# The Desirability of Economic Inequality: A Discourse

Memon, Sonan\*

November 2023

#### **Abstract**

I critically examine the burgeoning literature on inequality in economics. I report major empirical stylized facts on wealth/income inequality in the world and specifically in Pakistan. I also discuss arguments presented by many economists and some philosophers regarding the undesirability of wealth and income inequality and policies recommended to reduce inequality.

I present several arguments in defense of economic inequality by establishing its role in creating incentives, economic growth, and urbanization. I also argue that many of the policies proposed for ejecting inequality from the society impede on individual and social freedoms. Moreover, there are theoretical and philosophical conundrums regarding how to share the pie of wealth and income which stifle attempts to redistribute. Lastly, I ask the *why* question by interrogating the relevance of inequality, making the case that absolute *poverty*, *pain and suffering* are the relevant curses which have to be excommunicated from an ideal society rather than the distribution of wealth and income<sup>1</sup>.

**Keywords:** Inequality of Income and Wealth. Inequality in Pakistan. Policy Responses to Inequality. Economics and Philosophy of Inequality. How to Share the Pie and Why? Incentives, Freedom and Urbanization. Poverty and Absolute Suffering.

**JEL Classification:** A1, B3:B5, O0:O5, P0:P5, R0, Y8:Y9.

<sup>\*</sup>Research Fellow, Pakistan Institute of Development Economics, Islamabad. smemon@pide.org.pk and sonanahmed8@gmail.com. This paper did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

<sup>&</sup>lt;sup>1</sup>The replication code of this paper will be available on my GitHub page: https://github.com/sonanmemon



# **CONTENTS**

1 Introduction				
2	Ined	quality in Pakistan	5	
	2.1	Situating Pakistan In the Global Context	8	
3	In I	Defense of Inequality	9	
	3.1	Is Inequality Undesirable?	11	
	3.2	Piketty and Inequality	15	
	3.3	Incentives For Innovation	17	
	3.4	Problems With Redistribution Policies	18	
	3.5	Successful Cities Create Inequality	20	
		3.5.1 Cities in Pakistan	21	
4	Con	nclusion	23	

### 1. Introduction

"Inequality is often a consequence of progress. Not everyone gets rich at the same time, and not everyone gets immediate access to the latest life-saving measures, whether access to clean water, to vaccines, or to new drugs for preventing heart disease" Deaton (2013).

The most up to date and recognized data suggests that an average adult individual earned PPP adjusted <sup>2</sup> 23,380 USD<sup>3</sup> per year in 2021 and the average adult owned 102,600 (USD) as wealth Chancel et al. (2022). The richest 10% of the global population earns around 52% of global income, whereas the poorest half of the population earns 8.5% of it. On average, an individual from the top 10% of the global income distribution earns 122,100 (USD) per year, whereas an individual from the poorest half of the global income distribution makes USD 3,920 per year. Global wealth inequalities are even more pronounced than income inequality due to their persistent nature owing to inheritance and other factors. While the poorest half of the global population owned 2% of the total global wealth, the richest 10% of the global population owned 76% of all global wealth Chancel et al. (2022). Clearly, the theoretical Gini coefficient of 0 where there is perfect equality of wealth and income i.e., all human beings look the same, do the same and achieve the same is far from reality.

Much of leftist politics builds its narrative and justification on the foundation of this high inequality in wealth and income at both the international and national levels. For instance, labor's politics in the UK promotes public healthcare i.e the NHS and public education policies to deal with the inequality of opportunities. Historically, labor has campaigned against private finance, promoted progressive income taxation, and argued for £10 per hour minimum living wages in the past. It has also been a supporter of nationalizing public utilities such as British rail and energy companies. Similarly, the recent gush of socialist rhetoric in ironically the USA, which has hitherto been the church of modern capitalism is yet another example of the centrality of inequality in the public discourse. For instance, Bernie Sanders (refer to his most recent book "Its Ok to Be Angry About Capitalism") makes the case for social, democratic policies to control inequality and prevent climate catastrophe (see Sanders (2023)). While we are far from a socialist revolution which desired the alleged "vermin" of the earth to unite and overthrow the

<sup>&</sup>lt;sup>2</sup>In purchasing power parity terms.

<sup>&</sup>lt;sup>3</sup>US Dollars.

<sup>&</sup>lt;sup>4</sup>Labor Party.

<sup>&</sup>lt;sup>5</sup>National Health Services.

<sup>&</sup>lt;sup>6</sup>i.e., the "workers"

capitalist class, concern over distribution of economic gains continue to animate debate in politics; perhaps the "end of history" has not arrived yet.

Meanwhile, inequality is a highly popular research topic in academia; for the USA, there was a dramatic rise in web searches on economic inequality in the social sciences after the Great Recession in the period from 2009 to 2015 relative to the period 2004 to 2009 and post-2015 Trends (2023). Economists such as celebrated economist and Nobel laureate Joseph Stiglitz and others such as Thomas Piketty and Anthony Atkinson have highlighted the rise of inequality, which they consider damaging for society and the economy (Stiglitz (2012); Piketty (2017) and Piketty (2022)). One of the most prominent researchers on inequality, Anthony Atkinson (see Atkinson (2015)) has suggested many policy proposals to reduce inequality such as progressive taxation, other affirmative action driven social policies, and social sharing of capital for investment. Some of Atkinson (2015)'s specific recommendations are listed in Table 1 below. These policies treat earned income differently from inherited wealth and property in terms of taxation and they propose high levels of progressive taxation. Lastly, they also advocate social insurance and targeted welfare schemes to address inequality of opportunities *and* outcomes in health, education, and other sectors.

Top progressive rate at 65%.	Taxation of Inheritance.
Proportional property taxation.	Earned income discount.
Participation Income.	Social Insurance.

Table 1: Policies Recommended Atkinson (2015).

In political philosophy, the John Rawls (see Rawls (1971)) versus Robert Nozik (see Nozick (1974)) debate on what defines a just society is well-known. Rawls posited the concept of the veil of ignorance under which prior to birth, everyone is ignorant of where they might be born and und which set of endowments. Hence, the rational social design with the consent under the veil of ignorance should allow each person to have the full scheme of basic liberties, commensurate with the scheme of liberties for all; in other words, pursuit of freedom for one individual should not clash with the liberties of all. In this Rawlsian world, social and economic inequalities must satisfy two conditions: first, they must be attached to opportunities open for everyone under conditions of equal opportunity and second, they must create the greatest benefit for the least-advantaged members of society. Whereas Nozick's theory of justice claims that whether distribution is just or not depends exclusively on how it came about. His theory posits that there ought to be justice in acquisition, in transfer, and rectification of injustice but the magnitude of

inequality is irrelevant. This is in stark contrast with Rawlsian theory which posits that the least unequal outcome must be chosen, and initial conditions should be equal for all.

