# Where Do We Draw the Line?
# Suggesting a Threshold for Extreme Inequality

*Alice Krozer*

## Abstract

*Despite increasing consensus that high inequality levels are harmful, what is conspicuously missing from the debate over effective measures to decrease income disparities is the formulation of concrete targets to meet. This paper therefore proposes the creation of an extreme inequality line as a maximum threshold. Such a general limit would help policy-makers measure progress towards more equality and increase accountability of their actions. At the same time, it would signal to the general public that, rather than being a necessary evil, inequality is a moldable and ultimately reducible phenomenon. After explaining the conceptual need for an upper inequality limit, the paper proceeds to discuss its concrete level. As a measuring indicator, it proposes the ratio of the income share of the top 5 per cent over that of the bottom 40 per cent, denominated Palma v.2, for its simplicity and intuitiveness.*

*Alice asked the Cheshire Cat, who was sitting in a tree,*
*"What road do I take?"*
*The cat asked, "Where do you want to go?"*
*"I don't know," Alice answered.*
*"Then," said the cat, "it really doesn't matter, does it?"*
Lewis Carol, *Alice's Adventures in Wonderland*

## I. Introduction

Inequality has been the topic of much research and discussion lately. The academic mainstream, which used to consider "this preoccupation with inequality" (Krueger 2003) "the most poisonous tendency to sound economics" (Lucas 2003) and "nonsense" (Laffer 2015), increasingly recognizes it as one of the most pressing issues, or even the "most important problem" of our times (Shiller 2013). Despite increasing awareness, however, inequality continues to rise, as recent reports have repeatedly highlighted: since 2015 the richest 1% have come to own more of global wealth than the other 99% (Credite Suisse 2015) and instead of 85 in 2014, it is now the wealth of only 63 billionaires that is larger than that of more than half of the world population (Oxfam 2014, Hardoon et al. 2016). And although the pay difference between FTSE 100 chief executives and their employees' *average* pay lies at around 120 times in 2013,[1] that of some multinational companies' CEOs reaches 427 or 653 times their employees' median pay (Groom

1 Up from 47 times in 1998, though down from a peak of 151 times in 2007.

2014). Similar trends have been empirically confirmed on the national levels of the emerging countries (Krozer 2016), for the US[2] (Alvaredo et al. 2013), the UK (Dorling 2015; Lansley 2011), and many other, both rich and developing, countries.

To varying degrees, these dis-equalizing trends hold for the distributions of wealth and income, opportunities, education, life expectancy and other social dimensions alike (Krozer 2016). They impose substantial costs not only on those individuals left behind and excluded from rising prosperity of their societies at large, but also on entire countries and the international community. This includes both social costs, such as continuously high poverty rates and accelerating mass migrational movements, and "purely" economic costs. For instance, the OECD (2015) estimated the cost of inequality between 1990 and 2010 to amount to 10 percentage points of GDP for Mexico – equivalent to almost the entire expenditure of annual government transfers. And at the same time as luxury car producers reported a new record in sales for the fourth year in a row in the UK (Massey 2014), the number of people using food banks has tripled in just one year to almost a million[3] (Power 2015).

It could, if somewhat cynically, be argued that as long as society as a whole agrees with such discrepancies, they do not constitute a problem. However, most societies do seem to object existing inequality levels. For instance, surveys asking people about their understanding of the current income structure, as well as their distributional preferences for an ideal society, have uncovered three main issues: firstly, they show that people tend to grossly underestimate actual inequality levels (Norton and Ariely 2011).[4] Partially this might be due to the high level of abstraction and lack of accessibility in the way inequality data is often presented to lay people. For instance, interpretation of the most common indicator used to convey information about inequality today, the Gini coefficient, is not particularly intuitive. We might have a vague idea about broad ranges of "healthy" inequality (28?) and "excessive" levels (50?). However, this

2 For instance, median family incomes fell since 2010, while the mean rose (Wolf 2014), and top 1% incomes more than doubled over the last 30 years (Alvaredo et al. 2013).

3 Most people indicate that they would literally rather starve than go eat at such a "prejudiced" place – with the result that a man has starved to death last year, in midst of unseen economic wealth in the City of London.

4 Other sources pointing towards the underestimation of inequality levels include a poll about inequality perceptions in the US, where 68 per cent of respondents place themselves as part of the 99 per cent, 13 per cent think they are part of the top 1 per cent, and 19 per cent do not know. This strikingly indicates common misperceptions, both about the actual level of inequality, and the relative position of the different income groups (http://pollposition.com/2011/11/01/can-13-be-part-of-elite-1/).

perception seems to be changing over time, and even among scholars there is no agreement on desirable levels or a cut-off point beyond which inequality is definitely *too much*. Such vagueness does not help to accurately estimate actual inequality. Another part of the perceptional bias might stem from the cues taken up in one's immediate environment: the more spatially segregated a highly unequal society develops, the less direct interaction with other socio-economic groups, or knowledge about their lifestyles, exist (Dawtry et al. 2015). Whichever the ultimate reason for underestimating inequality levels, these common misperceptions condition the way current and "ideal" society is imagined (ibid).

