

THE PRICE OF INEQUALITY: HOW TODAY'S DIVIDED SOCIETY ENDANGERS OUR FUTURE

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Growing inequality within most countries around the world is one of the critical issues facing the world today. People everywhere sense that it is morally wrong. We sense that it cannot be justified. We sense that it is dividing our societies and undermining our democracies. And we are right in sensing this harm.

These effects of inequality should be more than enough to steel the resolve to do something to reduce growing inequality. But even if one didn't care about these effects, there are further reasons to fight inequality. It is self-defeating: it undermines our economies.

In this short paper, I want to do two things: First, I will describe the nature of this growing inequality, its multiple dimensions, and say a few words about its origins, explaining why it has such adverse effects, and arguing that this inequality is not inevitable: it is a result of policies and politics. There are policies that would simultaneously reduce inequality, heal some of the divides in our societies, and strengthen our economies. Then, I turn to the main focus of this conference – the environment – and explore its relationship to inequality.

This paper takes a global perspective with a special focus on the United States, simply because America has achieved the distinction of becoming the country with the highest level of income inequality among the advanced countries. As others have followed America's lead, they too have suffered increasing inequality.

I. The multiple dimensions of inequality in America, and its lessons for the world

There is no single number that can depict all aspects of society's inequality, but matters have become worse in every dimension. *Income* inequality is one of the most obvious indicators: In the United States, more than a fifth of all income goes to the top 1%.² This is a level of income concen-

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² See Emmanuel Saez, "Striking it Richer: The Evolution of Top Incomes in the United States" (Updated with 2012 preliminary estimates), September 3, 2013. Accessed on June 11, 2014 from <http://eml.berkeley.edu/~saez/saez-UStopincomes-2012.pdf>

tration that, until the 2000s, the United States had not experienced since before the Great Depression. It is twice the proportion of 30 years ago, and it is getting worse. Since the so-called recovery began after the Great Recession of 2008–2009 – in other words, since the U.S. economy returned to growth – 95% of the gains in income have gone to the top 1%.³ Even within the top 1%, there is inequality, with ultra-high income earners in the top 0.1% taking home some 11.3% of total income in 2012, which is some three to four times the number thirty years ago.⁴

Wealth in America is far more concentrated than income. The wealthiest 1% of Americans hold 35% of the wealth, and even more when housing wealth is not counted.⁵ This too is on the upswing. For the quarter century before the Great Recession, the rich were getting wealthier at a more rapid pace than everyone else. When the crisis hit, it depleted some of the richest Americans' wealth because stock prices declined, but many Americans also had their wealth almost entirely wiped out as their homes lost value. After the crisis, the wealthiest 1% of households had 225 times the wealth of the typical American in 2009, almost double the ratio 30 or 50 years ago.⁶ (Just one example of the extremes of wealth in America is the Walton family: the six heirs to the Wal-Mart empire command wealth of \$90 billion, which is equivalent to the wealth of the entire bottom 42% of U.S. society.⁷ The numbers may not be as surprising as they seem, simply because those at the bottom have so little wealth).

Inequality in America plays out along ethnic lines in ways that should be disturbing for a country that had begun to see itself as having won out against racism. Between 2005 and 2009, a huge number of Americans saw their wealth drastically decrease. The net worth of the typical white American household was down substantially, to \$113,149 in 2009, a 16% loss of wealth from 2005. That's bad, but the situation is much worse for other groups. The typical African American household has lost 53% of its wealth

³ Ibid.

⁴ See Alvaredo, Facundo, Anthony B. Atkinson, Thomas Piketty and Emmanuel Saez, "The World Top Incomes Database", <http://topincomes.g-mond.parisschoolofeconomics.eu> Accessed on 06/12/2014.

⁵ See Wolff, Edward N. "The Asset Price Meltdown and the Wealth of the Middle Class", *NBER Working Paper No. 18559*, November 2012.

⁶ See Allegretto, Sylvia A., "The State of Working America's Wealth", 2011, *EPI Briefing Paper #292*.

⁷ See for example Josh Harkinson, 2012, "6 Walmart Heirs Hold More Wealth Than 42% of Americans Combined", *Mother Jones*, July 18, available at <http://www.mother-jones.com/mojo/2012/07/walmart-heirs-waltons-wealth-income-inequality>

– putting its assets at a mere 5% of the median white American's. The typical Hispanic household has lost 66% of its wealth.⁸ In the years of “recovery”, as stock market values rebounded (in part as a result of the Fed's lopsided efforts to resuscitate the economy through increasing the balance sheet of the rich), the rich have regained much of the wealth that they had lost; but this is not the case for the rest of the country.⁹

At the same time that income has become ever more concentrated at the top in the United States, more people are in poverty at the bottom. Some 22% of American children live below the federal poverty level. The inflation-adjusted median income of an American male worker with only a high school degree has fallen by 47% from 1969 to 2009.¹⁰

Equally disturbing, there has been a hollowing out of the middle class – long the core strength of the societies of countries with advanced economies – which has seen its income stagnate. Median household income in the United States, adjusted for inflation, is lower today than it was in 1989, a quarter century ago. For large segments of the American population, matters are even worse. A full-time male worker today makes less than 40 years ago.

This recession has made the plight of those in the bottom and middle far worse. For most, there is no recovery. Still, the data just presented should make clear that the problems of inequality pre-date the crisis.