As far as the magnitude of inequality is concerned, whether it is too low or high is a complex question which must be seen in historical context rather than compared against some socialist utopia or hunter gatherer societies, both of which are not reasonable vantage points. Even if inequality has been on the rise in recent history and is exceeding "reasonable" thresholds as is implicit in the thesis of Piketty (2017), one must be careful in suggesting mitigation policies. The historical analysis of change in inequality is necessary and interesting but must not be casually used as a weapon for policies which do more harm to the social fabric than solve problems. For instance, several policies which are normally proposed to reduce inequality create capital flight, distort incentives for investment and innovation, curtail individual freedoms and push toward a path of state-led repression and slavery of the population Friedrich (1945).

While maintaining cognizance of the wide topography of relevant literature, I would argue that high level of economic inequality creates a socio-economic milieu in which scientific and intellectual innovation, aggregate welfare (regardless of degree of inequality), freedom to realize full potential for everyone in any domain given fair acquisition and inheritance of resources and motivation for individual human achievements reaches its pinnacle. More specifically, I discuss how inequality emerges from equilibrium outcomes of free market exchange between agents with conflicting interests i.e., "one man's poison is another man's meat" Friedman (1976), inequality allows labor markets to reveal signals about the change in demand and supply of labor over time, allowing efficient adjustments for social welfare and inequality is the engine for creating incentives for innovation. I present arguments for how inequality is desirable for maintaining social order and hierarchical structures, emerging from historical realities such as racial divides, natural variation in ability and differences in initial conditions across individuals. I also discuss the leaky buckets problem and the Coase Theorem to establish the problems with policies used for reducing inequality. Lastly, I discuss the role of urbanization and associated agglomeration economies in increasing inequality over time while also creating marvelous mega cities.

# 2. INEQUALITY IN PAKISTAN

The UNDP report of 2020 has documented national and regional inequality levels in Pakistan. Across provinces, Punjab has the largest regional economy and highest share in

national GDP, followed by Sindh, Khyber Pakhtunkhwa (henceforth KPK), and Baluchistan (refer to Pasha (2020)). Whereas, the Gini index<sup>7</sup> is the highest in Sindh, followed by Punjab, while Khyber Pakhtunkhwa (KP) and Baluchistan provinces have the lowest levels of inequality. This report (see Pasha (2020)) has also shown that gender inequality is the highest in Baluchistan, followed by KPK, Sindh and Punjab.

The work of Burki et al. (2015), Burki et al. (2020)) and Burki et al. (2021) on inequality in Pakistan is also prominent and noteworthy; these researchers have demonstrated that wealth inequality is more pronounced than income inequality. Nevertheless, income of the top 10% households has been highly favorable throughout, except for the fiscal Years 2005/06 to 2010/11 period in which the top households lost some income share due to higher vulnerability to the global recession. From 2001/02 to 2015/16, the top 10 percent of households captured 24 percent of the total income growth compared to those in the bottom 50 percent who captured 32 percent of the income growth Burki et al. (2021).

Among the four provinces, the distribution of household wealth is most unequal in Baluchistan, where the wealthiest 10 percent, 5 percent and 1 percent households own 65 percent, 54 percent and 32 percent of all wealth respectively, while the bottom 60 percent of households own less than 10 percent of all wealth. Based on these measures, wealth is most equally distributed in Sindh, while the wealth shares owned by the households in Punjab and KPK closely follow the national figures Burki et al. (2021)<sup>8</sup>; for a birds-eye view of national and provincial wealth inequalities, refer to the figure below.

<sup>&</sup>lt;sup>7</sup>The Gini index is a standard index to measure inequality and lies between 0 and 1.

<sup>&</sup>lt;sup>8</sup>These calculations are based on HIES and PSLM 2013/2014 data.

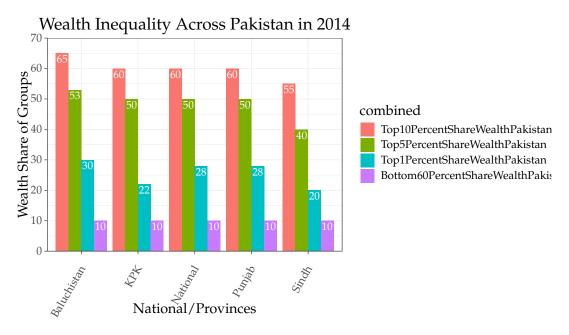


Figure 1: Data is From HIES/PSLM and Burki et al. (2021).

We also know that the level of urban inequality is higher than rural inequality in Pakistan. Based on evidence from a 2010-2011 survey, Burki et al. (2015) found that disparity between least and most developed districts ranges from cumulative asset score of 7.61 for Lahore to -6.23 for Rajanpur, southern Punjab; similar inequality exists with respect to road density in Punjab, as demonstrated in the figure below. Generally, the evidence suggests that there is higher and more persistent disparity in southern Punjab compared with northern and central Punjab (Mohey-ud Din (2017) and Burki et al. (2021)).

<sup>&</sup>lt;sup>9</sup>Household inequality is typically calculated based on asset scores at the district and Tehsil<sup>10</sup> levels which is based on 30 multi-dimensional asset indicators that capture a household's asset profile Burki et al. (2015)

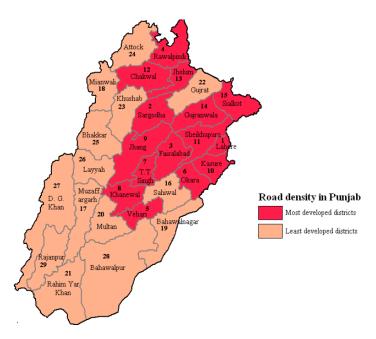


Figure 2: Lahore Versus Rajanpur Burki et al. (2015)

The anthropologist/political scientist Rosita Armytage has also recently published a book on inequality in Pakistan (see Armytage (2020)). She has pointed out that the elite of Pakistan perpetuates inequality through not just business profitability but ensuring preferential conditions using networks. For instance, the bureaucratic, military, business and landed elite are interwoven in Pakistan through highly rigid marital ties which helps sustain and diversify the power of elite. This diversification strategy can be seen as a wall against the high levels of infighting and political conflict among various elite groups in Pakistan throughout its history. Hence, this political and historical context has to be accounted for in any analysis of inequality in Pakistan. The economic challenge for Pakistan is not that inequality is high since that has also been the case in France and the USA. Rather, the peculiar hijacking of the state by an unproductive elite is at the heart of problem in Pakistan. This is unlike the capitalist-elite in advanced economies which is highly productive and innovative, creating economic growth, work opportunities and high-value added products for their nations and the globe.

