

ARENAS IN GLOBAL HISTORY: COMMODITY FRONTIERS
REJOINDER

Commodity frontiers: a view from economic history

Ronald Findlay¹ and Kevin Hjortshøj O'Rourke^{2*}

¹Columbia University and ²New York University Abu Dhabi

*Corresponding author. E-mail: ko37@nyu.edu

Abstract

The history of frontiers is a fascinating topic for research, especially interdisciplinary research. We stress the need to engage with existing work on the topic by economists and economic historians, but we also highlight the need to engage with such topics as the history of inter-state conflict and violence, technological change, and the role of multiple interest groups in determining policy.

This is a very ambitious proposal, interpreting the history of the last 600 years in terms of a sequence of overlapping commodity frontiers. As such it is intended to be a contribution to the field of 'frontier history'. This field has very recently had the benefit of what the authors rightly call the 'monumental' work by Edward Barbier¹ that surveys the history of frontiers from 10,000 BC to the present. Most of that book, from chapter 4 onwards, is concerned with the development of the global economy since the fifteenth century, the same temporal and spatial range that the authors propose to cover.

Unfortunately, in our opinion, the proposal under review shows insufficient engagement with the actual substance of Barbier's work. Perhaps this is because Barbier is an economist, a field that is largely ignored in the proposal, and a neoclassical one at that. Paul Collier, an occasionally controversial development economist, is mentioned in connection with environmental regulation, but few of the numerous economists and economic historians cited by Barbier himself are. (Immanuel Wallerstein is drawn on extensively, but he was a sociologist.) The proposal makes no mention, for example, of Stanley Engerman, Barbara Solow, Joseph Inikori or even Eric Williams on the slave trade; David Landes and Joel Mokyr on technology and the Industrial Revolution; Alan Olmstead and Paul Rhode on the process whereby crop varieties were developed that were suitable to new frontier conditions; Tony Wrigley on the importance of coal to modern economic growth or Arthur Lewis, Barry Eichengreen, Knick Harley, Paul Bairoch and many others on the history of the world economy. A serious study of frontiers will obviously have to engage with the work of these and many other scholars.

One concept that the authors rely on is that of the 'spatial' and various other capitalist 'fixes' in the history of the world economy introduced by the Marxist geographer David Harvey. While the phrase does crop up a lot in the literature, we admit that we find the use of such a colloquialism to describe long and fateful stretches of world history to be somewhat distasteful, and in many ways unhistorical: the past was much more complicated than that. The interests of capitalists were of course important factors underlying the Iberian voyages, Mercantilism, the Industrial Revolution and other such momentous events, but so were inter-state and religious rivalries, the development of science and technology, the legacies of the past, the many factors underlying the West's

¹E. Barbier, *Scarcity and Frontiers: How Economies have Developed Through Natural Resource Exploitation*, (Cambridge: Cambridge University Press, 2011).

‘comparative advantage in violence’ and so on. In our 2007 book *Power and Plenty*, we naturally emphasise the economic drivers of the modern world, but we hope that we have not been monocausal in our account since monocausal history is not really history.

Greed, cruelty and violence played a crucial role in creating the world economy: so much so that the subtitle of our 2007 book was ‘Trade, War and the World Economy in the Second Millennium’. Trade has always been inextricably intertwined with geopolitics and wars concerning the control of the sources and destinations of the commodities traded and the routes along which they pass. The fortunes of the Silk Road waxed and waned with the empires, such as the Mongol Empire, that controlled it. The trade of the Italian city-states involved almost continuous conflict between Venice and Genoa and of both of them with the Turks and the Mamluks. European intrusion into the Indian Ocean and the Pacific depended on their mastery of ‘guns and sails’.² The activities of the Dutch, British and French East India Companies were closely associated with the Anglo-Dutch Wars of the seventeenth century and the Seven Years and Napoleonic Wars of the eighteenth and early nineteenth centuries. None of these rivalries and conflicts between the emerging European nation-states and the Asian states and empires that stood in their way gets any mention in the proposal’s discussion of the ‘spatial fix’ from 1450 to 1850. As a matter of fact the discussion almost completely ignores the role of any specific historical states or the rivalries between them, making the discussion as it stands seem somewhat bloodless and disembodied.