The second main issue that is revealed by the survey results is the fact that intuitively people desire more equal societies. In spite of misjudging actual inequality levels, the surveys find respondents favoring ideal distributions far more equal compared to the societies they inhabit, even taking into account their underestimation of actual inequality. This, thirdly, shows that a shared feeling of disapproval exists with the current situation of high inequality. Far from people accepting, let alone preferring, highly unequal societies, they have a strong preference for more egalitarian structures. As such, in the US, for instance, where more than 80 per cent of the wealth belongs to the richest 20 per cent of the population, survey respondents estimated that this group held less than 60 percent of total wealth, and declared that in their ideal world it would hold about a third (Gudrais 2011).[5]

Acknowledging that extreme inequalities are the undesired and very expensive norm in contemporary societies thus means accepting that there is a problem. Nevertheless, the increasingly intense public and academic debates on inequality, forwarding both well-known and innovative solutions (notably Atkinson 2015), also suggest that it is a *solvable* problem. Countless strategies for applied problem-solving across different disciplines, from psychology, over business and management, to education and international development,[6] follow a schematic approach covering at least four main stylized steps: firstly, an *Analysis* focuses on understanding the problem; this is followed by a *Planning* step, which involves setting a target and considering alternative plans towards achieving that target; the third part would be *Implementation* of the

5 While these numbers concern the distribution of wealth, presumably similar trends could be expected for income.

6 In general terms, the most common stylized structure these stepwise approaches tend to follow is: 1) Identification of the problem; 2) Exploration of the problem; 3) Setting of goals/making action plan; 4) Analysis of alternatives; 5) Selection of possible solution; 6) Implementation of possible solution; 7) Evaluation.

plan; and finally, an *Evaluation* of the results. All recommend, after initial steps of identifying the problem and exploring it, to continue towards the creation of an action plan with (measurable) goals defined at its core. This makes intuitive sense, because if we don't know our goal, how do we measure progress on the way to reaching it, and how will we know when we have reached it? And when the destination is vague, can we ever know that we are on the right way?

For the problem of inequality, and how to get rid of it, the recent debate has done much to increase awareness and understanding of the problem. Moreover, there have been important, innovative and elaborate suggestions in terms of policy proposals. Accordingly, although a problem has been identified and its detrimental impacts are increasingly being acknowledged, action plans remain diffuse and vague. In this paper, I will argue that the persistence of the problem is partially grounded in this ubiquitous absence of a measurable goal: what has been largely skipped in the debate, is the important step of fixing a target to reach, as well as the indicators according to which progress towards this target should be measured, i.e. creating a means of accountability for progress towards the goals set out. The omission of these concrete practicalities maintains efforts to decrease inequality aimless and hinders implementation of otherwise promising strategies to solve distributional problems. To address this shortcoming, the paper advocates the necessity of fixing goals to be reached so that progress can be measured and accountability created. An option to do so could be establishing a maximum inequality threshold as an inequality line.

To sustain this argument, the remainder of this paper will firstly contextualize the problem of high inequality, describing some of its costs and particular features in the second chapter. This part of the analysis relies on the author's calculations based on Milanovic's World Income Database. In continuation, the idea of establishing an inequality line will be outlined in the third chapter, and complemented with the brief example of the establishment of the poverty line. In the fourth chapter an appropriate way of measuring an inequality line in terms of its indicator and level will be discussed, before concluding in the fifth chapter.

## II. Inequality Dynamics and Its Consequences

There is mounting evidence of the harmful impact that high inequality has on a number of aspects of societal wellbeing. These include the adverse effects it can have on economic development through its association with social and economic exclusion and instability (Galbraith 2012), imperiling poverty reduction, social cohesion and governability, by leading to increases in crime, mass migration and other forms of social and political conflict and instability. These then create

insecurity and distrust amongst economic agents, which could jeopardize economic growth and social development (Justino, Litchfield and Whitehead 2003).[7]

Moreover, extreme wealth generates significant economic cost. Instead of ensuring socially optimal investments, today it is rent-seeking that defines much of the highest income and wealth strata (Dorling 2014; Mount 2012), which undermines social cohesion by leading to greater disenfranchisement of the middle and lower classes and "foster[ing] among the elite a poisonous politics of sectarianism" (Rodrik 2014). For instance, the interests of the top 10 per cent of income earners tend to be significantly overrepresented in political considerations, exerting much greater influence even when misaligned with those of the rest of the population (Gilens and Page 2014). Thereby, those that start off with economic advantages tend to see related advantages multiplied, especially in unequal societies, further perpetuating inequalities over time. Moreover, recent studies have documented the rise of stress and worry levels among both rich and poor in unequal societies (Graham et al. 2015) and social mobility has been shown to fall with increasing inequality, leading to diminishing prospects for equality of opportunity, a long-held tenet and refuge of less egalitarian societies (Corak 2013).[8] Inequality is thus not only dangerous in economic terms, but also directly threatens democracy and social cohesion.

Overall, excellent accounts now exist of the cost of inequality (Stiglitz 2012, McQuaig and Brooks 2013), its extensions on a global level (Lakner and Milanovic 2013; Piketty 2014) and national levels (Esquivel 2015 for Mexico; Higgins et al. 2014 for Brazil; Piketty and Saez 2003 for the US; Dorling 2014 and Lansley 2012 for the UK, to name but a very few), as well as suggestions for desirable policy responses (Atkinson 2015).

However, how does the actual problem look like? For many decades, mainstream theoretical positions have assumed globalization to bring about convergence of incomes, which would make public sector interference with distributional levels unnecessary.[9] Nevertheless, empirical data

7 Although a number of recent studies by the IMF and OECD, among others, have shown how initial equality can be beneficial and inequality harmful to economic growth, the complex relationship between inequality and growth acts through a number of diverse channels which make it difficult to sustain claims about directionality of causal factors.

8 Even in the US, for some time known as host of the strongest believers in meritocratic wealth, now a majority does not believe anymore that people become rich because of their hard work, ambition or education (Dorling 2014).