#### 2.1. SITUATING PAKISTAN IN THE GLOBAL CONTEXT

In Pakistan, the share of the top 1% in national wealth was around 26% in 2021. Meanwhile, the share of top 10% individuals in wealth was close to 60%. The share of bottom 50% individuals in aggregate wealth was close to 4.6%; the data is based on standard-

ized world inequality database https://wid.world/country/pakistan/ (see Solt (2016)). For a comparison with Bangladesh, India, USA, France, and South Africa in terms of top 1%, 10% and bottom 50% wealth and income shares, refer to the tables below. South Africa stands out as the most unequal country in this group and USA is the second most unequal. Meanwhile, India is the most unequal country in South Asia and Pakistan is second most unequal in the region; Bangladesh is marginally less unequal than Pakistan is. Meanwhile, wealth inequality in France is almost the same as it is in Pakistan.

Table 2: Wealth Shares As of 2021 (Top 1%, Top 10% and Bottom 50%)

Country	<b>Top 1%</b>	<b>Top 10%</b>	<b>Bottom 50%</b>
Pakistan	26%	60%	4.8%
India	32%	64%	6%
Bangladesh	24.6%	58.4%	4.8%
USA	35%	70.7%	1.5%
South Africa	54.9%	85.6%	-2.5%
France	26.8%	59.3%	4.9%

Note: World Inequality Database.

In Table 3, similar data is presented for income rather than wealth. It is evident that due to the nature of inheritance of wealth and opportunities for upward mobility in labor markets, income inequality is always lower than wealth inequality for all countries. India continues to be the most unequal country in South Asia even in terms of income. Meanwhile, the similar degrees of wealth inequality in France and Pakistan no longer exist when it comes to income inequality, where France is significantly more equal than Pakistan is. Figure 1 summarizes the top 1% wealth and income shares for all the six countries.

Table 3: Income Shares As of 2021 (Top 1%, Top 10% and Bottom 50%)

Country	<b>Top 1%</b>	<b>Top 10%</b>	Bottom 50%
Pakistan	16.7%	42.8%	17.3%
India	21.7%	57.1%	13.1%
Bangladesh	16.2%	42.4%	17.1%
USA	19%	45.6%	13.8%
South Africa	19.3%	65.4%	5.8%
France	8.9%	31.2%	23.2%

Note: Data is from World Inequality Database.

Hence, the main stylized fact is that Pakistan has high level of inequality but this is an international phenomenon due to the evolution of international markets, technology and capitalism. One must be cognizant of this broader, global context which makes Pakistan appear as less of an anomaly than the leftist propaganda in the country and beyond would have one belief. Of course, the conventional response from left-leaning thinkers would be that inequality is indeed a global problem and a consequence of unhinged capitalism which is a global order. At the very least, this data must convince a critical thinker that Pakistan's capitalist class is not the worst possible vampire which sucks labor surpluses in the most pernicious possible way à la Marx. As far as global inequality is concerned, I later present arguments which question the belief that inequality is devastating for the society.

## 3. IN DEFENSE OF INEQUALITY

The "high" levels of economic inequality is often seen with an apocalyptic lens by some academics and politicians who view the asymmetric distribution of wealth/income as the core obstacle to the development of human society. However, the objective of this work is to inject some pragmatism in the debate and question the relevance of inequality.

Despite creating wealth and income inequality, capitalism has generated a lot of prosperity and wealth in the first but *also* the third world regions. It is well-known that global

welfare, life-expectancy, access to healthcare, economic prosperity, women's engagement in the economy and politics have increased over the last couple of centuries. Even violent crime has gone down and quality of life has increased for most of the global population, relative to let's say the 17th century. In fact, even relative to 1950, the data in figure below demonstrates that ground-breaking economic progress was made (see Roser et al. (2023)/"Our World in Data" and figure below for the entire data on GDP evolution.) across the globe. What's beautiful about economic growth is that even if you do not care about material progress as an end in and of itself, often many social indicators discussed above and even levels of crime tend to be positively co-move with the business cycle booms and higher long-term economic growth.

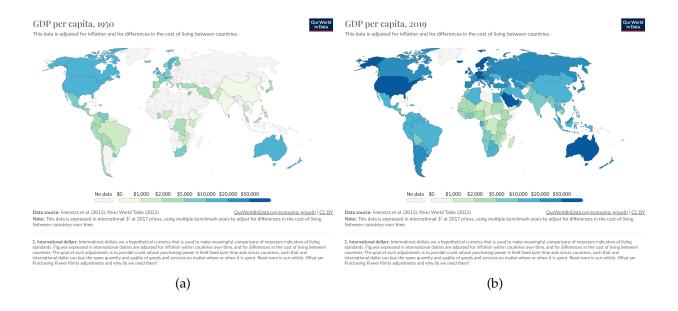


Figure 3: World GDP/Capita in 2019 vs 1950

For detailed and substantial evidence, refer to Angus Deaton's book i.e Deaton (2013) which documents the progress made in wealth and health across the world in past few centuries, despite a rise in inequality. We know that the industrial revolution created a lot of inequality by creating fortunes for those European nations who invented advanced technology for warfare, industry, and healthcare such as Britain, followed by USA and other European nations. For instance, life expectancy in the rich countries increased by thirty years, and it continues to increase today by two or three years every decade Deaton (2013). Of course, access to drugs and healthcare was not evenly distributed which created a lag in increasing life expectancy for the not so rich classes. Similarly, the knowledge regarding deleterious health impact of smoking saved millions of lives for the rich, fol-

lowed by the poor as knowledge slowly disseminated throughout the society. Even the internet revolution of the last 30-40 years created inequality in the initial phases between those who have internet access and those who do not; however, over time the internet has benefited many more people by trickling-down, especially the middle classes. Thus, higher inequality is often accompanied by breakthroughs that unevenly benefit different fragments of society but are nevertheless positive developments.

While this may be enviable for those who did not embark upon this path of civilization, it created a lot of inequality between the "West" and rest. For instance, Indian share of global GDP declined from 24.4% in 1700 to 10.2% in 1870; meanwhile Europe's share of world GDP was 33.2% by 1870 Maddison (2006). Surely, the fruits of colonization played a role in this dominance of the British empire as overly emphasized by leftist thinkers as if this were the key distinguishing factor. Many empires such as Islamic (e.g., Mughal empire, Persian empire, or the Mongol empire under Genghis Khan) empires and Roman empire existed in history with arguably the same or more enthusiasm to dominate their opponent. There has never been a shortage of violence, enslavement, and plunder in history; rather the uniqueness of British and Western empire lied in the industrial-revolution, progress in science, technology, and the consequent depth of market integration across the world. This exceptional progress in history created inequality which must be celebrated as a source of inspiration and learning for others rather than considered a negative development. For instance, countries like China, India and South Korea have benefited from globalization and technology in 20th century and grown rapidly, much faster than the progress of Europe 250 years earlier. Thus, while there is a first-innovator advantage as it should be, the returns of innovations spread across the world through international trade and knowledge exchange, making growth even faster for the previous laggards in the game of prosperity.

