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The Challenge of Studying Inflation in Precolonial Africa by Klas Rönnbäck – A Response

Toby Green

Abstract: Following the article by Klas Rönnbäck, this article responds by stressing some key elements missing from the original article. These include the connection of African economic history to world economic history, the question of periodization and economic change, and the issue of currency devaluation in the period in question. The response concludes by posing several questions of the theoretical assumptions made by economists regarding data, and problematizes the applicability of such models to a distant pre-colonial African past.

Résumé: À la suite de l'article de Klas Rönnbäck, cet article répond en soulignant certains éléments clés absents de l'article original. Ceux-ci incluent la connexion de l'histoire économique africaine à l'histoire économique mondiale, la question de la périodisation et du changement économique et la question de la dévaluation de la monnaie pendant la période en question. La réponse se termine en posant plusieurs questions sur les hypothèses théoriques des économistes concernant les données, et problématise l'applicabilité de ces modèles à un passé africain précolonial éloigné.

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Introduction[1]

[1] I would like to thank Paul E. Lovejoy, Joseph C. Miller, and Carlos da Silva Junior for their insightful comments on drafts of this response; all mistakes are of course my own.

Until recently, the question of pre-colonial currencies in African history had not been addressed systematically by historians since the work of Marion Johnson, along with Jan Hogendorn.[2] Though the subject has been discussed in passing by Joseph Inikori among others, and by the economic anthropologist Jane Guyer, the topic became unfashionable for historians.[3] In some ways, the debates between formalists and substantivists in the 1960s and 1970s closed off historical interest.[4] After Lovejoy discussed inflation in a 1974 article, and Curtin discussed currencies in his 1975 book on Senegambia, the matter fell largely into abeyance.[5] It would appear, however, that this pattern is now changing.

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[2] Marion Johnson, "The Nineteenth-Century Gold 'Mithqal' in West and North Africa," *Journal of African History* 9–4 (1968), 547–568; Marion Johnson, "The Cowrie Currencies of West Africa," *Journal of African History* 11–1 (1970), 17–49 and 11–3 (1970), 331–353; Jan S. Hogendorn and Marion Johnson, *The Shell Money of the Slave Trade* (Cambridge: Cambridge University Press, 1986).

[3] Joseph E. Inikori, "Africa and the Globalization Process: Western Africa, 1450–1850," *Journal of Global History* 2–1 (2007), 63–86; Jane I. Guyer, "Soft Currencies, Cash Economies, New Monies: Past and Present," *Proceedings of the National Academy of Sciences* 109–7 (2012), 2214–2221; Jane I. Guyer, *Marginal Gains: Monetary Transactions in Atlantic Africa* (Chicago: University of Chicago Press, 2004).

[4] Karl Polanyi, *Dahomey and the Slave Trade* (Seattle: University of Washington Press, 1966); George Dalton (ed.), *Primitive, Archaic, and Modern Economies: Essays of Karl Polanyi* (Boston: Beacon Press, 1968); George Dalton, "Primitive Money," *American Anthropologist, New Series* 67–1 (1965), 44–65; Antony G. Hopkins, "The Currency Revolution in South-West Nigeria in the Late Nineteenth Century," *Journal of the Historical Society of Nigeria* 3–3 (1966), 471–483; Antony G. Hopkins, *An Economic History of West Africa* (Harlow: Longman, 1973).

[5] Philip D. Curtin, *Economic Change in Prceolonial Africa: Senegambia in the Era of the Slave Trade* (Madison: University of Wisonsin Press, 1975); Paul E. Lovejoy, "Interregional Monetary Flows in the Precolonial Trade of Nigeria," *Journal of African History* 15–4 (1974), 563–585.

