

Are Statistics Useless?

The Four Phases of the African State in the 20th Century

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What do we really know about economic growth, wealth, the population or the structure of the economy in Africa? Building a history of how economic statistics about Africa are produced and consumed helps Jerven design a new approach to developing a periodization of the African state.

Reviewed: Morten Jerven, *Poor Numbers: How We are Misled by African Development Statistics and What to Do About It*, Ithaca, NY: Cornell University Press, 2013.

What do we really know about economic growth, wealth, the population or the structure of the economy in Africa? Morten Jerven assistant professor of International Affairs at Simon Fraser University begins his study by asking frankly, “How do they even come up with these numbers?” (p. ix) For several decades now we have lived in a world where it is possible to go to the library, open up a reference book, scan a table, and quickly establish not only that Japan is richer than Ethiopia, but also to see assigned to this judgment a precise numerical value.¹ The scholar’s preferred table, each of which have wildly different figures (Penn World Tables, Angus Maddison Index, or the World Development Institute) will duly reveal a figure for the per capita income, the Gross Domestic Product and the population of almost every country in the world. For the consumers of this data, the great advance over the last decade has been the ability to download this information over the Internet without leaving their offices, or asking how the data sets they manipulate were constructed.

Despite wide variations in the quality and methodologies used to construct these data sets, results gleaned from them often structure the questions we ask about Africa. For instance over the past two decades, political scientists and economists have wondered how to account for the relative poverty of African states in comparison with countries on other continents. Statisticians have attributed the clustering of African countries near the

¹ Daniel Speich, “The use of global abstractions: national income accounting in the period of imperial decline,” *Journal of Global History* Volume 6 / Issue 01 / March 2011, pp 7-28.

bottom of measures of relative wealth as the result of something mysterious that they refer to as the ‘African dummy variable.’² The use of a dummy variable symbolizes the fact that the relative poverty of many African nations can only be explained statistically by their presence on the African continent. However, despite the fact that most attempts to devise a causal theory for the large gap between the wealth of African countries and countries on other continents have failed, very few observers of Africa have paused to ask questions about the robustness of the evidence demonstrating the continent’s exceptional poverty. Scholars such as Jeffrey Sachs at Columbia University’s Earth Institute have posited that African poverty might be due to geographic factors ranging from its lack of navigable rivers to the presence of diseases such as malaria.³ Others such as the political scientist Robert Bates have explained African poverty as the result of state capture by the urban elite and the systematic privileging of industry and consumption over agriculture.⁴ More recently the economists Daron Acemoglu, Simon Johnson and James A. Robinson have posited that the rule of law followed in the footsteps of European settlement and that those regions of the world, which did not experience significant European settlement, continue to lag behind other areas of the world.⁵ In addition, the poor quality of data about African economies has led many scholars and international financial institutions to rely on often vague concepts, whether in the past the ‘traditional sector’ or today the ‘informal economy.’ These concepts attempt to put a label and numerical value on economic activity without charting the types of economic activities taking place.

Even as many scholars continue to rely on data of uncertain quality in order to explain African poverty, very little work has gone into assessing the direction of bias in the economic data the international community is collecting on Africa. The image of African poverty remains so strong that even when economists and political scientists have commented on potential errors in the statistical data produced by the continent’s national statistical offices, they have often followed the lead of the Oxford economist Paul Collier and assumed that Africa is likely poorer relative to other continents than the numbers currently make it appear.⁶

Jerven challenges scholarly assumptions about Africa’s poverty, by focusing on how economic data is actually produced. Jerven’s information is primarily drawn from former British colonies in Africa. And though Jerven touches on population figures and

² R. J. Barro, “Economic Growth in a Cross Section of Countries,” *The Quarterly Journal of Economics* (1991) 106 (2): 407-443. For a contextual discussion of this phenomenon, see: Morten Jerven, “The Quest for the Africa Dummy: Explaining African Post-Colonial Economic Performance Revisited,” *Journal of International Development* (2011) Volume 23 (2): 288-307.

³ Jeffrey Sachs, “Nature, Nurture, and Growth,” *The Economist*, 14 June 1997: 19-23 and Jeffrey Sachs, “Geography, Demography and Economic Growth in Africa,” (1998) *Brookings Papers on Economic Activity* 2: 207-273.

⁴ Robert H. Bates, *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. (Berkeley, CA: University of California Press, 1981).

