# ECONOMIC HISTORY REVIEW



Economic History Review, 0, 0 (2020), pp. 1–31

# Slavery and Anglo-American capitalism revisited<sup>†</sup>

By GAVIN WRIGHT\*

British and American debates on the relationship between slavery and economic growth have had little interaction with each other. This article attempts intellectual arbitrage by joining these two literatures. The linkage turns on the neglected part two of the 'Williams thesis': that slavery and the slave trade, once vital for the expansion of British industry and commerce, were no longer needed by the nineteenth century. In contrast to recent assertions of the centrality of slavery for US economic development, the article argues that part two of the Williams thesis applies with equal force to nineteenth-century America. Unlike sugar, cotton required no large investments of fixed capital and could be cultivated efficiently at any scale, in locations that would have been settled by free farmers in the absence of slavery. Cheap cotton was undoubtedly important for the growth of textiles, but cheap cotton did not require slavery. The best evidence for this claim is that after two decades of war, abolition, and Reconstruction, cotton prices returned to their prewar levels. In both countries, the rise of anti-slavery sentiment was not driven by the prospect of direct economic benefits, but major economic interest groups acquiesced in abolition because they no longer saw slavery as indispensable.

The relationship between slavery and the industrial revolution is one of the oldest debates in British economic history. On the American side, a parallel debate about slavery and economic development has been largely separate. Originally concerned with the profitability of slavery, attention in the American literature then turned to issues of efficiency and productivity, and most recently to the role of slavery in US economic development. Remarkably, these two conversations have had almost no connection to each other, with the notable exception of Beckert's *Empire of cotton*, which links the technological revolution in cotton textiles to the exploitation of slaves in the cotton fields of the American South.

In this article, I propose to conduct intellectual arbitrage by joining these two literatures. The linkage, however, is not exactly seamless. While Williams argued that the slave trade and slave-based commerce were essential components of the eighteenth-century industrial revolution, he went on to assert that British

<sup>\*</sup>Author's Affiliation: Stanford University.

<sup>&</sup>lt;sup>†</sup> Adapted from the Tawney Lecture, presented at the Economic History Society meetings in Belfast, 7 April 2019. The author thanks Steve Broadberry for the invitation to deliver the lecture, and John Clegg, Christian Dippel, Suresh Naidu, Richard Sylla, Warren Whatley, and Nuala Zahediah for comments on earlier drafts. Even more than usual, it should be stressed that none of these individuals are responsible for any of the views presented here. Dante Mangiaracina contributed outstanding research assistance.

<sup>&</sup>lt;sup>1</sup> A useful survey of the profitability and efficiency debates is Sutch, 'Economics of African American slavery'.

<sup>&</sup>lt;sup>2</sup> The centrality of slavery for US development is argued in Baptist, *Half has never been told*; Beckert, *Empire of cotton*; and Beckert and Rockman, eds., *Slavery's capitalism*. Critiques include Clegg, 'Capitalism and slavery'; Hilt, 'Economic history'; and Olmstead and Rhode, 'Cotton, slavery and the new history of capitalism'.

<sup>©</sup> Economic History Society 2020. Published by John Wiley & Sons Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA.

industrial development, 'stimulated by mercantilism, later outgrew mercantilism and destroyed it'. In the dissertation that formed the prelude to his famous book, Williams was even more explicit: 'The tremendous expansion of British industry and commerce was accompanied by the declining importance of the colonies which had once been the gems of the Empire'. In other words, abolition became viable in the nineteenth century because slavery and the slave trade were no longer the 'vital props that spurred the rise of British industry'. Williams was right. After 1815, British manufactured goods found diverse new international markets, which did not require captive colonial buyers, naval protection, or slavery. Long-distance trade became safer and cheaper, as freight rates declined and international financial infrastructure developed. One need not glorify the ideology of free trade, nor deny the role of imperialism, to acknowledge that the world economy emerging after 1815 was different in fundamental respects from its eighteenth-century predecessor. The thesis advanced here is that this revolutionary economic restructuring applied with equal force to the upstart economy across the Atlantic.

Insurgent scholars known as New Historians of Capitalism argue that slavery, specifically slave-grown cotton, was critical for the rise of the US economy in the nineteenth century. Beckert asserts: 'It was on the back of cotton, and thus on the backs of slaves, that the U.S. economy ascended in the world'. Baptist writes: 'Cotton also drove U.S. expansion, enabling the young country to grow from a narrow coastal belt into a vast, powerful nation with the fastest-growing economy in the world'. In essence, these historians are transporting the first part of the Williams thesis from the mercantilist eighteenth century to the industrializing economies of the nineteenth. But times had changed. The Atlantic economy of the eighteenth century was propelled by sugar, a quintessential slave crop. In contrast, cotton required no large investments of fixed capital and could be cultivated efficiently at any scale, in locations that would have been settled by free farmers in the absence of slavery. Early mainland cotton growers deployed slave labour, not because of its productivity or aptness for the new crop, but because they were already slave owners, searching for profitable alternatives to tobacco, indigo, and other declining crops. Slavery was, in effect, a 'pre-existing condition' for the nineteenth-century American South.