An economy in which most citizens see no progress, year after year, is an economy that is failing to perform in the way it should. Indeed, there is a vicious circle: the high inequality in the United States and other wealthy

⁸ See Paul Taylor, Rakesh Kochhar, Richard Fry, Gabriel Velasco, and Seth Motel, 2011, “Wealth Gaps Rise to Record Highs Between Whites, Blacks and Hispanics”, Pew Research Center report, available at http://www.pewsocialtrends.org/files/2011/07/SDT-Wealth-Report_7-26-11_FINAL.pdf

⁹ That this is the case can be clearly seen by examining what has happened to different kinds of wealth since the end of the crisis. Stocks, which are disproportionately owned by the wealthy, have done very well. Stock market values in the United States increased \$13 trillion from January 2009 to December 2013, according to data from the Center for Research in Security Prices. Meanwhile, home values, which account for much of middle class wealth, have not enjoyed a strong recovery: one fifth of American homes were still underwater as of Spring 2014 – their owners owe more on their mortgages than the market says their houses are worth. For a concise discussion of this, see “What Housing Recovery?” by Peter Dreier, *The New York Times*, May 8, 2014, available at http://www.nytimes.com/2014/05/09/opinion/what-housing-recovery.html?ref=opinion&_r=0.

¹⁰ US Census Bureau, Census Table P-5. Census historical table P-5 available at <http://www.census.gov/hhes/www/income/data/historical/people/> Accessed on June 12, 2014.

countries is one of the major contributing factors to their weak economies and low growth, a theme to which I will return later in this paper.

As disturbing as the data on the growing inequality in income are, those that describe the other dimensions of America's inequality are even worse. There are, for instance, marked inequalities in health, reflected in differences, for instance, in life expectancy. The poor are exposed more, too, to environmental hazards. What is particularly disturbing is the large numbers of Americans who do not have access to the basic necessities of life. Until the American Affordable Care Act, more than a sixth of Americans had no health insurance. Even though about one in seven Americans now depend on the government for basic food, a comparable number still go to bed hungry every year, not because they are on a diet, but because they or their families cannot afford adequate nutrition.

Perhaps the most invidious aspect of inequality is that affecting opportunity. Equality of opportunity – the “American dream” – has always been a cherished American ideal. But data now show that this is a myth: America has become the advanced country not only with the highest level of inequality, but one of those with the least equality of opportunity. The life prospects of a young American are more dependent on the income and education of his parents than in other developed countries. We have betrayed a fundamental value. And the result is that we are wasting a most valuable resource, our human resources: millions of those at the bottom are not able to live up to their potential.

A number of studies have noted the link between inequality of outcomes and inequality of opportunity. When there are large inequalities of income, those at the top can buy privileges for their children that are not available to others, and they often come to believe that it is their right and obligation to do so. And, of course, without equality of opportunity, those born in the bottom of the distribution are likely to end up there: inequalities of outcomes perpetuate themselves. For the United States, this should be deeply troubling: given the low level of equality of opportunity and the high level of inequality of income and wealth, it is possible that the future will be even worse, with still further increases in inequality of outcome and still further decreases in equality of opportunity.

America has been “winning” the race to be the most unequal country (at least among developed countries). But unfortunately, much of what I have just described for America has been going on elsewhere. The more countries follow the American model, the more the results seem to be consistent with what has occurred in the United States. The United Kingdom has now achieved the second highest level of inequality among the coun-

tries of Western Europe and North America, a marked change from its position before the Thatcher era. Germany, which had been among the best performers within the Organisation for Economic Co-operation and Development (OECD), now ranks in the middle. Most disturbing are the patterns that have emerged in the economies of transition, which at the beginning of their movements to a market economy had low levels of inequality in income and wealth (at least according to available measurements). Today, China's inequality of income, as measured by its Gini coefficient, is roughly comparable to the inequality of the United States and of Russia.¹¹ Across the OECD, since 1985 the Gini has increased in 17 of 22 countries for which data is available – often dramatically.¹²

Today, I want to make several observations concerning the growing inequality that I have just described.

1. The first observation is that this inequality is largely a result of policies. The laws of economics are universal: the fact that in some countries there is so much less inequality and so much more equality of opportunity, the fact that in some countries inequality is not increasing – it is actually decreasing – is not because they have different laws of economics. France and Norway are examples of OECD countries that have managed by and large to resist the trend of increasing inequality; Brazil and several other Latin American countries have actually managed to reduce the level of inequality, albeit from a very high level. The Scandinavian countries have a much higher level of equality of opportunity, regardless of how that is assessed. The European countries with public health care systems succeed much better in achieving equality of health outcomes.

Every aspect of our economic, legal, and social frameworks helps shape inequality: from the education system and how it is financed, to the health system, to tax laws, to our governing of bankruptcy, corporate

¹¹ Some caution should be exercised in comparing different countries' Gini coefficients: in addition to the well-known flaws in the measure, different databases have used slightly different methodologies or income data to arrive at their respective figures, and thus figures are different depending on the data source. Nevertheless, many different studies confirm these broad trends.

¹² See Organisation of Economic Co-operation and Development, 2011, *Divided We Stand*, OECD Publishing, available at <http://www.oecd.org/social/soc/dividedwestand-whyinequalitykeepsrising.htm>

governance, the functioning of our financial system, to our anti-trust laws. In virtually every domain, the United States, for instance, has made decisions that help enrich the top at the expense of the rest.