⁵ Daron Acemoglu, Simon Johnson and James A. Robinson, “Reversal of Fortune: Geography and Institutions in the Making of Modern World Income Distribution,” (November 2002) *Quarterly Journal of Economics*, 117, pp. 1231-1294.

⁶ Paul Collier, *The Bottom Billion: Why the Poorest Countries are Failing and What Can Be Done About It?* (New York, NY: Oxford University Press, 2009): 9.

agricultural statistics, the numbers that he is most concerned about are the figures for Gross Domestic Product (GDP), sometimes known as the Gross National Income (GNI), or casually as the National Income. This statistic is used to calculate economic growth, which is often defined as the “measure of change in real GDP per capita,” and to classify which countries are developed and which countries are underdeveloped. While there are three distinct ways of calculating GDP: the income method, the expenditure method, and the production method, which when calculated independently should allow for cross checking and the independent verification of results, none of these methods escape the central problem for the statistician charged with making calculations about “which economic activities and actors should and can be included in the official accounts.”(p. 11) Jerven’s book is broken into three sections. The first part of the book defines the problem. Here Jerven argues that the scholarly and policymaking community actually knows very little about wealth in Africa. The next two chapters look at how data is actually gathered about income in sub-Saharan Africa, while the fourth chapter offers practical solutions for improving economic statistics in Africa.

The Origins of Statistics

According to Jerven, many of the problems with the numbers we possess can be located in the details of counting. There are technical problems associated with how the counting of economic activity is carried out in many African countries and here Jerven makes a number of very sensible proposals for improvements. The most relevant of which include increasing the funding allocated directly to national statistical offices in order to allow these offices to carry out their core missions of counting economic activity without commitments to carryout numerous ancillary tasks often determined by outside funding bodies. The second is to ensure that each country is using an up to date “base year” when it tabulates economic activity. Since economic activity is rarely calculated in total, statisticians are forced to make assumptions about the structure of the economy. These assumptions are then used to estimate the size of the economy and its change on an annual basis. Due to a lack of resources, many national statistical offices in Africa are currently using ‘base years’ that date back to 1993. As a consequence much of the structural transformation that has taken place in African economies over the subsequent two decades is not accurately captured in the statistics that are reported. The obvious example being the declining place of industries such as cement and steel as a percentage of economic output in favor of new industries such as mobile telephones. One partial but largely inadequate attempt to make up for the lack of information about the structure of African economies by statisticians has been the increased importance given to the category of “informal economy.” Yet the recent rebasing of the Ghanaian economy using a new base year of 2006 transformed Ghana from a poor country into a middle-income country over night (p. 27). Following the World Bank’s acknowledgement in 2011 of Ghana’s updated figures, new questions have emerged about the wealth of other African countries as well as about how to use time series of income data as historical evidence.

For the economic historian, reading Jerven’s book has the potential to be dispiriting. If rough estimates of Ghana or Nigeria’s wealth have the potential to be between 25-40% inaccurate, how is it possible to even begin to write an economic history

of 20th century Africa? Which facts can the historian, political scientists or economists take at face value? However, for the scholar interested in the history of the African state, Jerven's work opens up potentially new avenues of inquiry. In particular his work as well as the recent work of Leigh Gardner on colonial budgets demonstrates the ways in which histories of accounting and finance can be the foundation of a new political history of Africa.⁷ One answer to the question about how to use time series of income as historical evidence emerges from Jerven's argument about why the data regarding African economic performance varies so widely not just between countries but also over time for the same countries. He argues that contrary to the views of data, users who have asserted that any inaccuracies in the numbers produced are random, and therefore can be treated as noise, the income data is biased in defined and historically contingent ways. Jerven's work moves beyond being a merely cautionary tale about the accuracy of our historical data, into a new form of evidence about the nature and structure of the African state in its own right.

African History's Four Phases

Over the last decade there has been a debate about how to divide postcolonial African history into distinct periods. The historian Frederick Cooper has argued against emphasizing the divide between the late colonial and the post-colonial state in African history, while the political scientist Crawford Young has argued that a concept defined by the prefix post, as in the post-colonial state, has to have a defined end point.⁸ Even more recently scholars have suggested that 20th century African history should be broken up into a number of distinct periods. Yet many scholars have struggled to develop a coherent rationale for periodization.⁹