## 3.1. IS INEQUALITY UNDESIRABLE?

Some economists have argued that higher inequality could act as a barrier to growth. For instance, prominent heterodox economist Samuel Bowles (see Bowles (2012)) argued that wealth inequality distorts the production cycle toward sub-optimal outcomes; a case in point is over-production of cotton relative to corn in the southern US states after the civil war during 1861-1865 AD. Basically, food merchants and creditors imposed cotton production requirements on farmers under the *crop-lien system*<sup>11</sup> since cotton can be more

<sup>&</sup>lt;sup>11</sup>Refer to chapter 2 of Bowles (2012).

durable for storage. This is despite the fact that *The Cotton South* experienced a serious labor shortage following the war, which should have led some farmers to abandon cotton in favor of corn, as the latter was much less labor-intensive. In sum, some economists have argued that high levels of inequality distort the economy toward less-efficient outcomes and question the equity-efficiency trade-off.

My response to this argument is that any market interaction and equilibrium emerges from the preferences and incentives of *all* the parties involved. Surely, in many cases the first best equilibrium from the perspective of one player or "society" cannot be achieved since it is not in the interest of other players to collaborate on that path. The crop-lien system led to sub-optimal outcome for the farmers but benefited the creditors for whom the cotton production was an optimal outcome. Why should the optimal outcome from the perspective of farmers be treated as the ideal against which the reality has to be compared with? The implicit assumption required here is that the gains for certain individuals must be weighed against more than gains for others which is normative and questionable on philosophical grounds.

As we also know from game theory, in some games, Pareto improvements cannot be achieved if they are not consistent with incentives for deviation i.e., the Pareto-optimal outcome need not be a Nash equilibrium. Hence, why should one compare the actual distribution numbers with a Utopian counterfactual which cannot be achieved given the incentives involved? The argument presented by Rawls (1971) and explained by Fisher and McClennen (2011) (see figure below) is that the initial distribution must be equal since variation based on talent, endowment or interests is morally arbitrary. However, given the initial equality of opportunity, a deviation toward a particular Pareto improvement which benefits everyone but creates least inequality among all the Pareto improvements should be chosen. However, I disagree with this approach toward distribution. Initial differences in talents and natural endowments should lead to inequality; otherwise, the motivation to make the most of one's ability will perish, leading to Pareto-inferior outcomes for everyone. Even at the second stage, choosing the Pareto-improvement which benefits everyone but creates least inequality is a flawed vision. This will limit human potential to achieve superior outcomes which may be more unequal but benefit everyone in significant absolute magnitude.

```
The Pareto argument can now be stated as follows:

[Stage 1]

(P1) If talents, endowments, interests, etc, at the outset are 'morally arbitrary,' then the initial distribution should be equal.

(P2) Talents, endowments, interests, etc, at the outset are 'morally arbitrary.

(C) Thus, the initial distribution should be equal.

[Stage 2]

(P1) There is an unequal Pareto-optimal distribution that i) is strongly Pareto-superior to the initial equal distribution, and ii) is the most equal of the Pareto-optimal distributions.
```

Figure 4: Fisher and McClennen (2011)

Inequality Is Inherited Or Intrinsic: Some economists have also argued that parental inheritance operating through superior cognitive performance and educational attainments explains at most only three-fifths of the inter-generational transmission of economic status Bowles and Gintis (2002). Moreover, while genetic transmission of earnings-enhancing traits appears to play a role, the genetic transmission of IQ appears to be relatively unimportant. For instance, factors such as race (see next paragraph on race), geographical location, height, beauty or other aspects of physical appearance, health status and personality traits drive significant variation in income and wealth. It is certainly the case that such "luck" variables and individual traits govern labor market outcomes; however, the "so what" question remains. Clearly, some individual traits are preferred over others in the market. However, the implicit assumption or "agenda" in the work of Bowles and Gintis (2002) is that one ought to view unequal outcomes emerging from wealth/income inheritance as problematic which require social rectification but accept inequality driven by innate, cognitive ability.

High inequality is a natural consequence of free economic interaction in society (i.e the Smithian tendency to truck, barter, and trade) which creates exceptional wins for some players, average outcomes for many others and extreme failures for a few players in the market. Uneven distribution of income and wealth is also maintained by inherited capital across generations; it is indeed a privilege to inherit wealth from a wealthy businessman or to be born in a family which has a large-scale business empire. However, this is not much different from inheriting beauty, grooming and upbringing from parents which have significant labor market returns (see Mobius and Rosenblat (2006); Robins et al. (2011) for evidence). In fact, in the case of economic inheritance, owner's children inherit the financial value, net of taxation paid by the parent throughout their lives, which demolishes any argument for further tax on inheritance to reduce inequality. In some cases, depending on individual will, inherited wealth can and is distributed for social causes

and charity. However, the ultimate decision regarding the allocation of wealth, net of taxes must remain with the individual in a free society. I would say that depriving an individual from the fruits of his talent, labor, and inheritance of all types (wealth, beauty, or height) manifested through consensual, non-criminal, free market exchanges is morally unjustifiable.

The key drivers of not just economic growth but social progress in all domains are indeed exceptional people, not the ordinary people. This is contrary to the majoritarianism and dictatorship of "working class" posited by the left. There are many musicians but only few reach the upper echelons of society; there may be many sportsmen but only a few rise to the level of Sachin Tendulkar in cricket or Novac Djokovic in tennis; there are many economists but a few become Nobel Laureates; there are many businessmen but a few rise to become billionaires. In the domain of business, the effects of random business cycle fluctuations, market volatility, changing technology and consumer baskets create exogenous risks for profitability, orthogonal to the quality of internal management, investment strategies and vision of a businessman. In many other fields such as academia and sports, internal factors such as talent and motivation play a stronger role than in business.

Similarly, the Darwinian process of natural selection has selected for various forms of hierarchies within groups across species. For instance, alpha males emerge in the animal kingdom including primates; such social hierarchies with dominant male leaders organize and shape the society in vital ways. These alpha males are not necessarily the most violent in the group despite occasionally using physical aggression to assert leadership; they resolve group conflicts and maintain order Peterson (2002). This responsibility to lead the group does not come without its costs; while its common among the heterodoxy to denigrate the elite class for misusing its power, one must also realize that power comes with responsibility, incredible stress, vulnerability and not everyone possesses the ability to occupy these powerful positions. For instance, recent research shows that higher-ranking males experience higher testosterone and stress hormone levels than lower-ranking males in baboons Gesquiere et al. (2011). Thus, many aspects of inequality emerge naturally from the distribution of human abilities, willingness to pay the costs of leading the group, equilibrium outcomes necessary for resolving otherwise chaotic, ingroup conflicts hindering the collective good and progress of species. I am not advocating for the defunct theory of social Darwinism but using analogies and some hard-core evidence from evolutionary biology to argue for the desirability of highly unequal and hierarchical society, which is constantly dynamic and evolving before its extinction.