To be sure, US cotton did indeed rise 'on the backs of slaves', and no cliometric counterfactual can gainsay that brute fact of history. But it is doubtful that this brutal system served the long-run interests of textile producers in Lancashire and in New England, as many of them recognized at the time. As argued here, the slave South *underperformed* as a world cotton supplier for three distinct though related reasons: the region agreed in 1807 to close the slave trade and failed

<sup>&</sup>lt;sup>3</sup> Williams, Capitalism and slavery, p. 106.

<sup>&</sup>lt;sup>4</sup> Williams, *Economic aspect*, p. 199.

<sup>&</sup>lt;sup>5</sup> Ibid., p. xv.

<sup>&</sup>lt;sup>6</sup> The most prominent works by New Historians of Capitalism pertaining to slavery are Baptist, *Half has never been told*; Beckert, *Empire of cotton*; Johnson, *River of dark dreams*; Schermerhorn, *Business of slavery*; and the collection edited by Beckert and Rockman, *Slavery's capitalism*. Critical surveys include Clegg, 'Capitalism and slavery'; Hilt, 'Economic history'; Oakes, 'Capitalism and slavery and the Civil War'; Olmstead and Rhode, 'Cotton, slavery, and the new history of capitalism'.

<sup>&</sup>lt;sup>7</sup> Beckert, *Empire of cotton*, p. 119.

<sup>&</sup>lt;sup>8</sup> Baptist, Half has never been told, p. 113.

to recruit free labourers, making labour supply inelastic; slave owners neglected transportation infrastructure, leaving large sections of potential cotton land on the margins of commercial agriculture; and because of the fixed-cost character of slavery, even large plantations aimed at self-sufficiency in foodstuffs, limiting the region's overall degree of market specialization. These shortcomings in cotton supply had larger ramifications for the course of US development. The slave South became increasingly isolated from the national mainstream, as manufacturers found their most inviting market opportunities in the expanding farm populations and cities of the free states. By the late antebellum period, the slave states emerged as a principal obstacle to the activist growth agenda supported by leading industrial and financial interests.

Can we say, then, that both British and American slaveries were abolished because they had outlived their economic usefulness? Historical political economy is rarely so clear-cut. There is little evidence that prospects of direct economic gains drove the historical rise of anti-slavery sentiment. In both cases, however, major economic interest groups acquiesced in abolition because they no longer saw slavery as indispensable for their political or economic agendas.

The argument proceeds as follows. The first section reviews the state of scholarship on the role of long-distance trade for eighteenth-century British manufacturers. The next part shows that these growing markets were dominated by slave-based commerce, primarily sugar, and argues that this expansion would not have occurred with free labour. This structure is then contrasted with the international economy emerging after 1815, in which British firms sold their wares in diverse growing markets around the world. Attention then shifts to North America and the rise of cotton, arguing that slavery was linked to cotton through historical legacies rather than technological or economic imperatives. Despite high returns to slave owners, the region underperformed as a cotton supplier, in comparison to a family-farm alternative. As events unfolded, the slave South was neither central nor essential to the mainstream of US economic development.

A few guideposts at the outset may be advisable. It has never been my practice to reify concepts like 'capitalism' and treat them as historical actors, and this article's title does not mark a change in this policy. But 'capitalism' can be a useful shorthand for a combination of market forces and political pressures from powerful economic interests. Because the term has come in for widespread use in this historical territory, I use it that way for convenience.

Second, although the present effort draws inspiration from Williams, it does not concern itself with the precise definition of the 'Williams thesis', still less with its truth or falsity. *Capitalism and slavery* should not be regarded as a sacred text to be worshipped or renounced. It was a product of its times and a suggestive motivator for ours, but ultimately it falls to us to understand the historical record with our own tools, as best we can.

Third, the formulation offered here is not an attempt to substitute a materialist interpretation for an alternative emphasizing the role of ideas and humanitarian sentiments in the demise of slavery and the slave trade. Ideas and sentiments mattered, but their trajectories were not free-floating and exogenous to economic developments. The most virtuous of abolitionists still had to refute claims that ending the slave trade would be economically disastrous. Even Williams's thesis supervisor V. Harlow, while urging his student to emphasize the humanitarian side

of abolition, acknowledged: 'Whether the Humanitarians could have got their way if the Nation as a whole had been convinced that the national economy would have been thereby seriously crippled is, of course, another matter'. Williams himself did not deny that abolitionists were moved by compassion, concluding only this: 'Even the great mass movements, and the anti-slavery mass movement was one of the greatest of these, show a curious affinity with the rise and development of new interests and the necessity of destroying the old'. Curious affinity' leaves us much room to manoeuvre on the interactive frontier between material interests and social change.

#### I. Long-distance trade and the industrial revolution

This section summarizes an emerging body of thought and evidence on the ageold question of the relationship between long-distance trade and the industrial revolution. As a gesture towards prudence, the term 'consensus' will not appear. Inikori describes how views on trade and the industrial revolution have oscillated for more than two centuries, and the principle of induction alerts us to the possibility that the pendulum might swing back again. <sup>11</sup> Nonetheless, historical interpretation over the past 30 years strongly supports the view that distant markets were critical for the emergent technologies of eighteenth-century Britain.