2. The second observation entails looking at the current levels of inequality in a historical context. While I have emphasized the growth of inequality in the last third of a century, Thomas Piketty in his recent book notes that the preceding four decades should perhaps be viewed as an historical anomaly: we are returning to the high levels of inequality that prevailed in the 19th century and in the 20th in the years before the Great Depression. Piketty concludes that inequality is likely to get worse.¹³ I will comment on this forecast later. But his analysis has some profound implications: it means that Kuznets's optimism that increasing inequality in the initial process of development gives way to a decrease (an idea referred to as the Kuznets curve),¹⁴ may well be wrong. Countries should not accept increasing inequality today, in the blind faith that it will eventually be reversed.
3. The third observation is that much of the inequality at the top cannot be justified as "just deserts" for the large contributions that these individuals

¹³ Thomas Piketty, 2014, *Capital in the Twenty-First Century*, Cambridge, Massachusetts: The Belknap Press of Harvard University Press. He notes, that there are policies – namely global capital taxation – that might prevent the ever increasing level of wealth inequality. As I note below (and have discussed more fully in Joseph E. Stiglitz, 2012, *The Price of Inequality: How Today's Divided Society Endangers Our Future*, New York: W.W. Norton) there are many policy reforms that will reduce inequality, and many of these reforms would actually improve economic performance.

Many years earlier, I had analyzed the long run evolution of wealth inequality in the economy, showing that there was, in fact, some presumption that the economy would converge towards an equilibrium wealth distribution (rather than that there would be ever more increasing inequality of wealth). Changes in the structure of the economy would, of course, shift the equilibrium wealth distribution. I identified some of the key parameters, changes in which could lead to an increase in wealth inequality. See J.E. Stiglitz, 1969, "Distribution of Income and Wealth Among Individuals", *Econometrica*, 37(3): 382-397. (Presented at the December 1966 meetings of the Econometric Society, San Francisco).

For an update and elaboration on these issues, see J.E. Stiglitz, "Distribution of Income and Wealth Among Individuals: Theoretical Perspectives", paper presented to World Bank/International Economic Association Roundtable, Dead Sea, Jordan, June 11, 2014.

¹⁴ Simon Kuznets, 1955, "Economic Growth and Income Inequality", *American Economic Review* 45(1): 1-28.

have made. If we look at those at the top, they are not those who have made the major innovations that have transformed our economies and societies; they are not the discoverers of DNA, the laser, the transistor; not the brilliant individuals who made the discoveries without which we would not have had the modern computer. Disproportionately, they are those who have excelled in rent seeking, in wealth appropriation, in figuring out how to get a larger share of the nation's pie, rather than enhancing the size of that pie. (Such rent seeking activity typically actually results in the size of the economic pie shrinking from what it otherwise would be). Among the most notable of these are, of course, those in the financial sector, some of whom made their wealth by market manipulation, by engaging in abusive credit card practices, predatory lending, moving money from the bottom and middle of the income pyramid to the top. So too, a monopolist makes his money by contracting output from what it otherwise would be, not by expanding it.

The inaptness of the "just deserts" argument was shown by the Great Recession, a recession which in no small measure was caused by the financial sector, which itself is responsible for so much of the inequality today. Even as they were bringing their firms and the global economy to the brink of ruin, the managers of these firms walked off with multimillion dollar bonuses.

The notion that large fractions of today's inequality are associated with rent seeking is supported by a look at the composition of the wealthiest and top income earners. But there is additional evidence. Three striking aspects of the evolution of the American economy (and the economies of other wealthy countries) in the last 35 years are (a) the increase in the wealth-to-income ratio; (b) the stagnation of median wages; and (c) the failure of the return to capital to decline. Standard neoclassical theories, in which "wealth" is equated with "capital", would suggest that the increase in capital should be associated with a decline in the return to capital and an increase in wages. The failure of wages to increase has been attributed by some (especially in the 1990s) to skill-biased technological change, which increased the premium put by the market on skills. Hence, those with skills saw their wages rise, and those without skills saw them fall. But recent years have seen a decline in the wages paid even to skilled workers. Something else must be going on. While in production functions with multiple inputs (say multiple kinds of labor), an increase in capital does not necessarily increase the wages of each type of labor (capital and unskilled labor can be substitutes rather than complements), if the production function exhibits constant returns

to scale (a standard assumption in neoclassical theory), then the average wage must increase.¹⁵ This does not seem to be happening.

There are two alternative explanations. The first is that rents are increasing (the fraction of income that is appropriated by monopolists and by other forms of exploitation). These rents are captured by (large) owners of capital, and since they are, at least in part, marketable, the present discounted value of these rents themselves become part of “wealth”. But an increase in this form of wealth does not lead to an increase in the productivity of the economy – or to an increase in the average wage of workers; to the contrary, it reduces the amounts received.

The second is that there may be other assets – like land – that can increase in value. These assets may not be very directly related to the production of goods and services,¹⁶ and indeed, with more wealth invested in these assets, there may be less invested in real productive capital. (A disproportionate part of America’s savings in the years before the crisis went into the purchase of housing, which did not increase the productivity of the “real” sectors of the economy).

