The Case Against Thomas Piketty. Lies, damned lies, and statistics

THE TRUE LEVEL OF INCOME AND WEALTH INEQUALITY IN RUSSIA

by Jon Hellevig

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Introduction

Thomas Piketty and his collaborators have published a series of reports where they claim that Russia would in a global comparison be a particularly inequal country in terms of income and wealth distribution. We disagree with this postulation.

By addressing the flaws in the Piketty studies, we do by no means want to imply that there would not exist glaring income and wealth inequality in Russia. Rather, we merely want to dispel the myth that the problem would be particularly dire in Russia, which it by no means is in an international comparison, as our report demonstrates. We have shown that contrary to what is claimed by Piketty and his collaborators, Russia has under its present political leadership moved towards a more equal society, which trend seems to be ongoing.

In our report, we expose the bias and reveal the multitude of methodological errors, distortions and misrepresentation of data, which have gone into producing the Piketty conclusions. After identifying the deficiencies, we have adjusted the main findings announced by the Piketty scholars to reflect the actual data. Our corrected data shows that instead of earning 45-50% of national income as claimed by the Piketty scholars, the top 10% of Russians earned less than 30% of the income. Correspondingly, our corrected data shows that instead of owning more than 70% of the national wealth, the wealth of the top 10 percent of the population was 39% of private wealth and 32% of total national wealth.

Hereby, it is remarkable that the total value of small and medium businesses (including shadow business) at 35% of total business assets stands way higher than all of “oligarch” wealth, and even at the same level as the combined wealth of the

top 10 percent (39%). (Hereby, it should be noted that there is overlap between the categories of small and medium business wealth and top 10 percent wealth).

There is no doubt that the scandalous history of Russian oligarch wealth and the contemporary urban legends about the malicious grip of oligarchs on Russia has initially informed the Piketty scholars in their quest to prove “extreme inequality” in Russia.

The present report is not only a criticism of the dubious studies of the Piketty scholars, but also more in general an attempt to reveal how scholars manipulate public opinion under the cover of statistical methods to advance their ideological or pecuniary objectives. In this regard, the Piketty studies excellently illustrate the old adage "Lies, damned lies, and statistics." This really is an arch case of how authority combined with the persuasive power of numbers is employed to bolster false arguments.

By means of applying solidly sounding statistical extrapolation techniques to the fully misapprehended source data (adjusted by a seemingly endless array of unwarranted assumptions), these scholars contrive to give a scientific gloss to their entirely misconceived conclusions in the attempt to validate their preconceived ideas. Like wizards waving magic wands and pronouncing incantations, the Piketty scholars attempt to convince us that their invalid data sources *by Pareto* or any other statistical formula turn into scientific truths.

Basically, what happens here is that these scholars make references to a series of fancy sounding statistical methods, which are designed to impress the reader that something scientific took place, but in reality, the scholars merely under the guise of the supposed sources and those methods just draw the figures to their liking. “In

order to construct these estimates, we use Forbes billionaire data and apply generalized Pareto interpolation techniques," they succinctly summarize their methodology.

In general, the Piketty reports never demonstrate to what extent the scholars have relied on one or another set of source data, rather their method is like a recipe for a potpourri, throw in generous amounts of Forbes billionaire data, a bit of survey data, some homemade tax tabulations, and stir everything with a Pareto spatula. The scholars merely tell that they have relied on those sources to make the blend, but the share of emphasis on one or the other sets of source data is not given and the choices are not discussed. There are also no scientifically falsifiable computations, which would show how the various data sources would supposedly have been mathematically combined to yield the results that these scholars claim to be their science. This is in itself renders the Piketty reports invalid as academic science and relegates them merely to the level of personal opinions.

Our examination of the Piketty studies revealed gross methodological flaws and misrepresentation of data. The distortions are at times of such magnitude that combined with the peculiar narrative we must suspect the Piketty scholars have acted out of ideological bias against Russia.

And this is why we present our case against Thomas Piketty.

Summary of Findings

Thomas Piketty and his research team comprising of Filip Novokmet, Gabriel Zucman and others have conducted a series of studies aimed at establishing the level of income and wealth inequality in Russia. The Russian studies form part of a broader project of the Piketty lead World Wealth and Income Database (WID.world). In this report we mainly refer to the two most important papers concerning our topic: (i) the WID.world working paper: From Soviets to Oligarchs: Inequality and Property in Russia 1905-2016 (From Soviets to Oligarchs),[1] and (ii) Between communism and capitalism: essays on the evolution of income and wealth inequality in Eastern Europe 1890-2015 (Between Communism and Capitalism).[2]

From Soviets to Oligarchs draws heavily from Between Communism and Capitalism, which is actually quite curious considering that the latter was published half a year later than the former. And more interestingly, the latter is a PhD thesis, which is supposed to consist of previously unpublished material. In fact, From Soviets to Oligarchs is in all essentials a verbatim copy of an eponymous chapter in Novokmet's PhD thesis – which thesis was published and defended half a year later (sic!).

For ease of reference and considering Thomas Piketty's leading role we will further refer to the authors collectively as the Piketty scholars.

In their latest report, these scholars declared that the richest 10% of Russians earn 45 - 50% of all national income[3] and own more than 70% of the country's private wealth[4] (Owning 70% of private wealth would mean that the top 10% owns 56% of total national wealth, considering that the Pikettys have assigned 20% of national wealth to the state.)

This, they maintain, “reveals an extreme level of inequality in Russia,” moreover, they claim, this is part of a “persistent” worsening trend.[5]

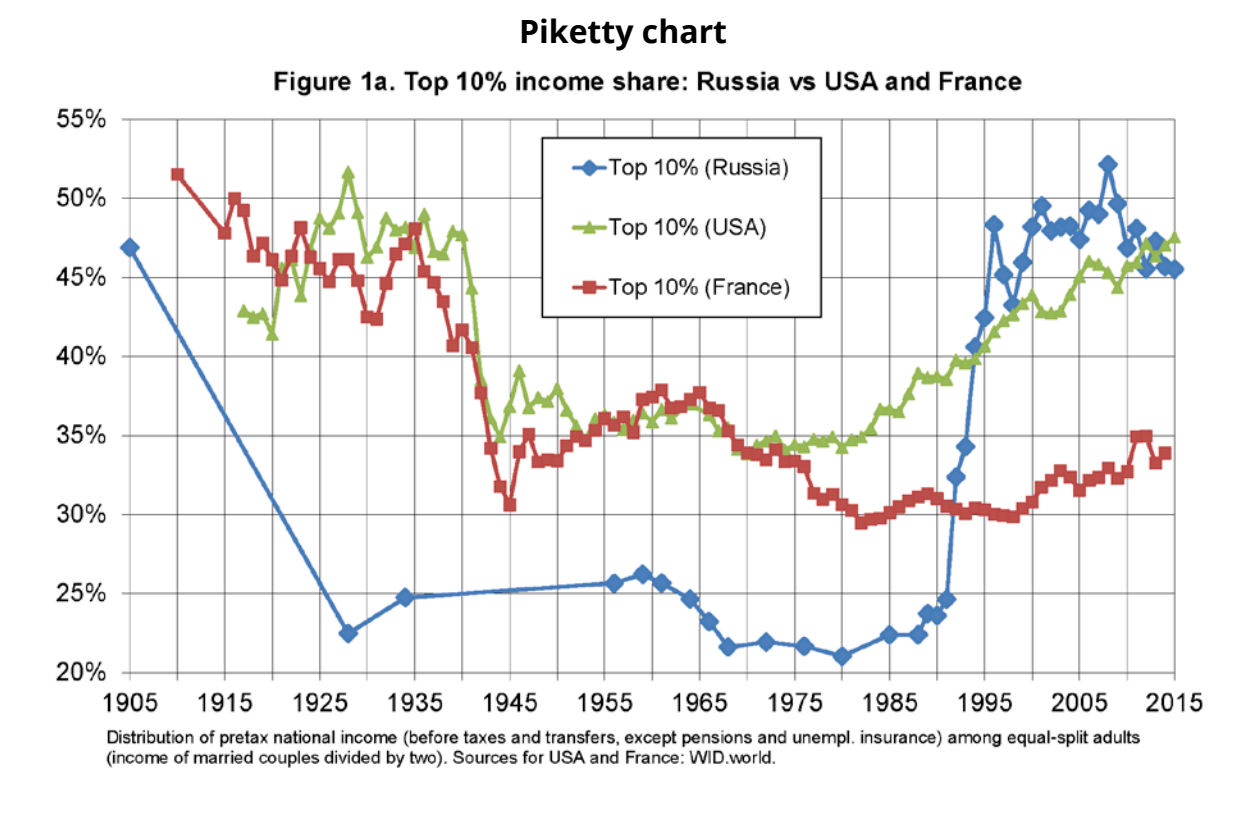
There is a problem, though, with these purported findings, namely that they are substantially not true, not regarding the present situation and the more so not what comes to the trend, which is moving in the totally opposite direction. Our examination of the Piketty studies revealed gross methodological flaws and misrepresentation of data. The distortions are at times of such magnitude that combined with the peculiar narrative we must suspect the Piketty scholars have acted out of ideological bias against Russia.

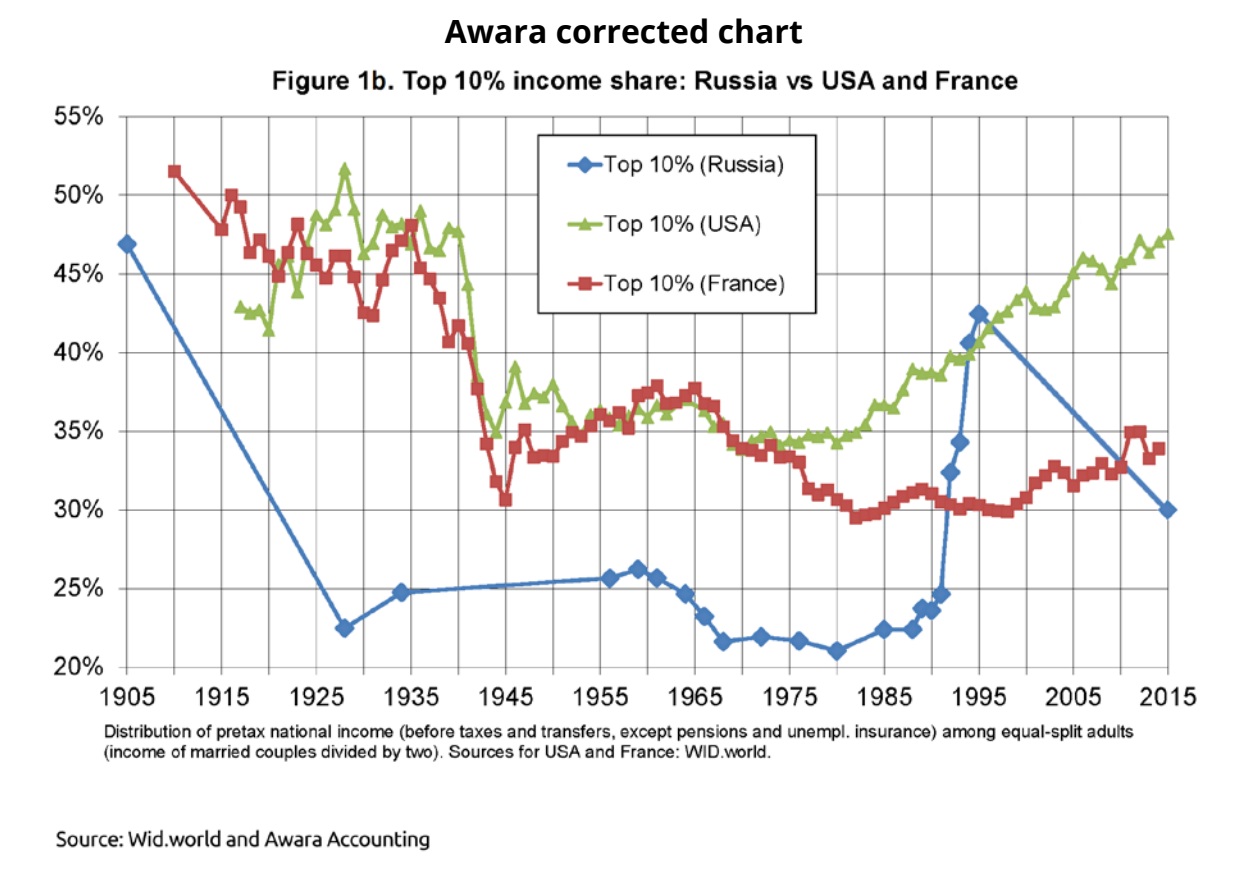
By addressing the flaws in the Piketty studies, we do by no means want to imply that there would not exist glaring income and wealth inequality in Russia. Instead, we merely want to dispel the myth that the problem would be particularly dire in Russia, which it by no means is in an international comparison, as our report demonstrates.

In this report, we will expose the bias and reveal the multitude of methodological errors, distortions and misrepresentation of data, which have gone into producing the Piketty conclusions. After identifying the deficiencies, we have adjusted the main findings announced by the Piketty scholars to reflect the actual data. Our corrected data shows that instead of earning 45-50% of national income as claimed by the Pikettys, the top 10% of Russians earned less than 30% of the income. Correspondingly, our corrected data shows that instead of owning more than 70% of the national wealth, the wealth of the top 10% was 39% of private wealth and 32% of total national wealth.

Hereby, it is remarkable that the total value of small and medium businesses (including shadow business) at 35% of total business assets stands way higher than all of "oligarch" wealth, and even at the same level as the combined wealth of the top 10 percent (39%). (Hereby, it should be noted that there is overlap between the categories of small and medium business wealth and top 10 percent wealth).

