



Historical datasets on Africa and the African Atlantic

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ABSTRACT

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To facilitate study of long-term economic change in African context, this research note lists and describes major existing datasets on Atlantic slave trade, general commerce, national accounts, and demography. *Journal of Comparative Economics* **40** (4) (2012) 604–607. University of Pittsburgh, Department of History, 3904 Posvar Hall, Pittsburgh, PA 15260, USA. © 2012 Association for Comparative Economic Studies Published by Elsevier Inc. All rights reserved.

1. Introduction

Economists are turning to Africa as an empirical field for exploring current theory arguing that historical factors—even over several centuries—may influence current levels of wealth and poverty (Whatley, 2008).¹ To facilitate such exploration this brief note identifies and discusses some of the main categories of historical data available for economic analysis of the African past. Because most early data come from European sources, the available data focus especially on African commercial and demographic links across the Atlantic.

2. Atlantic slave trade data

The most thoroughly worked-up set of data on pre-20th-century Africa is the “Slave Voyages” dataset on the transatlantic slave trade. This dataset, assembled under the leadership of David Eltis in collaboration with Stephen Behrendt, David Richardson and, in the early stages, Herbert S. Klein, is a comprehensive, voyage-based collection of data on slave-trading ships, their enslaved cargo, their crew, their routes, and their ownership, published in 2008 and updated in 2010.² The dataset includes hundreds of fields grouped into eight main categories.³

The wave of historical research that ultimately brought creation of this dataset arose in response to Philip Curtin’s 1969 work, *The Atlantic Slave Trade* (Curtin, 1969). In this case an individual scholar’s work of synthesis combined a wide range of previous work to outline the changing volume of slave trade by region, by time, and by national carrier. Its outstanding conclusion was that the total number of persons carried across the Atlantic in captivity was roughly ten million, rather than

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¹ For instance, at the conference on “Understanding African Poverty over the Longue Durée”, sponsored by the Weather head Center for International Affairs (Harvard University) and hosted by the International Institute for the Advanced Study of Cultures, Institutions and Economic Enterprise (IIAS) in Accra, Ghana, on July 15–17, 2010.

² The “Slave Voyages” dataset, at www.slavevoyages.org, has been hosted at Emory University since 2008.

³ Categories of data include the vessel, outcome of the voyage, itinerary of the voyages, dates of voyage, captain and crew, numbers of captives, captive characteristics, and sources for the record.

larger figures previously estimated (Curtin, 1969; Deerr, 1949–1950; Kuczynski, 1936; Du Bois, 1911; Dunbar, 1861).⁴ In the wake of Curtin's study, numerous individual monographs and conference papers resulted from the debates over the nature and extent of Atlantic slave trade, in a publication campaign that continued at a high rate through the 1980s and extended to new times and places in the 1990s (Manning, 1996).⁵

David Eltis and Stephen Behrendt began discussing the project in 1990; David Richardson and Herbert S. Klein joined them in developing it.⁶ After meetings with a range of scholars, the team won a 1993 grant from the US National Endowment for the Humanities for work based at the W.E.B. Du Bois Institute at Harvard University. To integrate the wide range of data, they organized a data structure around the basic unit of “the voyage”, a voyage by a given vessel from its point of origin (often but not always in Europe) to Africa, to one or more points in the Americas for disembarkation of slaves, and then to the conclusion of the voyage.⁷ They developed and implemented the system for coding the various national and regional datasets into a consistent format. Their work, published in 2000 in CD-ROM format with a total of 27,233 voyages, was known as the “Du Bois Institute Database” (Eltis et al., 2000).

The Du Bois Institute CD-ROM led to excitement and experimentation, as its data were at once comprehensive and easily accessed for manipulation. Among the most influential analyses drawing on it was Nathan Nunn's paper on the long-term impact of slave trade, which compared the African regional impact of enslavement with recent measures of growth and welfare for the same regions (Nunn, 2008).