Monetary policies that lead to low interest rates can increase the present value of these fixed assets – an increase in the value of wealth that is unaccompanied by any increase in the flow of goods and services. By the same token, a bubble can lead to an increase in wealth – for an extended period of time – again with possibly adverse effects on the stock of “real” capital. Indeed, it is easy for capitalist economies to generate such bubbles (a fact that should be obvious from the historical record,¹⁷ but which has been confirmed in theoretical models).¹⁸ There has been a “correction” in the housing bubble (and in the underlying price of land); but we should not be confident that there has been a *full* correction. We still may be on a “bubble” trajectory.

¹⁵ Assume a constant returns to scale production function with two types of labor, L_1 and L_2 . Then $F_{L_1}L_1 + F_{L_2}L_2 + F_KK = F$, so $F_{L_1K}L_1 + F_{L_2K}L_2 + F_{KK}K = 0$, from which it follows immediately that the average wage must increase when capital is increased.

¹⁶ Though they may be reflected in GDP, and may be related in particular to the value of housing services.

¹⁷ See Carmen Reinhart and Kenneth Rogoff, 2009, *This Time Is Different: Eight Centuries of Financial Folly*, Princeton, NJ: Princeton University Press.

¹⁸ See, for instance, Karl Shell and Joseph E. Stiglitz, 1967, “Allocation of Investment in a Dynamic Economy,” *Quarterly Journal of Economics*, 81: 592–609, and Frank Hahn, 1966, “Equilibrium Dynamics with Heterogeneous Capital Goods,” *Quarterly Journal of Economics* 80: 633–46.

Still another piece of evidence supporting the importance of rent-seeking is that showing that increases in taxes at the very top do not result in decreases in growth rates. If these incomes were a result of their *efforts*, we might have expected those at the top to respond by working less hard, with adverse effects on GDP.¹⁹

Piketty's recent research has emphasized a different aspect of the "just deserts" argument: the increasing fraction of inequality arising from inheritance.

4. The idea that one shouldn't worry about inequality – because everyone will benefit as money trickles down – has been thoroughly discredited. In some ways, it would be nice if it were true, because it would mean that the average American would be doing very well today, since the country has been thrown so much money at the top. But the statistics show that trickle-down is a fallacy: while the top has been doing very well, the rest has been stagnating.

In the absence of a change in the degree of inequality, if mean income (GDP) increases, everyone can benefit. But I emphasized above that there has been a large increase in inequality, and this gives rise to an increasing disparity between the mean and the median, between what is happening on average, and what is happening to the typical individual. Those at the very top, in the 1% or the .1%, can see their income increase; while incomes for the bottom 99% (or the bottom 99.9%) can actually decrease. That is what has been happening. An economic system that only delivers for the very top is a failed economic system. If the failures were of a short duration, that would be one thing. But they have been persistent – and there is no evidence of a turnaround.

5. Some go further: it is not just that everyone will benefit from trickle-down, but inequality is actually necessary for growth. One of the popular misconceptions is that those at the top are the job creators; and giving more money to them will thus create more jobs – and indeed this is the only way by which jobs can be created. This view, I believe, is fundamentally wrong: America and other countries are full of creative entrepreneurial people throughout the income distribution. What creates jobs is *demand*: when there is demand, firms (especially if the financial system could be made work in the way it should, providing credit to small and medium-sized enterprises) will create the jobs to satisfy that demand. But

¹⁹Thomas Piketty, Emmanuel Saez, and Stefanie Stantcheva, 2011, "Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities", *American Economic Journal* 6(1): 230-271.

in the United States, for example, the distorted tax system provides incentives for those at the top to destroy jobs by moving them abroad.

6. In contrast to those who believe that inequality is necessary for good economic performance, recent research has shown that inequality – when it gets to the level that characterizes the US and some other countries and when it is generated in the manner that it is created in the US and some other countries – is bad for growth, stability, and economic efficiency. This was the central thrust of my book *The Price of Inequality*, where I argued that inequality was not just a moral issue, but an economic one – we were paying a high price for our inequality. This view has now become mainstream, and the IMF has produced research supporting it, and endorsed it. Thus, the IMF finds that countries with greater inequality tend to be marked by lower growth and greater instability.²⁰

Economists used to think of there being a trade-off: we could achieve more equality, but only at the expense of giving up on overall economic performance. Now we realize that, especially given the extremes of inequality achieved in the United States and the manner in which inequality is generated, greater equality and improved economic performance are *complements*. By the same token, one of the reasons for the poor economic performance in many countries in recent years is the high and growing level of inequality.

This is especially true if we focus on appropriate measures of growth. If we use the wrong metrics, we will strive for the wrong things. Economic growth *as measured by GDP* is not enough – there is a growing global consensus that GDP does not provide a good measure of overall economic performance. What matters is whether growth is sustainable, and whether *most* citizens see their living standards rising year after year. This is the central message of the International Commission on the Measurement of Economic Performance and Social Progress, which I chaired.²¹

Economists and policymakers need to focus not on what is happening

²⁰ Andrew Berg and Jonathan Ostry, 2011, “Inequality and unsustainable Growth: Two Sides of the Same Coin?” IMF Staff Discussion Note No. 11/08, April, International Monetary Fund. See also IMF, “Fiscal Policy and Income Inequality”, Policy Paper, January 23, 2014, available at <http://www.imf.org/external/np/pp/eng/2014/012314.pdf>

