

MEASURING WELL-BEING IN THE PAST

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Review of *How Was Life? Global Well-Being Since 1820*, edited by Jan Luiten Van Zanden, Joerg Baten, Marco Mira d'Ercole, Auke Rijpma, Conal Smith and Marcel Timmer (OECD Publishing, Paris, 2014, 269 pp., ISBN 9789264214064, paperback)

1. INTRODUCTION

In 2011, OECD published the report *How's Life? Measuring Well-Being* as the cornerstone of the *Better Life Initiative* aimed at correctly measuring improvements in quality of life, identifying their drivers, and consequently, designing policies that can promote them (<http://www.oecdbetterlifeindex.org/>). *How's Life* is now revisited every 2 years—its third iteration dates to October 2015. However in 2014, OECD published a different report, entitled *How Was Life?*, which is of the utmost importance to those interested in long-term development of living standards and well-being. This report, which is the fruit of the cooperation between the Development Centre of OECD and a group of renowned economic historians belonging to the CLIO-INFRA project, represents a kind of follow-up to Angus Maddison's 2001 classic book, *The World Economy—a Millennial Perspective*, also published by OECD. *How Was Life?* covers the period 1820–2010, building upon Maddison's work, but also exploring dimensions that Maddison (deceased in 2010) had not covered. This results in a much more detailed picture of what “life” was, and not only of how “GDP” developed. The approach is consistent with that followed in OECD *How's Life?* Report with this new book adding an historical dimension. So, although the indicators used in *How's Life?* and *How Was Life?* do not match exactly, due to the limitations of the available historical data (where could we find an indicator of subjective well-being, like happiness, for nineteenth-century societies?), still “the aim (i.e. to present a more balanced, multi-dimensional picture of well-being) is the same” (p. 27).

2. OVERVIEW AND CONTENT

A notable aspect of the book is its format and style, which makes it highly accessible to the reader. The book consists of a sequence of 13 thematic chapters packed with data and all related to very important aspects of life in the past. The topics covered include demographic trends, per capita GDP, real wages,

educational levels, life expectancy, heights, personal security, political institutions, environmental quality, income inequality, and gender inequality. In each chapter, international comparisons are provided, which whenever possible cover the whole world, or more precisely, a subset of 25 countries. The data from these countries are aggregated to obtain measures representative of eight distinct world regions (labeled Western Europe, Eastern Europe, Western Offshoots, Latin America and Caribbean, East Asia, South and South-East Asia, Middle East and North Africa, and Sub-Saharan Africa). This is significantly innovative in a field such as economic history in which research on specific areas, case studies, and time periods tends to prevail. Of course, there are good reasons for the historians' attitudes (e.g. the need to collect data and to reach a deep understanding of the context to avoid quite dramatic misinterpretations), but there is also a clear need for syntheses able to provide direction for further "localized" research.

Another important aspect of the book is that an evaluation of the quality of the data used is provided systematically; this is done through the use of a standard table recurring in each chapter. The parameters considered are credibility, accuracy, and comparability of the data available per each date and world region; an overall numerical evaluation, from 1 to 4, with "4" being pure estimates, is provided. Such a high degree of attention to the quality of the data used is unfortunately not common, and is surely a welcome addition to the book. It also provides us with a clear indication of the direction towards which to address further research. So, for example, while demographic data are usually very good for most of the world (save for earlier dates), data on aspects like personal security are sketchy, and environmental conditions data quality is often poor if not entirely conjectural.

3. GENERAL DISCUSSION

Many aspects of the book are worthy of in-depth discussion. I will focus on a few only, starting with the primary objective of the report: to present measures of well-being that aggregate the individual dimensions discussed in each chapter. The authors provide two versions of their composite indicator: a simpler one, which consists of an equally weighted average of all indicators, and a more complex one, in which the composite indicator is constructed through a latent variable model where weights are determined by the model to differentiate between countries in the best possible way (pp. 257–61, with more details in the background paper by Rijpma 2014). The two versions of the composite indicator provide similar results. Also note that to make the construction of the composite indicator possible, "The indicators are standardised so that the mean and standard deviations for the entire 1820–2000 period and all countries are zero and one, respectively. No further transformations were performed on the data," p. 257.