For comparison, we present below in **figure 1** the findings concerning distribution of national income as announced by the Piketty scholars in parallel with our corrected data.[6] In **figure 2**, we have done the same concerning national wealth.[7]





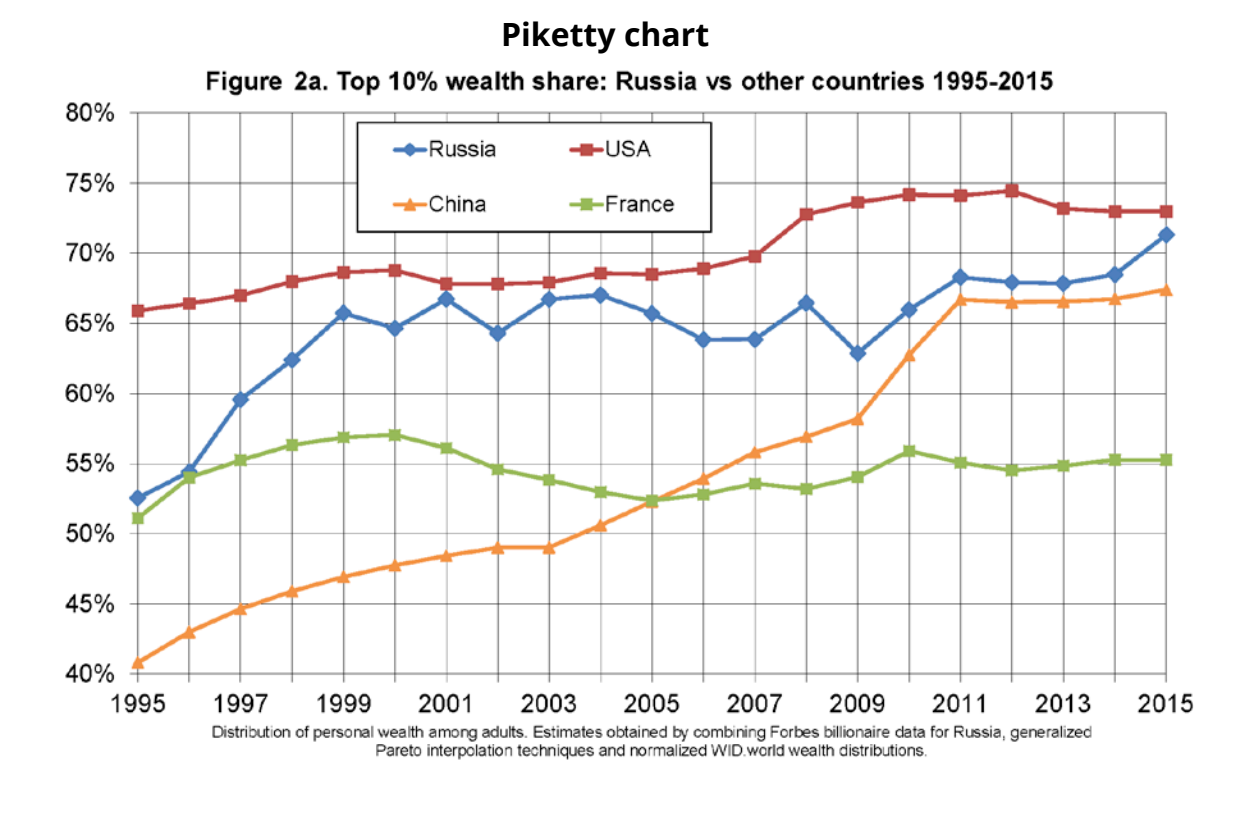
We note that the Piketty postulation about Russia's inequality levels represented a radical departure from earlier generally accepted inequality studies, which assign the substantially lower share of 30% to the top 10 percentiles. Our corrections represent the finding of such studies as discussed below.

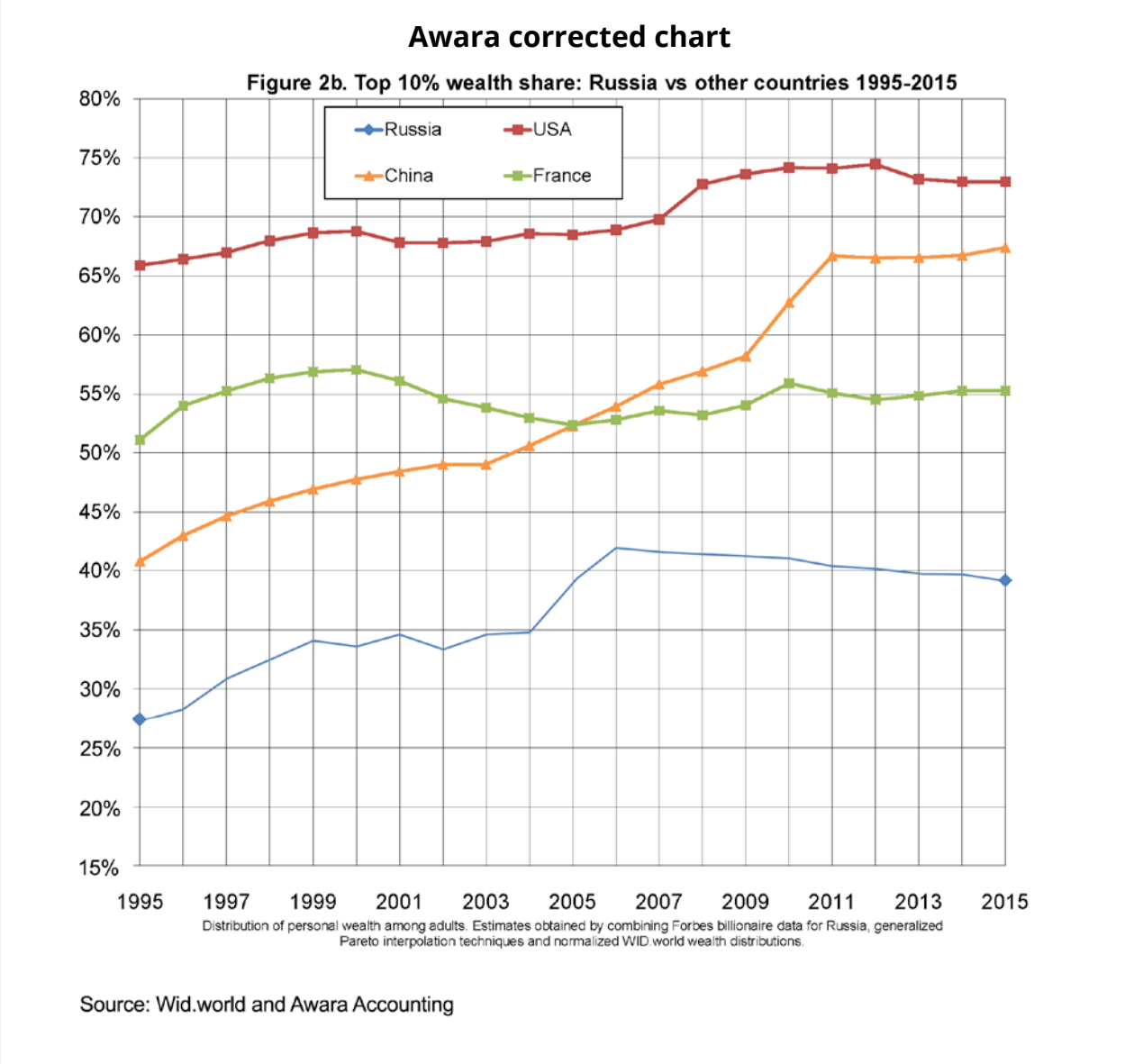
In this connection, we need to point out that public services funded through taxation represent income transfers to the population. As 90% of those public services benefit 90% of the population, this obviously means that the 30% share of

income for the top 10 percent would have to be diminished to reflect this income transfer. Presently, we do not have a figure for this.

As evidenced by the above charts, the corrected data shows that Russia – far from displaying "extreme inequality" - actually is by these measures close to the European levels. We see that by that inequality measure, Russia would rank lower than France.

Considering these charts, we need to stress that we have not reviewed the Piketty reports on the other referenced countries. It is therefore entirely plausible that the values evidenced for them are also inflated. However, we have every reason to think that the errors have been comparatively much larger in regard to Russia.





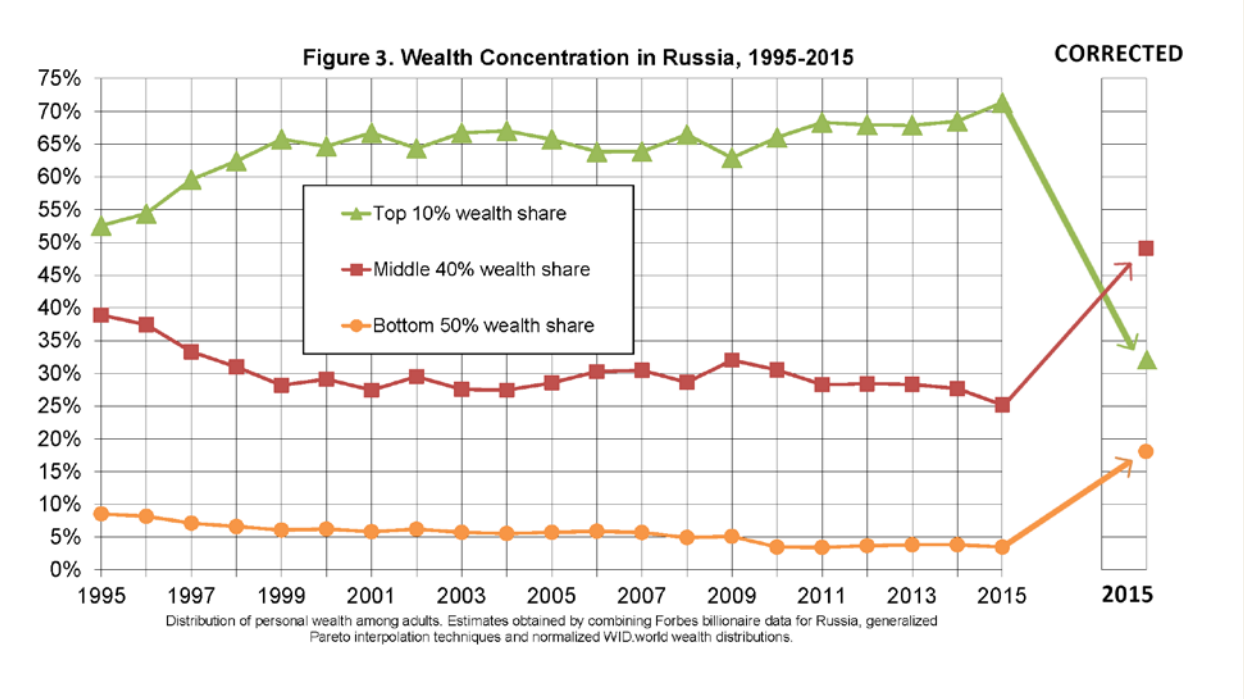
We have corrected the above chart illustrating supposed wealth inequality after detailed analysis of the actual data, as demonstrated in the present report. Among other things, we have removed a totally unwarranted addition of so-called “offshore wealth” to the holdings of top 10 percent, corrected the data on public wealth, and recalculated the true values of business assets.

The Piketty scholars are peddling the fiction that Russia is an especially inequal country in a global comparison and in that line of business they have made the outrageous claim that the richest top 10% of the population (mainly the people they refer to as "oligarchs") own 72% of the nation's private wealth. After analyzing the Piketty studies in detail and turning to independent sources, we concluded that the correct figure would be 39% (2015).

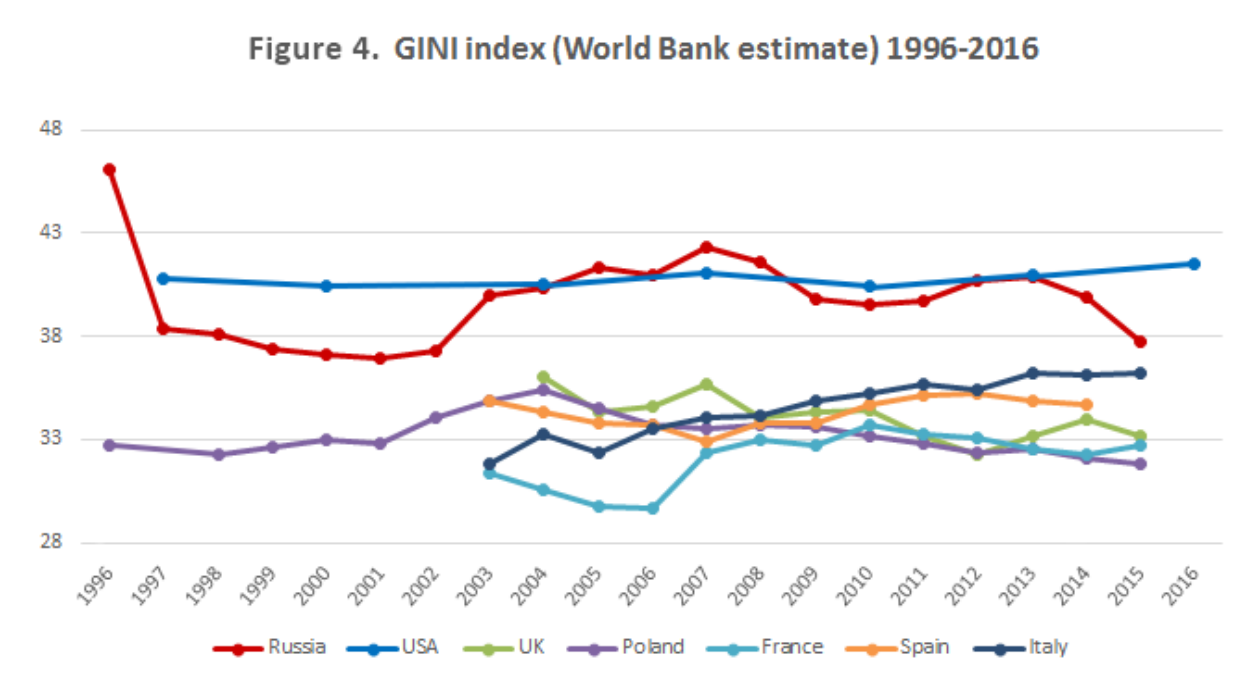
In this connection, we must point out that the whole idea of expressing the top 10 percent' share as a share of *private wealth* is grossly misleading to start with. The only relevant coefficient would be their share of *the total national wealth, private and public* (state owned). One must understand that fundamentally public property belongs to the whole population of a country, hereby the state (government, in Anglo-Saxon parlance) must be seen as holding the property in trust on behalf of the population. This means that the bigger the public assets, the less the wealth inequality. When you then omit this public wealth, as the Pikettys did - when measuring the top 10 percent's wealth, you omit a big portion of the wealth that belongs to the resting 90 percent. According to the Piketty scholars Russia's public wealth equals 100% of national income (2015), this in turn equals 27% of the total national wealth.[8] (In this connection we must stress, that the value of state owned property would in reality be significantly higher if we were to consider the vast virgin land and water resources of Russia and the country's untapped natural resources.) The Piketty scholars also report that net public wealth was negative or near zero in all Western countries[9]. It is entirely plausible that there are countries were the public assets make up more than 50% of total wealth, or even more. We would think the figure is more than 90% in socialist Cuba. With the significant differences between countries of the share of public wealth in the total, it is

obviously totally misleading to express a ratio of the share of top 10 percent in private wealth alone. Doing so really means standing the question on its head, as public wealth, which by definition is equality inducing, is removed from the equation. Having chosen to approach the question in this way, the Piketty scholars really confirm their ideological bias for private wealth over public.