**Race and Inequality:** When evaluating racial differences in market outcomes, one must be cognizant of the underlying structural realities, owing to historical racial divisions (see Darity Jr et al. (2006)). The markets are reacting to not just pure biases but also the fact that race continues to be a predictor of talent and productivity in the USA for many employers due to the continuity of historical deprivation. Some economists such as William Darity have argued for affirmative action Darity Jr (2005) and even rectifying historical injustice through reparations. However, I completely disagree with this policy recommendation on philosophical and ethical grounds. There is no ethical justification for why an individual from white heritage should face differential treatment in 2023 based on atrocities committed by his alleged ancestors; indeed, how would you discriminate between the set of ancestors which were more damaging for the African Americans relative to others? I would even go further by questioning whether the slavery and exploitation of Africans can be treated as a crime, since modern sensibilities cannot be used to morally evaluate the past. At the time, slavery was normal and practiced by many other empires including the Islamic empire. What sets the West apart in history is the unprecedented abolition of slavery in 19th century after which it was perceived as a crime against human rights, an idea not invented by any religion or empire before this time. Hence, reparations imposed on the white community today is unethical, irrational, impractical ad historically ignorant. The past and its consequences must be used as motivation to minimize current and future discrimination. Re-creating the past and amending its consequences in the present simply adds fresh, new wounds in the social fabric and does not correct anything.

## 3.2. PIKETTY AND INEQUALITY

The work of French economist Thomas Piketty Piketty (2017) and affiliates such as Emmanuel Saez, Gabriel Zucman and others have received a lot of traction in the academic debate on inequality. Piketty and his co-authors argue that accumulation of capital, high returns on investment relative to growth i.e.,  $r \geq g$  and inheritance of wealth inequality has perpetuated and magnified inequality over time in many advanced economies after 1970's such as in Europe and USA. Wealth inequality in 2010 was found to be less than its value in 1900 AD for US and Europe but it has increased in the last 50 years. On the other hand, income inequality as per top 10%'s income share in the USA has increased after 1970 and is currently even higher than its estimated value in 1900 Chancel et al. (2022). While this research is valuable because it documents historical trends in inequality, it imposes an assumption that high inequality is necessarily an undesirable outcome which must be rectified. Besides, there are other theoretical problems with this research

discussed below.

Tax Havens: Within this research circle, interesting work has been done on tax avoidance, tax havens, and its role in perpetuating inequality. The fact that this work measures the international flow of capital, tax revenues across the world and corporate profits is a noteworthy empirical contribution. For instance, Clausing et al. (2021) demonstrate that during 1950 to 2019, effective corporate tax rate has fallen from 49 to 23% due to tax cuts in some foreign countries. Meanwhile, Tørsløv et al. (2023) predict that the location of corporate profits would change if all countries adopted the same effective corporate tax rate, keeping global profits and investment constant. Under this global regime, profits would increase by about 15% in high-tax European Union countries, 10% in the United States, while they would fall by 60% in today's tax havens. Zucman (2015) argues that by creating incentives which are legal within certain national boundaries, tax-haven driven nations "steal the revenue of foreign nations" Zucman (2015).

However, I disagree with the policy recommendations and normative conclusions drawn in this literature. For instance, Clausing et al. (2021) argue that a domestic tax penalty should be applied to firms which pay lower taxes due to globalized capital returns' reporting. This policy is likely to fail because tax havens benefit from low taxes offered to multinationals and this is part of their economic strategy to attract capital. This clash of incentives would lead to a failure of international collaboration. For instance, Luxembourg and Switzerland offer favorable tax deals to multinational companies. Clearly, their incentives and economic strategy clashes with the costs paid by the USA or South Asia in the form of lost capital flows. However, USA also creates incentives for migration due to its political power, cultural openness, exceptional universities, and its dynamic job market etc. Similarly, Asia creates incentives for big-capital investors due to lower cost of labor. Thus, incentives for investment are created by innovation, healthy business environment and investment in quality of labor rather than "pulling legs" of nations through bullying. The only way to offset this perceived "exploitation" by tax havens is to impose oppressive sanctions, war, or armed conflict against the tax havens. In the ultimate analysis, such a strategy would harm all the players involved in the international economy.

**Savings**  $\neq$  **Investment:** Furthermore, Soskice (2014) argues that the framework used in Piketty (2017) conflates the high levels of savings relative to growth after the 1970's as equivalent to a high capital to savings ratio. In reality, saving lead to investment through

businesses which are vulnerable to business cycle fluctuations and *creative destruction* (see Schumpeter (1942))<sup>12</sup>. In fact, the significant rise in wealth inequality was driven by property, and largely reflects house price inflation (see Bonnet et al. (2014)) rather than high returns on overall savings. Thus, high aggregate saving rates by the top 1% does not seamlessly translate into high investment returns. The actual economy is far more complex where firm death is actually very high for younger and less profitable firms in advanced economies McKenzie and Paffhausen (2019) and only a few business ventures qualify in the competition for excellence and survival in the market.

The Top Is In Flux: Moreover, while the top 1% may be winning in recent decades, the composition of top 1% is not static. For instance, Indian billionaire Adani lost more than \$110 billion USD due to accusations regarding fraud and stock manipulation. Adani is no longer in the list of Forbes' top 10 billionaires in 2023 and was previously 3rd in the list Lazarus (n.d.). Hence, the top 1% is in constant flux and battle within its competitive arena and nearby. The work of Piketty (2017) does not adequately account for this fluctuation within the elite and creates the image that top 1% share of economy is increasing as if the this is a homogeneous group.

### 3.3. INCENTIVES FOR INNOVATION

Inequality creates incentives and motivation for progress in the economy and society. Naturally, the *creative destruction* process in markets creates winners and losers leading to inequality of *outcomes*. However, this is not a static process as the winners of the Fordian world were not the same as winners of the knowledge economy age. In a free society, exceptional talent and hard work is rewarded not through coercion but through the collective will of the society, manifested through the market forces. For instance, Arthur Laffer made the classical argument that taxation creates disincentives for business growth (see Laffer (2004)) and hence, there is a Laffer curve which dictates the optimal level of taxation on profits, which is clearly less than 100%. Trabandt and Uhlig (2011) calculated the empirical properties of Laffer curve and demonstrated that the US can increase revenues by 30% (6%) if labor (capital) taxes are raised. For the EU, the numbers are 8% and 1% respectively In other words, increase in capital taxes does not lead to increase in tax-

<sup>&</sup>lt;sup>12</sup>Creative Destruction refers to the continuous product and process innovation mechanism by which new production units replace old ones. This restructuring defines major aspects of macroeconomic performance, not only long-run growth but also economic fluctuations. Over the long run, the process of creative destruction accounts for over 50 per cent of productivity growth in advanced economies Soskice (2014).

revenue beyond a very mild increase in taxes; thus, increase in capital tax is not going to translate into high tax revenues. This is especially true in the context of an international economy where capital-flight is attracted to locations where incentives for business are more palatable (see section 3.2 above).