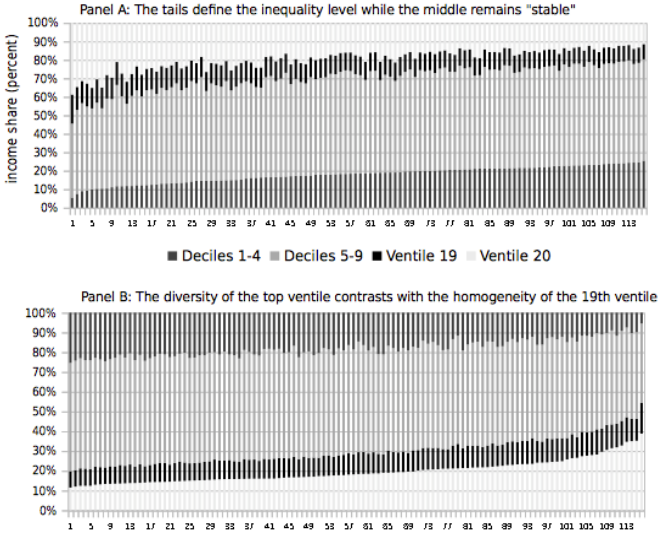
9 The Stolper-Samuelson theorem postulates that a rapid increase in international economic integration should have a positive effect on both within-countries and between-nations inequality.

does not confirm this prediction. Numerous efforts to consolidate international data on inequality have shed some light on the abysmal differences that continue to exist. These projects include Branko Milanovic's World Income Database; the LIS data collection on income and wealth; UNU-WIDER's World Income Inequality Database; Piketty et al.'s World Top Income Database; Galbraith's University of Texas Inequality Project; as well as regional collections including OECD datasets, Eurostat, and Sedlac for Latin America. With information on inequality becoming more systematic and accessible, awareness of the persistence of inequalities in wealth and income around the world increases. Middle-income countries, highly interconnected in terms of international trade, "graduate" to the high income club being still highly unequal. In the Latin America of the 1990s, income inequality was growing as per capita income increased, moving, therefore, in the opposite direction predicted by the trade-related factor-price-equalization theorem (Palma 2011). Middle-income countries with comparable GDP per capita levels (e.g. Tunisia and Ecuador) differ widely in terms of distributional outcomes, which undermines the conclusion of a predictable inverted-U shaped pattern à la Kuznets.

To better understand the empirical patterns driving the income distribution, Figure 1 uses Milanovic's (2014) data to construct the international income distribution. It shows that inequality in the world is both pervasive and very diverse across countries, not necessarily aligned with income levels.[10] Remarkably, inequality differences stem mostly from the different size in the share of total income that the top and bottom income groups hold, while the share of the middle 50-55% of the population is rather homogenous, covering just over half of total income (for a more detailed analysis of this empirical observation, see Palma 2006, 2011; for details on the dataset see Krozer 2015).

10 And as opposed to Kuznets-like expectations of receding inequality levels above certain income thresholds, it is the rich countries that are currently experiencing a backlash in their inequality levels, as if emulating the notoriously unequal middle-income countries of Latin America. See also Lakner and Milanovic (2013) for an estimate of the global Gini.

**Figure 1: Income Distribution in 116 countries, by Population Share (2008)**




*Source: Constructed with data from Milanovic 2014*

The fact that such diverse patterns of inequality coexist today, with the Nordic countries on one side of the equality spectrum, and most Latin American and Southern African countries on the other extreme, indicates that policy choice overrules "natural trends" of inequality. As such, even though the Scandinavian countries also maintain a large top 1 per cent income share, their bottom 40 per cent of the population appropriate approximately 23-25 percent of total income – compared to the lowest four deciles of the Latin American countries getting only about half of that. The comparison of the pre-tax and transfer distribution of e.g. Denmark with that of Mexico (based on simulation data) illustrates the power of policies very clearly: according to market income as measured by the Gini, the income distribution in Mexico and Denmark is not that different, i.e. highly unequal. However, Denmark then manages to reduce its disposable income Gini via redistributive policies to almost half its size, whereas the Mexican Gini remains virtually intact (Krozer and Moreno-Brid 2014). Thus, while Mexico remains the most unequal country of the OECD (or second-two most, depending on the indicator used), in Denmark (despite hosting a small very rich elite of the less than 1 per cent as well), the country's bottom 40 percent of income earners secure one of the largest shares for their group worldwide: 23.4 per cent of total income. At the same time, its middle groups (deciles 5 to 9) own more than 55 percent of total income, placing it above average (Krozer 2015). Often, it is the political will that is missing, rather

than for instance lack of economic resources (Krozer and Moreno-Brid 2014). Nonetheless, this example shows that even high inequality is not in principle unchangeable. If inequality is accepted as a threat, especially considering its social, economic and political costs and its possible tendency to increase if left to itself (Piketty 2014), then laissez-faire is out of question.

## III. Drawing a Line

However, without defining a maximum acceptable level of inequality, it becomes difficult to decide on both a starting- and end-point of a concrete plan of action. Hence, after analyzing the problem of inequality, the next step for reducing it should be to set an objective of the inequality level aspired. Such a delimitation is important as a signaling value, since establishment of a simple and intuitive target can be a powerful symbol for changing individual perception and consequently behavior. It is also important in terms of providing a clear target to direct institutional action and improve orientation for policy makers. This point can be illustrated with a brief account of the evolution of another well-known target: the poverty line as it came about in post-industrial revolution Britain. Considered almost like a natural given today, the existence of a poverty line is in fact the result of concerted policy approaches.

### IIIA. The Poverty Line Experience

Although an abundant literature criticizing the level of respective poverty lines exists (e.g. Reddy 2009), it rarely questions the idea of measuring poverty according to some threshold. We broadly accept the need for a benchmark to make meaningful statements about existing poverty, particularly where comparing its levels over time or across space. This usually takes the form of some income or expenditure threshold below which a person is considered poor, at times complemented with other relevant indicators such as access to health care or education.[11] This seems so trivial that it can easily be forgotten that the poverty line is actually a fairly new, purposefully constructed institution, invented early in the last century for practical measurement purposes, by a British industrialist.