When the editors of *History in Africa* contacted me for this response to my 2016 article in the *Journal of African History*, however, I had reservations.[6] My article built not only on fieldwork in West Africa, but on three years of archival and library research in Europe and Latin America, followed by almost two years of writing and revisions following editorial reports. Was there anything else for me to say, so soon? Yet it became apparent that Rönnbäck and I had distinctive perspectives. This will I hope be a productive discussion between methodologies to have at this moment; and at the same time appropriate to *History in Africa*, where issues of method in African historical studies have always been paramount.

I begin with a brief summary of my understanding of Rönnbäck's essay, which critiques my article. He finds this based on flawed sampling and assumptions. While economists working on inflation create "mixed baskets" of goods to develop an overall model, my article largely used slave prices – which alone, he suggests, are unreliable proxies for overall prices. Moreover, the available data are insufficient to make broader claims. The lack of recent studies is "probably due to the fact that there is a distinct lack of sources to enable such studies (…) it stems from a limited availability of quantifiable data in general." Finally, Rönnbäck analyzes prices for agricultural commodities along the Gold Coast to suggest that no discernible pattern existed for inflation in precolonial Africa, arguing that this invalidates my argument that imports of "currencies and currency materials" induced significant inflation in the seventeenth century.

Rönnbäck's title and argument stress the "precolonial," but his discussion addresses broadly the first half of the eighteenth century (1699–1760 to be exact). One would not know from reading his essay that my article deals with the sixteenth and seventeenth centuries. As a matter of fact, in the article I note how different patterns interrelating currency imports and the slave trade emerged in the

[6] Toby Green, "Africa and the Price Revolution: Currency Imports and Socioeconomic Change in West and West-Central Africa during the Seventeenth Century," *Journal of African History* 57–1 (2016), 1–24.

eighteenth century: "[S]lave exports fluctuated from different regions throughout the era of the Atlantic slave trade, and it would be wrong to propose a standardised system. Moreover, as Inikori notes, during the eighteenth century there were also heavy imports of goods such as alcohol and firearms that were not used as media of exchange."[7]

All the same, Rönnbäck adduces no evidence from the sixteenth and seventeenth centuries addressed in my article. It seems to me that an unstated assumption underlying this method is that his price series from the eighteenth century shows material from the earlier period to have led me astray. This assumption presupposes the view that economic patterns in precolonial Africa showed little variation across quite a lengthy timespan. Yet, as I discuss in a forthcoming monograph, the eighteenth century saw the relationship of currency imports and trade transformed compared with earlier periods.[8] The balance between currency and imported trade goods changed radically, with much higher volumes of trade goods. On the other hand, some states such as Asante and Dahomey saw an increase in the available gold supply, the former through switching more to an export slave trade, and the latter through importing Brazilian gold.[9] Thus to assume that material from the eighteenth century may well invalidate findings from the sixteenth and seventeenth centuries appears to me to be mistaken.

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[7] Green, "Africa and the Price Revolution," 17.

[8] Toby Green, *A Fistfull of Shells: Currencies of Power in Africa During the Atlantic Slave Trade Era* (London: Allen Lane, forthcoming).

[9] Robin Law, "The Gold Trade of Whydah in the Seventeenth and Eighteenth Centuries," in: David Henige and Tom C. McCaskie (eds.), *West African Economic and Social History: Studies in Memory of Marion Johnson* (Madison: University of Wisconsin Press, 1990), 105–118; Roquinaldo Ferreira, "From Brazil to West Africa: Dutch-Portuguese Rivalry, Gold-Smuggling, and African Politics in the Bight of Benin (ca. 1700–ca. 1730)," in: Michiel van Groesen (ed.), *The Legacy of Dutch Brazil* (New York: Cambridge University Press, 2014), 59–77.

Otherwise, the most important element of Rönnbäck's critique is that slave prices are a poor proxy by which to measure overall prices. He stresses that previous historians have recognized the divergence between export prices for slaves and internal price levels; and so he in turn examines the prices of corn, firewood, yams, and other agricultural and natural products. However this critique may contain its own share of assumptions.