Jerven's work indirectly provides an elegant solution to this problem. If we accept Jerven's suggestion based on the prior work of Theodore Porter that "it requires a massive exercise of social power to establish valid numbers," then it is possible to read the numbers that the state produces not merely in terms of their accuracy about the objective size and structure of the economy, but also as information about the nature of the state itself and changes in its interactions with society.¹⁰ Then following Jerven's brief sketch about the changing ways in which the state has deployed the statistical apparatus and the ways in which the states' efforts to count have been perceived can be the first step in a new approach to developing a periodization of the African state. According to Jerven, the colonial state had always been interested in collecting statistics about facts such as agricultural production and population. British colonies in Africa only began the systematic collection of statistics in order to support government objectives such as tax collection and the provision of services providing education, health

⁷ Leigh Gardner, *Taxing Colonial Africa: The Political Economy of British Imperialism* (Oxford, UK: Oxford University Press, 2013).

⁸ Frederick Cooper, *Africa Since 1940: The Past of the Present* (Cambridge, UK: Cambridge University Press, 2002) and Crawford Young, "The End of the Postcolonial State in Africa? Reflections on Changing African Political Dynamics." *African Affairs* (2004): 23-49.

⁹ Ruth Rempel, "Periodizing African Development History," *African Economic History*: 36 (2008): 125-158

¹⁰ Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995).

services, and agricultural extension services after the passing of the Colonial Development and Welfare Act in 1940. As independence swept the African continent during the 1960s, most African states simply intensified their collection of statistics, usually in the same manner as the late colonial state. If anything according to Jerven:

The developmental state expanded its scope and ambitions greatly, and this meant that in the 1960s, national accounts became an integral part of development plans, both in terms of defining which areas and sectors to address as well as in terms of monitoring the success of a development strategy with respect to clearly identified targets (p. 35).

While, the late colonial and early independence state shared a similar belief in the use of statistics as an instrument of decision-making, Jerven points out that the statistical apparatuses of the state were not perceived in similar ways across the independence divide. Most subjects perceived the late colonial state's efforts to count the population or to measure agricultural productivity as a precursor to increased taxation, and therefore they hid from state officials. The result is that colonial censuses vastly underestimate the population for instance. On the contrary, because the expectation was that after independence governments would provide social services to the people and redistribute wealth, many more citizens turned up to be counted in the censuses carried out in the early 1960s as colonial regimes receded from most of sub-Saharan Africa. This change is enough by itself to consider the late colonial and the early independent states in Africa to be distinct entities (p. 36-41).

Increased trust in and the availability of data continued throughout the 1960s and early 1970s, but after the declining profitability of many state owned enterprises and debt overhangs that began to trouble the balance sheets of many African countries in the 1980s and 1990s, statistical offices were gradually defunded. The 1980s and early 1990s have therefore come to be called the "lost decades." The decline in the production of valid numbers coincided with a decline in the state's ability and ambition to intervene in the economy and its ability to provide services to its citizens. State industries were privatized and in the place of the regulated industries large "parallel, black and informal markets" grew (p. 45-47).

Gradually, beginning in the late 1990s, the statistical information emerging out of Africa began to improve. However, priorities about what sorts of information the national statistical offices should collect had in many cases changed. In particular, there was an increased concern to gather information related to human development indicators and other priorities established by external donors and non-governmental organizations. In this respect, the internationalization of African states' statistical capacity mirrored the increased privatization of the provision of government services which was taking place across the continent.

Over the last few years the statistical capacity of a number of African states, such as Ghana and Nigeria has increased dramatically, and it appears that the continent may be on the verge of witnessing a new period in the history of the African state. A number of authors, most recently Robert Bates and John Coatsworth have posited that Africa itself

maybe undergoing an economic renaissance, and that the burden of colonialism is fleeting.¹¹ However, while the data may still be lacking to write an accurate history of Africa's long-term growth rates, it is possible to examine the ways in which statistics are gathered to tackle questions about the nature of the African state, answering the question posed by Crawford Young about whether the post-colonial period in African history had finally come to an end.¹² A history of statistics will in the future allow us to identify whether new state institutions have taken root in African countries that would justify classifying the present period as a distinct political and administrative era. Only a continued history of how economic statistics about Africa are produced and consumed will indicate whether or not the last few years have marked the start of new period in the history of the African state.

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¹¹ Robert Bates, John Coatsworth and Jeffrey G. Williamson, "Lost Decades: Post Independence Performance in Africa and Latin America," *Journal of Economic History* 67:4 (December 2007): 917-943.

¹² Crawford Young, "The End of the Postcolonial State in Africa: Reflections on Changing African Political Dynamics," (2004) *African Affairs* 103, 23-49.