Perhaps this redirection was launched with a 1991 essay by O'Brien and Engerman, which complained that 'expressing the value of the output produced within any sector of economic activity as a percentage of economic activity seems almost calculated to create an impression of insignificance'. If we look instead at shares of the increment to British exports, the authors note, we find that 'something like 95% of the addition to the volume of commodity exports [from 1700–1 to 1772–3] were sold on imperial markets (the bulk to North America and the West Indies), which underlies the significance of sea power, imperial connections, slavery and mercantilist regulation for the sale of British manufactures overseas'. Eltis and Engerman questioned this reading, noting that the slave trade itself was relatively small (less than 3 per cent of British shipping tonnage), and that sugar had limited linkages to the industrial sector. But long-distance trade was both large and dynamic, growing twice as fast as national income, prompting Findlay and O'Rourke to conclude that 'the "colonial" trade was undoubtedly a major driving force of Britain's overall economic growth'.

The role of international markets was particularly telling in cotton textiles, whose 'precocious mechanization' was one of the primary technological developments of the eighteenth century. Inikori describes a familiar process of import- and re-export substitution, culminating in this case in new technologies. Overseas markets were critical in this view, because the domestic market was not well integrated prior

<sup>&</sup>lt;sup>9</sup> Quoted in Williams, Economic aspect, p. xiii.

<sup>&</sup>lt;sup>10</sup> Williams, Capitalism and slavery, p. 211.

<sup>&</sup>lt;sup>11</sup> Inikori, Africans and the industrial revolution, pp. 89-155.

<sup>&</sup>lt;sup>12</sup> O'Brien and Engerman, 'Exports and the growth of the British economy,' p. 178 (emphasis added).

<sup>&</sup>lt;sup>13</sup> Ibid., p. 186.

<sup>&</sup>lt;sup>14</sup> Eltis and Engerman, 'Importance of the slave trade'.

<sup>&</sup>lt;sup>15</sup> Findlay and O'Rourke, 'Triangular trade', p. 172. See also Cuenca Esteban, 'Rising share of British industrial exports'.

to the railroads. Invoking 'new growth theory', Inikori stresses the link between export expansion and technological progress. One of the earliest breakthroughs in cotton was Paul's roller spinning machine, patented in 1738 and prompted by competition with Asian goods for the West African market. Rivalry between English and Indian cotton goods continued throughout the century, with the African market as a primary frontier. Broadberry and Gupta emphasize a search for labour-saving technologies, while O'Brien argues that the main production problems were skill shortages and product quality. Either way or perhaps both ways, international competition generated pressures towards mechanization. As Riello concluded in 2009: 'Cotton did not become a global commodity because its production was mechanized and industrialized; on the contrary, it became mechanized and industrialized thanks to the fact that it was a global commodity'. 18

While avoiding explicit endorsement of Inikori's formulation, mainstream economists were soon echoing similar themes, linking the growth of market scale through trade with an environment conducive to innovation. Among economic historians, detailed accounts portray a transition from mid-century Smithian innovations in products and marketing to the more famous Schumpeterian inventions of the 1780s and 1790s, featuring many of the same industries and entrepreneurs. An arrangement of the same industries and entrepreneurs.

The effects of rising trade were pervasive on what one might call economic infrastructure. In port cities, trade provided a powerful stimulus for a diverse range of occupations and ancillary activities, especially in London. Price and Clemens stress gains in the efficiency of ocean shipping across the eighteenth century, not primarily through technology but as the result of improved economic organization and reductions in risk, a 'revolution of scale' in the authors' words. According to Price, the most striking and distinctive peculiarity of British commercial organization during this period was the extension of long credits by warehousemen and wholesalers to exporters, contracts that depended on the scale of trade for their viability. Before 1800, the cotton textile industry had reached a scale sufficient to support specialized machine makers, whose ongoing innovations and marketing efforts served to spread industrial revolution technologies around the globe in the nineteenth century.

By 2014, the transformation of expert opinion seemed all but complete. In a conference volume concerned with the legacy of emancipation, the editors suggest that the essays 'consolidate the acceptance of Williams's argument that slavery was essential to the take-off of Britain's industrialization . . . [Hudson's essay] marks the incorporation of the Williams/Inikori thesis into the mainstream of histories of

<sup>&</sup>lt;sup>16</sup> Inikori, Africans and the industrial revolution, p. 442.

<sup>&</sup>lt;sup>17</sup> Broadberry and Gupta, 'Lancashire, India, and shifting comparative advantage'; O'Brien, 'Geopolitics of a global industry'.

<sup>&</sup>lt;sup>18</sup> Riello, Spinning world, p. 282.

<sup>&</sup>lt;sup>19</sup> Acemoglu, Johnson, and Robinson, 'Rise of Europe'.

<sup>&</sup>lt;sup>20</sup> Griffiths, Hunt, and O'Brien, 'Inventive activity'; Macleod, 'Strategies for innovation'; Smail, *Merchants, markets and manufacture*; Broadberry and Gupta, 'Lancashire, India, and shifting comparative advantage'.