In the first place it is not the case that the material in the original article only deals with slave prices. Where this article refers to inflation of the *nzimbu* in West-Central Africa, it relates to Kongo (in which the *nzimbu* was the currency). Yet Kongo was not an exporter of slaves in the early seventeenth century, but focused on the cloth trade.[10] But beyond this inaccuracy, the idea that the prices of these alternative commodities discussed by Rönnbäck on the Gold Coast offer a superior measure to slave prices to measure inflation needs a deeper context. After all, the commodities whose price records were kept by English traders were themselves purchased by foreign slave traders. The assumption that agricultural commodity prices for slave ships had the same pattern as those for local consumption could and should perhaps be interrogated further. This data cannot necessarily reveal the prices paid by Africans for the same products, since commodities for export often have a different price to those for local use. Ardeni's research argued that the assumption of a "Law of One Price" was based on flawed econometric approaches.[11] This has been critiqued, but other economists support the hypothesis that there is no "Law of One Price."[12] Certainly it is an assumption

[10] On a trade just for cloth in Congo in 1620, see for instance: António Brásio (ed.), *Monumenta Misonária Africana: África Ocidental* (Lisbon: Conselho Ultramarino, 1952–1988), volume 6, 438; see also: Green, "Africa and the Price Revolution," 16–17.

[11] Pier Giorgio Ardeni, "Does the Law of One Price Really Hold for Commodity Prices?," *American Journal of Agricultural Economics* 71–3 (1989), 661–669.

[12] See, for instance: James J. Choi, David Laibson and Brigitte C. Madrian, "Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds," *The Review of Financial Studies* 23–4 (2010), 1405–1432.

with which not everyone must agree that export transaction prices for agricultural commodities can indicate the transaction prices in the internal economy that this critique claims to be measuring.

Nonetheless, the eighteenth century series of prices which Rönnbäck has developed is interesting. At first sight, it does reveal the pattern which he describes on the Gold Coast, of fluctuating prices. Other patterns in this same material are however not addressed by him here, including the use of copper and iron bars discussed in my original article.[13] These records reveal that by 1730, the value of copper and iron bars (in pounds sterling) laded to the English forts along the Gold Coast had become insignificant. While Dixcove on the Gold Coast received almost £130 worth of the woollen cloths known as perpetuanoes in 1730, the combined value of iron and copper bars was less than £9. At Sekondi there were over £150 worth of cloth (again, mainly perpetuanoes), and less than £20 of iron and copper bars, and at Komenda the picture was very similar.[14]

In sum, while the price evidence for the eighteenth century considered by Rönnbäck does not reproduce the inflationary pattern I noted for the sixteenth and seventeenth century, this archival material does confirm one of the patterns identified in my article, which is that currencies were superseded by other imports as their relative local value declined. Shifting the materials monetized was a process which I identified there in the transition from copper manillas to iron bars in the mid-seventeenth century, a process which seems to have been repeated here in the subsequent decline of iron bars in the first third of the eighteenth century.

This is important evidence which may complement the idea of currency depreciation outlined in my initial article. However, acknowledging this requires an awareness of the methodological significance of plural currencies. While this 1699–1760 price series is valued in gold ackies and pounds sterling, in the sixteenth and

[13] Green, "Africa and the Price Revolution," 15–16.

[14] The National Archive of the United Kingdom, Kew (London), T70/1466, fols. 1 (Dixcove), 34 (Sekondi), 62 (Komenda).

seventeenth centuries other values were used alongside gold, as shown by the sources which I used in my article which equated prices with copper and iron bars, alongside other commodities. Moreover this was a pattern of accounting used in regions beyond the Gold Coast, such as Angola, where prices were accounted in volumes of trade goods and not the *real* or pound sterling until the early eighteenth century.[15] While the eighteenth century pattern of inflation may be inconclusive from the perspective of gold prices or pounds sterling, therefore, this was also a period when accounting systems changed. In contrast to gold, other currencies such as copper and iron bars show a loss of their seventeenth century value. Thus one of the larger patterns identified in my article is not challenged by the eighteenth century material.