With this in mind, we may therefore redistribute 10% of the value of the public assets to the 10% and 90% of the value to the resting 90% of the population. As we have established that the public wealth was 27% of the total national wealth, we thus assign 2.7 percentage points of that to the top 10% and 24.3 points to the other 90%. With this and the other adjustments to reflect the corrected data, we have redrawn the Piketty chart concerning wealth concentration in Russia (Figure 3.) The corrected data shows evidences the following distribution of national wealth: Top 10% - 31.6%, Middle 40% - 49.5%, Bottom 50% - 17.9% (**Figure 3**)[10].



Our corrected data on Russia's income distribution also shows that the Gini coefficients are not anywhere near the ones alleged by the Piketty scholars. These scholars maintain that the Gini coefficient evidenced by the more professional survey studies at the level of 0.3 – 0.4 (30 to 40%) would in fact stand at levels of 0.6 (60%).[11] We disagree and instead recognize the figures published by the World Bank. In the World Bank's database, Russia has a Gini coefficient of 37.7% (2015). This is well below the figure allocated to the United States, 41.5%. The World Bank figures also depict – contrary to the Piketty scholars' claim of a worsening trend - a sharply declining Gini curve for Russia in the last two decades since 1996. (This issue is further discussed below).



Summary of the Main Distortions

Income inequality series

Before we proceed with the details, we will here summarize the most severe distortions which have informed the Piketty tales.

The Piketty study on **income inequality** is grounded in an absolute misrepresentation of data published by the Russian tax authority. The Piketty scholars have out of thin air declared that some of the published data – which they refer to as "tax tabulations" - is a representative sample of income distribution, which would supposedly enable to determine the income levels of the different percentiles of the Russian population.[12]

That was an entirely gratuitous assumption from their part. The said database contains none of the data that the Piketty scholars have wanted to decipher in it. In fact, the data refers only to some exceptional cases when contrary to the general practice a tax filing has been mandatory. (The Russian tax system is such, that in the overwhelming majority of cases, no tax filings are due. This is discussed in detail below). We will show that the data can in no way be employed in the way the Piketty scholars have done it.

Furthermore, not only have these scholars used a totally invalid (for the given purpose) data source, but also doubled down on the error by displaying gross fallacies on their understanding of essential components of the data. In particular, the Piketty scholars refuse to understand the crucial difference between 'gross revenue' and 'assessable income' (i.e. 'taxable income'). Even after (incoherently) discussing the difference between these concepts, they declare 'gross revenue' and

'assessable income' to be the same, after which they proceed to draw the most fantastic conclusions from the data, which a diligent and able scholar would have discarded already after a brief perusal.

Wealth inequality series

The Piketty **wealth inequality** study, in turn, is grounded in one giant trick that delivered the result that the scholars were bent on producing. When all the other methodological biases failed to produce the screaming inequality - which the scholars undoubtedly had set out to prove – they resorted to adding, some supposed "offshore wealth" to the possessions of the top 10% of Russians. Not only is there no evidence on the amounts of such "offshore wealth," but also this represents a major transgression of their own method as such "offshore wealth" has not been taken into consideration in the studies concerning any of the other countries that the scholars have examined.[13]

The value of the "offshore wealth" to which the Piketty scholars have resorted to prop up their biases on Russia equals the value of all the actual privately owned share of the national wealth, or 75% of the GDP.[14]

When you fail to prove that Russia is an oligarchy

Apart from breaching their own methodology, there is also no scientific back-up that would hold up to academic standards for proving the existence of such "offshore wealth" to the amount claimed, the less for its ownership distribution. All

the Piketty scholars could do is to come up with thinly-veiled speculation based on their premise that some "nasty oligarchs have stolen the national wealth."

It is quite obvious that the goal of the Piketty study on Russia has been to prove the preconceived idea of these scholars that Russia is supposedly a particular inequal country. The title already gives the game away. By calling their publication From Soviets to Oligarchs, these scholars demonstrate that they entertained the preconceived idea that Russia would be an oligarchy. The bias by which these scholars were driven is clearly set out right there in their introductory comments, where they state what they think they know and want to prove: "We know that Russia is a country with large wealth inequality, but we do not know the precise extent of wealth concentration (for instance, we cannot provide a precise comparison with the US)."[15] That is what they thought they knew, and wanted to demonstrate.

Unfortunately for them, the wealth and income distribution source facts failed to back up that idea by wide margins. But the Piketty scholars were nevertheless bent to prove their biased ideas by hook or by crook. Our report presents the incredible amount of academic trickery that the scholars put in to going about it.

The Piketty scholars are aware of having a weak case on which they based their loud and derogative claims about Russia. They therefore frequently try to cover their tracks by reference to *uncertainty* and *assumptions* after *assumptions*. In the introduction to From Soviets to Oligarchs,[16] they wax particularly lyrical about the shortcomings of their study. Presenting "the resulting estimates, there is substantial uncertainty about the exact level of wealth concentration in Russia," we learn. They further tell that they have mainly relied on billionaire data published by the corporate gossip magazine Forbes. And although they exaggerate in every way

possible the size of Russian billionaire wealth in a global comparison, they then as statisticians must admit that the sample, number of billionaires, is anyway very small: "The problem, however, is that billionaire data is about very small groups of individuals (about 100 billionaires who are Russian citizens at the end of the period)." Their problem here is that they by reference to the tiny sample of Forbes billionaire data want to statistically extrapolate wealth and income distribution series for all of the nearly 150 million Russians, as they say: "In order to construct these estimates [for all of Russia], we use Forbes billionaire data and apply generalized Pareto interpolation techniques." (Poor Pareto, if he only knew to what use his name has been put). Their way out of the dilemma is (as always) "to make fairly strong assumptions."[17]

And yet, there is another even more astonishing admission: "all what we have to study wealth inequality in Russia is the Forbes billionaire data".[18] Further we learn: "This is a bit better than nothing at all, and this certainly captures something real, but this is not much." – But is it, though? (We remind, that Novokmet's PhD dissertation was also based on this nothing burger.) The scholars tell that they apply various variables and assumptions on the entertaining billionaire narrative from Forbes to produce various variants of outcomes. These, they stress, "lead to significant margins of error," but not withstanding that they have chosen the worst-case variant to present in screaming headlines across the world as their scientific truth. And then they again return to their preconceived bias to back up their academic speculation: "We can reasonably certain that wealth inequality is very high in Russia by international standards" although "it is not possible to be certain." In particular, it is not possible to certain "whether top wealth shares in Russia are

higher or not than in the US," but that again did not prevent them from floating the narrative that Russia of all countries suffer from particularly "extreme inequality."

But still, they admit: "Unfortunately, there is significant uncertainty about these estimates." This then was followed by this stunning acknowledgement: "We know that Russia is a country with large wealth inequality, but we do not know the precise extent of wealth concentration (for instance, we cannot provide 15 a precise comparison with the US)."

But notwithstanding all these caveats constituting an admission that they are on thin ice; the Piketty scholars had no problem in actually publishing their speculation as science. All those admitted deficiencies should have lead a conscientious scholar to discard those sources, but not the Pikettys, for them the admissions served only as academic litany for the purpose of hypocritically trying to cover their tracks, rather like the obscure fine print in insurance policies.

Considering all this bias and preconceived ideas, it is then no wonder that their research project has received generous financial support from the European Union.[19]

In reality, Oligarchy would signify political power in the hands of those who have concentrated the economic wealth

The true income and wealth figures on Russia – especially when considering Russia's substantial state sector – does in no way qualify Russia as an oligarchy any more than any of the other major economic powers in the world. But even if that would not have been the case and Russia's wealth and income distribution would be as unfair as the Pikettys wrongly claimed, then still there would not be any

reason to vilify Russia by calling it an oligarchy. An oligarchy is foremost a political concept signifying that real power in a given country (jurisdiction) rests with a small number of super-wealthy people called oligarchs. The fact that a country would have a skewed division of wealth with a disproportionate share of billionaire wealth would yet not mean that the country is an oligarchy in the true political meaning of the concept. And certainly, the Russia of today does not qualify as one. It has been widely acknowledged that since his ascendance to Russia's presidency (2000) Vladimir Putin has effectively stripped the super-wealthy individuals from the political power they actually wielded in the 1990s. Most importantly, the Piketty scholars have completely omitted any analysis of the political aspect of supposed Russian oligarchy. While anyway then using this concept in an academic paper, one cannot but draw the conclusion that in so doing they have been ideologically motivated by malice to revile the Russian nation and to flag their politically motivated preconceived conclusions.

The concluding remarks in From Soviet to Oligarchs again confirm our suspicions that the Russian inequality study is foremost a hit piece aimed at smearing the Russian state and its president. "Extreme inequality seems acceptable in Russia," the scholars maintain without a shred of sociological evidence to back up that claim, "as long as billionaires and oligarchs appear to be loyal to the Russian state and perceived national interests."[20] That statement cannot be seen like anything else except politically motivated hate speech. There is no more extreme inequality in Russia than in the West in general. What more, the inequality that is there, is highly revolting to the overwhelming majority of Russians. There is absolutely no moral tolerance for it, as these scholars maliciously claimed. Then comes the threat, which fits very well in with the European Union's – the sponsors of the

Piketty research - hostile economic warfare against Russia in form of sanctions and propaganda: “Whether this fragile equilibrium will persist in the coming years and decades remains to be seen.”

By Pareto - A veneer of science

The present report is not only a criticism of the dubious studies of the Piketty scholars, but also more in general an attempt to reveal how scholars manipulate public opinion under the cover of statistical methods to advance their ideological or pecuniary objectives. In this regard, the Piketty studies excellently illustrate the old adage "Lies, damned lies, and statistics." This really is an arch case of how authority combined with the persuasive power of numbers is employed to bolster false arguments.

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Basically, what happens here is that these scholars make references to a series of fancy sounding statistical methods, which are designed to impress the reader that something scientific took place, but in reality, the scholars merely under the guise of the supposed sources and those methods just draw the figures to their liking. “In order to construct these estimates, we use Forbes billionaire data and apply

generalized Pareto interpolation techniques," they succinctly summarize their methodology.[21] Remember the above already reviewed sections where they admit that this "Forbes billionaire data" is an invalid source for such statistical research. And believe us, it does not get any better by Pareto.

A potpourri of sources, but no falsifiable scientific method to combine them

The Piketty scholars purport to determine the level of income inequality in terms of accumulation and distribution of income by combining – as they claim - various sources of data, as per the following major classes: (i) survey data produced by other researchers; (ii) (misapprehended) taxpayer data from public files of the Russian tax authority (the "tax tabulations"); (iii) national accounts, and (iv) wealth inequality data.[22]

The category 'wealth inequality data' is mostly made up by the Forbes's billionaire gossip as we reported above. Of course, the Forbes billionaire data is an interesting and entertaining source and certainly can serve to guide the reader in the direction of who are the billionaires of one or another country. However, it seems that the Forbes exercises considerable editorial discretion in its reporting exposing and exaggerating the wealth of some billionaires while choosing not to disclose that of certain other billionaires. In any case, it is not a scientific study. The methods of compiling the data are not explained and sufficient details of the composition of the alleged wealth is not disclosed. The validity of that data would then at best be dubious, even in a transparent study.

In general, the Piketty reports never demonstrate to what extent the scholars have relied on one or another set of source data, rather their method is like a recipe for a potpourri, throw in generous amounts of Forbes billionaire data, a bit of survey data, some homemade tax tabulations, and stir everything with a Pareto spatula. The scholars merely tell that they have relied on those sources to make the blend, but the share of emphasis on one or the other sets of source data is not given and the choices are not discussed. There are also no scientifically falsifiable computations, which would show how the various data sources would supposedly have been mathematically combined to yield the results that these scholars claim to be their science. This is in itself renders the Piketty reports invalid as academic science and relegates them merely to the level of personal opinions.

Their starting point is said to be earlier household income survey data, which then is "corrected," as they claim, with income tax data on high-income individuals, supposedly drawn from the referenced fiscal data. But the fiscal data does not represent any "raw tabulations by income bracket" as the scholars wrongly maintain. Furthermore, that data source does not contain any data on "high-income-taxpayers income tax data," as was further gratuitously claimed.[23] The national accounts and wealth inequality data is then somehow applied to all that in order to - supposedly - "impute tax-exempt capital income."

Obviously, there cannot possibly be any mathematical model that could achieve the feat of combining the multitude of those disparate and overstretching data sources. In reality, the Piketty scholars have by artful manipulation of the data picked and chosen what aspects of all that welter of data to refer to in order to verbally motivate their conclusions. All the references to statistical models serve

only as smoke and mirrors designed to lend academic credibility to the resulting computations.

The basic problem here is that no statistical method could ever possibly cure what is from the beginning totally flawed source data. But, yes, name dropping statistical paradigms does wonders on convincing academic fellow travelers and the media. Here is an example of how the Piketty scholars refer to these statistical formula in an attempt to convince that they are making falsifiable science: "In order to exploit the income tax tabulations available over the 2008-2015 period, we apply generalized Pareto interpolation techniques… and piecewise-linear correction factors f(p) above p0 up to the percentiles provided by the tax data in order to correct the top part of the distribution…The resulting increase in top decile Pareto coefficients is used in order to correct survey-estimated Pareto shapes over the 1980-2007 period."[24] Sounds, pretty scientific, doesn't it?

Here's another beauty. In this they "assume" and "choose" "so as to deliver" what they had preconceived. And if the "raw data" does not bend for the purpose, then just do a bit more of the assuming, eventually you would get there. That done, wave your academic wand and pronounce that "log-linearly-estimated Pareto coefficients" have been applied. This is how it reads: "In our benchmark estimates, **we assume** a flat profile of deduction rate (same deduction rate for all brackets), and a rising profile of declaration rate (up to 100% for very high income taxpayers). This profile **was chosen so as to deliver** plausible levels **of log-linearly-estimated Pareto coefficients** (i.e. coefficients defined by ai=log[(1-pi)/(1-pi+1)]/log[thri+1/thri]). In effect, the raw **data includes too many large declarations** in the raw data as compared to the number of lower declarations, **so that one needs to assume** a fairly steep profile for the declaration rate **in order to**

obtain plausible coefficients (i.e. ai= not too close to 1, and bi=ai/(ai-1) not too large: plausible inverted Pareto coefficient bi are usually not higher than 3-4 at the very most, including in highly unequal countries)."[25] Problems with source data? They don't fit your conclusions? No problem, Pareto will fix it.