Any discussion of shifting global commodity frontiers will have to engage more with the history of transportation technology than is done in the current proposal. The expansion of trade has depended to a large extent on reductions in transport costs, reducing the price spreads between the sources and destinations of commodities. The authors do of course speak of a ‘transportation fix’ from the 1850s to the 1950s involving steamships and railways during the second of their ‘commodity regimes’, but earlier technological developments will need to be taken on board as well. Technologies mattered not just because they allowed the products of the frontiers to be transported to markets, but because they enabled vast flows of labour and capital to move to the frontiers. The abundance of land in the New World of the Americas and Australasia was cleared and made accessible by both capital and labour flows from Europe on a huge scale. These built railways and created the necessary infrastructure of ports and cities. In the frontier societies of the so-called New World, it was not the case that capital moved in search of cheap labour, or that labour moved to benefit from capital, but that ‘both capital and labour chased cheap land’.³ There is a vast literature on all these topics that the authors will need to engage with.⁴

But the new technologies also had strategic effects. The steam engine made it possible for European powers to use shallow-draft armed gunboats on the great rivers of Asia and Africa and penetrate the interiors of those continents. Nanjing was bombarded by British steamboats sailing up the Yangtze during the Opium Wars. The Burmese capital of Mandalay was taken by British troops transported up the Irrawaddy by steam-propelled vessels during the Second Anglo-Burmese War in the 1850s. Joseph Conrad’s *Mistah Kurtz*, like his numerous real-life counterparts, were likewise able to use the Congo to perpetrate their horrors far into the interior of Africa.

The earlier overseas commodity frontiers involved exotic tropical products, such as spices, tobacco, cotton and sugar, that were – relatively speaking – ‘non-competing’ with European production. European states therefore wanted to import them as cheaply as possible. By the second half of the nineteenth century, however, the major imports from the temperate zones of the

²C. M. Cipolla, *Guns and Sails in the Early Phase of European Expansion, 1400–1700* (London: Collins, 1965).

³R. Findlay and K. H. O’Rourke, *Power and Plenty: Trade, War, and The World Economy in the Second Millennium* (Princeton, NJ; Woodstock, Oxfordshire England: Princeton University Press, 2007), 408.

⁴K. H. O’Rourke and J. G. Williamson, *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy* (Cambridge, Mass.: MIT Press, 1999).

New World were wheat, beef and wool, all of which were produced on a large scale all over Europe. The incentive to practice free trade therefore came under threat from domestic European political constituencies, in particular (and depending on the country) peasants, farmers and/or land-owners. As Charles Kindleberger⁵ pointed out long ago in a famous article, there were a variety of different possible responses. One was to continue to import freely but to export the surplus agricultural population to the New World, which is one reason why there are so many Italians in Argentina and so many Swedes and Norwegians in Minnesota. Denmark responded more creatively, by adopting the cream-separator and the modern dairy industry based upon it. Britain repealed the Corn Laws and lived by exporting manufactures, capital and financial services, in part because this was in industry's interests, but also because workers wanted cheap food. The Germany of Bismarck and Kaiser Wilhelm chose to protect both agriculture and industry, while also innovating in new industries such as chemicals. Capitalists did not always get to call the shots: other interest groups mattered also, even in the nineteenth century.

Economic historians have produced a vast empirical literature on frontiers, but economic theorists have also analysed their economic logic. The literature setting out the economic theory of the frontier begins, perhaps not surprisingly, with the Argentinian Guido di Tella and the Canadian Knick Harley.⁶ The key concept of an 'endogenous land frontier' was introduced by one of the present authors.⁷ The model divides the world economy into an Old World that produces food and manufactures and a New World that produces food and a raw material that is an essential input into the manufactured good produced in the Old World. Capital and labour are both supplied by the Old World. Land is in fixed supply in the Old World but is available at an increasing marginal cost in the New World. The amount of land in the New World, i.e. the extent of the frontier, is determined endogenously by the equality of the rate of return on capital with the ratio of the rent per acre of land in the New World to the marginal cost of clearing an extra acre, equal to its price under perfect competition. The model also determines the outputs of all three goods, the real wage and the division of the labour force between the Old and New Worlds and the relative prices of the goods. The effects of various shocks, such as technical progress in manufactures (i.e. an 'industrial revolution'), increase in the size of the total labour force or a fall in transport costs can be deduced. The model implies that the driving force behind the extent of the frontier and hence of the New World economy is the economy of the Old World. As with all models the result over-simplifies history, but the dependence of the frontier societies of the New World on economic conditions in the Old is broadly consistent with experience up to about 1900, after which time modern manufacturing industry started to expand around the world, often in response to tariff protection.⁸