²¹ The Committee’s report was released in 2009, and published as Joseph Stiglitz, Amartya Sen, and Jean-Paul Fitoussi, 2010, *Mismeasuring Our Lives*, New York: The New Press. The Organisation for Economic Co-operation and Development (OECD) has since continued work in this vein with its Better Life Initiative (<http://www.oecd.org/statistics/betterlifeinitiativemeasuringwell-beingandprogress.htm>) and its High Level Expert Group on the measurement of economic and social progress, convened in 2013.

on average, or to those at the top, but how the economy is performing for the typical citizen, reflected for instance in median income. We value opportunity *directly*, not just for the benefits which it might bring to conventionally measured GDP. And as inequality increases, so does insecurity. Everyone, even those higher up the rungs in the ladder, worry about slipping down: they know the consequences. Once this is taken into account, the surge in inequality looks every worse.

7. One of the reasons that inequality is bad for economic performance is that this growing inequality is weakening demand. The reason that inequality leads to weak demand is easy to understand: those at the bottom spend a larger fraction of their income (they need to, just to get by) than those at the top.

The problem of weak demand is compounded by the flawed responses to this weak demand by monetary authorities, by lowering interest rates, which can easily give rise to a bubble, the bursting of which leads in turn to recessions. This indeed describes what has happened in recent years. (This is not the only possible response: fiscal authorities could lower taxes on say the middle class, or increase government investments in infrastructure, technology and education. But the Bush administration took exactly the opposite strategy – lowering taxes on the rich. These responses are perhaps not a surprise: as I emphasize below, economic inequality translates into political inequality, and those at the top have a tendency to seek their own advantage).

8. There are still other reasons that inequality is bad for the economy and growth. One of the reasons is that today, inequality is associated with rent seeking, and rent seeking distorts the economy. Another is the observation made earlier that inequality of outcomes is associated with inequality of opportunity, and that means that those unfortunate enough to be born at the bottom of the income distribution are at great risk of not living up to their potential. We thus pay a price not only in terms of a weak economy today, but lower growth in the future. With nearly one in four American children growing up in poverty,²² many of whom face a lack of access to adequate nutrition and education, the country's long-term prospects are being put into jeopardy.

²² See <http://www.childstats.gov/americaschildren/eco1a.asp> (accessed March 30, 2014).

A third is related to the corrosive effect of inequality on morale, especially when it cannot be well-justified (and as I have noted, the inequality evidenced in the United States and elsewhere cannot be justified). There is a widespread understanding of the adverse effects of corruption on morale, societal solidarity, and the functioning of the economy. But increasingly, inequality in the US is viewed as *unfair*, arising out of a corrupt political and economic system.

Still two further reasons are related to the political economy of inequality: societies with greater inequality are less likely to make investments in the *common* good, in say public transportation, infrastructure, technology, and education. The rich don't need these public facilities, and they worry that a strong government which could increase the efficiency of the economy might at the same time use its powers to redistribute. Moreover, with so many at the top making their money from financial market shenanigans and rent-seeking, we wind up with tax and other economic policies that encourage these kinds of activities rather than more productive activities. When we tax speculators at less than half the rate that we tax workers, and when we give speculative derivatives priority in bankruptcy over workers, and when we have tax laws that encourage job creation abroad rather than at home, we wind up with a weaker and more unstable economy.

9. The ninth observation is that the weaknesses in the economy (partly caused by the high levels of inequality) have important budgetary implications. Deficits have become a central focus of policymakers in many countries. But worries about the deficit are exacerbating the real inequalities in our society; it is those at the bottom and middle that suffer the most from government cutbacks in expenditures.

The budget deficits of recent years are a result of the weak economy, not the other way around. If we had more robust growth, the budgetary situation would be far improved. That's why investments in decreasing inequality and increasing equality of opportunity make sense not only for the economy, but for the budget. When we invest in our children, the asset side of our country's balance sheet goes up, even more than the liability side: any business would see that its net worth is increased. In the long run, even looking narrowly at the liability side of the balance sheet, it will be improved, as these young people earn higher incomes and contribute more to the tax base. But if we look at these issues the wrong way, the budgetary weaknesses will lead to cutbacks in public investments – including those that help ameliorate inequality – and we

reinforce the vicious circle, with lower investment in the public sector (including education) leading to a weaker economy and more inequality, and leading in turn to still lower investments and growth.

10. Countries also pay a high price for this inequality in terms of their democracy and the nature of their societies. A divided society is different – it doesn't function as well. Democracy is undermined, as economic inequality inevitably translates into political inequality. I describe in my book how the outcomes of America's politics are increasingly better described as the result of a system not of *one person, one vote* but of *one dollar, one vote*.²³ And just as we described earlier how the rules of the economic game affect the outcomes, so too in the realm of politics: with the rich having more and more influence, they write the rules of the political game to give them more power and influence, which means economic inequality gets even more translated into political inequality, and the political inequality gets translated into ever more economic inequality, in a vicious circle. The same process is occurring in other countries where the wealth and income have become stubbornly concentrated.
11. There are further adverse effects of this economic/political inequality as we view societal well-being from the broader perspective that I argued for earlier. Special interests have incentives and scope to shape our society – in their interests. Even when most citizens care about the environment, they see actions to protect the environment as costing them profits, and they use their economic and political power resist such actions. This has proved to be a major impediment to dealing with the challenges of global warming. But as I comment on more extensively in the second part of this paper, the costs of failing to deal with climate change and other environmental hazards are borne disproportionately by the poor.
12. With extreme inequality, the nature of society changes in fundamental ways. Those at the top come to believe that they are entitled to what they have. And this can lead to behaviors which themselves undermine the cohesiveness of society. Those excluded from prosperity begin to expect the worst from their governments and leaders. Trust is eroded, along with civic engagement and a sense of common purpose.