Their work demonstrates, that the Piketty scholars are extremely cavalier with their source data granting themselves very much creative freedom in the way they go about using the already flimsy data sources. In particular, there is no scientific method on display which would show how the scholars would in fact have connected and merged the various data sources and how and by which exactly computations they would have arrived at the purported results of their exertions. This although they precisely stress that the point of their study really was in "explaining how the various existing sources can be combined."[26] But contrary to that claim, the Piketty scholars do not even attempt to present a unifying method.[27]

Our investigation into the Piketty studies show that - clearing from the academic smoke and mirrors and naming of various fancy sounding statistical methods supposedly employed - there is nothing that could even remotely resemble a scientific method. Their research does not represent falsifiable science, as there is no way that another scientist could recreate the experiment (in this case calculations) by which to demonstrate the same conclusions by way of applying the same data sources. Instead it is evident that the Piketty scholars have taken the liberty to merely loosely refer to various elements of their disparate data with the aim of justifying their preconceived opinions. Theirs is a narrated story and not science.

As if to further convince us that a scientific method has been employed, the Piketty scholars announce that "all corresponding computer codes and robustness checks

are provided in" an appendix to their opus.[28] That is not true, nothing of the sort were made available. What is true, is that their work refers to appendices and that they contain a welter of data, but there is absolutely no transparent thread – or any mathematical method – that would evidence a transformation of one set of data to another or the combination of data sets. What we find is that the scholars have allowed themselves generous freedom to make various assumptions and to sketch various scenarios based on that, and nothing else.

We cannot know to what extent the misapprehensions and misrepresentations of the referenced data is intentional and to what extent the multitude of fallacies in the Piketty study would be purely inadvertent. But what is clear is that ultimately, the reader is asked to accept the results of the study by appeal to the academic names of the Piketty scholars (funded by the European Union) and not by means of any transparently argued falsifiable science.

Income Inequality Series, Particular Problems

Not only is there no scientific method in evidence, but in several key aspects the source data has been grossly misrepresented. Most compromisingly, this holds true for the fiscal data, the treatment of which the Piketty scholars claimed to constitute a veritable scientific breakthrough. They are not shy about speaking in a self-congratulatory manner of being the very first researchers to use Russia's "national income tax tabulations" in order to (supposedly) account for Russia's income inequality.[29] [30]

The problem here, however, is that these scholars have grossly misapprehended and misrepresented the fiscal data on which they based their bold proclamations. The Piketty scholars imagine that the fiscal data they reference constitute tabulations of assessable income by income brackets, which supposedly serve to reveal the annual income of the richest 10 percentiles of Russians. But that is not the case, that fiscal data does not contain any of the variables that the Piketty scholars wanted to discern in it. The two main aspects of their errors may be summarized as follows:

1. Their **failure to understand when tax declarations must be filed in Russia and what information the tax declarations would contain, and most importantly, what they do not contain.**

   We shall see that the Piketty scholars have drawn an entirely gratuitous inference that the tax declarations in question would contain data on the annual income of the taxpayers, when in fact tax declarations in Russia are

transactional by nature. This means that the declarations only contain data on specific types of transactions, which have to be declared separately, whereas the regular income is - as a rule - not declared at all. In Russia, it is the corporate entity paying the income that must withhold the tax and declare it to the authorities. Among other fallacies, the scholars have made entirely unjustified assumptions as to who must declare and when (an issue they refer to as "declaration rates").

The referenced fiscal data does therefore not represent "raw tabulations by income bracket" as the scholars wrongly assumed. Furthermore, that data source does not contain any data on "high-income-taxpayers income tax data," as claimed. That fiscal data merely refers to the exceptional cases when – contrary to the general rule in Russia – tax declarations must be filed. The Piketty scholars admit understanding as much and although they describe some of the contours of those exceptions, they fatally failed to understand their essence, to the extent of rendering the data useless for their purposes and their study invalid.

2. Their **failure to correctly understand the crucial difference between 'gross revenue' and 'assessable income' (i.e. 'taxable income')**. Broadly, this affects what these scholars refer to as "deduction rates."

The Pikettys refer to imaginary tax tabulations

According to the Piketty scholars, the Russian tax authority started in 2008 "to release annual tabulations" that "provide information on the numbers of taxpayers

for a larger number of brackets of "assessable income," including very high brackets."[31] But in reality, nothing of the sort have been released. Below, we will show what fundamental deficiencies there are in their interpretation and treatment of the referenced fiscal data.

Contrary to the misconceptions of the Piketty scholars, the referenced fiscal data merely compound data on the exceptional cases when in Russia a taxpayer must file a tax declaration. Russia has in a global comparison a highly streamlined system of personal income taxation[32] The system is characterized by a flat tax of 13% in the general case on income for tax residents. For other income, which is mainly transaction in character, other rates apply from 6 to 35%. Importantly, the income is not accumulated, the way it is in countries which apply a progressive taxation system, rather each of the types of income is taxed with its own flat tax rate. From the flat tax rate follows that tax administration is rather straightforward with the salient system feature that taxpayers do not as a rule file tax declarations. A corporate entity (or registered individual entrepreneur) functions as a tax agent who has the legal obligation to withhold personal income tax from gross salaries and submit it to the authorities. As long as an individual receives income only from such tax agents, no personal tax declarations are filed. Moreover, due to the flat tax, income received from various sources need not be consolidated as it would be in high-tax countries which apply progressive tax rates (higher rates for higher levels of income).

Tax declarations are then filed only for income that is earned from sources which have not acted as tax withholding agents, and also in cases when the taxpayer claims tax deductions which have not been executed at the level of a tax agent

(which they usually would be). Hereby it is important to recognize that one person may file more than one tax declaration, one for each of the types of income.

For the overwhelming majority of taxpayers an obligation to submit a tax declaration would rise only when he or she receives transactional income from: renting out a flat (to an individual or legal person which is not a tax agent), selling real estate, selling shares in corporations, selling a car, receiving a gift, or winning in the lottery and other unusual cases. Another of the rare cases when an income declaration must be filed is when the taxpayer receives income from abroad. Also, individual entrepreneurs (individuals engaged in commercial activities in their own name) must file tax declarations. These individual entrepreneurs include those who apply special incentivized tax regimes (including farmers) and also those engaged in certain professional services (advocates, notaries).

Hereby, we must again point out that the tax declarations in question are filed on a transactional basis, that is, they are filed only for that particular extra income; the tax declaration will not include any other income, for example, not the income on which tax agents have applied tax withholding. This is very important to understand in order to grasp the magnitude of the error of the Piketty scholars. The fiscal data they referenced does therefore not even at best constitute any validly representative samples of Russian income distribution.

In some cases, tax declarations are filed also concerning income paid out by tax agents. This is when the taxpayer claims deductions and the deductions had not been effected by the tax agent (employer) in connection with withholding of tax, which is the rule.

From the above it becomes evident that the income which is declared separately by taxpayers concerns mainly supplementary income of medium-income households, for example, people having an extra income from renting out a second home (frequently pensioners). Therefore, contrary to demonstrating inequality between different groups of taxpayers the database used would actually evidence how middle-class income is supplemented. Hereby, one must bear in mind that the enforcement of declaring that income has been very lax and therefore a very large share of the income has not even been declared in the first place.

An important class of cases when tax declarations must be filed concerns capital gains on sale of assets such as real estate, shares and other assets. But even in these cases tax declarations are filed unfrequently and taxable income shown seldom. Profit on sale of real estate used to be tax exempt if the object was held for three years or more (from 2016 – five years). (Up to 2015, a Russian resident could sell an object of housing tax free pending 3-year ownership, so such capital tax gains would not show up in the statistics either.) Capital gains and dividends received from trade with stock listed shares would be subject to withholding by the broker. In these cases, no tax filing was due either. In the case of shares (securities) on organized markets (stock exchanges), individuals trade through licensed brokers (licensed middlemen), who must act as tax agents. As a rule, these tax agents would then withhold the tax. Only in the case that there are not enough funds on the individual's trading account at the end of the year, would the individual have to submit a tax declaration and pay the relevant tax personally. If a car has been owned for three years it would also be exempt from taxation. In the listed cases, only sale of shares in non-listed corporations would trigger the obligation to file a tax declaration. (After the periods covered by the Piketty study, the rule concerning

such shares has also changed, so that shares held at least 5 years, and acquired after 31.12.2010 can be sold tax exempt).

Perched atop their ivory tower, the Pikettys have totally omitted any sociological approach to their subject

But even knowing the rules, as per above, would not be enough when one attempts a scientific study of deriving income brackets from such fiscal data. The Piketty scholars should also have had to examine what is the real situation with tax filings. The Piketty research project is a prime example of academic failure when academic scholars perched atop ivory towers ignore a sociological approach to the subject of their research. The scholars blatantly ignore the income distribution surveys and replace them with their failed computations centering on the imaginary tax tabulations as they fancied that those amounted to a representative survey of tax declarations. But even if that would have been the case, they would have had to combine the treatment of those with at least a basic level of sociological verification to find out the actual situation with tax compliance. Alas, that did not happen.

It is widely known, that the practice of filing tax declarations has been very lax. In the majority of cases tax returns have not been filed, or when filed, then not to the full value of the transaction, as the subjects tend to avoid showing a taxable income. Tax compliance is slowly improving in Russia, but for the years covered by the Piketty study this was generally true.

A tax expert or a real estate agent, could easily have confirmed that in most cases people avoid showing taxable income by way of demanding payment in undeclared cash. Both parties to the transaction usually willingly comply in such efforts as

Russians have a deep-rooted aversion for taxation. The same is generally true for sale of shares in non-listed corporations.

This being the general background for tax filings, we are inclined to think that the larger tax filings represent striking exceptions in the practice of filing tax returns. It is highly likely that they tend to refer to capital gains from sale of businesses and such transactions in cases with risk of heightened public scrutiny, for example, because of the status of the buyer or the seller (large corporations or public persons), or when a tax-exempt status would already have been reached. In most other cases, the transaction would normally be done without the true value being shown.

Alas, as the Piketty scholars failed to recognize that and have taken those declarations to demonstrate income (taking gross revenue as the tax base). They then stipulate that the difference between the amounts taxed and the gross revenue are tax deductions (sic!). This further leads them to declare that the general level of tax deductions would have been an astonishing 73% (2014). Following down the slippery slope of these erroneous assumptions the Piketty scholars have established this fantastic figure of supposed deductions as the justification for immensely inflating the income of the most affluent 10% in their entirely flawed research paper so as to motivate their false (and fabricated) claims about the level of income inequality in Russia.

We will further below discuss more in detail, their error of failing to understand the difference between (gross) revenue and taxable income, or the difference between deducting expenses from gross revenue and tax deductions.

No amount of assumptions will validate fundamentally misapprehended data

One of the gravest fallacies in their project occurs with the failure of the Piketty scholars to recognize that the declarations do never represent the combined annual income of the taxpayer. As it was explained above, **the declarations are transactional by nature**, that is, they are filed to account for income received from a particular transaction (e.g. sale of real estate or other property) or a series of transactions (e.g. securities trade and property rental).

It transpires that based on these partial transactional declarations no one can possibly know the actual combined income of the taxpayers. And therefore, it is impossible to assign people to income tax brackets based on the referenced fiscal data, which the Piketty scholars erroneously did. And, no "generalized Pareto interpolation techniques" or any other statistical incantation could possibly cure this fatal flaw. What is particularly disturbing is that these esteemed scholars have actually recognized the problem at large. In particular, we find this revealing passage in their labor:

> "The other major difficulty (which biases the data in the opposite direction) is the fact that not all taxpayers need to submit an income declaration in Russia's personal tax system. In principle, taxpayers whose income is entirely reported by tax agents (i.e., who only earn wages reported by employers, and/or interest and dividends reported by financial institutions) do not need to submit a declaration. For them, the 13% flat income tax withheld at source is considered as final. The declaration is only compulsory for taxpayers who also receive other income (such as entrepreneurial income, capital gains, foreign income, gifts, etc.) on which the tax has not been withheld at source.

> Taxpayers who do not receive such incomes must also submit a declaration in case they want to claim personal deductions (such as deductions for charitable giving, education or health expenses, mortgage payments, etc., with the exception of deductions for dependent adults and children, which are already taken into account at source)."[33]

The above does not contain the acknowledgement that even in the case when the tax submissions are required, there is no need to declare the total annual income, but it shows that the question has been examined. It is then the more perplexing when the scholars next write that they in "order to properly exploit the data ...[we] **need to make assumptions** on what fraction of taxpayers file a declaration. In all variants, we assume that very top income taxpayers all file declarations."[34] These scholars really like to cover up their biases with unwarranted "assumptions," like this one. We have above explained very much in detail when according to Russian law a tax declaration is due, the Piketty scholars would have easily been able to verify those rules and therefore there was absolutely no reason for making this ridiculous assumption.

In this connection, we must also refer to a curious – and crucial - translation error. In their online appendices, they have regrouped and translated the data sourced from the tax authority's file, and hereby they have retained some of the original Russian line item descriptions. Concerning the alleged income tax brackets tabulations, the Russian original text reads (literal translation): "Number of taxpayers, who have submitted tax declarations on form 3-NDFL on income for [relevant year], where the total sum of income is." (Translator's note: The latter word 'income' refers to gross revenue'). The Pikettys have chosen to translate this simply as: "Number of taxpayers with income less than 1,000,000 RUB."[35] – We note

a striking difference between the original Russian line item description and the shorthand in which the scholars have chosen to translate it. The Russian original states what has been the value of the 'gross revenue' of the respective tax declarations, whereas the Pikettys wholly unjustifiably have perverted the meaning to sound as if the question was about the number of taxpayers whose total income was so and so much.

It follows that what Piketty and co. have wrongly taken to demonstrate income tax tabulations based on distribution of income according to percentiles of people, in fact, merely demonstrates the distribution of the declarations according to the underlying gross revenue, in the relatively rare cases when tax declarations are due. These scholars have then made a series of totally gratuitous assumptions based on the referenced database. Contrary to their assumptions the data does not tell anything about the tax brackets of income groups as it merely provides data about additional income of certain tax brackets, which in the majority of cases cover only mid-income groups.

Imaginary "Declaration rates"

Having completely misapprehended the essence of that fiscal data, the Piketty scholars proceeded with making more assumptions, this time about something they call "declaration rates," that is, the share of taxpayers at every (supposed) income bracket level who actually filed tax declarations.[36] Seemingly out of thin air, the scholars then declare that they have chosen "a rising profile of declaration rate" as they move up the fictive income brackets so as to reach "100% [declaration

rates] for very high income taxpayers."[37] By that these scholars mean that all of the richest people would supposedly file such declarations.