The authors of the dataset, meanwhile, were disappointed to find that they had not completed the task. It was evident from the beginning that many voyages, especially under Portuguese and Brazilian sail, had not been included. Documents on these voyages began to come forth, and the authors inevitably overcame their disappointment and joined in the work of seeking and incorporating additional voyage data. In addition, the steady advance in internet technology make possible the publication of a second edition of the dataset as a website. The “Slave Voyages” website, published in 2008, included 34,948 voyages, with most of the additions being the voyages of Portuguese and Brazilian ships in the first half of the slave-trade era.

Characteristics of this dataset are that the authors have cited the original sources and have coded and transformed data to fit the variables defined for the dataset. Many cells in the full spreadsheet are empty, as data are missing on most of the fields identified. Especially for quantities of captives embarked and disembarked, the authors also developed “imputed” results, in which they estimated the number of captives on board ships for which none are listed, based on ship tonnage and estimates of average numbers of captives per ton.

The Slave Voyages dataset has already been widely consulted by authors drawing on its data for specific times and places. In addition, there are at least two examples of applications incorporating the complete dataset. First, the voyage data have been portrayed on the WorldMap interface at Harvard University's Center for Geographic Analysis, showing the number and simplified trajectory of voyages on a map of the Atlantic.⁸ Second, documented cases of embarkations and disembarkations of captives have been used, in a statistical analysis, to estimate missing values for captive embarkations and disembarkations, by region and by decade, in an analysis by James Sharpnack that is part of a larger study of African population, 1650–1950 (Manning and Nickleach, forthcoming).

While the transatlantic slave trade from Africa was exceeded in magnitude by later European and Asian migrations, this dataset is the largest and most detailed single historical dataset on human migration. While it has yet to be linked closely to other major migrations, such as those of from Europe from the sixteenth to the 19th century and the migrations from Europe and Asia in the era beginning 1850, the quality of the data trans-Atlantic slave trade data will surely lead to deeper, comparative analysis (McKeown, 2004; Lucassen and Lucassen, 2009).

3. African coastal trade statistics

The second most substantial and impressive dataset on Atlantic Africa is that compiled by the late Marion Johnson out of the English trade statistics, from 1699 to 1808. Johnson initially collected and coded the data by hand; after her death in 1988 they were published with the assistance of Thomas Lindblad and Robert Ross. This dataset displays the annual values of British exports to Africa and the annual values of African exports to Britain for most years in the interval, valued at 1699 prices (Johnson et al., 1990). The original documents, unfortunately, do not break out imports or exports by African port, though one can make estimates for African exports based on the nature of commodities (Schumpeter, 1961; Davis, 1973). For the 19th century, equivalent and more detailed records of British trade with Africa can be obtained from the published British Parliamentary Papers; indeed, J. Forbes Munro published a 1976 interpretation of African trans-oceanic trade based on these documents (Munro, 1976). With more laborious work, it will be possible to collect data on African overseas trade from the archives of France, the Netherlands, Portugal, Denmark, the US, and Brazil.

⁴ Estimates of cumulative totals of captives landed in the Americas included 9.6 million (Curtin), 12.0 million (Deerr), 14.5 million (Kuczynski), 15 million (Du Bois), and 13.9 million (Dunbar).

⁵ For a convenient summary of the main individual monographs and conference volumes that presented the great majority of these works.

⁶ Eltis had provided ample primary data on 19th-century slave trade as documented by British consular officers; Behrendt and Richardson had each analyzed 18th-century British slave trade, and Klein had studied Iberian data.

⁷ Thus the trade in slaves from West Africa to Iberia, especially in the 15th and 16th centuries, is not included within the range of the dataset.

⁸ <http://worldmap.harvard.edu/maps/771>.

4. Regional economic data

At the level of precolonial African regions and colonial African states, a few scholars worked from the 1960s to the 1990s to collect and estimate economic–historical data. Philip Curtin was outstanding in collecting and publishing substantial quantities of data on 18th century Senegambia; a generation later, Joseph Inikori combined data from Africa and England in the 18th century to assess Africa's place in the industrial revolution (Curtin, 1975; Inikori, 2002). For the colonial era, a few scholars put substantial effort into gathering and systematizing data on trade and finance for Nigeria (Helleiner), Ghana (Szereszewski and the team of Kay and Hymer), and Dahomey (now Benin, by Manning) (Helleiner, 1966; Szereszewski, 1965; Kay and Hymer, 1972; Manning, 1982).