However it is necessary to know well the sixteenth- and seventeenth-century material, and the differences they offer to the eighteenth century, to draw this conclusion. Moreover, my discussion here also recognizes the importance of multiple currencies in pre-colonial Africa, a vital methodological element of my original article.[16] It is to this and other differences in approach that I now turn.

African Economic History and World Economic History One of the largest methodological differences between the two articles is in the relationship between African economic history and world economic history. My article specifically linked the two, making the point that the "price revolution" is a widely accepted

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[15] Joseph C. Miller, "Slave Prices in the Portuguese Southern Atlantic, 1600–1800," in: Paul E. Lovejoy (ed.), *Africans in Bondage* (Madison: University of Wisconsin Press, 1986), 43–77.

[16] Green, "Africa and the Price Revolution," 5–7, 21. This question is well addressed by Akinobu Kuroda, "What is the Complementarity Among Monies? An Introductory Note," *Financial History* 15–1 (2008), 7–15; Akinobu Kuroda, "The Maria Theresa Dollar in the Early Twentieth-Century Red Sea Region: A Complementary Interface Between Multiple Markets," *Financial History Review* 14–1 (2007), 89–110.

model for European and Asian economies in the sixteenth and seventeenth centuries. My article argued that there was also an increase in African prices during this period, and that African economic patterns were therefore connected to world economic patterns.

Rönnbäck's critique does not refer to this broader thrust of my article. That he passes over this topic's relevance is revealed by an assertion which is curious in view of the topic of the price revolution addressed by my article: "Prior to the twentieth century, however, periods of inflation were often followed by periods of deflation, i.e. falling prices, and were often not very severe compared to the levels of inflation that occurred in many economies around the world during the twentieth century." If nonetheless he is right, and there was not any significant inflation in Africa during the price revolution, then Africa was cut off from broader global economic patterns. Yet the consequence that Africa was not part of "the world economy" is a problematic conclusion to draw. Were African economic patterns really disconnected from world economic patterns in this period? The material adduced in my paper suggests that they were, on the contrary, deeply connected.

The methodological differences go further than this. Even if accepting the view that slave prices are a poor proxy for overall prices, one is left with the conclusion that they increased rapidly in the sixteenth and seventeenth centuries (which the multiple examples from different regions used in my article show); that increasing slave prices brought in an expanded money supply used by slave traders to purchase these slaves alone (as is shown by my article); but that this had no inflationary impact on African economies. For this to have had no inflationary impact, according to monetarist theory, the cause would have had to be an expanded supply of trade goods alongside the currency imports; and yet as Inikori and I show, the majority of traded items to the mid-seventeenth century were currencies.[17]

[17] Inikori, "Africa and the Globalization Process," 83, 86.

In light of all this, what of those sections where Rönnbäck does make comparative assertions? Regarding the "limited availability of quantifiable data in general," he claims that "this is partly a result of the widespread practice of subsistence agriculture and limited market development." Yet as scholars such as Judith Carney and Richard Rosomoff have shown, African economies were anything but subsistence based in the eighteenth century.[18] The volumes of agricultural exports were enormous, especially in the eighteenth century discussed here. As the editors of Antera Duke's diary from Calabar note, in a six-month period in late 1769, one English ship captain purchased 82,935 yams here alone.[19] So personally I would prefer the methodology I use, which places Africa in a global economic context, and gives due weight to its export economies.

Conclusion

In conclusion, it is useful to return to an understanding of why this debate matters. The question turns on the economic consequences of Atlantic trade, and divergent trajectories regarding the accumulation of economic wealth between Africa and European empires (and their inheritors). My article examined currency exchanges, use, and trajectories of value as part of this process, as one explanatory factor in subsequent economic history. This methodology is disqualified by Rönnbäck, since "trying to find data that allows for the quantification of market growth in West Africa would seem even more futile. The imports of currency materials per se cannot therefore settle the issue of whether there was inflation in pre-colonial Africa or not." According to this view, nor could there be data showing whether markets and economies grew or contracted in Africa during this time.