A particularly important finding of *How Was Life?* is that if we look at overall (composite) indicators of global well-being, today inequality between different parts of the world is lower than looking at per capita GDP alone. This is welcome news (and the report tends to underline it quite strongly), but unfortunately this is the case only since about 1970; in earlier periods the contrary seems to have been

true. In the nineteenth century, there is only a weak correlation between per capita GDP and a number of well-being indicators. This means that up until about 1900, economic gains were less likely to be associated with broader improvements in well-being. A possible interpretation of this is that only a small part of the population was benefiting from economic growth. Only from 1900 the situation starts to change with a positive correlation appearing. Yet, if we look at overall well-being, the world seems to be more unequal than by looking simply at per capita GDP up to about 1950. Consequently, this is a markedly less rosy picture compared to the impression we would get focusing on the most recent decades only. However, if we think about possible implications of the findings of this report for making forecasts about the future, we could conclude that the overall picture is still optimistic; there seems to be an implicit promise of convergence in well-being in the new century in the world at large, as represented by the data for the regions studied. Looking more carefully into the data, though, there is also reason for concern, for example with the damage that continues to be caused to the environment. The general question here, is how much this greater convergence in world well-being, compared to per capita GDP, is due to the ability of the poor regions of the world to achieve a better performance of important indicators like life expectancy at birth, or to a declining performance of Europe or—more importantly—the Western offshoots on the same or other indicators (see in particular the figures at p. 260).

The composite indicator of well-being introduced by the report also allows for comparing the differential dynamics of distinct parts of the world. These are largely confirmatory of what we already knew (see, for example, Prados de la Escosura 2010, 2015), but it is worth restating some aspects:

- (1) Western offshoots (North America, Australia, and New Zealand) are always in a favorable situation compared to the rest of the world.
- (2) Western Europe, and later East Asia, are the areas that in time, converge more clearly to the Western Offshoots.
- (3) There is also a good degree of convergence in Eastern Europe.
- (4) Sub-Saharan Africa is always placed at the bottom.

Sadly, Sub-Saharan Africa is the under-performer in practically all aspects. It “did not see any substantial progress until the 1950s, and even after that convergence with the rest was very limited” (p. 263). Sub-Saharan Africa is, for example, the worst performer by far in terms of life expectancy at birth. In many countries in Sub-Saharan Africa, life expectancy has in fact declined in the final part of the twentieth century mostly due to the spread of HIV infection. Of the countries included in the report, this is the case only for Kenya, where life expectancy at birth declined from 59.2 years in the 1980s to 55.1 in the 2000s. This being said, overall, the lag of Sub-Saharan Africa compared to other areas is less stark if an overall indicator of well-being is used instead of per capita GDP only.

It is important to underline that overall, the report quite clearly demonstrates that per capita GDP does not explain everything. This is based on the fact that some components of well-being, like adequate access to political institutions

or good personal security, are not strongly positively correlated to per-capita GDP. The quality of the environment, for example, is negatively correlated with it, a striking, although not really unexpected, finding. This is an important memo to scholars working on the past, and especially economic historians who in the last few years have dedicated much effort to constructing measures of national income and per capita GDP, even for preindustrial times. One example of this is the recent and truly impressive book by Broadberry *et al.* (2015) on economic growth in Britain, 1270–1870. But, the OECD reports seem to remind us, a reconstruction of per capita GDP must be considered only as the starting point if we are interested in discovering how life actually was. What makes Broadberry and colleagues' book so good is, in fact, that they include at least some other key parameters in their encompassing reconstruction. For example, they include the social distribution of income. This is a particularly important aspect, as evidence has been piling up that in the centuries preceding the (European) industrial revolution, inequality increased also in periods of economic stagnation or decline (Alfani 2010, 2015; Alfani and Ryckbosch 2016). A more detailed analysis of the report's findings on distribution is provided in the following.

4. KUZNETS CURVE(S): INEQUALITY AND THE ENVIRONMENT

How Was Life? dedicates two specific and very interesting chapters to income inequality and to the environment. There are aspects of their respective trends that are intriguing and worthy of a joint discussion. Regarding income inequality, the book clearly describes the “U” shaped curve characterizing the twentieth century; the shape of the curve reflects the relationship between income inequality and economic development. For the nineteenth and early twentieth century, Kuznets (1955) hypothesized the now famous “inverted-U”: advances in industrialization processes first result in increases in income inequality followed by decreases. The data presented in this report show that a phase of declining income inequality started around 1900, while a rising phase began in the 1970s. Interestingly, this is the same if we look at income inequality between, or within countries. According to the estimates presented, by 2000, world income inequality levels had returned to those of the 1820s due to a quick increase in income inequality in the 1990s. This could be viewed as proof that the Kuznetsian “promise,” that economic development per se would bring a reduction in inequality, was unfulfilled.

Overall, the book presents an excellent overview of recent findings on income inequality trends—but covers wealth inequality only in a passing way. This is a pity for two reasons: (1) wealth inequality has become a hot topic since the publication of Piketty's much-debated book (Piketty 2014); and (2) for the nineteenth century and earlier epochs, the information about wealth is much more abundant and reliable than that for income. This has been recently reaffirmed by Lindert (2014). In fact, at least for some parts of the world, mostly in Europe and in some parts of Asia, it is technically possible to produce estimates of wealth inequality beginning with the late Middle Ages (see, for example, a very recent study of north western Italy covering the period 1300–1800 by Alfani (2015)).

