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A silly debate? Review of Leandro Prados de la Escosura, Human Development and the Path to Freedom. 1870 to the Present, Cambridge University Press, Cambridge (UK), 2022

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1. Introduction

The notion that GDP is an imperfect guide to well-being is arguably as old as the concept itself. Its limitations were already discussed in detail by Simon Kuznets, and these issues were part of the 1940s debate between Richard Stone, Milton Gilbert and Kuznets about the exact measurement of National Income. There has since been an undercurrent of literature trying to compensate for the flaws of the official System of National Accounts, for example by incorporating inequality, or environmental problems, or health and education. The Human Development Index, inspired by the welfare-theoretic work by Amartya Sen and developed by UNDP (United Nations Development Programme) is the best-known example of this new approach. Since the financial crisis of 2008, however, and the report by Stiglitz, Sen and Fitoussi (2009), the well-being debate has both broadened and deepened, and increasingly has had an impact on economic history. The core ideas are simple. Firstly, the ultimate goal of economic development is not just an increased command over resources (as is measured by GDP), but the increase in overall well-being of the relevant population. Secondly, well-being is multidimensional: we do not live by bread alone, and health, political rights, education, a healthy environment, inequality etc. must be taken into account when the «achievements» of economies are assessed. However, it is not straightforward to interpret the sometimes discordant trends in the various measures – one dimension of well-being may go up while another goes down at the same time. One way to solve this is to aggregate the different dimensions into a single, composite index.

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But for a well-being concept that has many dimensions, this is not easy. Attempts to solve the puzzle of measuring with a single index something inherently multidimensional have proliferated.

2. The contribution of Leandro Prados de la Escosura

Economic historians have traditionally struggled with these issues. The British Standard of Living Debate (when did British labourers start to benefit from industrialization and growth?), the American «Antebellum growth puzzle», and the increase in well-being during the Interwar period are examples of debates in which various measures of well-being developed differently over time, calling into question reliance on «traditional» measures such as real wages or income. A more recent debate focuses on the period after 1980, when economic growth has continued (albeit at a lower rate than before), but trends in inequality and health, suggest a stagnation in well-being.

Leandro Prados de la Escosura (henceforth, LP), a leading economic historian who has published innovative papers on European (and global) economic growth, has produced an ambitious contribution to this debate. It offers, on the basis of a rich dataset, a reinterpretation of the evolution of well-being around the world since 1870. He builds his new view on data on four dimensions of well-being: life expectancy, education, GDP per capita, and liberal democracy, the latter being an index of the quality of political institutions (and therefore the degree of political freedom). It yields new insights into the long term development of well-being. An important example is that between 1920 and 1950 well-being increased much more than the slowdown in GDP per capita growth suggests, because literacy and education continued to grow at a robust rate.

A researcher wishing to go beyond GDP and measure multidimensional well-being in the past has to make a number of choices to produce a composite well-being index. Firstly, how many and which dimensions to include (a question I return to below). Secondly, how to transform the data on individual dimensions to make them comparable – how to standardize series with very different scales. And thirdly, how to aggregate the various series. I will start with the second issue, which is one of the areas where LP innovates. The problem is as follows: life expectancy, education, GDP per capita, and democracy are concepts measured with very different scales. GDP per capita at the world level increased by a factor of 10 between 1870 and 2020 (from about 800 dollars in 1990 prices in 1870 to 8,000 dollars in 2020); life expectancy at the global level more than doubled – from 27 to 70 years; years of education increased from an average of 1.2 to 8; and the index of liberal democracy is constructed such that the extremes are zero and 5. The fundamental difference between GDP series and the rest is that GDP grows exponentially, at a rate of on average 1.5% per year, whereas life expectancy and years of schooling (and liberal democracy) are bounded – they run up against natural limits. In Japan, for example, life expectancy is 84 years and still increasing, but at a very slow pace, because it is already so high. The same applies to years of education, which

do not increase much anymore in the wealthiest countries. There is therefore a «natural» tendency for the growth of well-being, in particular when dominated by life expectancy and education as in the Human Development Index, to slow down beyond a certain point. LP concludes from this that «an increase in the standard of living of a country at a higher level implies a greater achievement than would have been the case had it occurred at a lower level» (p. 19).