²³ Joseph E. Stiglitz, 2012, *The Price of Inequality: How Today's Divided Society Endangers Our Future*, *Op cit*.

13. For those who believe we would have a better world were more countries to become committed to market economies with democracy, there are further adverse effects: Will other countries want to emulate an economic system in which most individuals' incomes are simply stagnating? A political system which seems to be captured by the wealthy?
14. In this paper, I have emphasized the economic, social, and political costs of the growing inequality and diminishing equality of opportunity that has afflicted so many countries. But in viewing inequality this way, I do not want to diminish the *moral* argument. The moral argument should reinforce the commitment to reduce inequality. We should, I believe, have been willing to reduce inequality – especially reduce the high levels of poverty that seem endemic even in rich countries – even if there were a price for doing so, even if overall economic performance, as measured by GDP, were weakened as a result. But the fact is, as I have stressed, that we could actually get better economic performance with less inequality.

A way out from inequality

The fact that inequality is created by policies – it is not the ineluctable result of economic forces – means there is a glimmer of hope. Policy created the problem, and it can help get us out of it. There are policies that could reduce the extremes of inequality and increase opportunity – enabling our countries to live up to the values to which they aspire. There is no magic bullet, but there are a host of policies that would make a difference. In the last chapter of my book, *The Price of Inequality*, I outline 21 such policies, affecting both the distribution of income before taxes and transfers and after.

There is a strong need macroeconomic policies that maintain economic stability and full employment. Nothing is worse for those at the bottom and the middle than a higher level of unemployment. Today, workers are suffering thrice over: from high unemployment, weak wages, and cutbacks in public services, as government revenues are less than they would be were our economies functioning well. (Central bank policies focusing on inflation have almost surely been one of the factors contributing to the growing inequality).

Policymakers must make it a priority to move more people out of poverty, strengthen the middle class, and curb the excesses at the top. Most of the policies are familiar: more support for education, including pre-school; increasing the minimum wage; strengthening the earned-income tax credit; giving more voice to workers in the workplace, including

through unions; more effective enforcement of anti-discrimination laws; better corporate governance, to curb the abuses of CEO pay; better financial sector regulations, to curb not just market manipulation and excessive speculative activity, but also predatory lending and abusive credit card practices; better anti-trust laws, and better enforcement of the laws we have; and a fairer tax system – one that does not reward speculators or those that take advantage of off-shore tax havens with tax rates lower than honest Americans who work for a living.

If we are to avoid the creation of a new plutocracy in our countries, we have to retain a good system of inheritance and estate taxation, and ensure that it is effectively enforced. We need to make sure that everyone who has the potential to go to college can do so, no matter what the income of his parents – and to do so without undertaking crushing loans.

Again, the United States provides numerous examples of the path to avoid. It stands out among advanced countries not only in its level of inequality, but also in its treatment of student loans in bankruptcy proceedings. A rich person borrowing to buy a yacht can get a fresh start, and have his loans forgiven; not so for a poor student striving to get ahead. A contingent loan program of the kind employed by Australia shows that there are alternatives – ways which provide access to all who can benefit from a college education without imposing the risks of hardship that the United States does.

In the United States, the special provisions for capital gains and dividends not only distort the economy, but, with the vast majority of the benefits going to the very top, increase inequality – at the same time that they impose enormous budgetary costs: \$2 trillion dollars over the next ten years, according to the Congressional Budget Office.²⁴ While the elimination of the special provisions for capital gains and dividends is the most obvious reform in the tax code that would improve inequality and raise substantial amounts of revenues, there are many others that I have discussed elsewhere.²⁵ In the past, when the United States reached these extremes of inequality, at

²⁴ See Congressional Budget Office, 2013, *The Distribution of Major Tax Expenditures in the Individual Income Tax System*, May, p. 31, available at http://cbo.gov/sites/default/files/cbofiles/attachments/TaxExpenditures_One-Column.pdf (accessed March 28, 2014). This figure includes the effects of the “step-up of basis at death” provision, which reduces the taxes that heirs pay on capital gains. Not including this provision, the ten-year budgetary cost of preferential treatment for capital gains and dividends is \$1.34 trillion.

²⁵ See Joseph E. Stiglitz, “Reforming Taxation to Promote Growth and Equity”, Roosevelt Institute working paper available at <http://www.rooseveltinstitute.org/reforming-taxation-promote-growth-and-equity>

the end of the 19th century, in the gilded age, or in the Roaring 20s, it pulled back from the brink. It enacted policies and programs that provided hope that the American dream could return to being a reality.

Other countries have done likewise: Brazil, torn by even greater inequality than the United States, has shown how concerted policies focusing on education and children can bring down inequality within the span of less than two decades.

We are now at one of these pivotal points in history. We must hope that the citizens of the world will make the right decisions.