<sup>&</sup>lt;sup>21</sup> Zahediah, 'London and the colonial consumer'.

<sup>&</sup>lt;sup>22</sup> Price and Clemens, 'Revolution of scale'.

<sup>&</sup>lt;sup>23</sup> Price, Capital and credit, pp. 117-18.

<sup>&</sup>lt;sup>24</sup> Saxonhouse and Wright, 'National leadership'.

the Industrial Revolution'. <sup>25</sup> Hudson highlights the 'unique importance of the slave trade and associated bills of exchange in bringing about the integration of London and provincial money markets, without which the major manufacturing regions of the industrial revolution might well have floundered'. <sup>26</sup> According to Hudson, the Atlantic trade and specifically the slave trade were 'peculiarly bill dominated', and this familiarity through external usage then spilled over into internal trade, 'creating credit for a dense regional network of traders . . . The Industrial Revolution was entirely dependent upon it'. <sup>27</sup>

To be clear: none of these interpretations claim that the slave trade and slavebased commerce 'caused' the industrial revolution. As countless critics of Williams have observed, if merely engaging in violent enslavement were enough to generate an industrial revolution, then Spain and Portugal would have become world industrial leaders centuries before. Clearly, the British presence in Africa was an endogenous consequence of British naval and shipping dominance, themselves important background factors in national economic growth. Expanding markets provide incentives for innovation, but by no means do they assure that these innovations will actually appear. Thus, the accounts reviewed here are fully compatible with those emphasizing supply-side factors such as skills, creativity, and culture. Indeed, historians of science have shown that the slave trade served to advance the frontiers of British scientific knowledge of botany, entomology, drugs and dyes, even celestial mechanics.<sup>28</sup> Following Findlay and O'Rourke, the argument is simply that the slave trade was part of an interdependent imperial system, whose expansion underlay the sustainability of the industrial revolution.<sup>29</sup> As Findlay summarized his perspective in an earlier work:

slavery was an integral part of a complex intercontinental system of trade in goods and factors within which the Industrial Revolution, as we know it, emerged. Within this system of interdependence it would make as much or as little sense to draw a causal arrow from slavery to British Industrialization as the other way around.<sup>30</sup>

The mainland colonies of British North America were very much part of this flourishing network, albeit in a peripheral role.

#### II. The link to slavery

Dynamic gains from expanding trade seem familiarly plausible to economists, but why single out a link to slavery? What happened to the Enlightenment ideal of *doux commerce*, expressed in Montesquieu's 'commerce is a cure for the most destructive prejudices'? The problem with this proposition for the eighteenth century is that long-distance Atlantic trade was then dominated by the products of slave labour, and rising trade volume did nothing to ameliorate the conditions of slavery. Figure 1 divides British American exports to England into those from 'free' and 'slave'

<sup>&</sup>lt;sup>25</sup> Hall, Draper, and McClelland, Emancipation and the remaking, p. 8.

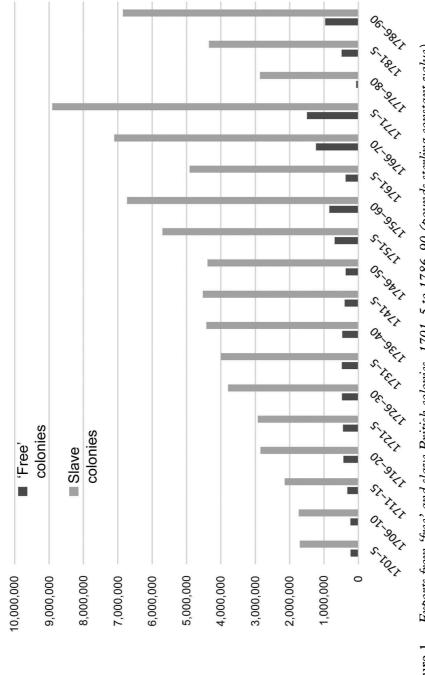
<sup>&</sup>lt;sup>26</sup> Hudson, 'Slavery, the slave trade, and economic growth', p. 45.

<sup>&</sup>lt;sup>27</sup> Ibid., p. 45.

<sup>&</sup>lt;sup>28</sup> Kean, 'Historians expose early scientists' debt to slave trade', summarizing research by D. Coleman, J. Delbourgo, and K. Murphy.

<sup>&</sup>lt;sup>29</sup> Findlay and O'Rourke, *Power and plenty*, pp. 339-45.

<sup>&</sup>lt;sup>30</sup> Findlay, 'Triangular trade', p. 28.



Exports from 'free' and slave British colonies, 1701–5 to 1786–90 (pounds sterling constant value) Sources: Carter et al., eds., Historical statistics of the United States, ser. Eg 430-435; Schumpeter, English overseas trade statistics, p. 18. Figure 1.

colonies, according to their post-Revolutionary War choices. It is obvious that slave-produced commodities were dominant, and their relative prominence widened across the century. Inikori estimates that Africans produced more than 80 per cent of commodity export value from the Americas between 1711 and 1800.<sup>31</sup> By far the largest of these was sugar, which in the 1770s accounted for nearly two-thirds of American colonial exports to Britain, and nearly 20 per cent of the entire English import bill.<sup>32</sup> And sugar was inextricably linked to slavery.