Before the Old Poor Laws were enacted around 1600 to regulate poverty via state intervention, poverty in the Elizabethan England was regarded as the unchangeable lot of most of humanity

11 For instance, in Mexico poverty is measured according to a multidimensional definition including eight determinants bundled into an index (CONEVAL 2015).

(Lepenies 2013).[12] As such, the Poor Laws were not originally created to eliminate poverty, but as a means to maintain the public order (Piven and Cloward 1993). Despite their transformation into a vast relief net, it was unclear at the time how many poor were actually covered under these previsions at first set up on a parish level. The number of beneficiaries was grossly overestimated in the Report of 1834 due to a lack of "any hint of a quantitative view of the problem" (Blaug 1963).

Thus, measurement became a central feature of the fight against such deprivation, because of the difficulty of documenting progress where the initial (and final) level was unknown. There is much debate about the conceptual possibility of an "end of poverty", since its very definition changes over time and is, thus, a relative concept, even if some absolute threshold is agreed upon in a certain time and context. However, the aspiration to ameliorate poverty and the possibility of its eradication has been profoundly influenced by the changed understanding of poverty as a moldable concept (Lepenies 2013).

Seebohm Rowntree is credited with the invention of the "poverty line", which came into existence as a concept with the publication of his 1901 book "Poverty: A Study of Town Life" (ibid). When attempting to tackle poverty, the heir of a York chocolate dynasty found that neither did he know who, nor what part of the population was poor. Based on the latest nutritional information and calorie intake, he thus designed a basket of goods that were considered necessary for the "maintenance of physical efficiency", and estimated its monetary value according to current market prices. He denominated its sum (including very basic housing and clothes expenses) the Poverty Line, transforming the else abstract concept of poverty into a graspable proportion. This allowed him to determine in statistically transparent ways whether a household was poor or not, as well as measure the prevalence of poverty in society. With this transformation of the social phenomenon of poverty into an economized number, it became possible to both estimate poverty in a specific place, compare its level to other places, and to trace poverty dynamics over time. This was the starting point of a more strategic fight against poverty, as opposed to the prevalence of individual acts of charity.

12 The idea of poverty alleviation has existed for centuries, particularly in the context of religious morality. However, in religious contexts poverty is mainly perceived as a necessary evil rather than a problem that can be solved. As such, poverty eradication as a state-sponsored project it is more recent phenomenon.

The aim here is not to recount the rich and often contentious history of poverty lines, including critical approaches challenging the concept.[13] Instead, the circumstances of its inception can serve to illustrate the potential for social and scientific advances that such a threshold might create: although *the* poverty line does not exist (as opposed to *a*), a threshold does help to focus attention on a specific objective to be achieved. Of course, as Peter Townsend (1979) objected, poverty is a relative concept, and as such, any fixture at a specific level as absolute minimum must necessarily include elements of randomness (Lepenies 2013). At the same time, idiosyncratic preferences may very well vary between countries and over time (as does the conceptualization of poverty). However, not being able to find *the* one level that describes all aspects of the issue, and that is not to some degree arbitrary, must not deter us from fighting high poverty – or inequality – levels. Seminal contributions to the understanding of poverty as a relative concept (Townsend 1979) and as lack of capabilities (Sen 1985), which largely built on the previous definitions, might not have come about in the way they did if it were not to challenge existing concepts of poverty. As with the (contentious) World Bank's extreme poverty line, we might choose to accept a certain absolute maximum threshold that no country would want to overstep, while at the same time other, more context-specific thresholds prevail in individual countries.[14]

If the introduction of a poverty line can change both the perception of poverty and the perceived ability to change it, an inequality line might support the struggle against extreme inequality. Fixing a maximum level of inequality appears even more ambiguous compared to e.g. extreme poverty, since it is more difficult to say at what precise level extreme inequality becomes life-threatening. While this is an important conceptual discussion to be had on the basis of the individual and societal costs and consequences of inequality, here the focus shall be mainly on some technical aspects of defining such a threshold.

13 Thresholds for poverty measurement vary on the basis of absolute or relative, income or multidimensional poverty etc. Hence multiple poverty lines coexist and are relevant for different purposes. There is much work critical of particular poverty lines, including especially the World Bank's extreme poverty line of now $1.90 per day per head (see e.g. Reddy 2009 and other years).

14 The EU poverty line of a weighted equivalent net income below 60% of national median is not the same as that for the US, where poverty is defined as three times the cost of a minimum food diet in 1963, or the Mexican multidimensional poverty definition, but all of them consider the World Bank line the absolutely lowest threshold.

### IIIB. The Inequality Line Suggestion

To be sure, the task of determining a quantitative threshold for inequality is far from a neutral, unemotional and ideology-free endeavor. It will require extensive negotiations over conflicting interests and will ultimately depend on power balances in decision-making institutional bodies. These contentious issues will need to be addressed more explicitly elsewhere. As a starting point to such a discussion, in continuation three important interrelated challenges to defining an inequality line will be discussed briefly: narrowing down of the complex concept of inequality to just one number; the issue of flexibly adjusting a once determined threshold; and the identification of its actual level and a way of measuring it.

Clearly, it is excessively limiting to squeeze the rich and complex phenomenon of inequality into any single "representative" number. It increases the danger of oversimplifying its multilayered structure, trivializing much of its negative impact. It would grant too much importance to a quantifiable dimension, be it income, wealth, or some other factor, where in reality many different kinds of social, economic and political inequalities overlap, interfere with and reinforce each other, and trigger new sorts of disparities (Therborn 2005). These dangers notwithstanding, there can be practical advantages to defining a maximum threshold in terms of one dimension, here suggested to be income: for one, international comparisons of multidimensional data tends to be a highly complex issue, increasing inaccuracy with each additional determinant due to differences in measurement across time and space. Moreover, asset inequality and income inequality are closely associated across countries (Goñi, López and Servén 2008), allowing for the selection of income as a "proxy" for other inequalities. Additionally, most people rely on their incomes, rather than wealth, for survival: even among those in the top 10-1 percent of the distribution, earnings from work account for shares of 70-85 percent (OECD 2014). Income trends are also better documented compared to wealth, especially for non-OECD countries, making longitudinal and cross-country comparisons more reliable.