5. National accounts before 1950

When national income analysis became a prime focus of economists in the postwar era, scholars and government agencies began to work on African economies as well, but the result was generally abortive. The most important early effort was that of Phyllis Deane in British Central Africa (Deane, 1953; Deane and Cole, 1967). Deane later conducted distinguished work in calculating historical accounts for England, but she and others set aside further work on African economies. In a later effort, Maldant and Haubert sought to construct national accounts for French African colonies, but their calculations for the totality of French West and Central Africa turned out not to fit with the balkanized post-colonial nations (Maldant and Haubert, 1973). South African national accounts were estimated for the period from 1910 forward, but for other African states or colonies this investment in analytical infrastructure was simply not made (Houghton, 1973).⁹

6. Demography

Demographic studies of Africa began seriously only during the 1940s. Ultimately, the United Nations Office of Population was able to pull together results for all of Africa, providing relatively strong and precise results for all of Africa from 1950 forward (Tabutin and Schoumaker, 2004).¹⁰ Two collective works launched the study of historical demography in Africa (Cordell and Gregory, 1987; Fetter, 1990). Quite a different approach to African demography was a series of attempts to estimate the effects of slave trade on African population, beginning immediately upon the publication of Curtin's census of slave trade. Most persistent in this analysis has been Patrick Manning, who published an overview in 1990 and further analysis in 2010, with more to come (Manning, 1990; Manning, 2010; Manning and Nickleach, forthcoming).¹¹

7. Economic history interpretations

This essay focuses primarily on data available for analysis of African economic change. Nevertheless, it is appropriate to cite the principal interpretive works in African economic history written in the post-independence period. The journal *African Economic History* began as an annual issue in 1976.¹² In the wake of the best known economic history of Africa, *An Economic History of West Africa*, by A.G. Hopkins, later volumes by Munro, Austen, and Zeleza reviewed the continent in various time frames (Hopkins, 1973; Austen, 1987; Zeleza, 1993; Munro, 1976). For precolonial Africa, the works of Hogendorn and Johnson on cowrie currency and that of Inikori on the place of Africa in English industrialization gained wide recognition (Hogendorn and Johnson, 1986). Economic historical studies of 20th-century Africa, some of them including quantitative analysis, appeared as early as the 1960s and up through the 1980s until a lull developed in such research (Houghton, 1973; Natrass, 1981; Baldwin, 1966; Birnberg and Resnick, 1975; Kitching, 1980; Baier, 1980; Peemans, 1970; Manning, 1990–1991). A single volume provided monographic, quantitative economic analysis linking precolonial and colonial eras, from 1640 to 1960 (Manning, 1982). Finally, occasional reviews of the literature in African economic history provide useful summaries of the data and interpretations as they changed over time (Alpers, 1973; Manning, 1987; Austin, 2011).

8. Conclusion

The growing interest of economists and economic historians in change over medium and long periods of time makes the African continent into a region of increasing interest. While African historical data are in relatively short supply, this note has shown that significant data sets have already been worked up, and that the published documents of African colonial governments include great quantities of data that can be analyzed within the colonial time frame and can also be connected to available postcolonial data. In addition, understudied archives in Africa and elsewhere provide documents from very recent times back into times several centuries ago. Finally, new techniques of digitization and data-mining will enable collection and collation of documentary evidence that has previously escaped the analyst's attention. In sum, these various approaches

⁹ For South Africa, net domestic product was calculated by the Union of South Africa government back to 1912, just after formation of the Union.

¹⁰ For an excellent summary of the UN analysis of African populations.

¹¹ These studies review the broader literature on estimation of historical African populations.

¹² The contributions to *African Economic History* consist mainly of descriptive and institutional work.

to documenting the economic past of Africa open up significant opportunities for developing and testing hypotheses on African economic change and on long-term links of Africa to other parts of the world economy.

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