Sugar plantations required slave labour not because of any efficiency advantage associated with that organizational system, but because it was all but impossible to attract free labour to those locations and working conditions. According to Kupperman, a 'general impression of unhealthiness' hung over the West Indies and the southern mainland. Worse than location, sugar entailed 'literally a killing work regime', for reasons of both the hostile disease environment and episodic stress. Dunn concluded his exhaustive study of a Jamaican plantation with the observation that 'the evidence ... plainly demonstrates that the labour system practiced at Mesopotamia sentenced the slave workers to broken health and early death'. For any labourer with a choice—and despite elements of coercion, indentured servitude was in principle a voluntary contractual system—these were not places to go. As mercantilist James Steuart asked in 1767: 'Could the sugar islands be cultivated to any advantage by hired labour?'. <sup>36</sup>

The truth of this proposition is suggested by figure 2 and confirmed by every study of the transition from free to slave labour on Barbados, the first British sugar colony. The island was uninhabited in 1627 when first occupied by English settlers practising small-scale farming. The rise of sugar plantations in the 1640s brought a much harsher work regime, initially with indentured servants. Beckles and Newman stress that labour discipline and regimentation predated the shift to African slaves, including complete planter control of hours, pass requirements, and involuntary transfers. The system originated under indentured labour, but the relationship between supply and demand was not sustainable in that regime. Menard describes 'signs of strain' in the market for servants, including higher prices, shorter terms, and increased use of convicts. <sup>38</sup> Not only did servants resist, but news of their plight quickly spread, and Barbados became known as 'a place worse than hell for servants', a 'land of Misery and Beggary'.<sup>39</sup> Did the planters thereby suffer a loss of labour quality in their switch to full-blown slavery? To the contrary, they 'rapidly developed a strong preference for Africans from the Gold Coast'. 40 According to Roberts, 'the vast majority of planters never questioned whether an enslaved worker was better than a free worker . . . a guaranteed, captive

<sup>&</sup>lt;sup>31</sup> Inikori, Africans and the industrial revolution, p. 197.

<sup>&</sup>lt;sup>32</sup> Solow, Economic consequences, p. 31; Zahediah, 'Economy', p. 58.

<sup>&</sup>lt;sup>33</sup> Kupperman, 'Fear of hot climates', p. 236.

<sup>34</sup> Morgan, 'Poor', p. 302.

<sup>&</sup>lt;sup>35</sup> Dunn, 'Dreadful idlers', p. 82. Dunn confirms the association between sugar and mortality in his *Tale of two plantations*, pp. 131–80, with added emphasis on diet, disease, and the social environment. These findings buttress those advanced by Higman in *Slave population and economy in Jamaica*, pp. 121–4, and *Slave populations of the British Caribbean*, pp. 158–99, 324–9, 332–6.

<sup>&</sup>lt;sup>36</sup> Quoted in Drescher, Mighty experiment, p. 17.

<sup>&</sup>lt;sup>37</sup> Beckles, White servitude and black slavery; Newman, New world of labor.

<sup>&</sup>lt;sup>38</sup> Menard, Sweet negotiations, pp. 43–4.

<sup>&</sup>lt;sup>39</sup> Beckles, White servitude and black slavery, p. 125; Menard, Sweet negotiations, p. 45.

<sup>40</sup> Newman, New world of labor, p. 190.

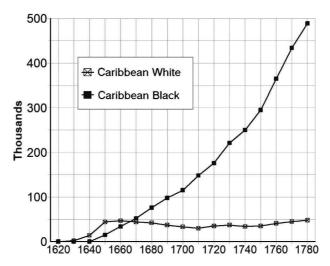


Figure 2. Population of the British Caribbean, 1620–1780 Source: McCusker and Menard, Economy of British North America, pp. 153–4.

and permanent labour force reduced the risks inherent in improvement schemes, thus encouraging experimentation and innovation'. <sup>41</sup> Climatic theories of race were popular, but during the relatively brief transition period on Barbados, the physical productivities of slave and indentured labour were reported to be equal. <sup>42</sup>

Sugar contrasts with tobacco, the second-largest British American colonial export, a care-intensive crop with no significant scale economies.<sup>43</sup> In many respects, tobacco areas epitomized the world of the Domar model, where investors adopt slavery as the only way to expand their scale of operations, because labourers prefer independent farming as long as they have that option.<sup>44</sup> Until the 1690s, tobacco labour in the Chesapeake region was mainly indentured servants, many of whom served out their terms and became farmers themselves. A transition to slavery occurred at the turn of the century, because servant prices rose and slave prices fell, while improved mortality tipped the calculus in favour of lifetime labour. 45 Slavery undoubtedly accelerated the growth of tobacco production during the eighteenth century, not through any productivity advantage, but because slave assets attracted infusions of credit, while the mobility of slaves facilitated the extension of the frontier. 46 Both slave and free populations experienced high rates of natural increase, pushing the slave trade into sharp decline even before the American Revolution.<sup>47</sup> Nonetheless, by the time of the Revolution, slavery was entrenched throughout the Chesapeake and the Virginia Piedmont, a legacy of great importance for the subsequent century.