If we worry about data quality – knowing that much of the available data is prone to include potentially major mistakes[15] – the establishment of an inequality line is likely to result in improvements in data quality and quantity. Countries committing to a specific threshold will want to document their progress, thus presumably supporting studies on the subject – as will other independent institutions critically testing this progress, increasing transparency of the

15 For a discussion about the problems with currently collected data and available databases, see for instance Lakner and Milanovic (2013), Krozer (2015).

debate. This relates closely to an additional potential benefit that comes with the expansion of new data: the standardization of definitions and metrics. As the rise of GDP as *the* indicator of economic development after standardization of the UN income-accounting measures in the late 1940s shows, such harmonization can be potentially very powerful in shaping perceptions of abstract concepts such as national wealth, or for that matter, inequality.[16]

However, even if income is chosen as measurement dimension on pragmatic grounds, this does not exclude other dimensions of inequality from consideration. Instead, it is intended to improve the concept's operability, which is essential for comparability, policy-making, and better public understanding.

We might worry that later adjustments of once-established thresholds could prove difficult, particularly considering the challenge of achieving consensus across diverging interests in the first place. This is a serious concern, but does not constitute a fundamental argument against fixing a threshold as such. The symbolically powerful threshold of the World Bank's absolute poverty line, in 1990 originally fixed at $1 a day, has later been revised and adjusted to $1.25 per head per day in 2005 and $1.90 in 2015 (World Bank 2015). While such changes may imply bureaucratic obstacles, fixing no upper limit would leave us with vague improvement attempts that, by definition, cannot reach any target.

Once we decided on the usefulness of an absolute inequality line, we would still be left with the challenge of where to fix this threshold. Too unambitious a level, for instance, might decrease the potential for improvements. Yet, defining any concrete number above which inequality is too high, and below which we want to get its levels, would mean that governments can be held accountable for the attainment of these levels, and society can place substantiated demands on its ruling elite. This is not a minor issue: as the experience of the poverty line shows, the establishment of a threshold enabling a quantification of progress towards the goal of poverty

16 In the 1940s and 1950s, it was the concept of GDP that began changing perceptions of national wealth. After the UN income-accounting standards adopted in 1947 were taken up by the IMF in 1951 for their own standardization measures, adoption of the concept spread worldwide (Parker 2014). For concerted action against widespread threats it is indispensable to standardize definitions and metrics in an accessible way. This example is to intended to show the mobilization potential of unified measurement, rather than an approval of GDP as measure for national wealth or even country development. When Parker (2014, p.69) calls for a refinement of the standardization of collection and measurement of the income and wealth distributions as a priority for the next years, he touches upon a crucial point: “we will also need greater accuracy and agreement about what it is that we want to measure”.

eradication marked a turning point in the concerted action against, and spurred research into, the issue. In reality, numerous pragmatic factors beyond costs of inequalities, including setup and members of relevant committees or public pressure for inequality reduction, might influence the specific level for an inequality threshold. The ensuing discussion is to serve as a starting point for considering relevant alternatives rather than a finite decision about its level.

## IV. Choosing the Threshold for an Inequality Line

Beyond the conceptual discussion of advantages and disadvantages to an inequality line, a different question is where such a threshold might meaningfully be set. At the very least, two technical factors must be accommodated to fix an inequality line: the indicator according to whose scale inequality is to be measured, and a point on that scale functioning as a threshold.

### IVA. Disadvantages of the Gini Coefficient and the 1 per cent measure as Indicators for a Maximum Inequality Threshold

Many factors feature in the decision of a "right" indicator and level, and besides technical issues, political and social implications will influence the choice of one over another. While not necessarily an exhaustive list, four minimum requirements of an adequate indicator for a potential inequality threshold are considered here. These are: technical convenience; ease of use for policy-making; data availability; and people's declared preferences for equality. Without at least these four criteria in place, the indicator for a general inequality line would either fail to reach people and thus lose its signaling value, be technically infeasible, lack empirical backing, or be unpractical to implement politically. To illustrate these points, I will compare the most well-known inequality indicator, the Gini coefficient, with two alternatives, the top 1 per cent income share and the Palma ratios.[17]

Why does it matter which indicator is selected to describe inequality? Since a number of distinct dynamics coexist along the distribution at the same time (Palma 2011; Krozer 2015), each inequality measure emphasizes different aspects of inequality, and consequently tends to rank countries differently. For instance, a similar Gini coefficient in two countries can mask large distributional differences captured by other measures: Portugal and Sierra Leone both feature a Gini of 34.4 in 2010, while their Palma ratios of 1.38 and 1.73, respectively, separate them by more

17 Proposed by Cambridge economist Gabriel Palma, the Palma indicator denominates the ratio of the share of total income the top 10 per cent of income earners holds compared to that of the bottom 40 per cent.

than 20 ranks on the global scale. Due to the way it is constructed, the Gini overemphasizes changes in the middle of the distribution, without accounting sufficiently for those happening in the extremes (Cobham and Sumner 2013a).[18] The majority of the general public, however, is willing to tolerate certain discrepancies in incomes (and find these justified) only as long as the differences between the top and bottom ends of the distribution are held in check (Oxfam 2014). Although the Gini is currently by far the most commonly-used indicator to measure inequality, it is technically complex to calculate, and becomes increasingly unreliable the fewer data points are known for its calculation (Brinks 2005).