When high value-added jobs such as artificial intelligence engineers for robots and ChatGPT, astrophysicists, and neurosurgeons are created, it increases the incentive for immigration in advanced economies from developing ones, and national labor force participation (opportunity cost of unpaid household work or leisure increases for women and aged population), making labor markets tighter for some jobs. These dynamics increase wages for high value occupations steeply, increasing inequality between less skilled and highly skilled workers (see Acemoglu (2002) and Acemoglu and Restrepo (2020)). Such changes in structure of demand for labor and flows in supply increase inequality but also create incentives to move away from low-performance sectors and invest in human capital for high paying jobs. Thus, inequality provides signals and information for changes in the labor market and how to optimally react to them. Without this functional role, labor markets will not adjust to the needs of an evolving society, hindering innovation and collective welfare.

In fact, inequality in and of itself is a peripheral issue; the real and relevant problems to solve are *absolute* poverty, pain, and disease. For instance, Northwestern University has recently done some path breaking research which has solved the blood-brain barrier, a major bottleneck which made it impossible to test 80 to 90% of chemotherapy drugs for brain cancer treatment Schoen Jr et al. (2022). Without excellent private universities such as Northwestern and Harvard University which create incentives through interaction with healthcare industry, revolutionary breakthroughs will be less attainable. Naturally, when market prices fall over-time and the innovation is re-produced by other producers and intellectual property rights/patents ease Kanwar et al. (2006), the distribution of returns to innovation will become more widespread and equitable. However, to encourage innovation, one must pay the "cost" of initial inequality in dispersion of benefits.

### 3.4. PROBLEMS WITH REDISTRIBUTION POLICIES

**Coase Theorem:** Another problem with the critique of unequal distribution emerging from markets is that there are various philosophical problems with any proposal to redistribute the outcomes of market forces. For instance, Ronald Coase proved the cele-

brated *Coase Theorem* (refer to Coase (1981)) which basically established that under certain assumptions, the initial distribution of property is irrelevant; the parties will resolve the conflict over distribution optimally assuming competitive and efficient markets along with *zero transaction costs*. Of course, this irrelevance theorem works under some assumptions<sup>13</sup> but completely defeats the purpose of redistribution. Even if reality somewhat approximates this abstract world, the initial distribution of property will have at the very least a tendency to redistribute itself toward optimal economic distribution. Hence, apart from the political and social costs of redistribution policies, they are inconsequential.

Hence, the focus of policy should be to create the economic atmosphere which minimizes fraud, prevents criminal land-grabbing in Pakistan, creates efficient transport infrastructure, efficient tax-collection process and optimal taxes as per Laffer curves for corporate sector, promotes liberalization of culture and political stability which allows the winners in markets to emerge, closely approximating the Coase Theorem where the initial distribution of wealth would be close to irrelevant and market forces would reign supreme.

**Leaky Buckets:** The result of distribution is generalization of what Okun (1975) called redistribution in *leaky buckets:* i.e., that the net benefit to the recipient may fall considerably short of the loss to those paying the costs of redistribution. In a democracy, such leaky buckets also make it more difficult to secure government support for egalitarian redistribution programs since those who lose from redistribution policies resist this arrangement. The losers of such policies are not the mythical top 1% which has captured the public and intellectual imagination but the vast number of middle-class families which lose the most from such redistribution with leaky buckets.

For instance, consider the much-celebrated Benazir Income Support Program (BISP) in Pakistan. While the aggregate redistribution dispersal through this program amounted to 90 billion Pakistani rupees in 2016, given the leakages through bureaucratic red tape, corruption, costs of implementation, payment of merely 9000 per quarter to individual family as of 2023, it is not clear that net-benefits to poor outweigh the costs to the society at large. For instance, there is evidence that only 50 to 60 percent of beneficiaries receive cash payments from BISP Ahmad (2018). Furthermore, I think the whole philosophy of cash transfers is flawed; rather than addressing structural problems of society such as low participation of women in labor markets of Pakistan and creating markets in do-

<sup>&</sup>lt;sup>13</sup>Participants must only care about economic returns and have no sentimental value attached to initial property or to social equity and other non-pecuniary incentives. There must be perfect and symmetric information.

mains where there are market-gaps, a meager amount is transferred to poor households, equivalent to collection made by beggars in a week or less. Even promoters of BISP argue that this is only an income support program and not a substitute for actual jobs, they fail to recognize that BISP encourages dependence on government for basic survival and hinders long-term structural solutions through markets.

In a democracy, such leaky buckets also make it more difficult to secure government support for egalitarian redistribution programs like BISP, since those who lose from redistribution policies resist this arrangement. The losers of such policies are not the mythical top 1% which has captured the public and intellectual imagination but the vast number of middle-class families which lose the most from such redistribution with leaky buckets.

### 3.5. SUCCESSFUL CITIES CREATE INEQUALITY

The urban economics literature demonstrates that cities tend to arise at *focal points* in the transportation space such as harbors, rivers or highways. This is primarily driven by the lower transportation costs due to economies of scale, stemming from concentration of trade volumes (see Brueckner (2011)) in big cities. Hence, cities emerge as epicenters of trade and focal points for firms and exchange of ideas. Resembling a chain reaction in physics, workers are attracted by firms and when population increases, demand for various household items, schooling, and health increases, which creates spillover effects and expands the economic scope of the city. Often certain kind of production clusters emerge in specific cities; for instance, Pittsburgh in USA became a center for steel production and Chicago for meat packing. In Pakistan, Sialkot has a sports goods and leather production cluster, Lahore has food, garments, education and textile cluster, Gujranwala has an electronics and machinery cluster, and Karachi has many clusters, the most noticeable of which is the financial sector (see Azhar and Adil (2019)). Economists call these agglomeration economies and economies of scale Glaeser (2013).

We know that in the United States, workers in metropolitan areas with big cities earn 30 percent more than workers who are not in metropolitan areas Glaeser (2008). The only reason why companies put up with the high labor and land costs in mega cities is that the city creates productivity advantages that offset those costs. For instance, Americans who live in metropolitan areas are on average, more than 50 percent more productive than Americans who live in smaller metropolitan areas Glaeser (2013). Consequently, the income gap between urban and rural areas is large in advanced economies and even stronger in poorer nations. Across countries, reported life satisfaction also rises with the

share of population that lives in cities, controlling for country level income and education. Thus, if an artificial attempt is made to reduce inequality, it will stifle the evolution of winner cities by distorting the incentives to locate and work in them. As a result, inequality may fall but economic growth will suffer, and human potential will not be realized completely.

