loans to the needy with a view to starting a business. In their study <https://innovation-entrepreneurship.springeropen.com/articles/10.1186/s13731-022-00195-7>, Miled, Younsi, and Landolsi show the negative correlation between the GLF (Gross Loan Portfolio) and income inequality. They demonstrate, over the period 2000-2013, the presence of MFIs (microfinance institutions) and their overall positive effect on equality, albeit gradually. The correlation represents the GLF per capita and the effect on inequality as measured by the Gini coefficient. It is important to note there that microfinance has a holistic impact as well as borrowers then use the auxiliary financial services, thus contributing to even lower inequality over time. Another critical point to consider here is the patriarchy that exists around the globe and in poor countries; if microfinance can play a role in empowering women, which it has shown to have done, it has achieved a major objective toward mitigating inequality. For, when we support women in terms of economic opportunities, we help not just them but the entire community.

We have discussed the minimum wage issue threadbare in this paper. We also see in **Figure 18** that a more effective way to deal with the minimum wage issue is to index it to the median wage as opposed to inflation or the mean wage. **Table 2** shows us that the US has the lowest ratio of minimum wage to the median wage compared to the other OECD countries, suggesting there is room to go further without necessarily adversely affecting the employment level. Another consideration is the current spike in wages in the US which, as per a BLS November 02, 2022, publication, stands at a median of \$24.69 per hour (@ \$1,070 per week) as of the third quarter of 2022, using the 173.33 hours per month equation. There are different states, and the rate varies

from one to the other, raising the question of indexing the minimum wage to the median wage of the state in question for a fairer representation in terms of cost of living. Again, policymakers need to rethink their direction more objectively.

There is rhetoric from both the extreme ends of the political divide on globalization and the scourge it brings. It is to a point where we believe it to be more due to lost perspective and on account of it being politically self-serving. **Figure 29** shows the benefit of global trade in terms of the incremental income it generated, a whopping \$4.3 TRN for that period. In addition, **Figure 30** shows the negative correlation between unemployment and trade, busting the myth that trade has caused the displacement of workers. In fact, as can be observed from **Table 3**, most of the unemployment has been a result of productivity improvements, pointing directly to technological advancements. Policymakers need to be cognizant of this and try to remedy the issue by providing for the affected workers.

With regards to displaced workers, we believe that the Trade Adjustment Act is a good step toward alleviating some of the pain; however, we have also seen that most of the displaced workers are because of productivity improvements but it still begs the same remedy. Right from high school, the administration should look at opening vocational schools for training and retraining - for those interested in starting their second acts - if college were not an option. In addition, Congress should look at reviving the Trade Adjustment Act which was suspended as of July 2022, and expand it to include not just those affected by trade but also by technological advancements/AI making some jobs redundant. We live in a dynamic world where such natural progression is best

encouraged but without any economic loss to human capital, and it can be achieved by opportunities for retraining. It will make for a fairer and happier place and reduce inequality.

Financial literacy has been a major topic in this paper as well as in the annals of equality mitigation. It is clear to see why. As was shown in the preceding lines, competence in the area is less than desirable. **Figures 19 and 20** demonstrate this fact. Even with a higher level of education, we do not see a significantly more robust financial knowledge base. For society to flourish, good quality education is important, and policymakers need to consider encouraging their youth to acquire it. One incentive is to offer free Community College education in all fields, with a focus on the fields that yield solid employable opportunities. The states should also be monitoring their community college educators to make sure the curriculum is consistent with the preceding objective of ‘relevance.’ Not all individuals are cut out for college, hence a dire need for vocational training at the state level. That said, let it not escape us that as per a study <https://gflec.org/wp-content/uploads/2015/12/Optimal-Financial-Knowledge-and-Wealth-Inequality.pdf>, the wealth to income ratio for College +/High School is 2.45 (simulated) stands at 2.45, implying that those with a higher level of education can manage to accumulate more wealth as a function of their income than those without a HS diploma. As public policy, it would be befitting to have financial literacy education at the HS level as well as mandating the same at firms/agencies/unions to help the workers make responsible financial decisions in the realm of retirement savings, social security, Medicare plans, college loans, other credit/mortgage facilities, individual retirement accounts, budgeting, and other related topics. Financial responsibility comes with financial knowledge and literacy and it is costly; however, given that at least a good third of

the inequality can be attributed to a lack of financial literacy, as per the piece <https://pensionresearchcouncil.wharton.upenn.edu/wp-content/uploads/2015/08/WP2015-01.pdf>, the cost might just be worth expending.