Astonishing is that the Piketty scholars surmise that all the100 Russian billionaires, who they found in the Forbes list, file tax declarations in Russia, at the full value of their income. They argue that in the fiscal data – which they so spectacularly misapprehended – are typically each year "400-500 taxpayers with assessable income above 1 billion rubles, and 30-50 with assessable income above 10 billion rubles."[38] 10 billion rubles is about 150 million US dollars, this, the scholars tell, corresponds with a 4-5% annual return on 3-4 billion dollars. – What did they just say? They imagine that a billionaire would take out as personal income each year the income that his billion-dollar assets yield across all the holdings. This is a hilarious. That is not how billionaires and not even millionaires function. They take out a decent income but most money they would have circulating in their many companies and trusts, in whose name they pay their expenses and acquire new assets, villas and yachts.

We must also remind, that nobody – not the billionaires either – would file tax declarations for the income that has been taxed at source, that includes salary (and similar personal remuneration) and dividends from domestic sources. This means, that there is no room for any speculation that those declarations represented the annual earnings of the Russian billionaires as falsely assumed by the Piketty scholars.

So, clearly, those tax declarations represent the income of other people than those billionaires. As we argued above, most likely they refer to sale of business assets, real estate and trade in shares, bearing in mind that the question was not about income (assessable/taxable income) but gross revenue.

At one point, the Piketty scholars declared that they were perplexed with "too many large declarations in the raw data as compared to the number of lower declarations."[39] Instead of this serving as a hint to alert them to the obvious errors in their interpretation of the source data, these scholars went on to "cure" the data with more Pareto voodoo formulas. As they put it: "In effect, the raw data includes too many large declarations in the raw data as compared to the number of lower declarations, so that one needs to assume a fairly steep profile for the declaration rate in order to obtain plausible coefficients (i.e. ai= not too close to 1, and bi=ai/(ai-1) not too large: plausible inverted Pareto coefficient bi are usually not higher than 3-4 at the very most, including in highly unequal in highly unequal countries)." This is again a prime illustration of how the Piketty scholars by making "assumptions" and invoking statistical formulas take great liberties with their source data with the aim of finally turning out the figures that fit their objectives.

Expenses are deducted from gross revenue before you get to taxable income

Next in line of fallacies is their misconception about the nature of tax deductions. The Piketty scholars fail to acknowledge the difference between 'tax deductions' and 'deductible expenses.' This leads them to contend that 'gross revenue' (the whole revenue stream including expenses) constitute the actual income or 'assessable/taxable income,' which latter concepts in economics is precisely defined as 'gross revenue less expenses.'[40] [41] This error is of similar magnitude as it would be to equate a company's profit with its turnover. By committing this stupendous logical error, the scholars have inflated the income figures by astonishing amounts. To make matters worse (if possible considering the already terminal errors) the

Piketty scholars settled for applying this peculiar method only for inflating the income figures of their chosen nemeses, the more affluent Russians, which constitute the highest 10 percentiles, whereas they stick with the data from the earlier more professional studies concerning the resting 90 percentiles.[42]

It follows that the Piketty scholars have doctored only the data on the most affluent top 10 percentiles. By now the pattern should be clear, the Piketty scholars and their sponsors did never aim for a true and fair study on the actual inequality being instead geared on producing a hack piece on the "Russian oligarchs."

It truly is worth pausing for a moment to reflect on this peculiarity: Why would these researchers accept 90% of the conclusions of studies that they dismiss as methodologically inaccurate only to discard them regarding the remaining 10%?

Normally, assessable income (actual income) on salaries would be the same as the *gross salary* (hereby *net salary* means salary minus tax) but concerning other kind of income you must frequently determine the assessable income first, that is, deduct the part of the total revenue that corresponds to expense deductions.[43] This is the case, for example, for revenue on sale of real estate and other property. In these cases, you arrive at the assessable income by **deducting justifiable expenses** from the total revenue. If you, for example, purchased a house at 200,000 and sold it later for 300,000, then the purchase price (if you can justify it, i.e. prove it) constitutes a justifiable expense, and the assessable income would then be 100,000 (the difference between selling price and purchase price). In these cases, the assessable income equals the capital gain or profit. Hereby, the total revenue – the selling price – is the gross revenue.

In order to fully grasp the extent of the Piketty fallacy, we must further consider four other concepts; **non-taxable income** (tax exempt income); **tax deductions**; **taxable income**; and **tax base.**

By law certain kinds of income are declared **non-taxable** (tax exempt). For example, this may be the case with life and other insurance premiums, or child support payments, workers' compensation benefits, welfare benefits and cash rebates from a dealer or manufacturer. In many jurisdictions there are exemptions from income tax on capital gain for real estate or other assets held for a minimum period of years.

Taxable income would generally mean assessable income minus non-taxable income.

A **tax deduction** is an allowance that the law makes for reducing the otherwise taxable income, for example, money spent on personal health care. The **tax base** in turn is the **taxable income minus tax deductions** to which the tax rate is applied. If the tax base is 100,000, a health care cost allowance is 5,000, and the tax rate is 13%, then the tax payable would be counted as 95,000 * 13%.

Hereby we should note that notwithstanding the differences explained above the concepts assessable income, taxable income and tax base are closely related concepts, and especially assessable income and taxable income are often used interchangeably. Hereby, the exact meanings would be clear from the context or applicable law. This would, however, not be a big concern for our purposes, because concerning the referenced Russian tax statistics there are no major differences between these categories. What is important is the difference between these three concepts on one hand, and gross revenue on the other hand. This is the

crucial difference that the Piketty scholars did not want to recognize with the fatal result of rendering their whole study invalid.

Without any doubt, in international tax practice by 'assessable income' one means the gross revenue less expenses. However, the decisive is not how you call your concepts but how you define them and how you employ them. By using the 'gross revenue' figures and claiming they represent 'assessable income,' the Piketty scholars have broken against all these principles. Same goes for their employment of the concept 'deductions.' People habitually do refer to these justifiable expenses also as 'deductions,' but whatever the colloquial style, in a research paper drawing on tax statistics you must draw the crucial difference between 'deductions as expenses resulting in assessable/taxable income' and 'tax deductions from the assessable/taxable income.'

The Pikettys acknowledge the problems with their method, but stick with it nevertheless

The error is the more disturbing as the Pikettys actually seem to have recognized it by discussing the problem in their paper. They go as far as admitting that there are "unfortunately…two major limitations with" the referenced fiscal statistics.[44] The first limitation lies in the 'the concept of assessable income,' whose use in the referenced fiscal files the authors claim resembles a 'gross revenue' concept, "rather than an 'income' concept." This, they maintain, is "in the sense that all personal revenues are taken into account, before any deductions, in particular before deductions such as professional expenses for entrepreneurial income, or asset acquisition price and other costs for capital gains, etc.)."[45]

The quoted section clearly demonstrates that these scholars have correctly identified the problem: that the deductions in question are in fact not tax deductions, but expenses that must be subtracted from gross revenue in order to determine what the actual (assessable) income is. Normally, that insight would have been enough to disqualify the fiscal data from the research. But as these scholars did not act upon their own clear understanding of the essence of the matter, the question rises whether we are not faced with willful fabrications also known as academic fraud? The latter possibility is all the more plausible when we take into consideration the highly confused manner in which they discuss this crucial issue and the equivocal manner in which they employ these concepts all through their narrative. We will look below at a few examples demonstrating the muddled way in which the scholars employ these concepts in their paper.

As referenced above, the authors claim that "the concept of "assessable income" in the fiscal data files resembles a 'gross revenue' concept." Next, in a footnote to what was quoted above, these scholars expressed their bewilderment over the "reason why the tax administration uses 'assessable income' (i.e., gross revenue) to tabulate income declarations instead of "taxable income" (i.e., gross revenue minus deductions)."[46] In this short passage, there are immediately three things that strike the eye. First, we note here the misguided and wrong postulation that 'assessable income' would be synonymous with 'gross revenue,' which is implied by the way the authors wrote "i.e. gross revenue" in the brackets following 'assessable income.' This notwithstanding the fact, that they had just above (in the main text to which the footnote referred) correctly argued that 'assessable income' would normally be like an 'income' concept (in the sense of 'taxable income'). It did not take longer than a footnote to reverse that insight (sic!). We should note, that this synonymous

use of 'assessable income' and 'gross revenue' is what the scholars settled for in their papers.

Secondly, it follows that the scholars now postulate that 'assessable income' and 'taxable income' would be altogether different concepts, as they said that the former is used instead of the latter. But, these two precisely are the synonymous concepts, contrary to 'gross revenue.'

The third thing here is that – contrary to what is affirmed - the Russian tax administration does not "use assessable income" anywhere in the referenced material, the more so, it does not use it synonymously with 'gross revenue.' In the appendices, which the esteemed scholars refer to and have made available on their website[47] containing original Russian language headings and line descriptions, there is absolutely nothing which could be construed as the Russian tax authority having used the data in any other way than to group the tax declarations (not taxpayers) according to the gross revenue indicated in the declarations. There is not a word about assessable income or any Russian concept that could possibly be translated into English as 'assessable income.'

There is sound reason to group the declarations in the way the Russian tax authority has done it, as a transaction with a bigger revenue stream obviously merits more attention in tax audits. And in fact, the Pikettys admit as much (sic!) by suggesting (in the very same footnote) that this (alleged) use "might be due to tax audit strategy," which according to the Pikettys would "in effect [be] a way to keep track of all declarations with large revenues (before deductions are used to reduce taxable income to much lower levels)."

But that is not all, further in this treasure trove of a footnote, we find this startling statement:

> "Also note that in some cases foreign residents are not allowed to claim deductions, so that in effect the flat tax rate applies to their gross revenue rather than their taxable income, which can make an enormous difference."

So, here we have the Pikettys in no uncertain terms stating that the use of 'gross revenue' instead of 'taxable income' can result in **enormous differences.** And yet, this is precisely what they have done systematically all through their flawed narrative!

Imaginary "deduction rates"

After the conceptual mess by which the Piketty scholars defined their data, they then try to reconcile the 'gross revenue' – which they had declared as 'assessable income' - with the actual tax levied. Naturally, the tax rates which are designed for real 'assessable income,' can be in no relation to the gross revenue. This is why these scholars have invented something they call 'deduction rates,' which they define as "the average bracket-level ratio of deductions to gross revenue."[48] Here it must be stressed that the entire concept 'deductions to gross revenue' is fundamentally meaningless, as there cannot possibly be any generalized correlation between the amounts of expenses deducted from gross revenue and the resulting taxable income. For example, in real estate, some people make a quick return with 10% profit margin, some hold out for decades and may have a 90% margin; not to mention differences in capital gains on securities trade. - Russians would say that this is like measuring the average body temperature in a

hospital. - But not letting facts get in the way of their scandalous narrative, these scholars have made gratuitous assumptions about such "deduction rates."

Having misapprehended and confounded every crucial bit of their research data, the Piketty scholars waved their academic wand and declared that they in their computations "assume a **flat** profile of deduction rate"[49] As we have seen, this concept is not only grossly flawed but also meaningless. If possible, these scholars make it even worse by declaring that these supposed "deduction rates" are **flat**, that is, that the same "deduction rates" would be employed for all kinds of income and for all income brackets across the board. And it is not just any "flat deduction rate" that they have invented, but a gargantuan one of 73% (in 2014).[50] Let this sink in, the Piketty scholars claim that all Russians on average for all their income of the different types – salary, real estate, shares, rents, you name it – would make a 73% deduction.

In reality, tax deductions proper amount to 1.5 - 2% of the assessable income.[51] Any amounts beyond those levels are not tax deductions but deductions of justifiable expenses from gross revenue.

In this connection, we must remind that there is another legitimate class of amounts that reduce the assessable income, this is tax-exempt (non-taxable) income. As it was said, this is income after expenses, which normally would be taxed in absence of a legal exemption. In Russia this kind of tax-exempt income include (valid for 2014), for example, real estate (and some other property) held for three years, inheritance, gift between close relatives. In a valid research paper, the scholars would try to assess the amounts of such tax-exempt income, but this was not done in the Piketty papers. If anything, we surmise that taking these facts into

consideration would add to the income of the 11 to 30 percentiles, and thus reduce the proportionate share of the top 10 percentile.

With all this in mind, we remind that the outrageously high deduction rates that the Piketty scholars have reported are in fact mostly expense deductions from business turnover prior to establishing assessable profit (entrepreneurs) and expense deductions for calculating capital gains from sales of business, real estate and securities.

True data regarding Russian income and wealth inequality

Taking into account the above reported severe fallacies of the Piketty research project, we must reject the conclusions advanced by these scholars. Hereby, the natural way out from the Piketty cul-de-sac is to return to the well-established and less biased survey studies, which these esteemed scholars had specifically set to disprove. Their paper singled out in particular two studies RLMS survey data (over the 1994-2015 period)[52] and the HBS survey data for earlier years[53], as well as a study by the EBRD which confirms the findings of the two former.[54]

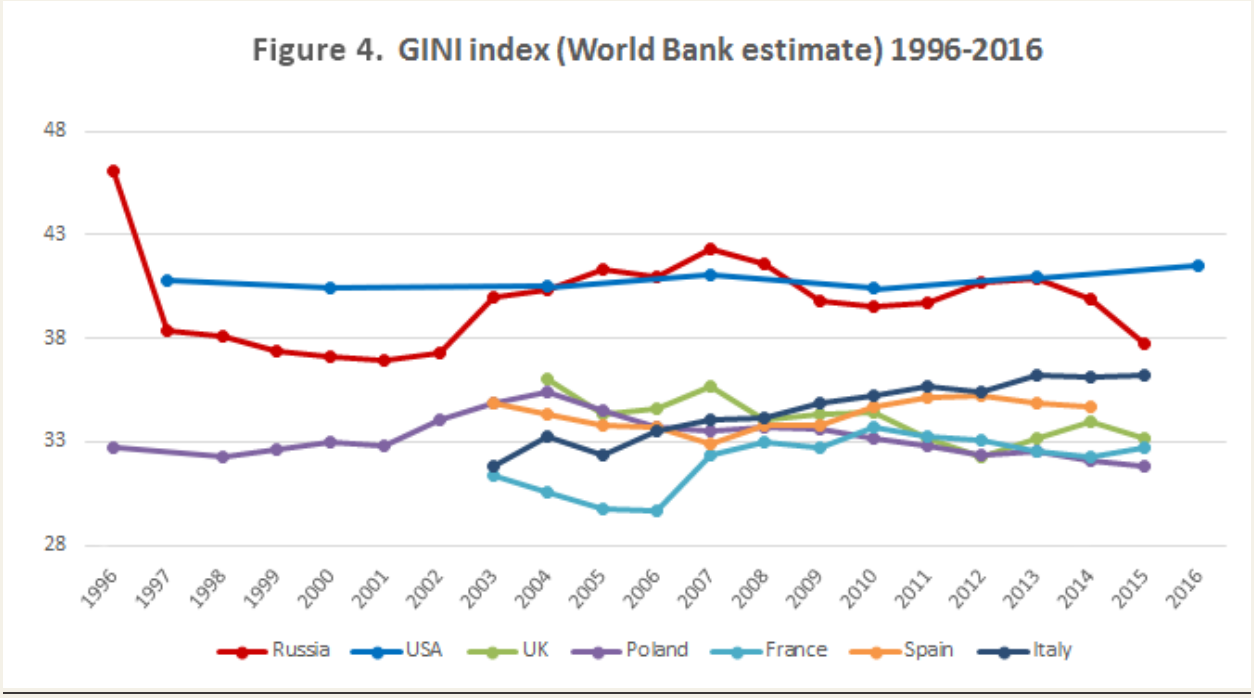
The Piketty scholars motivated their rejection of those more professional studies in reference to their own academic license to make up data and twist it to comply with their initial biases. In particular, in regard to the EBRD report, the scholars tell that they themselves have done a better job by using "corrected inequality series combining survey data with income tax data and wealth data."[55] But on the contrary, as we have seen, it is the "income tax data" and "wealth data" of the Piketty tales which must be regarded as null and void due to the severe fallacies in method and misrepresentation of source data.