At the same time, assuming a number between 0-1 (or, as an index, between 0-100), the Gini coefficient is difficult to interpret for a person without training in comparative inequality analysis. Although researchers would probably agree that a country featuring a Gini of 42 is relatively unequal, there is no intuitive indication for assuming this. The fact that the Gini coefficient is not expressed in any meaningful unit increases the challenge of providing a straightforward answer to this question. Such features decrease its convenience as an indicator for a maximum inequality threshold both in technical terms and according to the criterium of intuitiveness.

Alternatively, a number of researchers (e.g. Piketty 2014, Dorling 2014) have advocated the use of the income share of the top 1 per cent as an inequality indicator in recent years. Now widely cited in academic and non-academic publications for its simplicity, Dorling (2014) hails it as the superior indicator for its high intuitiveness. It makes the actual concentration of income explicit, rather than "hiding" it behind average levels as occurs with Gini numbers.[19]

However, both in terms of data availability and societal concerns the 1 per cent measure displays shortcomings for the purpose at hand. So far, data on the top 1 per cent's share of income is only available for a number of (predominantly rich) countries, decreasing the indicator's comparability on a global level. Besides, there are a number of critical issues as to reliability of available data, whether from household surveys or tax returns (availability of the latter is even less frequent across countries). For one, they vary dramatically. For instance, in Mexico, Esquivel

18 For a discussion about measurement problems with the Gini see e.g. Cobham and Sumner 2013a and 2013b.

19 If comparable data were available for smaller fractions of the elite (0.1, 0.01 per cent etc.), these would highlight polarization even more, since the top share is in itself the most unequal part of the income distribution.

(2015) has estimated on the basis of fiscal data that the actual share of total income held by the top 1 per cent is closer to 21 per cent of total income, than to the household survey estimate of 9 per cent. The magnitude of these differences highlights the general problem of aggregate data accuracy. But even tax data is likely to underestimate top shares; on the global level, around 8 per cent of global financial wealth of households is estimated to be held in tax havens, thus not accounted for in fiscal statistics (Zucman 2013).

Whether this tax evasion occurs at lower or higher income levels, growth in the share of the top 1 per cent indicates a relative loss for the remaining 99 per cent. However, seeing part of her income share to be redistributed towards the top is not the same for an individual living close to the poverty line to, as it is for somebody in the middle, or even in the top decile. Besides, since people tend to worry about developments in both extremes of the distribution, perceived fairness of redistributions will differ between two countries with an equal share of income going to the top 1 per cent, if in one of them income is more evenly distributed throughout the rest of the population, whereas the other one allocates all remaining income to the next 9 per cent in the income distribution. These issues decrease the top 1 per cent measure's adequacy as inequality line indicator.

### IVB. Why the Palma is a Better Alternative

Disregarding societal priorities, the Gini or the top 1 per cent measures are unable to display changes in *both* extremes of the distribution. The Palma ratio, on the other hand, looks at both tails, and how they relation to each other. It is simple to calculate and intuitive in its interpretation ("the top owns x times the share that the bottom holds"), making it a persuasive tool for policy making.[20] Moreover, recalling the relative distribution of income presented in Figure 1, it is not only important to focus on the extremes because this is what most people care about, but because this is what characterizes the actual distribution. These data also show the complementarity of the "original" Palma with a Palma v.2, dividing the share of the top 5 per cent income earners over that of the bottom 40 per cent, or a Palma v.3, using the top 1 per cent as numerator (Krozer 2015).

Compared to the original Palma, its derivatives are even more sensitive to changes in the upmost ranks of the income distribution, accounting for the fact that the top decile is the most unequal decile compared to all others. Calculations from Milanovic's dataset show that, whereas the 90$^{th}$

20 For other advantages of the Palma over the Gini and other traditional measures of inequality see Cobham and Sumner (2013a, 2013b) and Doyle and Stiglitz (2014).

to 95th percentiles receive only somewhat more of total income than the 18th ventile just below them (20 per cent more on world average), the last ventile secures on average almost the double (10.3 per cent of total income for the 19th ventile and 19.6 per cent for the last one), for 30 per cent of countries more than double, and for three countries – Guatemala, Central African Republic and Honduras – more than triple that of the 5 per cent just below. No other ventile is marked by such drastic difference to the ones above or below it.[21]

At the same time, differences in the level secured by the top ventile across countries are vast, with shares ranging from almost 39 per cent of total income in South Africa, to less than a third, or 11.5 per cent of the total in Slovenia. Analogously, the bottom 40 per cent of the population hold a mere 5.5 per cent at the low end (South Africa) compared to a maximum of almost 5 times this share (25.5 per cent in Slovenia). These large differences contrast sharply with the relative homogeneity in the upper-middle 55 per cent of population, varying by less than 20 per cent between the highest (China) and lowest (Central African Republic) share.

Actual Palmas v.2 currently range from 0.45 in Slovenia to just over 7 in South Africa. For the latter this means that a person in the top 5 per cent owns 56 times the share of total income a person in the bottom 40 per cent has.[22] In the comparison of 116 countries, the indicator's global average is 1; 59 countries have a Palma v.2 lower than 1, and 57 countries feature a Palma v.2 above 1. This means that across countries the richest 5 per cent of countries' citizens on average earn eight times as much as somebody in the poorest 40 per cent.