3. The Kakwani transformation

LP has addressed this problem by applying a so called Kakwani transformation to the bounded series, which is, technically, a way to blow up growth at higher levels of the series, when increases in life expectancy and education are more «difficult». The increase of life expectancy from say 27 years to 70 years becomes much more spectacular after being treated with Kakwani: the global average of transformed life expectancy rises from 0.027 to 0.35, or by a factor 12 (lower and upper limits of the transformed series are 0 and 1 respectively); if it continued to 80 years the new Kakwani level would be 0.614, or an increase by a factor 22. The rather «dull» series of life expectancy suddenly becomes highly dynamic. A rise of life expectancy from 82 to 83 years has the amazing effect of increasing well-being from 0.74 to 0.83, or by 13%. It is not just the elderly who profit from this, the well-being of the entire population seems to explode when life expectancy grows toward the upper limit of 85 years! Increases in education are inflated in the same way; for example, the first five years of education have the same effect on well-being as the single year increase of educational attainment from 16 to 17 (I know university education is good, but is it that good?). An important result is that a composite well-being index based on these underlying series, will continue to show fast growth of well-being at high levels of wealth, but this is the result of the assumption on which the exercise is based, that at high levels growth is more difficult and therefore should be rewarded more than growth at low levels. The post 1980 divergence between GDP growth and well-being, which plays such a fundamental role in the beyond GDP debate largely disappears due to the Kakwani transformation.

GDP growth, on the other hand, gets compressed by LP. The log of GDP per capita is taken as the best measure of well-being (a not unreasonable assumption, as we tend to think about our incomes in terms of relative and not absolute changes). Moreover, for the standardization of the series a relatively high upper limit (goalpost) of 47,000 1990 dollars is chosen. The result of this is that all action takes place in the lower half of the index as only a few countries approach the high upper limit. The odd consequence of these transformations is that whereas in the real world GDP per capita in the long run increases much more than life expectancy and education, the indices – after Kakwani and log – show the opposite pattern: the average level of life expectancy and of years of education increases by 0.4% per year between 1870 and 2015, whereas income grows at only 0.1% per year,

and political rights at 0.15% per year. The result, in brief, is that LP's augmented human development index (AHDI) is largely driven by life expectancy and education.

The early 1930s clearly demonstrate where this leads to. Between 1929 and 1933, when the world economy collapses, mass unemployment peaks, democracy is on the defensive and Hitler seizes power – in short, during our worst nightmare – the AHDI shows a remarkable increase in well-being, thanks to the increase in life expectancy and education, which overpower the declines in GDP per capita and liberal democracy (pp. 32-34). By this standard, the world's population was better off in 1933 than in 1929, a result that, to say the least, challenges established views. This happy growth of well-being continues in the rest of the 1930s (next data point is 1938), and between 1938 and 1950, the next year for which estimates are available. It explains the «superior» development of well-being compared with GDP in the first decades of the 20th century, which is one of the main conclusions LP draws from his reconstruction.

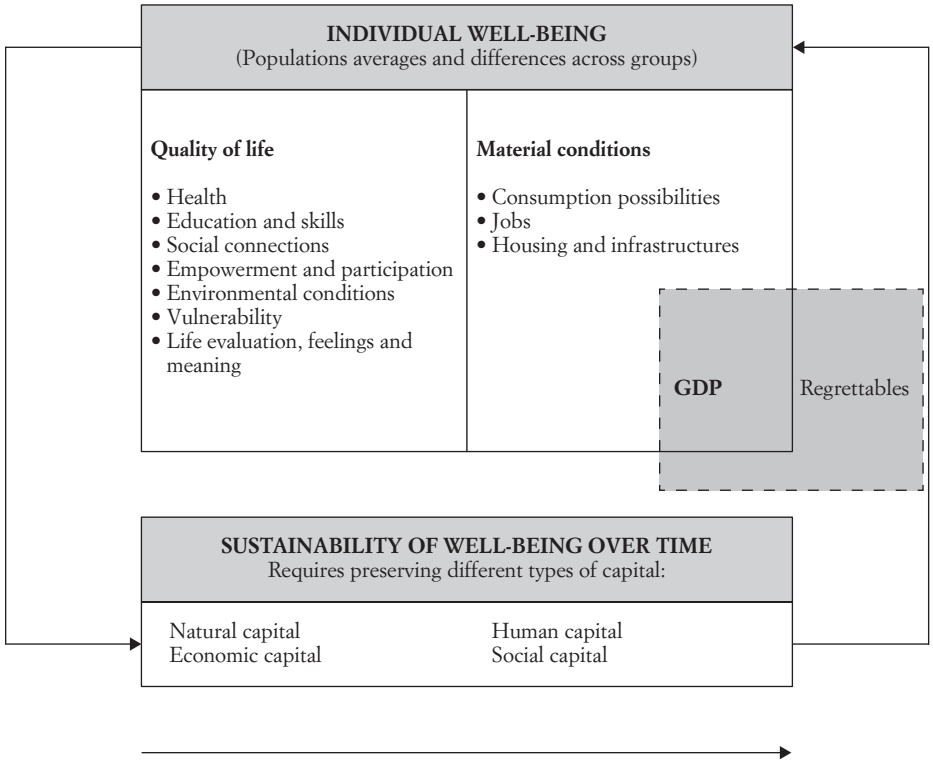
The book presents estimates for well-being for key years, often per decade or per 5 year period (1933 is a bit of an exception). The story gently moves from 1938 to 1950, to 1960 and so on. There are no crises, no wars, the millions who died on the battle fields and in concentration camps, have no impact on this story – there is only the smooth increase of indices, the well-paved path to freedom. GDP series that are often available on an annual basis, show huge fluctuations: sharp depression in the 1930s, dramatic contractions as a result of the World Wars, which is at least one way captures the tragic history of the 1930s and 1940s. The concepts that dominate LP's story, life expectancy and years of schooling, move slowly in time, driven by long-term processes, growing gently. Not only are life expectancy and years of schooling relatively immobile, by focusing comparisons on years of peace and stability, the appearance of harmoniously growing indices is strengthened.