The Piketty scholars claim that their labor supposedly showed that the income share of the top 10% in Russia "moved from about 30% [as evidenced by cited surveys] to over 50% of total income.[56] As we now have demonstrated that their study is fraught with deficiencies and proven it patently wrong, we may by good reason accept as guidelines the conclusions of those earlier studies.

We refer back to **page 11** for a presentation of the corrected figures about Russian income distribution.

Proper research on Gini coefficients also prove the Pikettys wrong

Inviting us to take the leap of faith and discard science in favor of their peculiar form of art, the Piketty scholars tell that the Gini coefficient evidenced by the more professional survey studies at the level of 0.3 – 0.4 (30 to 40%) would in fact stand at levels of 0.6 (60%).[57] But the World Bank disagrees. In the World Bank's database, Russia has a Gini coefficient of 37.7% (2015). This is well below the figure allocated to the United States, 41.5%. The World Bank figures also depict – contrary to the Piketty scholars' claim of a worsening trend - a sharply declining Gini curve for Russia in the last two decades since 1996.



In the same period, Germany has seen a marked rise in Gini inequality. Altogether by this measure, Russia is not far away from the other of the major European countries: UK, Spain, Italy, and France. The difference is not big between Russia and Poland either, which is remarkable given Poland's colonial economic model, which the Piketty scholars regard as more equality inducing on the basis that the overlords are alien and not nasty domestic oligarchs.[58]

Indeed, by these measures income inequality is slightly higher in Russia, although there certainly are no extreme differences as the Piketty scholars falsely claim.

The Pikettys laud a colonial economic model

What is funny, if not right out absurd, is when the Pikettys discuss this relative success of the Eastern European countries and put it down to their **colonial**

economic model, as the Pikettys express it: "the fact that a substantial part of the capital stock is owned by foreign wealth holders in Eastern European countries also contributes to lower inequality."[59] Here is another spectacular quote reaffirming that absurdity: "the fact the holders of top capital incomes tend to be foreigners rather than domestic residents contributes to lower top income shares in countries like the Czech Republic or Poland or Hungary (as compared to countries like Russia or Germany). **I.e. foreign owned countries tend to have less domestic inequality** (other things equal)."[60]

What this means is that according to these scholars the people of Eastern Europe are supposed to be more equal because the top wealth of the country is not owned by the state or domestic billionaires but foreign overlords in the capacity of transnational corporations. More in general, it is remarkable that in their studies the Piketty scholars have altogether disregarded foreign ownership from the numbers in the equation computing inequality between the classes. Yet, this did not prevent these same scholars from doing the reverse in case of Russia, where they inflated Russia's wealth inequality with hypothetical amounts of the so-called "offshore wealth).

In this connection it is also interesting to point out that Novokmet named his thesis analyzing the former Soviet bloc Eastern European countries "Between Communism and Capitalism." This title implies they are not communist anymore, but then not yet fully capitalist, and therefore still not fully mature, but on their way to the ideal.

This source[61] which compares the income inequality levels of countries on several parameters, also show that it was totally unwarranted to single out Russia – as the Piketty scholars did – as a particularly inequal country. On the contrary, Russia, in a

global comparison, is closer to the European levels with a marked declining inequality trend, the trend really being what counts.

This source[62] shows that Russia is on a general European level in regards to Wealth Gini as well. In particular, by this measure Russia ranks lower than France, United Kingdom, Denmark and Sweden.

Wealth Inequality Series, Particular Problems

Similarly, as the case was with the national income series in the Piketty tales, these scholars have resorted to dubious methods for making Russia's wealth inequality seem bigger than it is. We have managed to detect several fundamentally flawed premises in their approach on how to calculate Russia's national wealth and its distribution. Hereby, one of the methodological flaws stands way above all the others, single-handedly accounting for most of the erroneous conclusions that the scholars have presented as facts. This is the superimposition of the value of some supposed "offshore wealth" on the national wealth and allocating that all to so-called oligarchs. By this methodological innovation (combined with other distortions), the Piketty scholars have achieved the feat of showing that the Russian top 10 percentage own more than 70% of all private wealth and 56% of the total national wealth, while the true figures are 27% and 23% respectively.

The offshore wealth of Russia was according to the official statistics (produced by the Central Bank of Russia) equivalent to 25% of national income, but out of the blue the Piketty scholars exchanged that for a value of 75% of national income and allocated all of that to the top 10% without any real justification.[63]

Adding "offshore wealth" in the figures is totally wrong because of several reasons. One, which should crush this method at its roots, is that a corresponding addition of "offshore wealth" has not been done regarding any of the other countries the Piketty scholars have analyzed, and indeed is not done in international practice of wealth inequality studies. Breaching their own methodology for the purpose of making Russia look bad goes totally contrary to the proclaimed mission of Piketty's

so-called World Wealth and Income Database (WID.world), which was to "produce distributional statistics that are comparable across countries."[64] "To make the statistics as comparable as possible," we are told, these scholars "**follow a common methodology** that involves combining national accounts, surveys, and fiscal data **in a consistent manner** to produce distributional national accounts."

The idea to add the "offshore wealth" is such a blatant transgression that it screams bias. It is apparent that the Piketty scholars were disheartened when the normal methods of analysis did not deliver the support for their biased view of Russia supposedly suffering from "an extreme level of inequality".[65] As they had apparently already tampered with all the other input data to the limits of what could possibly be done, all they had left to resort to was this unwarranted addition of "offshore wealth."

Their justification of this methodological breach is very weak and does not warrant a detailed review. Indeed, when something is fundamentally wrong – and most likely fraudulent - to start with, you cannot possibly analyze it according to the normal standards of scientific discourse.[66] Suffice to mention, that the main trust of these scholars is centered around the idea that the relevant statistics - the balance of payments produced by the Russian Central Bank, which form part of the National Accounts - would supposedly be inaccurate.[67] However, in another connection (concerning statistics which lends support to the negative outlook that the scholars are apparently searching for), the Piketty scholars hail the financial statistics produced by the Russian Central Bank enthusiastically noting that they "are fully in compliance with" the U.N. System of National Accounts (SNA 2008).[68] The same Russian Central Bank complies the balance of payments on all Russia's cross-border transactions including investments abroad. These form part of the

previously lauded national statistics, but this time they are wrong, because they don't deliver the figures suitable for the Piketty bias. Therefore, these scholars have without any valid justification edited the figures by reference to one of their usual liberal doses of "assumptions."[69]

Furthermore, it is dubious that offshore wealth should be counted in when calculating national wealth inequality, even if it would be done for each country and access to transparent data would be available (which was not the case concerning Russia in the Piketty tales). This because wealth, which is transferred abroad, is not anymore participating in the national economy. It would be better to consider such foreign wealth through the prism of income distribution. In any case, there is no reason to consider that the foreign wealth of Russians would be owned in any other proportion than income is earned by them, or in any other proportion than national wealth within Russia itself is distributed.

In this connection it is worth mentioning that the Piketty scholars have not considered foreign owners of wealth in a given country as one class of owners that would affect inequality. For example, when the Piketty scholars discuss inequality in Eastern Europe (as we reported above), they make the point of saying that wealth inequality is lower in those countries because such a great portion of productive assets are owned by foreign capitalists.

True and fair value of business assets

The Piketty scholars have compounded the problems by applying the book value for all non-listed businesses while using the market value for stock listed companies. In justification for this peculiar choice of differing valuation methods,

the Pikettys refer to the Russian national accounts[70] from where the data was taken. (This is the instances when they lauded the quality of Russia national accounts). But that is by no means a valid excuse. As the objective was to establish the value of the wealth of the Russian population, these scholars should not have been content on drawing the data from those sources at face value. No doubt, this was an easy choice again to reinforce the bias by which these scholars are driven.

In general, to make Russian asset values comparable with the West, one should adjust the values to purchasing power parity (PPP). This poses a special problem in reference to the Forbes billionaire data on which the Piketty scholars have so heavily drawn. The Russian billionaire data is to an overwhelming extent connected with the export sector and Russian and foreign stock exchange listed corporations. For these reasons, the values of that wealth are more closely aligned with the standards of the Western financial wealth. Even when the valuations on the Moscow stock exchange are much lower than the valuations on the Western stock exchanges, the Moscow stock exchange listed companies are much higher evaluated than non-listed Russian companies. This is why you are not comparing like with like when you juxtapose Forbes's Russian billionaire data with the value of other Russian assets. One solution would be to make the PPP adjustments. For a discussion of the essence of PPP adjustments and its usefulness in these kinds of studies we refer to **Appendix 1.**

We from our side have attempted to establish the true and fair value of all businesses, listed and non-listed. This we did by reference to the total sales revenue (turnover) of all businesses, as derived from the Rosstat statistics. We then applied the general rate of profitability to the sales volumes.[71] The profit was then

multiplied with a P/E ratio. The P/E ratios on the Russian stock markets have been at the level of 6 in 2012-2014.[72]

But, we did not simply use this P/E value assigned by the markets, because the Russian market evaluations are greatly distorted by concentrated attacks on the Russian economy from Russia's geopolitical foes, and therefore do not in our opinion adequately reflect the true values. For example, in the case that the majority of shares of any of the listed companies were sold, or if geopolitical conjectures were to be turned around, the evaluations would be completely different. Whatever the distortions, the owner of the shares in the Russian listed companies can look forward to receiving the profit for as many years as the owner of any shares on the Western market. In view of these considerations, we have adjusted the P/E ratio to one that reflects the true economic prospects. (The post fact value, so to say). Our imputed P/E ratio reflects more adequately the true economic value of the Russian assets.

Logically the best method would be to calculate the net present value, but as that is not feasibly done across the market in a statistical study, we have therefore approximated the net present value by applying an imputed P/E ratio of 15 for companies of all forms and classes of owners. Arguably, we could also have settled for applying an average P/E ratio from global markets, but we think the generalized P/E method is the best approximation of a true and fair asset value. It most adequately takes into consideration the value of the business itself as opposed to short-term considerations applicable to a given owner. It is fair to think that a company on average will return 15 times its annual profit.

We have applied the same evaluation principles to non-listed business. We remind that the Piketty scholars have resorted to employing the obviously wrong

accounting book value for non-listed companies where as they used the market capitalization for stock-listed corporations. This choice of radically opposed evaluation principles naturally helped to prop up the Piketty scholars legend about supposed extreme wealth inequality in Russia. As the billionaire wealth – and that of the other top 10 percentile - is to a larger proportion in listed corporations (and other assets with globally comparable evaluations), then of course, the wealth of the other Russians (below top 10%) is made look less valuable.

Our method showed that the stock listed companies accounted for 40 percent of the total business asset values, while the non-listed businesses (including SMEs) accounted for 60 %. These can be compared with the 70% of total value assigned to the stock-listed corporations by the Piketty scholars.

The values further change significantly when we take into considerations small businesses and the shadow economy. (These are discussed below.) With these we get the following distribution of share of the respective classes of owners:

Figure 5. Value of business assets by owner categories

Listed companies – 40%		
	of which:	Private – 13%
		State – 16%
		Foreign – 12%
Non-listed companies – 24%		
	of which:	Private – 16%
		State – 4%
		Foreign – 5%
Small businesses – 18%		
Shadow businesses – 17%		

It is noteworthy that shadow businesses refer to small and medium sized businesses (as it is argued below).

In light of the above figures, the share of business asset wealth that can possibly be assigned to the top 10% richest is maximum 39%, the 13% share of listed companies, three fifths of the 16% of non-listed, and around half of the 35% combined value of small and shadow business.

Foreseeing criticism, we may point out that our method is very similar to the one that the World Bank has applied for calculating the value of so-called human capital. In their publication titled The Changing Wealth of Nations 2018[73] the World Bank has defined the value of human capital as the present value of the expected earnings of the labor force (i.e. wages and salaries and all other household income). The authors point out that this measure "is consistent with the concept of capital

used for other assets," that is the basically same as we here advocate for calculating the value of companies (businesses).

While we refer to this World Bank method for calculating human capital in support of our method to calculate value of businesses, we nevertheless must reject its applicability to human capital itself. We have devoted an appendix to this report for criticizing this approach by the World bank. (**Appendix 2**.)

Small businesses and the shadow economy

We have further adjusted the business (equity) values with the addition of the volumes of small businesses (SME) and shadow business. These are significant additions to the numbers which have been completely ignored by the Piketty scholars. EY with European Investment Bank have assessed that small and medium sized businesses make up 20-25% of Russia's GDP.[74] [75]

Another factor totally ignored by the Piketty scholars is the shadow economy. The estimation of the size of the shadow economy varies from the official 10-14% (Rosstat) to expert estimations of 32% of the total GDP.[76] [77]

It must be noted that the lion's share of the shadow economy is small businesses and individual entrepreneurs. (Not considering black market transactions and per se illicit activities). The Russian government has been conniving to allow this leeway to small businesses as it has directed – after the widespread anarchy of the 1990s - all tax and legal compliance measures towards the bigger companies and tacitly accepted that that small businesses and entrepreneurs must not comply. This state of affairs has lately been acknowledged as a significant problem for the Russian economy, but the government is posed with a dilemma here because it has ruled

out any kind of repression to get small businesses to comply, rather it is working on the economic macrostructures. Important measures to improve the situation includes, the Central Bank's campaign to weed out banks that specialize in serving the shadow sector, most notably companies that aid businesses to convert wire money into illegal cash with the aim to steal the value added tax and avoid payment of other taxes. By enforcing tax compliance (in particular VAT) among the larger companies, the government has aimed at compelling them to make sure the smaller suppliers also comply.