<sup>&</sup>lt;sup>41</sup> Roberts, *Slavery and the enlightenment*, p. 37.

<sup>&</sup>lt;sup>42</sup> Beckles and Downes, 'Economics of transition', p. 238.

<sup>&</sup>lt;sup>43</sup> Main, *Tobacco colony*, pp. 31-8.

<sup>&</sup>lt;sup>44</sup> Domar, 'Causes of slavery or serfdom'.

<sup>&</sup>lt;sup>45</sup> Menard, 'From servants to slaves'; Galenson, White servitude, pp. 141-57.

<sup>&</sup>lt;sup>46</sup> Kulikoff, *Tobacco and slaves*, pp. 49–54, 64.

<sup>&</sup>lt;sup>47</sup> Menard, 'Economic and social development', p. 273.

· ·			•	\ <u>*</u>	<u> </u>	
	Great Britain	Ireland	Southern Europe	West Indies	Africa	Total
Fish	206		57,195	94,754		152,155
Livestock, beef, and pork	2,516		1,660	105,810		109,986
Wood products	8,618	4,982	4,405	76,614		94,619
Whale products	40,443		804	20,416	440	62,103
Grains and grain products	15,570	9,709	179,278	194,725		399,282
Rum	471	44	1,497		16,754	18,766
Other	53,467	37,561	2,523	6,438	1,077	65,110
Total	145,344	52,991	249,885	501,678	18,271	965,646

Table 1. Average annual value and destination of commodity exports from New England and Middle Atlantic colonies, 1768–72 (pounds sterling)

Source: McCusker and Menard, Economy of British America, pp. 108, 199, using data from Shepherd and Walton, Shipping, maritime trade.

The mainland colonies were relatively minor direct participants in the African slave trade, but they were still intimately connected to the larger slave-based Atlantic economy. As imperial insiders, the northern colonies were beneficiaries of the Atlantic trading regime, protected against outsiders by British naval superiority. Table 1 shows that as late as 1768-72, the British West Indies were the largest single market for commodity exports from New England and the Middle Atlantic, dominating sales of wood products, fish, and meat, and accounting for significant shares of whale products, grains, and grain products. Moreover, Richardson estimates that two-thirds of New England's 'invisible' earnings during the same period arose from Caribbean commerce, providing the region with its largest single source of revenue from overseas trade. 48 Two years before the publication of Capitalism and slavery, Greene wrote: 'On the eve of the American Revolution [the slave trade] formed the very basis of the economic life of New England. The vast sugar, molasses and rum trade, shipbuilding, the distilleries, a great many of the fisheries, the employment of artisans and seamen, even agriculture—all were dependent upon the slave traffic'. 49

The prominence of slave-based commerce for the Atlantic economy provides the background for the arresting connections reported by C. S. Wilder in his book *Ebony and ivy*, associating early American universities with slavery. The first five colleges in British America were major beneficiaries of the African slave trade and slavery. Harvard became the first in a long line of North American schools to target wealthy planters as a source of enrollments and income'. The reason for what might seem an incongruous liaison is not hard to identify: 'The American college was an extension of merchant wealth'. A wealthy merchant in colonial America was perforce engaged with the slave trade or slave-based commerce. Thus, part one of the Williams thesis also holds for the colonial American economy in the eighteenth century.

<sup>&</sup>lt;sup>48</sup> Richardson, 'Slavery, trade and economic growth', p. 257.

<sup>&</sup>lt;sup>49</sup> Greene, *Negro in colonial New England*, pp. 68–9. Cf. McCusker and Menard, *Economy of British America*, pp. 288–94. Compare Beckert and Rockman's (*Slavery's capitalism*, p. 21) claim that 'virtually no scholarship mentions Caribbean slaves as key to New England commerce'.

<sup>&</sup>lt;sup>50</sup> Wilder, Ebony and ivy, p. 17.

<sup>&</sup>lt;sup>51</sup> Ibid., p. 30.

<sup>&</sup>lt;sup>52</sup> Ibid., p. 76.

## III. The global economic revolution, 1775–1815

The debate over the 'decline' of Caribbean slavery is unusually persistent and may be unresolvable, largely because the turbulent wartime years 1793-1815 were dominated by issues of conflict and strategy, making it virtually impossible to identify long-term trends that would have prevailed in 'normal' times. The proposition advanced here is more modest, a restatement of part two of the Williams thesis: in the new economy that emerged after 1815, the role of slavery for the British economy was peripheral and no longer required. Propelled by political hegemony and technological leadership, British manufactured goods found diverse new international markets, which did not require captive colonial buyers, naval protection, or slavery. As nations opened their doors to British imports, albeit often under political pressure, long-distance trade became safer and cheaper. In a separate but complementary development, the locus of primary product supply shifted from the tropics to the temperate and semi-tropic zones, all but eradicating an essential role for slave labour. As Findlay and O'Rourke conclude: 'The technological and geopolitical underpinnings of globalization were ... much weaker before 1800 than they would be afterwards'.53

Was the emergence of this new global order clear to all the major players in 1807 or 1815—manufacturers, shippers, workers, landowners, imperial strategists? Obviously not. In England, the Corn Law of 1815 tried to keep farm prices at high wartime levels, anticipating future conflicts. Home-market advocates decried the folly of exposing manufactures to the risks of insecure foreign markets, which could be blocked by import duties at any time. Even in the 1820s, defenders of the West Indian sugar preference argued that integrated colonial shipping and trade networks were crucial in counteracting the maritime power of the US. As events unfolded, however, the wisdom of free trade seemed confirmed, by unparalleled export growth and prosperity. Rather than a once-and-for-all swing from one full-blown ideology to another, we can better view the process as an exercise in collective learning, in which the outcomes and their agreed-upon interpretation only emerged with clarity further down the historical path.