Two decades ago, Panatoyou (1993) hypothesized that, due to the connection between environmental damage and economic development, an “environmental Kuznets curve” would also have emerged in time. He hypothesized that environmental degradation would worsen as an effect of modern economic growth until a tipping point was reached at high levels of per capita income, after which the relationship between economic development and environmental degradation would become negative. This negative relationship would be due, at least in part, to the demand for a cleaner environment coming from a newly rich population. Until now, though, empirical evidence supporting this hypothesis has been sketchy. *How Was Life?* provides a wealth of interesting information in this regard, measuring change in time and space by emissions of polluting gases (SO₂) and greenhouse gases (CO₂), as well as by biodiversity (measured by Mean Species Abundance, MSA). Two conclusions are particularly noteworthy:

- (1) In the entire period 1820–2010, the overall tendency has been clearly oriented towards an increase in environmental damage. Biodiversity declined continuously throughout the world. Regarding emissions of polluting and greenhouse gases, signs of a slow reduction in per capita emissions are found only in the last two or three decades. However, total emissions continued to increase, and in this case, total emissions are the most important.
- (2) Environmental damage, and specifically emissions, are positively correlated with per capita GDP, as expected. The report claims that there may be some proof that a tipping point is near, as the negative link between per capita GDP and environmental quality is now much less clear than it was in the nineteenth century (p. 194). In other words, this could be supporting evidence for the existence of an environmental Kuznets curve; although if this is the case, the world would still be in the slowing down part of the slope, and not in the declining part.

Unfortunately, I think that the environmental Kuznets curve presents the same problem as the originally hypothesized Kuznets curve: it holds an implicit promise that things will improve, and largely by themselves. Environmental policies will be introduced or strengthened as people become richer and develop different needs, including that of a cleaner environment. But how rich should the world population become before the relationship between per capita GDP and environmental damage turns negative? We don't really know. For example, regarding biodiversity, the only hint at a change in the trend is found in Western Europe; there biodiversity has been very slowly recovering from the bottom point reached in the 1950s. This seems too little to be fully confident in a better future, environment-wise, especially considering that the long-term developments in economic inequality should make us wary of the implicit promises held by Kuznetsian curves of all kinds. Moreover, we may want to consider the possibility that there is a threshold in environmental damage that, when exceeded, triggers a feedback effect, for example, increased environmental instability. Increased environmental instability may negatively impact other well-being indicators, including life expectancy at birth. Admittedly, until today, life expectancy at birth has increased even in

situations of worsening environmental conditions; but, we cannot be sure it will always be the case, and more generally, we should be very careful about projecting past trends in the future.

5. CONCLUSION

During a closing talk delivered at the first conference of the newly established European Society of Historical Demography (Alghero, 27 September 2014), the distinguished Italian demographer Massimo Livi Bacci expressed a concern: projecting the tendencies of the more recent decades into the future (say, up to 2100, as done by some agencies, including the United Nations) might be the equivalent of looking at the world through rose-coloured glasses. For example, we have no proof that fertility rates worldwide will converge towards replacement levels (conventionally placed at 2.1 children per woman). Some of the trends reconstructed by *How Was Life?* may present similar problems were they used to forecast future developments. Such an objective is clearly beyond the aims of the authors of the report who are usually extremely cautious in commenting on their data. However, in looking at the report, we have much reason to hope for a better (and also a less unequal worldwide) future, for example considering the steady and widespread improvements in life expectancy at birth, gender equality, and education. The composite index of overall well-being captures this favorable dynamic. But there are also critical aspects, from the environmental damage caused by economic development to the failure of income inequality to decrease in the long run. Consequently, although we should hold that hope close, at the same time we should be very careful both when trying to divine the future, and when providing an interpretation of data about the past. The interaction between components of well-being might be even more complex than it already seems to be, and attention (including in historical research) should focus on those aspects that fit less well with the largely optimistic picture of recent decades—as we cannot rule out that the impact of such aspects will acquire prevalence in the future. *How Was Life?*, in fact, goes a long way towards making economic historians, as well as other social scientists, better aware of the need to provide complex and multifaceted interpretations of fundamental human and social developments, like the momentous improvement in global well-being that has been accomplished since 1820. Hopefully this report will provide a much-needed stimulus to research currently under-explored aspects of life in the past (including in periods preceding 1820), as well as a warning against adopting excessively reductionist approaches that might risk hiding more than they are supposed to uncover.

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