#### 3.5.1. Cities in Pakistan

The ten major cities of Pakistan contribute around 95% of the total federal tax revenue in the country: this includes the direct and indirect taxation Habitat (2018). In the table below, I report the federal tax revenue share for each of the top 10 cities in addition to the per capita income and poverty rate in these cities. It turns out that Karachi has the highest contribution in federal tax revenue, followed by Islamabad and Lahore. Surprisingly, the per capita income in Rawalpindi is the highest, followed by Islamabad, Peshawar, Lahore, Karachi and Faisalabad. As far as urban poverty is concerned, it is the highest in Quetta (46.3%) and lowest in Islamabad (3.1%), Lahore (4.3%) and Karachi (4.5%) Habitat (2018).

In the figure below, I provide a visual and graphic representation of the top 10 cities in Pakistan which are represented by a dark-red color. The caption includes population ranges in millions, where Karachi has a population above 10 million and is hence represented by the largest circle. Lahore is another large city with a population of more than 6 million and Quetta is the smallest city among the top 10 with a population of close to 1 million people. Clearly, the economic activity is concentrated in these mega-cities which creates economic inequality between urban and rural areas and inequality between winner cities such as Karachi and "runners-up" cities such as Hyderabad, Multan, and Gujranwala and "loser" regions such as South Punjab and Southern Sindh (e.g., Thatta, Sujawal, and Badin) in Pakistan.

Table 4: Pakistan Cities' Contribution to Federal Tax Revenue and Income

City	Federal Tax Share	Per Capita Income	<b>Poverty Rate</b>
Karachi	55%	56,000	4.5%
Lahore	15.1%	60,000	4.3%
Faisalabad	1%	56,000	19.4%
Rawalpindi	2%	82,000	7.5%
Gujranwala	0.5%	43,000	14%
Peshawar	2%	67,000	31.5%
Multan	2.9%	44,000	35.7%
Hyderabad	0.9%	55,000	25%
Islamabad	16%	70,000	3.1%
Quetta	0.9%	37,000	46.3%

Source: FBR Year Book 2014-2015 and Habitat (2018)

In the next figure, I present a map, distinguishing 8 administrative units by colors such as Sindh in dark green and Punjab in light green. Apart from these units, 32 administrative divisions are represented by area segmentation within provinces for divisions. For the top 10 cities, the graph shows contribution in percentage toward national GDP. For instance, Karachi from Southern Sindh has 20% contribution to GDP, Lahore has 11.5% contribution and 1.1% for Quetta. Despite the high population density in top cities, a majority of Pakistan's population does not live in these top 10 cities. In fact, the combined population of Karachi and Lahore is less than 15% of Pakistan's population but the share of national GDP coming from only these two cities is more than 30%.

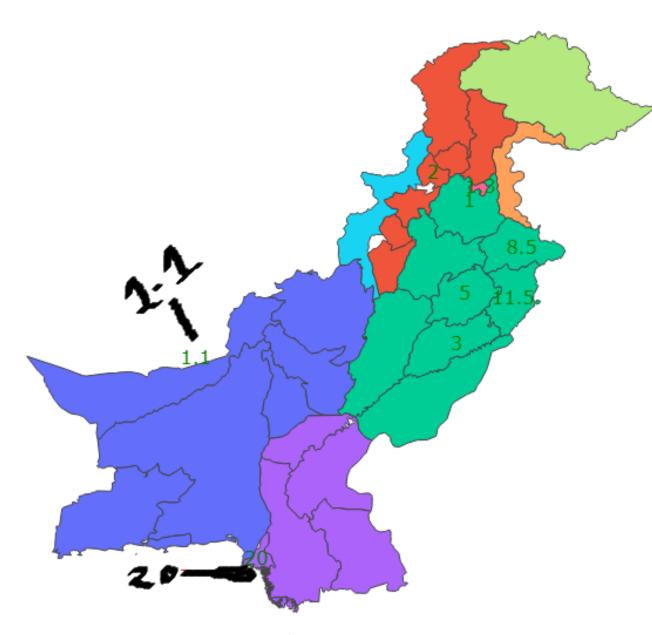


Figure 5: GDP Contributions of Top 10 Divisions (%).

## 4. CONCLUSION

The main objective of this discursive work is to present an extensive literature review and critically evaluate the arguments inequality and present arguments for inequality.

I take a more pragmatic perspective on the issue and point out that social conditions which lead to inequality are desirable relative to some alternatives. I argue that inequality

itself is also desirable to create incentives and the material conditions for progress. Moreover, there is no morally unquestionable technique available for dividing the pie and hence, it is better to let the distribution issue to addressed by natural evolution of markets and the society. Often, the policies typically suggested to reduce inequality such as minimum wages or high progressive taxation leads to capital flows away from economies which are unfavorable for business. Thus, redistribution policies are destructive for the poorest segments of society in the long-run and are democratically resisted by the huge middle-class rather than the top 1%.

Given the unprecedented, historical success of capitalism in increasing life-expectancy, welfare and reducing poverty, one should appreciate the hitherto organization of society and economics. Idealism must be weeded out and so should the romanticism and an unrealistic, starry-eyed vision for equity and "social justice" warfare against inequality. Rather, one should focus on innovation and technological progress which will solve the problems of 21st century such as finding a cure for cancer, developing technology for reducing carbon-emissions from production and transportation of goods and people and facilitating inter-cultural exchange in an increasing global society and economy. Such innovation will create new winners and losers; this may increase inequality and can even reduce it as the raw-material of knowledge gets widely distributed; however, it will benefit the bulk of population in long-run relative to their previous positions.

