I have read with interest this paper. The task of identifying an alarming threshold for the Gini coefficient at world level is certainly very difficult and challenging, and I was curious to read about it.

In my view the paper is divided into two parts.

A first section where referring to previous theoretical works (mostly by Tao) it is claimed that a "fair" income distribution should be shaped like an exponential distribution. With the conclusion, reached by the authors, that if this is the case then the Gini index should not exceed 0.5 because given the exponential shape the value of 0.5 is the upper bound for the index.

A second section where it is shown that in a series of years the distribution of the Gini indices of the world countries is approximatively normal and it is argued that in this case the potential for social instability is higher for countries whose Gini index substantially deviates from the average world value. The authors formalize this deviation by using the 2-sigma rule and identify the associated "alarming level of the Gini" that by looking at the different years ranges between 0.56 and 0.59.

According to the authors the combinations of these two parts seem to go in the direction of suggesting that the "alarming level of Gini" should be larger than 0.5 (see page 8, central part). Why are these figures alarming levels of inequality? Why one should expect that the likelihood of social conflicts or instabilities is substantially higher for the countries whose Gini is above say 0,56 and not instead 0.40?

For instance the authors argue at page 7 (end of first paragraph of section 4.2) that because 0.4 is around the mean of the Ginis in the sample then if one chooses 0.4 about 50% of the countries will be considered as potentially subject to instability. In my view the fact that many countries (in any case less than 50% if we consider the median values of the Ginis) are above a threshold does not necessarily mean that the threshold could not be considered as informative. In fact if one refer to Biancotti (2006) "A polarization of inequality? The distribution of national Gini coefficients 1970–1996" extensive analysis of the distribution of Gini coefficients one could arrive at the conclusion that, as mentioned in the title of the paper, inequalities are polarized across two groups of countries. Are the countries in one of these groups more likely to experience social instabilities? Why should we focus, as argued implicitly in the paper at page 6, on the top 2.3% of countries with higher Gini index?

The authors are tackling a difficult problem that can hardly be dealt with in few pages.

Reading this paper I see a difference in many instances between what is shown and proved and what is argued or claimed.

The authors show that for 1995, 2000 and 2005 the distribution of the world Gini indices could be statistically considered as normal. They estimate mean and variance of the Gini indices distributions and compute a theoretical threshold (mean + 2 sigma) for each year.

They argue that if the distribution of the Gini indices across countries is not correlated then values in the upper tails above the threshold could lead to higher probability of social instability. I agree to what is shown, but I may not agree "automatically" on the conclusions.

Are Gini indices distributed independently across countries? I guess that inequality could depend on institutional and historical factors that may be shared at least partially by groups of countries. For instance why not look at the distribution of Ginis for more developed countries and less developed countries? As shown in Biancotti (2006) the two groups of countries show different trends in the Ginis distributions.

Is there evidence of conflict, social instability in countries experiencing Gini indices higher than the computed thresholds? I expect that this could be the case. However, by looking at the Figures 3-6 (pp.9-10) these countries are 2 or 3 and I suspect that could be the same in all the 4 years (there is no mention on this in the paper).

But why should we assume the 2-sigma rule and not the 1-sigma or the 1.5-sigma rule?

The authors argue for instance that 1990 is not an appropriate year to take into account because "… full of uncertainty, … and a series of astonishing incidents occurred…" (see top of page 7), moreover incidentally for that year the hypothesis of normality of the distribution of Ginis is rejected. When we look at the distribution of the Gini coefficients in 1990 represented in Figure 3 the mean and median values of the Ginis are lower and the variance is higher but many countries are located at the bottom of the distribution have lower Gini index while only few exhibit higher Gini on the upper tail.

Going back to the first part of the paper. Even if one accepts the idea that an exponential distribution of income can be considered as "fair" this does not necessarily imply that those that are not exponential should lead to social instability. If so one should look at departure from the exponential shape as a measure of instability, even for distributions with Gini lower than 0.5.

If the aim of the paper is, as claimed also in the abstract, to provide a solid economic support for the identification of the "alarming level of Gini coefficient" then this investigation should be based on evidence. It will be desirable to look at the different country evidence on social instability and verify how these data, if available, correlate with the Gini index of these countries, and if an appropriate test for instability is more informative if set at Gini = 0.4 or Gini = 0.5.

To summarize, the conclusions of this paper need to be motivated by evidence, ideally considering information on the social instability, crimes, or occurrence of conflicts in countries with Gini index higher than 0.4 compared to those with Gini higher than 0.5.

In my view the "alarming level of inequality", if it exists as a unique number, can hardly be seen mechanically as a problem of the 2.3 % of the countries in the upper tail of the distribution of Gini indices without taking into account a number of social, historical and economic factors. With little or no evidence one should be careful to come to "drastic" conclusions on the "right" alarming level and should refer only to what is shown by the data.