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Thomas Piketty's exhaustive inequality data turn out to be flawed

By Chris Giles and Ferdinando Giugliano Author alerts

Thomas Piketty is in no doubt that data underpin the conclusions of his best selling economics book, "Capital in the Twenty-First Century" .

He writes, in the introduction: "Compared with previous works, one reason why this book stands out is that I have made an effort to collect as complete and consistent a set of historical sources as possible in order to study the dynamics of income and wealth distribution over the long run".

Piketty copies the 1908 line of his original source ...

While the conclusions of his work, including his call for an international wealth tax, have stirred controversy among academics, commentators and policy makers, even his critics have generally praised the ambition and quality of the data presented in the text.

Reviewing the book this month, Lord Mervyn King, former governor of the Bank of England, said, "the principal weakness of the book is that the carefully assembled data do not live up to Piketty's rhetoric about the nature of capitalism".

The sense of diligence in Professor Piketty's compilation of trends in wealth is bolstered by an online technical annex and spreadsheets containing the data, with sources.

An investigation by the Financial Times, however, has revealed many unexplained data entries and errors in the figures underlying some of the book's key charts.

These are sufficiently serious to undermine Prof Piketty's claim that the share of wealth owned by the richest in society has been rising and "the reason why wealth today is not as unequally distributed as in the past is simply that not enough time has passed since 1945".

After referring back to the original data sources, the investigation found numerous mistakes in Prof Piketty's work: simple fat-finger errors of transcription; suboptimal averaging techniques; multiple unexplained adjustments to the numbers; data entries with no sourcing, unexplained use of different time periods and inconsistent uses of source data.

Together, the flawed data produce long historical trends on wealth inequality that appear more comprehensive than the source data allows, providing spurious support to Prof Piketty's conclusion that the "central contradiction of capitalism" is the inexorable concentration of wealth among the richest individuals.

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> - Thomas Piketty

Once the data are cleaned and simplified the European results do not show any tendency towards rising wealth inequality after 1970.

The US source data are also too inconsistent to draw a single long series. But when the individual sources are graphed, none of them supports the view that the wealth share of the top 1 per cent has increased in the past few decades. There is some evidence of a rise in the top 10 per cent wealth share since 1970.

The FT uncovered several types of defect.

One apparent example of straightforward transcription error in Prof Piketty's spreadsheet is the Swedish entry for 1920. The economist appears to have incorrectly copied the data from the 1908 line in the original source.

A second class of problems relates to unexplained alterations of the original source data. Prof Piketty adjusts his own French data on wealth inequality at death to obtain inequality among the living. However, he used a larger adjustment scale for 1910 than for all the other years, without explaining why.

Chris Giles outlines his issues with data in 'Capital in the 21st Century'

In the UK data, instead of using his source for the wealth of the top 10 per cent population during the 19th century, Prof Piketty inexplicably adds 26 percentage points to the wealth share of the top 1 per cent for 1870 and 28 percentage points for 1810.

A third problem is that when averaging different countries to estimate wealth in Europe, Prof Piketty gives

Some issues concern sourcing

the same weight to Sweden as to France and the UK – even though it only has one-seventh of the population.

There are also inconsistencies with the years chosen for comparison. For Sweden, the academic uses data from 2004 to represent those from 2000, even though the source data itself includes an estimate for 2000.

and definitional problems. Some numbers appear simply to be constructed out of thin air.

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Prof Piketty’s documents explaining his sources and methods, suggest that he uses similar data from death duty records around the world. In fact, he interchanges between such source material and surveys of the living, which often give very different answers. Switching between the two sorts of data series, particularly for the US is important to his results.

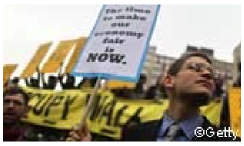
Some of the biggest defects relate to the UK data, where his original sources consistently show very large declines of near 10 percentage points in wealth held by the rich in the highly inflationary 1970s.

Conversely, Prof Piketty shows the super rich held a greater share of wealth by 1980 and the top 10 per cent saw their share fall only 1.5 percentage points.

The official data series that Prof Piketty says he used for the UK after 1980 shows little increase in inequality over the next 30 years, while his figures show a steep rise.

@ChrisGiles_

Piketty response



I am happy to see that FT journalists are using the excel files that I have put on line! I would very much appreciate if you could publish this response along with your piece.

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@FerdiGiugliano

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