Compared to the Palma v.3, the Palma v.2 is more interesting for two main reasons: firstly, reliable data on the top 1 per cent is sparse for the time being, particularly in developing countries. Secondly, most countries' Palma v.3 tends to be a fraction, rather than a whole number, even in high-inequality contexts, making interpretation more cumbersome: if in Brazil the top 1 per cent income earners in 2011 own 0.635 times the share that the bottom 40 per cent hold, it is less readily accessible that this translates into an average share of just over 25 times the size for a

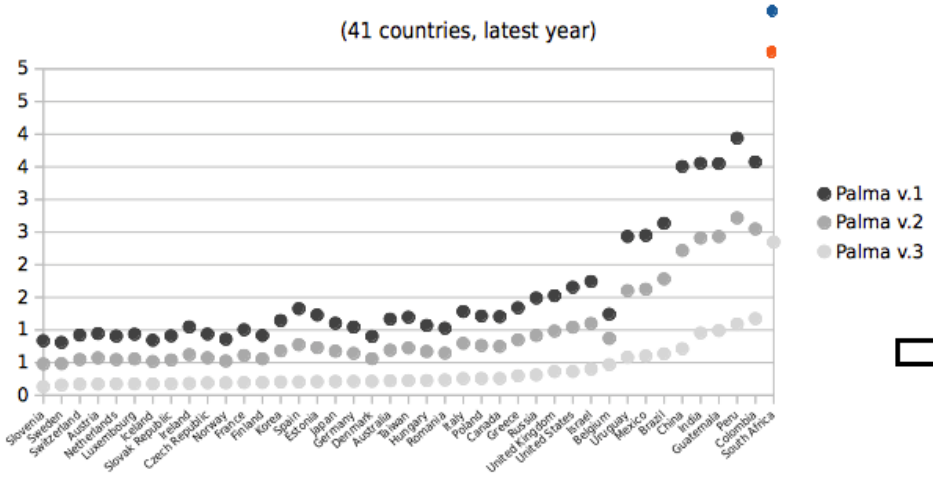
21 The same phenomenon can be observed comparing the 100th and the 99th percentile of income; in many cases the former is more than double the size of the latter, a far larger distance than that to the next-lower, 98th, percentile.

22 Such levels of inequality seem to be a unique trademark of some Southern African and the Latin American countries: the latter region isolated from the rest features a Palma v.2 of 2.7; of the 20 most unequal countries, 15 are Latin American.

person in the upper bracket compared to the poorer group,[23] hence decreasing intuitiveness in the interpretation of the indicator's results.

The indicators' different emphases influence the estimation of a country's inequality. While the three Palmas lie fairly close to the Gini at levels of lower inequality, they diverge more significantly the higher the inequality level of the country (Palma 2011). This shows a higher sensitivity of the Palmas to highly polarized distributions, but also the complementarity the indicators display respective to each other.

**Figure 2: Comparing the Original Palma with the Palma v.2 and v.3**




*Source: Constructed with LIS (2014) data*

Compared to the Gini and the 1% indicators, the Palmas seem to comply better with the four requirements set up above: i) they gauge inequality dynamics as empirically observed, stressing those parts of the distribution that people are most interested in (i.e. top and bottom); ii) more reliable and comparable data are available to calculate them; iii) they are unsophisticated in technical terms; and iv) as a consequence intuitive for interpretation by the general public as well as policy-makers. Considering the stable share of the 19th ventile, the Palma v.2 might be best suited as a target indicator.[24]

23 In 2011, the top 1 per cent's income share in Brazil amounted to 8.7 per cent of total income, while the bottom 40 per cent held 13.7 per cent of total income.

24 Since they point to potentially diverging trends within the distribution, it is always useful to consider several indicators alongside each other.

## IVC. Setting a Maximum Level

Choosing the right level to denominate *too much* inequality is a difficult task, which inevitably will introduce some degree of arbitrariness. Moreover, any discussion over the distribution of society's assets will always be intrinsically politicized, and as such "driven as much by perception and symbolism as by substantive argument" (Levick 2014). A preferable threshold might be one that is easily memorable and has some symbolic value, besides being empirically meaningful, as for instance the original $1 per head per day absolute poverty line. Considering that the world average Palma v.2 is 1, this level could serve as a simple and convenient initial threshold.

If the level was set too unambitious (i.e. too high), it might have no effect at all, since it would fail to concern most countries. Besides, beyond a certain level, the Palma v.2 starts increasing very rapidly, thus a threshold above 1 (at, say, 2) would mainly target a select number of countries rather than function as a unifying general commitment to decrease inequality in the world. On the other hand, at levels below 1 some of the appeal in terms of simplicity would be sacrificed, since a fraction might be less convenient to handle.

Built around a catchy threshold, it has the potential to change the way people think about inequality as something that, although it had been present in society as long as memory lasts, is ultimately changeable, and potentially *eradicable*. This understanding might influence people's behavior in many aspects of life, including voting patterns, demands towards politics, and participation in public discourse. Such influence is already the first step towards social change. It seems at the same time pragmatic and a powerful symbol for every country in the world to strive towards, for instance, a Palma v.2 below 1. Moreover, since effectively half of the world does feature a Palma v.2 below 1, including many developing countries, it is clearly an achievable level.

If enforced appropriately this average is self-evidently expected to decrease. At the latests when this is achieved, the appropriate level for a maximum threshold for inequality should be reconsidered.

## V. Conclusion

Most people worry about (and underestimate) concentration of incomes at the extremes. However, most policy prescriptions to resolve the inequality crisis today are geared towards the (politically cheap) increase of access to education, in combination with (financially cheap) patchy anti-poverty programs. These disregard the top end of the distribution. While this is not consistent with societal preferences, it is also empirically misguided: inequality is largely defined

in the top end of the income distribution. If policy-making continues to address those parts of the population where changes are least likely to occur (as happens e.g. with the human capital theory addressing the middle groups), the resultant effect on inequality is likely to be minor.

It has been argued here that part of the reason for the slow progress towards inequality decrease might be found in the fact that the actual dimension of inequality is not stated explicitly enough through the indicators we use to describe it, and that the problem of failing to define a concrete objective to aspire hinders the implementation of progressive action plans.