### REFERENCES

- **Acemoglu, Daron**, "Technical change, inequality, and the labor market," *Journal of economic literature*, 2002, 40 (1), 7–72.
- \_ and Pascual Restrepo, "Robots and jobs: Evidence from US labor markets," *Journal of political economy*, 2020, 128 (6), 2188–2244.
- **Ahmad, Shahzad**, "Can BISP be used for Poverty Reduction?," *Journal of History Culture and Art Research*, 2018, 7 (3), 713–723.
- **Armytage, Rosita**, *Big Capital in an Unequal World: The Micropolitics of Wealth in Pakistan*, Vol. 29, Berghahn Books, 2020.
- **Atkinson, Anthony B**, *Inequality: What can be Done?*, Harvard University Press, 2015.
- **Azhar, Annus and Shahid Adil**, "The effects of agglomeration on socio-economic outcomes: A district level panel study of Punjab," *The Pakistan development review*, 2019, pp. 159–176.
- Bonnet, Odran, Pierre-Henri Bono, Guillaume Flamerie de La Chapelle, and Etienne Wasmer, "Does Housing Capital Contribute to Inequality? A Comment on Thomas Piketty's Capital in the 21st Century," *Working Paper*, 2014.
- **Bowles, Samuel**, *The New Economics of Inequality and Redistribution*, Cambridge University Press, 2012.
- \_ **and Herbert Gintis**, "The Inheritance of Inequality," *Journal of Economic Perspectives*, 2002, 16 (3), 3–30.
- **Brueckner**, Jan K, Lectures on urban economics, MIT press, 2011.
- Burki, Abid A, Arsalan Hussain, and Kinza Emad Khan, "Exploring the Extent of Selected Dimensions of Inequality in Pakistan," 2020.
- \_\_, **Arsalan Khan Hussain, and Kinza Emad**, "Why Do Income and Wealth Inequalities Matter for Pakistan?," 2021.
- **Burki, Abid Aman, Rashid Memon, and Khalid Mir**, "Multiple Inequalities and Policies to Mitigate inequality Traps in Pakistan," 2015.
- Chancel, Lucas, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman, World inequality report 2022, Harvard University Press, 2022.
- Clausing, Kimberly A, Emmanuel Saez, and Gabriel Zucman, "Ending Corporate Tax Avoidance and Tax competition: A Plan to Collect the Tax Deficit of Multinationals," *UCLA School of Law, Law-Econ Research Paper*, 2021, (20-12).
- **Coase, Ronald H**, "The Coase theorem and the empty core: a comment," *The Journal of Law and Economics*, 1981, 24 (1), 183–187.

- **Deaton, Angus**, *The Great Escape: Health, Wealth, and the Origins of Inequality*, Princeton University Press, 2013.
- **Fisher, ARJ and Edward F McClennen**, "The Pareto Argument for Inequality Revisited," 2011.
- **Friedman, Milton**, "The fragility of freedom," *Brigham Young University Studies*, 1976, 16 (4), 561–574.
- Friedrich, Carl J, "The Road to Serfdom," 1945.
- Gesquiere, Laurence R, Niki H Learn, M Carolina M Simao, Patrick O Onyango, Susan C Alberts, and Jeanne Altmann, "Life at the top: rank and stress in wild male baboons," *Science*, 2011, 333 (6040), 357–360.
- **Glaeser, Edward**, "Triumph of the city: How our greatest invention makes us richer, smarter, greener, healthier, and happier," *New York, NY: Penguin Books. doi*, 2013, 10, 1726–3247.
- **Glaeser, Edward L**, Cities, Agglomeration, and Spatial Equilibrium, OUP Oxford, 2008.
- **Habitat, UN**, State of Pakistan Cities Report 2018, United Nations (UN) Habitat, Pakistan, 2018.
- Jr, Scott Schoen, M Sait Kilinc, Hohyun Lee, Yutong Guo, F Levent Degertekin, Graeme F Woodworth, and Costas Arvanitis, "Towards controlled drug delivery in brain tumors with microbubble-enhanced focused ultrasound," *Advanced Drug Delivery Reviews*, 2022, 180, 114043.
- **Jr, William A Darity, Patrick L Mason, and James B Stewart**, "The economics of identity: the origin and persistence of racial identity norms," *Journal of Economic Behavior & Organization*, 2006, 60 (3), 283–305.
- **Jr, William Darity**, "Affirmative action in comparative perspective: Strategies to combat ethnic and racial exclusion internationally," *University of North Carolina*. Chapel Hill, 2005.
- **Kanwar, Sunil et al.**, "Innovation and intellectual property rights," *Center for development economics working paper*, 2006, 142.
- **Laffer, Arthur B**, "The Laffer curve: Past, present, and future," *Backgrounder*, 2004, 1765 (1), 1–16.
- Lazarus, Neville, "India's Richest Man Gautam Adani loses \$100bn in Less than a Week."
- Maddison, Angus, The World Economy, OECD publishing, 2006.
- McKenzie, David and Anna Luisa Paffhausen, "Small Firm Death in Developing Countries," *Review of economics and statistics*, 2019, 101 (4), 645–657.

- **Mobius, Markus M and Tanya S Rosenblat**, "Why beauty matters," *American Economic Review*, 2006, 96 (1), 222–235.
- Nozick, Robert, Anarchy, State, and Utopia, Vol. 5038, New York: Basic Books, 1974.
- **Okun, Arthur**, "The Big Trade-Off: Efficiency versus Equality," *Brookings Institution, Washington DC*, 1975.
- **Pasha, Hafiz**, Pakistan National Human Development Report: The Three P's of Inequality: Power, People and Policy, United Nation's Development Program, Pakistan, 2020.
- **Peterson, Jordan B**, *Maps of meaning: The architecture of belief*, Routledge, 2002.
- **Piketty, Thomas**, "Capital in the Twenty-First Century," in "Capital in the Twenty-First Century," Harvard University Press, 2017.
- \_ , *A Brief History of Equality*, Harvard University Press, 2022.
- Rawls, John, A Theory of Justice, Harvard University Press, 1971.
- **Robins, Philip K, Jenny F Homer, and Michael T French**, "Beauty and the labor market: Accounting for the additional effects of personality and grooming," *Labour*, 2011, 25 (2), 228–251.
- Roser, Max, Pablo Arriagada, Joe Hasell, Hannah Ritchie, and Esteban Ortiz-Ospina, "Economic Growth," *Our World in Data*, 2023. https://ourworldindata.org/economic-growth.
- Sanders, Bernie, "It's OK to Be Angry About Capitalism," 2023.
- Schumpeter, Joseph A, "Capitalism, Socialism and Democracy, 1942," 1942.
- **Solt, Frederick**, "The Standardized World Income Inequality Database," *Social Science Quarterly*, 2016, 97 (5), 1267–1281.
- **Soskice, David**, "Capital in the Twenty-First Century: a Critique," *The British journal of Sociology*, 2014, 65 (4), 650–666.
- **Stiglitz, Joseph**, "The Price of Inequality: How Today's Divided Society Endangers Our Future," 2012.
- **Tørsløv, Thomas, Ludvig Wier, and Gabriel Zucman**, "The Missing Profits of Nations," *The Review of Economic Studies*, 2023, 90 (3), 1499–1534.
- **Trabandt, Mathias and Harald Uhlig**, "The Laffer curve revisited," *Journal of Monetary Economics*, 2011, 58 (4), 305–327.
- **Trends, Google**, "Search For Economic Inequality in the USA: 2004 to 2023," Technical Report, Google 2023.

**ud Din, Ghulam Mohey**, "Exploring Spatial Trends in Wealth Inequalities in Punjab, Pakistan," *Pakistan Journal of Urban Affairs*, 2017, 1 (6), 45–57.

**Zucman, Gabriel**, *The Hidden Wealth of Nations: The Scourge of Tax Havens*, University of Chicago Press, 2015.