4. Choice of dimensions

This brings me to the first choice made by LP: that of the dimensions included. There is no gender inequality in this study, no racism and slavery, no warfare and its brutal impact. There are no series which reflect the dark side of development such as biodiversity decline and pollution. When LP discusses inequality, it is inequality between countries, not within countries. The argument for not including within country inequality is that good data are not available, yet he mentions two recent papers which have produced such datasets. The problem with the old, GDP based studies of economic development was that they were concentrating on the good news only – the worldwide growth of real incomes; yet by focusing so much on two other indicators which show the same happy global trends the picture does not become more nuanced (and even the 1930s become a success story).

What is needed are clear criteria about which dimensions should be included in composite indices of well-being, criteria that go beyond *ad hoc* choices based on the subjective preferences of scholars and the availability

Figure 1. Framework *How Is Life?*



Source: OECD.

of datasets. Sen, the intellectual grandfather of this research, has refused to produce a list of relevant dimensions of well-being. The potentially relevant indicators are nearly endless, and the list grows even longer when future generations are taken into account and we consider sustainability issues. In their *How Is Life?* studies the OECD has developed a framework for this, in which such choices are made by panels of experts (see Figure 1). 11 dimensions are defined and measured, issues regarding future generations being addressed in the capital accounts. Much more can be said, but this is probably the best, internationally agreed framework. It has been used in the two *How Was Life?* reports of 2014 and 2021, edited by Marco Mira d'Ercole from OECD, Auke Rijpma, and myself (together with Joerg Baten, Conal Smith and Marcel Timmer on the first and Mikolaj Malinowski on the second). The aim of these reports was to present the historical data measuring the various dimensions of well-being for the period 1820-2010, and integrate them into one composite index. Global datasets comprising various dimensions of well-being are presented, and both reports conclude with a discussion of how to calculate a composite index based on the wide range of data presented. The odd thing about LP's book is that he does not even mention these publications, which develop exactly the same agenda

that underlies his own research. In certain respects these *How Was Life?* reports have the same limitations as LP's book: they are first of all statistical overviews and experiments that keep the history of well-being at arm's length; and they identify *ex post* patterns, without presenting a thorough analysis of the *ex ante* driving forces of these changes. But it is strange that these publications have simply been overlooked by LP (who as a commentator was involved with at least one of them).