What is remarkable is that our research shows that the combined value of small and medium sized businesses and shadow economy are bigger than the top 10% wealth. The value of SMEs alone is bigger than top 1% wealth (the "oligarch wealth" as per the Piketty parlance).

State ownership

Experts conclude that the state sector makes up a much higher share of the Russian economy than it is the case in all Western countries. The estimates vary from 35% – 70%. The European Bank of Reconstruction and Development (EBRD) has estimated that the share of the public sector (state sector) of the total economy was 35% in 2009.[78] Experts agree that the state sector share has grown since. The Russian competition authority, the Anti-Monopoly Committee, estimated in its annual report for 2015 that the state sector had grown to comprise 70% of the Russian economy.[79]

No doubt, the Russian government Anti-Monopoly Committee, given its liberal pro-Western proclivities has chosen to exaggerate the state involvement, at the same

time as the Piketty scholars have wanted to denigrate the same. Considering these political biases, we may assume that the true size of the Russian state sector lies somewhere between these opposite poles, as we argue below.

In an independent study on Russia's state sector Paweł Augustynowicz refers to a report by the IMF, which has Russia's state sector at the level of 68% of the total. Augustynowicz concurs with the IMF based on his own research.[80] Hereby, it is important to note that the estimation of a state sector at 68% includes both the contribution of state owned enterprises and budget-funded state and municipal services, the latter comprising 18 % of GDP (Rosstat, 2015).

In reality, the estimate of a state sector at the levels of 68 and 70% seem to us exaggerated. But at any rate these estimates are based on the highest level of expertise on the Russian economy. It is then the more intriguing why the Piketty scholars have totally bypassed these studies at the same time that they have amorously embraced the Forbes's billionaire gossip data. Even if the state sector would be at the level of 50% - which we think it is, considering the corrected data on small businesses and the shadow economy – then for sure that should show in the national wealth series that the Piketty scholars concocted. The Pikettys only assigned 20% of the national wealth to the state. This is clearly not correct. One must bear in mind that the value of an asset at the end of the analysis is the net present value of the revenue it generates. There are some exceptions to this principle, like private housing used by the owner. In this case the dwelling does not generate a direct income but one may impute an income based on the principle of alternative costs. Other examples include virgin land which is not in commercial or residential use, as well as untapped natural resources. There is no entity in the world, which owns so much of the latter kind of assets as the Russian state. Even if

we do not consider these assets, it is evident that the true share of the state in Russia's natural wealth is closer to the 50%.

The Pikettys used a further trick to decimate the value of state holdings by way of deducting state debt from the value of the assets. This approach ignores the fact that state debt is at the end of the analysis paid by corporations and households in form of taxes collected from them. We have therefore eliminated the deduction and left the assets at gross value.

Conclusions on wealth inequality series

Considering all the above reported adjustments, the distribution of Russia's national wealth over different types of owners looks quite different from what the Pikettys wanted us to believe. For our conclusions we refer back to the introduction on page 8 where we have presented chart with our corrected data alongside the skewed data from the Piketty studies.

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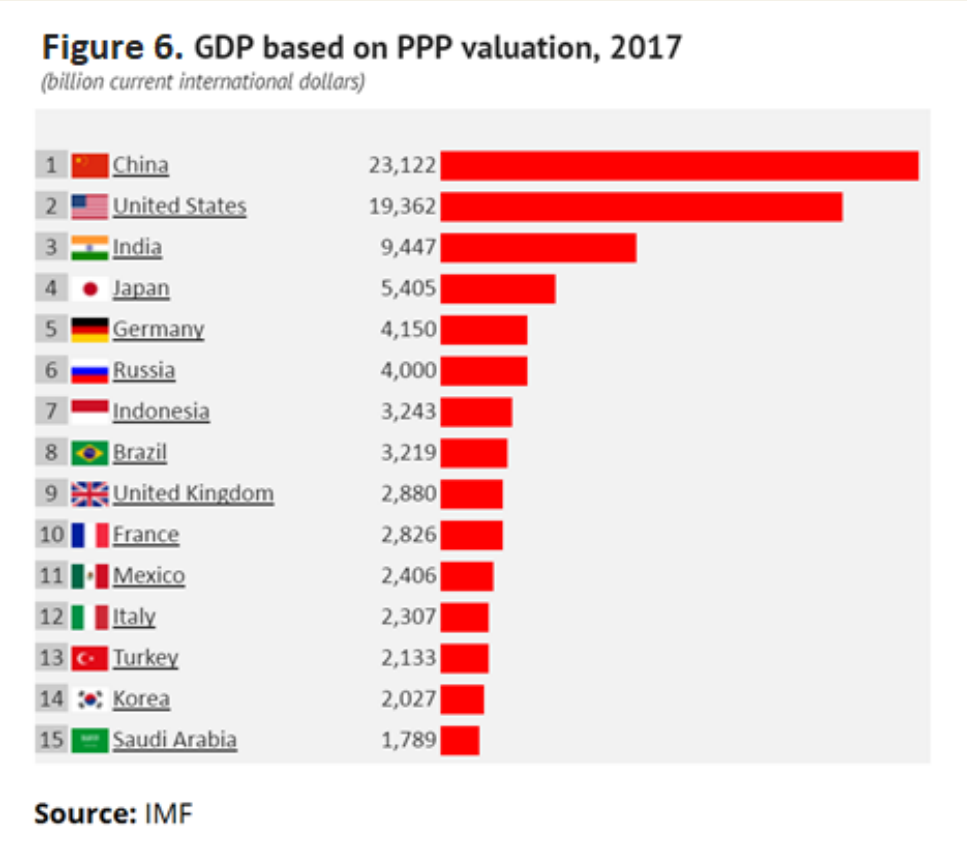
Appendix 1.

Purchasing Power Parity Adjustments (PPP)

In order to properly understand the importance of the PPP method, we start by republishing here an article we earlier wrote on the topic under the heading **Why the PPP method is more accurate for GDP comparison**s.[81]

According to figures from the IMF (October 24), Russia's GDP is expected to exceed $4 trillion first time ever. By this measure, Russia is the 6th largest economy in the world, virtually on par with Germany, who scored $4.15 trillion.

At the same time, China has solidified its position as the world's indisputably largest economy. With its $23 trillion, China's economy is already bigger 1/5th than the U.S. economy with its $19 trillion.



These GDP figures are calculated according to the PPP method. PPP stands for purchasing power parity and it aims to capture the value of the real economic output contrary to the method of rendering GDP in nominal USD figures. The nominal method, converts a country's GDP calculated in the local currency to the USD using the market exchange rates. The figures calculated with the nominal method is what the media tends to report. But, the Nominal GDP method contains several grave errors. There is a huge calculation bias in favor of the countries possessing the dominant world currencies, that is, the Western countries. Thanks to the dominant currencies, their GDPs tend to be inflated in value as compared with the countries with currencies that are not widely used globally. This way, the economies of the

Western countries would seem bigger than they are if one only goes by the nominal market exchange value.

High taxes and a high general level of prices also push up the nominal GDP, again making the Western economies seem bigger than they are.

GDP is statistics fraught with assumptions

Before we proceed further, we must note that any GDP (Gross Domestic Product) calculation is a statistical exercise based on a host of assumptions on how to arrive to the total value of everything produced. Therefore, the step from Nominal GDP to PPP method is just one of the thousands of assumptions, the one method is not based on more exact input data than the other.

The volume of the economy is expressed in a monetary form, because that is the only way you can make all the millions of products statistically comparable, but what we really need to know is how much of each product has been produced, how many cars, how many houses, how many tomatoes etc. But, by using the USD exchange rate as the multiplier we lose the comparability. (Global GDP comparisons are always given in USD).

If one kilo of tomatoes costs 90 rubles or 1.5 USD in Russia and 4.5 USD in the United States, then according to the Nominal method the U.S. economy would be 3 times bigger by this parameter, even though both countries would produce the same amount of tomatoes. In fact, on average, almost everything is 3 or 4 times less expensive in Russia, therefore, by converting the Russian prices to USD according by the market exchange rate, Russia's economy would seem 3 to 4 times smaller than it

actually is. This is where the PPP method comes in to remove the calculation biases and currency fluctuations. The PPP method looks beyond the US dollar, striving to capture the actual volume of goods and services produced in a country. In comparing the size of the economy of different countries, that is precisely what we want to do, to measure their real output of goods and services.

The PPP method adjusts the dollar GDP to the comparative price levels

The starting point for the PPP GDP is the Nominal GDP calculated in the local currency of any country. This is then adjusted by the PPP coefficient, which is the average price difference between products in the given country and the U.S. The local GDP figure is multiplied with the PPP coefficient and this way we reach the more accurate comparison of the actual volumes of the economies. We are still using the USD as the currency for comparing all the world's economies, but have adjusted them to eliminate the market exchange rate biases.

Another way to express this is to say that we check how much of any given product we can by for one dollar in various countries. Any expat and even tourist experiences something similar on a daily basis when they are in a foreign country, observing what their money buys there compared with at home. The so-called Big Mac index, which compares the price of McDonald's Big Mac sandwich around the world can serve to illustrate the differences in price levels of various countries. (The idea being that as the product and the production method is highly standardized, it would tell something about the general price level differences). In the U.S. a Big Mac costs on average 5 dollars, while the price in Russia is 2 dollars. Thus by this indicator alone

the Russian economy would look artificially lower by 2.5 times using the Nominal method and its market exchange rate. (In reality McDonald's prices are not the best indicator, because the prices are still higher than the general level of prices due to McDonald's brand dominance, franchising royalties etc.)

Quality of products is not the explainer

The adherents to the Nominal GDP method maintain that what explains the price difference is supposedly quality, a better Western product is more expensive because it is of better quality, they say. Obviously, quality affects the comparative prices, but only to a certain degree, and often not at all. Let's go back to the example of tomatoes, many claim – and I agree – that tomatoes in Russia, as well as vegetables in general, are often tastier than those in Europe, yet they are cheaper, so for sure quality is not what explains the price difference in these cases. Or how about a haircut? I can get it for 3 dollars in Moscow and 20 in Helsinki, and really there is no difference in the result.

The PPP method thus assesses the actual economic output of goods and services disregarding the distortions of currency exchange rates and all the structural differences on the markets of the various countries, contrary to the wrongheaded nominal GDP method.

In the case of Russia, a particularly good example is the arms industry. Lately, it has been proven beyond any doubt that Russia's weapons, aircraft, missile systems, tanks etc. are by no means inferior in quality to the American ones, yet they cost

much less. This article[82] argues that the PPP difference in the arms industry could be as high as tenfold in Russia's favor.

The final nail in the coffer of the Nominal GDP method

I often find myself in online arguments with Nominal GDP apologists, where I go through all these arguments and many more. But, they just go on and on, till we come to the final argument that would shut them up – literally. I tell them that Russia's nominal GDP in 2016 was $1.28 trillion and it is expected to reach $1.47 trillion by 2017. That's a 14.5% growth, I point out, and then I ask them to explain how Russia has reached this absolutely spectacular growth. "That's not real growth, it's just the exchange rate difference when the ruble appreciated," they frown. – Exactly, that's what it is. That's what the Nominal GDP is, an illusion based on fluctuating and biased exchange rates.

PPP and tax adjusted income, Russia compared with Finland

As it was shown, a proper comparison of income levels between countries would have to consider both the difference in price levels (PPP adjustments) and the tax burden, so that income would be compared net of taxes and adjusted to the respective price levels. Both these adjustment vastly favor Russia, in the sense that it shows Russia's true comparative wealth and well-being. This point is well illustrated by comparing the adjusted salaries of Russia and Finland.

The nominal gross average monthly salary in Russia of $775[83] - pales – at a superficial glance - in comparison to the $3,730 of Finland.[84] But after a 30.4% tax, the salary in Finland would be worth $2,700[85] whereas in Russia $687 would be left after a 13% flat tax. The PPP conversion factor between the price levels in Finland

and Russia is 2.68, meaning that prices in general and on average are 268% higher in Finland.[86] Therefore, we must multiply the Russian net salary by 2.68 to make it comparative with the Finnish. This gives $1,840. Alternatively, we could divide the Finish salary by the PPP factor to compare it downwards with the Russian salary, yielding $1,000. In the latter case we would see that the $3,730 which seemed to be a vastly higher salary in Finland in actual reality is worth $1,000 (in the home country) compared with the actual value of $687 of the Russian nominal gross salary of $775.

In April 2018, the average salary in Moscow was 89,000 rubles, the equivalent of $1,465. Making the same adjustments as above, this would yield the purchasing power comparable value with Finland of $3,410. In Finland you would have to earn $6,500 to achieve the same purchasing power as the Moscow $1,465.

Net of tax and adjusted for purchasing power, a monthly salary of $3,700 in Finland equals a salary of $1,150 in Russia.

The above examples should make it clear how illusional the nominal income and nominal wealth comparisons are if they are not adjusted for purchasing power parity and indeed taxes, too. For further reading, we refer to Awara Global Survey on Total Payroll Taxes 2014[87]

Appendix 2.

The World Bank's unsuccessful attempt to compute value of human capital

In their publication titled The Changing Wealth of Nations 2018[88] the World Bank has defined the value of human capital as the present value of the expected earnings of the labor force (i.e. wages and salaries and all other household income). The authors point out that this measure "is consistent with the concept of capital used for other assets," that is the basically same as we here advocate for calculating the value of companies (businesses).

It is another thing, that we find the idea to calculate value of human capital in that way outrageous. What applies to asset values, certainly does not apply to the value of human capital. Just think about it, the authors suggest that the value of some "human capital" is the value of the discounted future earnings of the person! Through this absurd method the authors arrive to the conclusion that the countries with the highest cost of labor have the biggest share of human capital in the total national wealth. It is a case of circular reasoning, if ever we saw one.

This is wrong on so many levels.

To start with, the fundamental condition that is need for determining an asset price is saleability, that the asset can potentially be sold by way of transfer of ownership. Now, since slavery has been abolished that condition does not apply to human labor. A person does so to say sell his labor service when he concludes a job agreement, but that is just a figure of speech. In actual fact, you can never sell your

future labor, cash in on future earnings and stop working. Therefore, there cannot be any talk about an asset value of human capital.