II. Inequality and the environment

There is a two-way relationship between inequality and the environment, and the complex relationships between inequality and the environment play out both at the local (national) and global levels.

The poor are often more dependent on the natural environment than the rich, and thus environmental degradation, including climate change, has particularly adverse effects on them. Many in developing countries are dependent on common resources, such as local forests and ground water. Their very survival may be at stake when there is degradation of these resources. In both developing and developed countries, the poor are more likely to live in areas where they are exposed to higher levels of pollution and toxicity.

Indeed, not only does environmental degradation *affect* the poor, it creates poverty. Farmers who might otherwise have eked out a living above the poverty threshold can no longer do so. Those who live surrounded by pollution and toxicity are likely to be less healthy. They will perform more poorly at school, and their lifetime productivity will be lower.

While it is gradually being recognized that a rich country with a temperate climate, like the United States, will be very seriously hurt by climate change, it is the poor in poor countries especially in the tropics that are likely to suffer the most. They disproportionately work in agriculture, which will be hurt both by global warming and climate variability. It is likely that there will be more serious consequences for health. They are more likely to be buffeted by extreme events like typhoons and floods, likely to suffer greater *relative* losses of wealth, and less likely to be able to protect themselves either physically or materially. They have less access to insurance to compensate them for the loss of property, and have less savings with which they can self-insure and recover. They live in countries with poor disaster management and social protection systems. Many (such as millions in Bangladesh) live in low-lying areas that will be inundated with the rise of sea levels.

But poverty can also contribute to environmental degradation. Because they are too poor to afford an efficient cookstove, too poor to buy kerosene, they turn to surrounding forests, leading to increasing deforestation.

At a global level, the poor imitate the materialistic life styles of the rich. This is true both within countries and across countries. Those in the emerging markets aspire to have life styles as similar as possible to those of the advanced countries, and especially the United States. But if even one such large country, such as China, were to follow America's lifestyle, there is a very high risk that our planet will not survive.

Some have argued that any attack on climate change (reducing greenhouse gas emissions) though in the long run might benefit the poor, in the short run would have adverse effects. There is, they suggest, a trade-off between social justice today and sustainability, between equity *within* a generation and across generations. What I have said so far (as well as discussions elsewhere during this conference) has suggested that that is not necessarily the case; the two can be complementary. Providing efficient cookstoves to the poor and connecting them to the electric grid would improve their health, their standard of living, and simultaneously reduce greenhouse gases (including emissions other than of carbon dioxide).²⁶ More broadly, poverty in many developing countries today leads to increased deforestation, with adverse effects on carbon sequestration.

Similarly, in developed countries today, an attack against climate change would yield benefits today as well as for the future. Forcing firms and households to pay for the social costs associated with carbon emissions would lead to a retrofitting of the economy – with large investments that would create jobs, restoring the economy towards full employment. The installation, for instance, of solar panels would give rise to large employment of construction workers, who currently face high levels of unemployment in many countries. Reducing unemployment would not only be of direct benefit to those suffering from lack of income (especially important in the US,

²⁶ See Veerabhadran Ramanathan, 2014, The two worlds we inhabit: The Top 4 billion and the The Top 4 Billion (T4B) and the Bottom 3 Billion (B3B), *Pontifical Academy of Social Sciences*; also see Comments by Joseph E. Stiglitz on Climate Change, Cook Stoves, and Coughs and Colds in *Environment and Development Economics*

Essays in Honour of Sir Partha Dasgupta, Ed. Scott Barrett, Karl-Goran Maler, and Eric S. Maskin. Oxford University Press, 2014. I note there that the provision of cookstoves may also promote gender equity, since the burden of gathering wood is borne in most traditional societies by women, and women are more exposed to the health hazards arising from traditional cooking methods.

with its poor system of social protection), but would reduce the downward pressure on wages arising from unemployment. The restoration of growth to the economy would provide government with additional revenues, so that some of the cutbacks of public service that have been so costly to the poor would be reduced.

But the *potential* conflict between the two raises important issues of social justice and global fairness, which could play out in important ways in the attempt to reach a global agreement on climate change. Whenever there are important externalities – and climate change entails an externality of first order importance – it is possible to achieve a Pareto improvement. There are a set of “deals”, payments from some parties to others, accompanied by a reduction in greenhouse gas emissions, such that everyone is better off than in the current, business as usual, scenario. Unfortunately, however, since it is the poor countries that are likely to be hurt most and the rich countries that do the most polluting, the compensations required would entail the poor countries bribing the rich countries not to pollute. That is politically unacceptable for most developing countries, and understandably so. It seems patently unjust.

One way of thinking about what is “fair” is to think of the atmosphere as having a certain capacity for carbon – beyond a critical level, an unacceptable level of climate change will result. In a sense, the international community has agreed to this perspective: in Copenhagen, they resolved not to allow atmospheric concentrations that would result in an increase in climate of more than 2 degrees Celsius. We can translate that into how much carbon can be added to the atmosphere. Then the question becomes how the rights to add that limited amount of carbon to the atmosphere should be divided. A natural principle suggests itself: allocating rights in proportion to population (as of the time that the problem was globally recognized, i.e. 1992). One might argue that principles of social justice would entail giving more rights to those who are poor, i.e. that these rights should be allocated progressively. (Giving rights is really equivalent to giving money). In this perspective, allocating (total) emission rights on a per capita basis is socially unjust.²⁷

In effect, however, the US and some other developed countries are arguing for a regressive allocation –giving rights in part on the basis of past emission levels (allocation systems which require different countries to re-

²⁷ Note that many in the developing world would even view the criterion suggested above, with an allocation of the carbon capacity of the atmosphere according to per capita population in 1992 as unjust, for it gives a “free ride” to the advanced countries for all their carbon emissions prior to 1992.

duce emission levels from 1992 levels by the same percentage allow those who were polluting more the right to continue to pollute more).