5. Explaining the growth of well-being

What is missing in this literature is a theory explaining why well-being has changed so much over time. There is the «old» story of economic growth, based on the increase in productivity made possible by the accumulation of ideas that started with the 17th century Scientific Revolution and the 18th century Enlightenment. Increases in real income made it possible to invest more in health care, education, a clean environment etc. LP wants to distance himself from this view, rooted in growth theory. In the pages on the «Ultimate determinants of human development» economic growth and technological change (other than technologies applied to better health care) are not mentioned as deep causes of the walk to freedom, and it is stressed that education and health improved even in countries that saw no rapid rise in health spending (p. 57). Is the explanation for largely ignoring economic growth as a driving force that the author has become the victim of his own experimental calculations, which he has taken for the truth? LP's assumptions result in a dataset in which 37% of the increase in global well-being is caused by the increase in life expectancy, and 32% is driven by education (p. 57), leaving a meagre 31% for the rest. But rather than concluding that this is perhaps a bit too much and that his index may be biased, he takes its behaviour as a fact and argues that economic growth was not a driver of the process. His conclusion to chapter 2 illustrates this again: when listing the causes of progress in human development he mentions «life expectancy was the main contributor», «Education... was a steady contributor», and «political and civil liberties... added substantially» (p. 64), but economic growth and technological change, the fourth subindex of the AHDI, is not mentioned at all.

6. Subjective view

In sum, via the selection of dimensions of well-being, the transformation and standardization of the relevant series, and their weighting, LP has created a highly subjective view of the evolution of the global standard of living in the period since 1870. The problem of subjectivity in well-being research has been receiving increasing attention. A convincing analysis of these links is presented in the paper by Amendola, Gabbuti and Vecchi (2018), which compares various indices – including LP's proposal – and concludes that they «are nothing more than a formal representation of the analyst's ethical system» and that «any history based on composite indices

is one where both data and history play a minor role, if any». I think that there are ways forward in this discussion – international agreements that limit the impact of the preferences of individual scholars are probably part of the solution – but I do not understand how LP can simply ignore this contribution and those of other scholars who have made similar points.

7. Policy implications

What are the policy implications? Should we conclude that countries should stop chasing technological innovation and economic growth, and instead focus on increased investment in health care and education – say, the Cuban model? This is not LP's argument; he does not really discuss policy implications, but it seems a logical conclusion. I think such policy advice is dangerous for a number of reasons. There is, to begin with, no alternative (yet) to the standard explanation of the rise of well-being in the past 200 years, based on productivity growth made possible by the cumulative growth of knowledge. Economic growth was indispensable in this story, generating the high income levels that can – via social transfers and private money flows – be transformed into better health care, or less pollution, or more personal security. Moreover, the higher income levels produced by economic growth are fungible, can be transformed in whatever is required, whereas an increase in life expectancy by two years is simply that, and cannot be transformed in more education. The key phenomenon is, I would argue, not economic growth itself, the increase in per capita GDP, but the underlying growth of productivity, which simply means that we (or our machines) become smarter over time, that we can do more with less effort. Part of this getting smarter has in the past been used to lower our labour input and increase leisure – and if we prefer zero-growth or even negative growth this can be realized by working less and less hours (which also supposedly increases well-being).

Growth theory supplies us with a rather convincing explanation of the increase in productivity over the past 200 years, which directly and indirectly has been the main driver of the increase of well-being. We do not have a similar theory explaining the increase of life expectancy, education, political rights, or well-being in general. The source of inspiration of LP's research into well-being is Sen's capabilities approach, but that is a social-philosophical framework for the conceptualization of well-being, not an economic historical theory about the causes of the growth of well-being in the past. In the slipstream of economic growth and scientific progress, life expectancy has increased dramatically, so in a way they are both part of a single process. But LP's results about the enormous impact of life expectancy on well-being are not the result of new insights into the effect of health on economic growth, or another new feedback loop between them; they are simply based on the statistical assumptions made. Nor has the book disclosed new theoretical ideas about the link between education and well-being – the contribution of education to well-being is simply measured in a different way.

8. Conclusion

Let me conclude by repeating that multidimensional well-being is an important guide for the *ex post* assessment of the outcomes of economic development, and in that sense a valuable tool for policy review. But it is not an ideal instrument for *ex ante* policy advice for accelerating economic development, as we lack a theory explaining it. A second conclusion might be that GDP is flawed. It has, like all concepts in the social sciences, serious limitations, but for studying long term economic change it is still better than anything else we have available (as demonstrated by LP in many pioneering papers about the construction of long time series of GDP and their analysis, most recently Prados de la Escosura and Rodríguez-Caballero 2022).

I finish with what a colleague recently wrote to me: «As someone from a developing country, I really just laugh at these silly debates. OF COURSE GDP is important! Income is the only thing poor people care about: sure, their lives can improve with better public services or better technology imported from abroad, but these things can make 10% of the difference whereas more income will make a 90% difference».

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