The developing world was also intimately involved in this process. Economic growth in Europe generated demand for tropical consumer goods such as coffee, tea and cocoa and industrial raw materials such as rubber and palm oil. This produced a vigorous supply response by peasant cultivators in Africa and Southeast Asia, thereby extending the frontier in the tropics as well. India and China also responded by exporting labour, not only as workers but also as shopkeepers and moneylenders servicing native cultivators. This would have political ramifications in later decades.

⁵Kindleberger, C. P. (1951). Group Behavior and International Trade. *Journal of Political Economy*, 59(1), 30–46.

⁶G. Di Tella and M. Zymelman, "El desarrollo económico de los espacios abiertos," *El Trimestre Económico*, 29, no. 116(4) (1962): 622–33; Harley, C. K. (1978). Western Settlement and the Price of Wheat, 1872–1913. *The Journal of Economic History*, 38(4), 865–878.

⁷R. Findlay, 'International Trade and Factor Mobility with an Endogenous Land Frontier: Some General Equilibrium Implications of Christopher Columbus,' in W.J. Ethier, E. Helpman & J.P. Neary, J. P. (Eds.) *Theory, Policy and Dynamics in International Trade* (Cambridge: Cambridge University Press, 1993; reprinted as Chapter 8 of R. Findlay & M. Lundahl (Eds.), *The Economics of the Frontier: Conquest and Settlement* (London: Palgrave Macmillan, 2017).

⁸K. H. O'Rourke & J. G. Williamson (Eds.), *The Spread of Modern Industry to the Periphery Since 1871* (Oxford: Oxford University Press, 2017).

Increasing flows of food and raw materials from frontiers to metropolises had a major economic impact, but they also had a strategic one. Dependence on imports was seen by some military planners as dangerous, and this had a destabilizing impact on the geopolitical system that has been analysed by several historians.⁹ State security was an independent driver of events throughout the period under scrutiny: not only economic actors and domestic politics but also geopolitical equilibria – and disequilibria – mattered for the course of events.

In summary, frontier history is an exciting area for future research. There is a lot of existing research on frontiers that will have to be drawn on in any serious attempted synthesis and that includes the research of economists and economic historians. As economists and economic historians, we have naturally stressed this in the present review. However, like all history frontier history is complicated – far too complicated to be explained in monocausal fashion. That makes the inter-disciplinary nature of the proposed research particularly welcome.

Kevin O'Rourke is Professor of Economics at NYU Abu Dhabi. He was formerly the Chichele Professor of Economic History at the University of Oxford and a Fellow of All Souls College. He is a Member of the Royal Irish Academy, a Fellow of the British Academy and a former Research Director of CEPR. After obtaining a PhD in Economics at Harvard, he taught at Columbia, University College Dublin, Harvard, Sciences Po Paris and Trinity College Dublin. His books include the prize-winning *Globalization and History* (co-authored with Jeffrey Williamson) and *Power and Plenty: Trade, War and the World Economy in the Second Millennium* (co-authored with Ronald Findlay). He was awarded an ERC Advanced Investigator in 2009 to study interwar trade and trade policy. His most recent book is *Une Histoire Brève du Brexit* (Odile Jacob, 2018), published in English as *A Short History of Brexit: From Brentry to Backstop* (Penguin, 2019).

Ronald Findlay was born in Rangoon, Burma, and educated at Rangoon University (BA 1954) and MIT (Ph.D 1960). He has been on the faculty of Columbia University from 1969, retiring as Ragnar Nurkse Professor of Economics in 2014. He now lives in San Gabriel, California.

⁹M. A. Barnhart, *Japan Prepares for Total War: The Search for Economic Security, 1919–1941* (Ithaca; London: Cornell University Press, 1987); A. Offer, *The First World War: An Agrarian Interpretation* (Oxford: Clarendon Press, 1989); J. A. Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (London: Allen Lane, 2006).