On climate, we see that North America and Europe are responsible for well over 60% of accumulated carbon emissions, as per **Figure 23**. To expect the developing economies to continue to go clean and participate in global output is not realistic, nor is it fair. We do believe support from the developed countries, the former major emitters warranted for the less developed ones to navigate them gradually to clean energy. Furthermore, we also are of the opinion that a complete cut from the current energy set-up would result in output reduction and will be counterproductive. We need a well-thought-out map to clean energy while maintaining output growth for sustainability and for availing opportunities to invest in clean energy at the required levels. While Europe gets 25% of its needs met through clean energy, the US is lagging at a shy less than 15%, as per **Figure 25**, and has work cut out for itself. The good news: the cost of renewables has come down almost 75% in the last 12 years (**Figure 24**).

The role the state can play by way of fiscal measures and social spending has been seen to be pivotal in reducing inequality. **Table 6** shows us that the inequality incidence has fared better among the lower-income countries in the last three decades with the reduction in the measure versus an increasing amount in the higher-income countries, indicating room in the fiscal space to go further. If we look at domestic revenue collection as a share of GDP (**Figure 30**), we see a

parallel in that the relative improvement compared to the high-income countries corresponds to a better performance in terms of mitigating the threat of inequality (**Table 6**).

It is clear that the rich world has a greater capacity to make a difference, and the taxes, direct cash transfers, and in-kind facilities do make a bigger overall proportional difference (**Table 7**). Here is an opportunity for high-income countries to coordinate for the betterment of the world. One example is the proposed ‘global corporate tax’ which has garnered much attention of late. It is to close a loophole to evade taxes. There are also differences in inequality measures among countries within the same income group, suggestive of differences in fiscal policies; some opportunities are to have higher progressivity of income tax, eradication of unnecessary subsidies in favor of better social protection constituting reasonably thought out in-kind transfers and cash transfers based on an equitable structure.

One of the most critical areas to look at to reduce the threat of inequality is child care. Not only do we need to see more preschools in the less privileged areas but also help parents in the preschool years; this would facilitate their attending work as opposed to staying home to care for their child. In poorer communities, preschools are spotty. Also, as per a report by NBER <https://www.nber.org/papers/w29249>, early care for high SES (socioeconomic status, proxied by maternal education) children at non-parental facilities is of higher quality than for lower SES. Decent early care and reasonable education go a long way in brightening children’s minds and afford the opportunity for parents to find employment and have income flowing in. Head Start is one of the largest government agencies providing care subsidies but is more focused on older

children and the lowest income brackets. We would suggest a broader-based program that touches a greater spectrum of income levels. The administration policymakers and the Department of Labor would do well to get this past Congress as a priority in the name of equality.

We see, all over the world, some element of inequality; some of it is because of internal strife, and some can be linked to geopolitical developments, what with the rush of refugees to neighboring countries, stirring up a populist storm. The rich world leadership both in the US and across the pond (used loosely) needs to be that much more diligent globally and have more of a redistributive bias domestically. We want this world happy and prosperous, in a holistic way.

Appendices

Average Employment Per Store Before And After The Rise In Minimum Wage In NJ

Variable	Stores by state			Stores in New Jersey ^a			Differences within NJ ^b	
	PA (i)	NJ (ii)	Difference, NJ – PA (iii)	Wage = \$4.25 (iv)	Wage = \$4.26–\$4.99 (v)	Wage ≥ \$5.00 (vi)	Low– high (vii)	Midrange– high (viii)
1. FTE employment before, all available observations	23.33 (1.35)	20.44 (0.51)	–2.89 (1.44)	19.56 (0.77)	20.08 (0.84)	22.25 (1.14)	–2.69 (1.37)	–2.17 (1.41)
2. FTE employment after, all available observations	21.17 (0.94)	21.03 (0.52)	–0.14 (1.07)	20.88 (1.01)	20.96 (0.76)	20.21 (1.03)	0.67 (1.44)	0.75 (1.27)
3. Change in mean FTE employment	–2.16 (1.25)	0.59 (0.54)	2.76 (1.36)	1.32 (0.95)	0.87 (0.84)	–2.04 (1.14)	3.36 (1.48)	2.91 (1.41)
4. Change in mean FTE employment, balanced sample of stores ^c	–2.28 (1.25)	0.47 (0.48)	2.75 (1.34)	1.21 (0.82)	0.71 (0.69)	–2.16 (1.01)	3.36 (1.30)	2.87 (1.22)
5. Change in mean FTE employment, setting FTE at temporarily closed stores to 0 ^d	–2.28 (1.25)	0.23 (0.49)	2.51 (1.35)	0.90 (0.87)	0.49 (0.69)	–2.39 (1.02)	3.29 (1.34)	2.88 (1.23)

Notes: Standard errors are shown in parentheses. The sample consists of all stores with available data on employment. FTE (full-time-equivalent) employment counts each part-time worker as half a full-time worker. Employment at six closed stores is set to zero. Employment at four temporarily closed stores is treated as missing.