The allocation of “carbon space” perspective has one important implication going forward: since the United States (and some other advanced countries) failed to curb their emissions after 1992, they have already used up most of the carbon space allocated to them. Fairness, then, requires them to move quickly to zero emissions.

There is a wealth of evidence (including from laboratory experiments) on the importance people attach to fairness.²⁸ They would rather accept an allocation that leaves them worse off, than one that they view as excessively unfair. The implications for reaching a global agreement on climate change are daunting: while there is a Pareto improving agreement (one which makes all countries better off than they would be in the business-as-usual scenario), such agreements would appear to be patently unfair to most of those in the developing world. Some would, as we suggested, entail the poor countries transferring money to the rich countries – contravening principles widely accepted in virtually all countries, that polluters should pay, i.e. should bear not only the cost of reducing their pollution, but also the costs they impose on others. Others would give the rich countries a disproportionate share of the world’s carbon space, allocating to the rich a disproportionate share of a scarce resource. It will be difficult to get poor countries to accept such measures. At the same time, so far, leaders in the advanced countries have done little to convince their citizens that there is a moral case (as opposed to self-interested case) for reaching a fair agreement with developing countries. (Undoubtedly, this is in part a result of the influence of the special corporate interests in the politics of many Western democracies, and especially the United States). We have created institutional structures which are seemingly designed to constrain use of the moral calculus in making important social decisions, by having decision structures in which *amoral* institutions (corporations) play pivotal roles. Individuals working for such institutions are instructed to care primarily (or only) about the well-being of, say, their shareholders; to do otherwise would a dereliction of their duties to others, an action which might even be labeled as immoral. In so doing, they seem released from the broader moral obligation of thinking more broadly about the consequences of their actions, and in

²⁸ See for example See Werner Güth, Rolf Schmittberger, and Bernd Schwarze, “An Experimental Analysis of Ultimatum Bargaining”, *Journal of Economic Behavior and Organization* 3 (December 1982): 367-88.

particular, the consequences for their actions on the poor. And under such institutional arrangements, arriving at a global agreement will be difficult.

There is an alternative approach which reframes what needs to be done, and outlines a common set of principles which would receive wide assent, such as the “polluter pays principle”, the principle that those who pollute should pay for the cost of reducing their pollution and the damage that is done by their pollution; the “right to development”, the principle that says that any new obligation put on developing country should not impede their basic right to develop; if there are substantial costs imposed on less developing countries, those costs should be borne by the developed countries.

Rather than focusing on how to allocate a scarce resource (the carbon carrying capacity of the atmosphere), we should focus on what needs to be done to achieve a common purpose – the common purpose of reducing carbon emissions. This includes eliminating old coal burning generators, not installing new ones (without carbon storage), requiring all cars to be emissions efficient, etc. It should go so far as agreeing on the imposition of a carbon price, with the revenues generated retained within the country. There may be differential net costs/benefits from the imposition of such a tax, but the differences are likely to be small. The deadweight (inefficiency) loss associated with the imposition of any tax is called its “Harberger triangle” and is typically a very small number, usually of the order of magnitude of 3 to 10% of the revenues raised. Moving from taxing labor or savings to taxing carbon will thus result in a net distortionary cost which is the difference between these two small numbers; and the difference between the dead weight losses among countries is the difference in these differences across countries. Most countries are likely to gain – though special interests within their countries are likely to lose. Nonetheless, it would be appropriate for rich countries to help facilitate the transition of the poor countries, using perhaps some of the net gain in welfare which arises from shifting to the more efficient taxation of pollution.²⁹

It has been more than a quarter century since the risks of climate change have been recognized. Climate change is a quintessential global public good – a problem that can only be address through collective action at the global level. If the world consisted of identical individuals, the problem would be

²⁹ Some of the ideas in this section are elaborated in Stiglitz, 2006, *Making Globalization Work*, New York: W.W. Norton, and in Stiglitz, 2013, “Sharing the Burden of Saving the Planet: Global Social Justice for Sustainable Development”, in Mary Kaldor and Joseph E. Stiglitz, eds., *The Quest for Security: Protection without Protectionism and the Challenge of Global Governance*, New York: Columbia University Press, pp. 161-190.

easy to solve: that individual would realize the destructive effect of his behavior and the carbon emissions leading to climate change would be curbed. But there are very large distributive consequences: some gain from the current arrangements. It is by and large the rich that gain, and the poor that suffer. Climate change may become an increasingly important force contributing to global inequality.

And yet, the high level of global inequality today – with powerful corporate interests blocking actions which would be in the common interest of global society – means that reaching a global agreement for reducing carbon emissions is proving extraordinarily difficult, even though the broader societal benefits are becoming increasingly clear. We have suggested some alternative approaches that might at least move us in the right direction faster than we have been moving recently.