Or just think about the situation that a top scientist from a low-pay country moves to a high-pay country, as it was for example in the 1990s when Russian scientists moved to the United States. According to the World Bank method those scientists possessed a low individual human capital as long as they lived in Russia, but as soon as they crossed the border to the USA, they were all of a sudden high-value. In fact, what this example shows is that the human capital was something that those scientist possessed already after having received an adequate education in Russia and its economic value was just realized when they emigrated. This very much illustrates that human capital cannot be expressed in a monetary value, at least not by the simplified and blatantly false method proposed by the World Bank.

The absurdity of this idea can be exposed by another similar situation. Consider the situation, that a low-income country is annexed by a high-income country with the result that the salaries are moved significantly up towards the level of the annexing country. This was the case with East-Germany joining West Germany.

We see, from these examples, that it is not the value of the human capital that changed but the surrounding price level. Human capital must be defined not as the salary (income) in present circumstances but the potential to earn better. As we cannot assess that in a scientifically falsifiable way, then the best choice is not to do it at all, instead of creating fake statistics.

The World Bank acknowledges that they have developed this new way of assessing human capital in response to the difficulties to account for the factors of production that create GDP growth. Whereas economists claim to be able to assign

growth to various production factors – whether pertaining to production (produced capital) or natural wealth (natural capital) - there is a residual amount which cannot be directly linked to any (referred to as intangible wealth). The World Bank economists therefore recognize that knowledge (intellectual property) must be a key component of the residue along with institutional factors such as the quality of the judiciary. That is basically a correct way of reasoning, but where the economists go astray is when they try to measure the intangible capital, which they rebranded as human capital. The intangible or human capital cannot possibly be measured (except for as a residual value, as it was previously done), because it is the result of infinite variances of the activities of humans in social life, social practices.[89]

One approach to determine the value of human capital has been that of trying to determine spending in education as an investment in human capital. That approach misses the point in two main senses. First, the value of an asset is not the same as its acquisition cost, but ultimately its ability to yield a return. This problem is immensely more complicated concerning investments in intangible activities, the more investments in education. Any investment in education are only loosely connected to the value of the human capital created, owing to inefficient expenditures. More fundamentally, though, education forms only a part of the parameters in infinite variances that affect human behavior or collective human behavior we term social practices. Everything tangible and intangible – including the historic culture - that a human is surrounded by and draws from in his life affects his behavior, his (supposed) knowledge and the way he uses the knowledge. The quality and adequacy of political and judicial institutions, law enforcement and many other such factors affect the social practices that produce human capital.[90]

It is futile and patently impossible to try to assign a value to any of those components of so-called human capital or to try to define what kind of investment affects human capital to what extent. Investment in formal education is only a part of the equation. In our present Internet age it is, however, more likely that it is a diminishing part in it. Perhaps investment in culture and public space could be as important.

Acknowledging the importance of education, health and institutions (while failing to recognize the big picture of all social practices), the World Bank authors dismiss these concerns (no doubt because of their inability to quantify them) and go on to motivate why they then instead only consider the income people generate. We have shown above why that is a naïve way of trying to commodify the value of human labor. The resulting monetary calculations are not indicative of anything but the present level of prices and income in the given countries.

Most grossly, the World Bank, by this method, has not advanced a bit our knowledge on which kind of input will advance human capital and what sources serve to grow human economic income. If anything they have muddled the question. Amusingly, the authors announced that they "seek a measure of wealth that informs us about likely future well-being." Projecting the present levels of income into the future is as far as one can go from a measure that is likely to affect future well-being.

To make matters worse, the World Bank has valued this so-called human capital at market exchange rates instead of doing it on the method which adjusts prices for purchasing power parity (PPP). This choice of flawed method ads an enormous valuation bias for the Western countries, which by the temporary strength of their monopoly currencies[91] have vastly higher general level of prices and taxes and

therefore also personal income. There are several other market distortions connected with the monopoly currencies and the resulting bubble economies, not least an disproportional service sector as a share of the GDP, which all inflate the World Bank's flawed human capital measurement.

Footnotes

[1] From Soviets to Oligarchs: Inequality and Property in Russia 1905-2016 Filip Novokmet, Thomas Piketty, Gabriel Zucman. July 2017. WID.world WORKING PAPER SERIES N° 2017/09 - http://piketty.pse.ens.fr/files/NPZ2017WIDworld.pdf
[2] Filip Novokmet, PhD Thesis: Between communism and capitalism: essays on the evolution of income and wealth inequality in Eastern Europe 1890-2015. Thesis Advisor : Mr. Thomas Piketty.Prepared and defended at Paris School of Economics on December 11, 2017. http://piketty.pse.ens.fr/files/Novokmet2017.pdf
[3] From Soviets to Oligarchs, page 30.
[4] From Soviets to Oligarchs, Appendix, Figure 12c.
[5] From Soviets to Oligarchs, page 5
[6] Figure 11a in From Soviets to Oligarchs.
[7] Figure 12c in From Soviets to Oligarchs.
[8] We have reached this corrected figure after removing the value of the "offshore wealth," which the Piketty scholars had entirely gratuitously added to the private wealth, and some other adjustments. This issue is discussed in detail in the present report.
[9] From Soviets to Oligarchs, page 27.
[10] Figure 12a in From Soviets to Oligarchs.
[11] From Soviets to Oligarchs, page 12
[12] As we shall see, at the end of the analysis, they settled for only using this data for declaring the income of the top ten percentile.
[13] From Soviets to Oligarchs, page 26, footnote 25: "For other countries, offshore wealth is estimated to be much smaller than in Russia (typically less than 10% of national income; see Zucman 2014) and is not included in the estimates reported here."
[14] From Soviets to Oligarchs, page 5.
[15] From Soviets to Oligarchs, page15.
[16] From Soviets to Oligarchs page 14
[17] "One needs to make fairly strong assumptions in order to move from there to estimates of the top 10% or even the top 1% and top 0.1% of the distribution. In the appendix we present a number of alternative series based upon explicit assumptions and generalized Pareto interpolation techniques." From Soviets to Oligarchs page 14.
[18] From Soviets to Oligarchs, page 39.
[19] From Soviets to Oligarchs, page 1.
[20] From Soviets to Oligarchs, page 41.
[21] From Soviets to Oligarchs, page 14.
[22] From Soviets to Oligarchs, page 10, and Between Communism and Capitalism, page 529
[23] Between Communism and Capitalism, page 529.
[24] From Soviets to Oligarchs, page 12
[25] Between Communism and Capitalism, page 529
[26] From Soviets to Oligarchs, page 5.
[27] About the scholars' alleged method, see also Between Communism and Capitalism, page 529
[28] From Soviets to Oligarchs, page 10
[29] "Our contributions are both methodological and substantial. First, from a methodological viewpoint, we provide what is to our knowledge the first attempt to exploit Russian national income tax tabulations to correct official survey-based inequality estimates."
[30] From Soviets to Oligarchs, page 4. . "Second, we combine various official and non-official series to provide the first complete balance sheets for private, public, and national wealth in post-Soviet Russia, including an estimate for offshore wealth." From Soviets to Oligarchs, page 5.

[31] From Soviets to Oligarchs, page 4.
[32] Awara Russian Tax Guide / Jon Hellevig, Artem Usov, Anton Kabakov. — Awara Group, 2014. — 332 p. ISBN 978-5-00077-021-4 https://www.awaragroup.com/wp-content/uploads/2015/05/awara-russian-tax-guide.pdf
[33] From Communism to Oligarchs, page 11.
[34] From Communism to Oligarchs, page 11.
[35] The corresponding Russian text reads like this: ”Количество налогоплательщиков, представивших налоговую декларацию формы 3-НДФЛ по доходам 2008 года, в которой общая сумма дохода составляет.”
[36] Between Communism and Capitalism,page 529
[37] In order to properly exploit the data, we need to make assumptions on what fraction of taxpayers file a declaration. In all variants, we assume that very top income taxpayers all file declarations.” From Communism to Oligarchs, page 11.
[38] From Soviets to Oligarchs, page 10.
[39] Between Communism and Capitalis, page 529
[40] https://finance.zacks.com/difference-between-assessable-income-taxable-income-9940.html
[41] https://www.ato.gov.au/Individuals/Lodging-your-tax-return/In-detail/What-is-income-/
[42] “Regarding household survey data, we use the RLMS survey data (over the 1994-2015 period) and the HBS survey data for earlier years (HBS data is available over the 1989-2015 period.” “We assume that they provide an acceptable description of the distribution of income below the 90th percentile (p0=0.9).” From Soviets to Oligarchs, page 13.
[43] Concerning the total payroll income you would also deduct expense reimbursements before arriving at gross salary
[44] From Soviets to Oligarchs, page 11
[45] The other of the two “major limitations” was the already mentioned fact that the Piketty scholars had in fact recognized that the tax declarations do not represent what the Piketty scholars anyway insist on them representing . From Soviets to Oligarchs, page 11.
[46] From Soviets to Oligarchs, page 11.
[47] https://wid.world/methodology/#library-general
[48] Between Communism and Capitalism, page 529.
[49] Between Communism and Capitalism, page 529
[50] Between Communism and Capitalism, Table B12. Corrected Russian Income tax tabulations, 2008-2015
[51] Not only is there a flat tax rate but the Russian system of personal income taxation is also characterized by very limited opportunities for the application of tax deductions. Apparently, the Piketty scholars have failed to understand this aspect of the Russian tax laws, too.
[52] Russian Longitudinal Monitoring Survey – HSE https://www.hse.ru/en/rlms/
[53] Russian Federation - Household Budget Survey
[54] European Bank for Reconstruction and Development (EBRD), Transition for All: Equal Opportunities in an Unequal World, Transition Report 2016-2017 (October 2016) https://www.ebrd.com/transition-report
[55] From Soviets to Oligarchs, page 34
[56] From Soviets to Oligarchs, page 12
[57] From Soviets to Oligarchs, page 12
[58] Between Communism and Capitalism, Abstract: “We find that official survey-based measures vastly under-estimate the rise of inequality since 1990. According to our benchmark estimates, top income shares are now similar to (or higher than) the levels observed in the United States. We also find that inequality has increased substantially more in Russia than in China and other ex-communist countries in Eastern Europe.”
[59] From Communism to Oligarchs, page 38
[60] From Soviets to Oligarchs, page 29.
[61] https://en.wikipedia.org/wiki/List_of_countries_by_income_equality
[62] https://en.wikipedia.org/wiki/List_of_countries_by_distribution_of_wealth
[63] From Soviets to Oligarchs, page 5.
[64] From Soviets to Oligarchs, page 5.
[65] From Soviets to Oligarchs, page 5
[66] The relevant section can be found in From Soviets to Oligarchs, pages 18-23

[67] In this connection the relevant report is the so-called international investment position drawn as a balance from the annual balance of payment statistics.
[68] Between Communism and Capitalism, page 525
[69] From Soviets to Oligarchs, page 21.
[70] Between Communism and Capitalism, page 525
[71] The profits of all companies were reported by Rosstat and the profitability of listed companies could be derived from the P/E ratios reported.
[72] Tregub, A.Ya., Grabucha, I.Yu. Russian Stock Market: 2014 Events and Facts, page 26. https://www.naufor.ru/download/pdf/factbook/en/factbook_2014_eng.pdf
[73] The Changing Wealth of Nations 2018: Building a Sustainable Future https://openknowledge.worldbank.org/handle/10986/29001
[74] Small and Medium Entrepreneurship in Russia, November 2013 http://www.eib.org/attachments/efs/econ_study_small_and_medium_entrepreneurship_in_russia_en.pdf
[75] The medium sized businesses are included in Rosstat's statistics on business volumes and profits, but small businesses are not. We determined the volumes of small business indirectly through the data that the EY/EIB report provided and by correlating it to the Rosstat data.
[76] Россия вошла в пятерку стран с крупнейшей теневой экономикой https://www.rbc.ru/economics/30/06/2017/595649079a79470e968e7bff
[77] By shadow business, it is here meant, business that is not officially accounted for and reported to the tax and statistics authorities.
[78] Transition Report 2009: Transition in crisis? EBRD (2009) https://www.ebrd.com/downloads/research/transition/TR09.pdf
[79] Доклад о состоянии конкуренции в Российской Федерации за 2015 год https://fas.gov.ru/documents/589902 See also: Russian Anti-Monopoly Service: State Doubles Presence Over Past Decade. The Russian economy can be characterized as a capitalism of state monopolies. https://themoscowtimes.com/articles/russian-state-doubles-economy-presence-over-past-decade-55529
[80] Paweł Augustynowicz: State-owned enterprises in Russia. The origin, importance and principles of operation in Voszka, É. – Kiss, G. D. (eds) 2014: Crisis Management and the Changing Role of the State. www.eco.u-szeged.hu/download.php?docID=40328
[81] Jon Hellevig at Awara Accounting blog https://www.awaragroup.com/blog/despite-sanctions-russias-gdp-shoots-over-4-trillion/
[82] http://russia-insider.com/en/russia-and-china-will-win-new-arms-race/ri13258
[83] Rosstat gives $674 for 2017, we have adjusted that with the income paid in the shadow sector, as explained in this report
[84] Data from 2016 https://yle.fi/uutiset/3-9843295
[85] We refer to the calculations of the Finnish Taxpayers Association of effective tax for various income levels https://www.veronmaksajat.fi/luvut/Laskelmat/Palkansaajan-veroprosentit/,
[86] The PPP conversion factor is calculated by comparing the nominal GDP and PPP GDP as reported by the IMF -
[87] Jon Hellevit at Awara Accounting blog https://www.awaragroup.com/blog/survey-on-total-pay-roll-taxes-2014/
[88] The Changing Wealth of Nations 2018: Building a Sustainable Future https://openknowledge.worldbank.org/handle/10986/29001
[89] For an explanation of the philosophical concept 'infinite variances,' refer to Jon Hellevig, Expressions and Interpretations. Our perceptions in competition. - A Russian Case / Moscow, 2006. Expressions and Interpretations. Our perceptions in competition. ISBN 5-93347-222-0. Can be downloaded at www.hellevig.net
[90] About the philosophical essence of 'social practices,' refer to Jon Hellevig, All is Art On Social Practices and Interpretation of Feelings. Helsinki 2007. ISBN 978-952-99785-4-0. Can be downloaded at www.hellevig.net. See also, Jon Hellevig, The Case against Noam Chomsky. Helsinki 2010. ISBN 978-952-99785-7-1 (printed book), ISBN 978-952-99785-8-8 (e-book / PDF). Can be downloaded at www.hellevig.net.
[91] Jon Hellevig at Awara Accounting blog: How the Dollar and Euro monopolies destroyed the real market economy. And what Hayek told about the need for competing currencies. (2015). https://www.awaragroup.com/blog/dollar-euro-monopolies-destroyed-market-economy/