[18] Judith A. Carney and Richard Rosomoff, *In the Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009), 52–66.

[19] Stephen Behrendt, A.J.H. Latham and David Northrup (eds.), *The Diary of Antera Duke, an Eighteenth-Century Slave Trader* (Oxford: Oxford University Press, 2010), 170 n144.

This maneuver has clear origins in the Enlightenment discipline of economics. If material for distant pre-colonial Africa can be methodologically ruled out of court as it doesn't fit theoretical models of economics, then there is no need to consider the trajectories of economic systems which may challenge normative views on economic theory. Yet a historical perspective suggests that economic realities were experienced differently at different periods of time, and that data are not some "universal arbiter," as a quantitative economic perspective would suggest.

In the first place, it is conceptually flawed to require there to be volumes of quantifiable data to study economic changes during the sixteenth and seventeenth centuries. The widespread use of this kind of data and accounting was in fact an important corollary of the world transformations in this period. In Portugal prior to the end of the fifteenth century, only two books were published with Arabic numerals instead of Roman numerals. Indeed, even such basic symbols of mathematical quantification, such as the + and – signs, the + sign and the signs for multiplication (x) and division (÷) only became commonplace in the seventeenth century. Thus to rule out material from this period owing to the lack of data is to apply an anachronistic conceptual standard, since mathematical and numerical values were then in the process of developing.[20]

Secondly, as David Graeber has recently shown, many cherished theoretical bases of the discipline of economics related to "the market," "barter economies," and rational choice, rely on assumptions. It is worth adding that many of these assumptions derive from imperial stereotypes and rationales, from hierarchies of superiority, inferiority, development, and underdevelopment – with conceptual

[20] On Portuguese use of mathematical symbols, see: Joaquim Barradas de Carvalho, *Portugal e as Origens do Pensamento Moderno* (Lisbon: Livros Horizonte, 1981).

Eurocentrism, as Gareth Austin puts it.[21] And Graeber's critique is, I would argue, important to the current conceptualization of African economic history.[22]

For instance, when the formalist/substantivist debate on pre-colonial African economies began in the 1960s, the hold of the "rational choice" economic model was unquestioned. Formalists and substantivists did not disagree as to whether rational choice underpinned modern economics; they disputed whether such formalism could be attributed to "pre-capitalist" economies. By those lights, it was progress to show Africans as "rational" economic consumers, "developing" along the path which (implicitly superior) rational consumers in the West also took. Scholars such as Antony Hopkins and his successors have rightly shown the intellectual poverty of analyses of "primitive" industries and agriculture.[23] Hence, the formalist position became quickly triumphant.

However as the conceptual underpinnings of that rational choice model seem ever shakier in the light of recent political and economic changes, so do the conclusions drawn then by formalists and substantivists alike, predicated as they were on the assumption of economic growth deriving from rational economic choices. While some theories reproduce ideas of underdeveloped African economies, a careful reading of the material for the sixteenth and seventeenth centuries offers a different view, in which world economic growth derives from the changing inter-relationships of economic values, and in which Africa and Africans played an important role.

This can be important, as it connects African economic and world economic history, and productively engages with questions related to capital accumulation and the divergent economic trajectories of African and Western economies. So, in

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[21] Gareth Austin, "Reciprocal Comparison and African History: Tackling Conceptual Eurocentrism in the Study of Africa's Economic Past," *African Studies Review* 50–3 (2007), 1–28.

[22] David Graeber, *Debt: The First Five Thousand Years* (New York: Melville House Publishing, 2011).

[23] Hopkins, *Economic History of West Africa*, 49.

conclusion, I found it unfortunate to read a critique which challenges these readings without producing evidence from the centuries on which the original article dwelt.

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