The discussion of markets for industrial revolution exports is chiefly though not exclusively about cotton goods, which accounted for nearly half of all British exports in the first half of the nineteenth century.<sup>56</sup> The transition from the centrality of slavery in the eighteenth century to its minor role in the nineteenth century is clearly visible in this sector. Production of cotton textiles in England was insignificant before 1750, so the rise of this product line was central to the technological transformation of industry. Eighteenth-century cotton cloth was a 'fashion fabric'. Until the 1790s, according to Griffiths et al., almost half of all recorded inventions in the British textile industry were concerned with the nature and appearance of the end product.<sup>57</sup> The same authors argue that the proximate impulse towards mechanization in cotton derived from efforts to attain 'a more varied and higher-quality product mix to be achieved within an expanding

<sup>&</sup>lt;sup>53</sup> Findlay and O'Rourke, *Power and plenty*, p. 308.

<sup>&</sup>lt;sup>54</sup> Gambles, Protection and politics, p. 35.

<sup>&</sup>lt;sup>55</sup> Ibid., p. 156.

<sup>&</sup>lt;sup>56</sup> Davis, *Industrial revolution*, p. 14.

<sup>&</sup>lt;sup>57</sup> Griffiths, Hunt, and O'Brien, 'Inventive activity'.

manufacturing base'.<sup>58</sup> Perhaps it should not be surprising, therefore, that the fastest-growing market for British manufactured goods to 1775 was the northern mainland of British North America (Figure 3). At that time, however, a mercantilist observer might nonetheless maintain that most of the purchasing power of these free consumers derived from slave-based commerce; and that the ascendancy of this particular market depended on its 'captive' colonial status. As an 'American Farmer' put it in 1775:

The mother country has the power of introducing her own fabrics as cheap as she pleases and under whatever advantages and bounties or premiums she likes to grant; which she can do in her exportation of them to no other market. Elsewhere they meet with duties on importation, and perhaps prohibitions; but in America the manufactories of Britain are sold openly in every market without duty or clog.<sup>59</sup>

Remarkably, after 1783, North America again emerged as the leading importer of British cotton goods, and the US remained a major customer even after the advent of protectionism in 1816. The West Indies were important importers during the war years, but subsequently faded. After 1815, the British exported cotton goods to a diverse portfolio of international buyers, primarily for the simple reason that these goods were of high quality and affordable. As summarized by Davis: 'Cheap cotton fabrics could be bought by large numbers of people in Britain, Europe, the Americas and Asia who were too poor to be good customers for other textiles, while muslins and other fine cottons appealed to the tastes of the well-to-do'. Davis shows that 'new' markets for cotton goods grew far more rapidly than 'old' markets after 1815. Figure 4 shows that the slave economies had lost their eighteenth-century centrality, supplanted by a diverse array of global destinations.

Cotton textiles were the export leader, but not the whole show. As Temin shows, by 1815 Britain's comparative advantage in manufacturing was broad, including many non-factory industries that benefited from cost reductions in metals such as copper, iron, tin, and lead. The list of refined metals and metalwares enjoying rapid export growth between 1814–16 and 1844–6 includes hardware and cutlery; hand guns and swords; iron bolts, rods, and castings; copper sheets and nails; and tinplate. Davis writes: 'By 1850 Britain had become the supplier of refined metals and semi-finished products to the world'. After 1850, exports moved further up the ladder to steam engines and other sophisticated types of equipment and machinery.

The extension of global sales was supported by an ongoing decline in ocean freight rates and other infrastructure costs. Although the major impact of the metal

<sup>&</sup>lt;sup>58</sup> Griffiths, Hunt, and O'Brien, 'Scottish, Irish, and imperial connections', p. 646.

<sup>&</sup>lt;sup>59</sup> Quoted in Smith, 'British exports to colonial North America', p. 47.

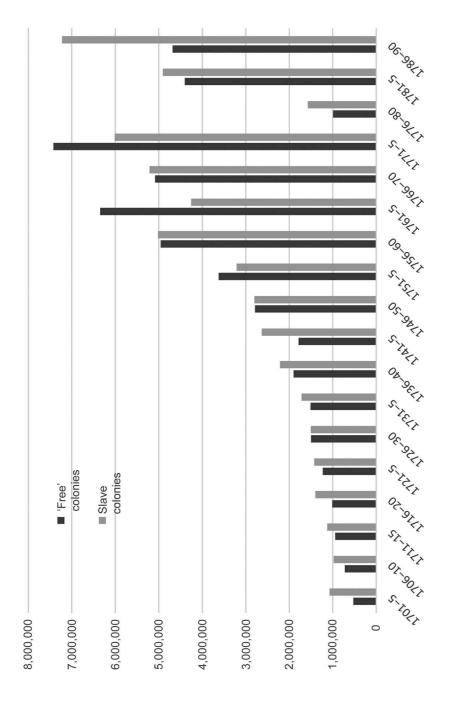
<sup>60</sup> Davis, Industrial revolution, p. 14.