^aStores in New Jersey were classified by whether starting wage in wave 1 equals \$4.25 per hour ($N = 101$), is between \$4.26 and \$4.99 per hour ($N = 140$), or is \$5.00 per hour or higher ($N = 73$).

^bDifference in employment between low-wage (\$4.25 per hour) and high-wage ($\geq \$5.00$ per hour) stores; and difference in employment between midrange (\$4.26–\$4.99 per hour) and high-wage stores.

^cSubset of stores with available employment data in wave 1 and wave 2.

^dIn this row only, wave-2 employment at four temporarily closed stores is set to 0. Employment changes are based on the subset of stores with available employment data in wave 1 and wave 2.

Appendix Table 1:

Minimum Wages and

Employment: A Case

Study of the Fast-Food

Industry in NJ and PA;

David Card and Alan

Krueger; October 1993

OECD Minimum Wages Relative to Median Wages (2014-2021, by column)

Japan	Mean	0.34	0.34	0.35	0.36	0.37	0.38	0.39	0.39
	Median	0.39	0.40	0.40	0.42	0.43	0.44	0.45	0.45
Korea	Mean	0.36	0.36	0.40	0.41	0.46	0.48	0.50	0.49
	Median	0.45	0.49	0.50	0.53	0.59	0.63	0.62	0.61
Luxembourg	Mean	0.45	0.44	0.44	0.44	0.43	0.44	0.43	0.43
	Median	0.55	0.54	0.54	0.54	0.55	0.55	0.54	0.55
Mexico	Mean	0.29	0.30	0.30	0.32	0.34	0.37	0.41	0.45
	Median	0.37	0.39	0.38	0.40	0.42	0.46	0.51	0.57
Netherlands	Mean	0.40	0.39	0.40	0.40	0.40	0.40	0.39	0.39
	Median	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.46
New Zealand	Mean	0.51	0.51	0.51	0.52	0.52	0.55	0.56	0.57
	Median	0.60	0.60	0.61	0.60	0.61	0.64	0.65	0.66
Poland	Mean	0.41	0.41	0.43	0.44	0.42	0.42	0.45	0.45
	Median	0.51	0.51	0.53	0.54	0.51	0.51	0.56	0.55
Portugal	Mean	0.39	0.40	0.42	0.43	0.45	0.45	0.46	0.47
	Median	0.55	0.56	0.58	0.60	0.63	0.63	0.66	0.66
Slovak Republic	Mean	0.37	0.37	0.38	0.38	0.39	0.40	0.42	0.39
	Median	0.45	0.47	0.48	0.48	0.49	0.49	0.52	0.52
Slovenia	Mean	0.49	0.49	0.48	0.48	0.49	0.49	0.49	0.51
	Median	0.60	0.60	0.59	0.58	0.58	0.59	0.59	0.60
Spain	Mean	0.31	0.31	0.32	0.34	0.34	0.41	0.43	0.41
	Median	0.37	0.37	0.38	0.40	0.41	0.50	0.51	0.48
Türkiye	Mean	0.39	0.40	0.43	0.41	0.40	0.40	0.39	0.40
	Median	0.69	0.70	0.70	0.71	0.71	0.71	0.69	0.71
United Kingdom	Mean	0.40	0.41	0.44	0.44	0.45	0.46	0.48	0.48
	Median	0.48	0.48	0.53	0.54	0.54	0.55	0.58	0.57
United States	Mean	0.27	0.26	0.26	0.24	0.23	0.22	0.21	0.20
	Median	0.37	0.36	0.35	0.34	0.33	0.32	0.29	0.29
Latvia	Mean	0.39	0.41	0.41	0.39	0.38	0.35	0.33	0.34

Appendix Table 2: OECD

iLibrary.org; Minimum Wages to

Median Wages up to year 2021

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