As a response to such lack of orientation, this paper has suggested the introduction of an inequality line to provide a concrete target, powerful enough to signal excessive inequality levels. Improving the income distribution starts with choosing an appropriate indicator to measure inequality, and deciding on a clear threshold of how much is *too much*. I have argued that, far from being a dry, technical exercise, the choice of inequality indicator can influence the perception we have of inequality, and is thus politically and ideologically charged. Indeed, based on the underlying assumptions the measure is constructed upon, every indicator encapsulates an implicit value-statement: do we care mostly about changes in the middle of the distribution, or in the extremes, transfers between which groups of the population? Today's generic usage of the Gini indicator as inequality measure complicates interpretation and obscures developments in the high and low ends of the income distribution, where most of these changes occur. The alternative indicator advocated here for the purpose of a maximum threshold of inequality is the Palma v.2, defined as the ratio of the share of total income that the richest 5 per cent of the population hold over that of the poorest 40 per cent.

The symbolism and persuasiveness of a global inequality line at a Palma v.2 level of 1 could be strong. It is important to take advantage of the increased interest the topic of inequality is currently graced with in the public discourse, where everybody from the World Economic Forum in Davos, to widespread academic discussions and US President Obama acknowledge its importance. This opens up an unprecedented policy space to be filled with substantive proposals. Researchers are feeding into public desires for more equality with relevant suggestions, helping to build up pressure to curb inequality sustainably. To accelerate this process, we need a target to reach on the path towards the equality level we want.

**References**

Alvaredo, F., A.B. Atkinson, T. Piketty and E. Saez (2013). The Top 1 Percent in International and Historical Perspective. Journal of Economic Perspectives, 27(3): 3-20.

Blaug, M. (1963). The Myth of the Old Poor Law and the Making of the New. The Journal of Economic History, Volume 23, Issue 02, June 1963, pp 151-184.

Brinks, D. (2005). Explanation fo the Gini Index of Inequality. Extract from material for the course *Law and Democracy in Latin America* at the University of Texas. http://www.laits.utexas.edu/lawdem/unit03/reading2/Gini_definition.html (last accessed January 2016).

Cobham, A. and A. Sumner (2013a). 'Putting the Gini back in the bottle? The Palma as a Policy-relevant measure of Inequality'. London: King's College London.

Cobham, A. and Sumner, A. (2013). 'Is It All About the Tails? The Palma Measure of Income Inequality'. Working Paper 343. London: Center for Global Development.

Corak, M. (2013). Inequality from Generation to Generation: the United States in Comparison. In Robert Rycroft (editor), *The Economics of Inequality, Poverty, and Discrimination in the 21st Century,* ABC-CLIO

CONEVAL (2015). CONEVAL informa de los resultados de la medición de pobreza 2014, http://www.eluniversal.com.mx/articulo/nacion/sociedad/2015/07/24/crece-pobreza-en-mexico-hay-dos-millones-mas-coneval

Credite Suisse (2015). 'Global Wealth Report 2015', http://publications.credit-suisse.com/tasks/render/file/index.cfm?fileid=C26E3824-E868-56E0-CCA04D4BB9B9ADD5 (last accessed January 2016)

Esquivel, G. (2015). 'Desigualdad Extrema en México. Concentración del Poder Económico y Político', http://cambialasreglas.org/images/desigualdadextrema_informe.pdf Last accessed: 07.08.2015.

Dawtry, R.J., R. M. Sutton, and C.G. Sibley (2015). Why Wealthier People Think People Are Wealthier, and Why It Matters: From Social Sampling to Attitudes to Redistribution. Psychological Science 1-12 July 17, 2015.

Dorling, D. (2014). Inequality and the 1%. London: Verso.

Doyle, M. W. and Stiglitz, J. E. (2014). 'Eliminating Extreme Inequality: A Sustainable Development Goal, 2015–2030'. Ethics and International Affairs, 20 March 2014

Forbes Magazine (2014). 'The Worlds Billionaires'

Galbraith, J.K. (2012). *Inequality and Instability.* Oxford: Oxford University Press.

Gilens, M. and B. I. Page (2014). Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens. Perspectives on Politics, Volume 12, Issue 03. September 2014, pp 564-581.

Goñi, E., J. H. López and L. Servén (2008). 'Fiscal Redistribution and Income Inequality in Latin America', Washington, DC: The World Bank, Policy Research Working Paper.

Groom, B. (2014). 'If only Plato were running Barclays'. http://www.ft.com/cms/s/0/c0ecff02-a84a-11e3-a946-00144feab7de.html#axzz31PUsfSmr. Last accessed on 04.08.2014.

Gudrais, E. (2011). What We Know About Wealth. http://harvardmagazine.com/2011/11/what-we-know-about-wealth. Last accessed on 04.05.2014.

Hasenheit, M. (2014). 'Inequality: Where Palma is better than Gini, Network for Green Economy Indicators'. http://netgreen-project.eu/blog/2014/06/18/inequality-where-palma-better-gini. Last accessed on 04.05.2014.

Higgins, S., N. Lustig, W. Ruble and T. Smeeding (2014). 'Comparing the Incidence of Taxes and Social Spending in Brazil and the United States', http://www.cgdev.org/sites/default/files/comparing-incidence-taxes-social-spending-brazil-us.pdf

Justino, P., Litchfield, J. and Whitehead, L. (2003). 'The Impact of Inequality in Latin America'. PRUS Working Paper 21. Sussex: University of Sussex.

Krozer, A. (2016). For Richer or Poorer: The Capture of Growth and Politics in the Emerging Countries. Oxfam: Civil Society Networks BRICSAM. https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/rr-for-richer-or-poorer-270116-en.pdf (last accessed January 2016).