<sup>&</sup>lt;sup>61</sup> Ibid., p. 21. Eltis, *Economic growth*, p. 11, asserts that Britain would have grown even faster by maintaining the slave trade, and that this policy would not have 'inhibited the growth of trade with the new markets for British goods in Asia and the Far East'. The suggestion that Britain's historic take-off should have been even faster is dubious on its face, and Eltis does not address the policy or political compatibility between these two regimes. In any case, the main point here is that expanding global markets undermined the claim that protected slave-based imperial markets were 'required' for British industrial expansion.

<sup>62</sup> Temin, 'Two views of the British industrial revolution'.

<sup>63</sup> Davis, Industrial revolution, p. 27.

<sup>64</sup> Ibid., p. 28.



Imports into 'free' and slave colonies from England, 1701–5 to 1786–90 (pounds sterling constant value) Sources: Carter et al., eds., Historical statistics of the United States, ser. Eg 437-442; Schumpeter, English overseas trade statistics, p. 18. Figure 3.

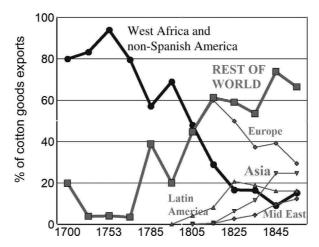


Figure 4. Shares of British cotton goods exports by region, 1700–1856

Notes: Ireland and Australia are omitted. Exports to Latin America are deducted from Inikori's column labelled 'Americas Western Africa'.

Sources: Inikori, Africans and the industrial revolution, p. 448; Davis, 'English foreign trade', pp. 302-3; Davis, Industrial revolution, pp. 94-101.

steamship came only at mid-century, freight rates on cotton fell markedly after 1820 because of tighter packing on board and at the ports. Even without breakthrough technologies, shipping speeds increased through greater hull strength, caused by increasing use of iron reinforcing, to reduce leakage and allow more sails to be set safely. The British also gained customers by providing credit, and by the increasing use of bills of exchange, which facilitated multilateral trade. English manufacturers could thus gain sales from Latin American exports to Europe and the US. Increased exports to Asia were possible because of the demise of the English East India Company, which lost its monopoly on trade with India in 1813, and the China trade in 1833. After passage of the Reciprocity of Duties Act in 1823, free trade advocates pointed out that British shipping activity grew twice as fast on 'unprotected routes' opened under the reciprocity agreements as on the protected routes.

The British colonial slave economy declined, not because slavery became unproductive or unprofitable, but because it was no longer seen as essential for British prosperity. To be sure, the shift in perception encompassed a new worldview or ideology; but the new subjective outlook was powerfully reinforced by objective evidence that British growth accelerated in the nineteenth century, with no apparent need for slavery or the slave trade.

<sup>&</sup>lt;sup>65</sup> Harley, 'Ocean freight rates and productivity', pp. 856-60.

<sup>66</sup> Kelly and O'Grada, 'Speed under sail', p. 460.

<sup>&</sup>lt;sup>67</sup> Miller, Britain and Latin America, pp. 78, 95.

<sup>&</sup>lt;sup>68</sup> O'Rourke, 'Worldwide economic impact', p. 195.

<sup>&</sup>lt;sup>69</sup> Chambers, Workshop of the world, p. 62.

#### IV. Capitalism and cotton in the American South

The British surge in cotton goods production put pressure on traditional sources of raw cotton, leading to soaring prices in the 1780s and 1790s.<sup>70</sup> The initial supply response came from the West Indies, where production tripled between 1780 and 1790.<sup>71</sup> Most of this new cotton was cultivated by slave labour, which Beckert argues was essential: 'It was slavery that allowed these planters to respond rapidly to rising prices and expanding markets'.<sup>72</sup> As we have seen, for sugar slavery was critical. But was this true for cotton? Probably not. Edwards points out that much of the cotton exported from the British West Indies actually originated in diverse foreign sources. Despite the urgings of the Board of Trade, planters were reluctant to divert acreage to cotton, because sugar was more profitable.<sup>73</sup> Beckert acknowledges that as late as 1791, most cotton grown for manufacturing purposes was produced by small farmers in Asia, Africa, and Latin America.<sup>74</sup> The mere correlation between slavery and early West Indian cotton thus tells us nothing about the nature of the connection.

The same is true for the rise of cotton on the mainland. Popular history dates the take-off from Eli Whitney's invention of the cotton gin in 1793, but historians have long known that this event was merely a blip in a more extended transition. Roller gins had been in use for some years in the West Indies, and Whitney's saw gin was at first highly imperfect. Lakwete shows that the two alternatives co-evolved in competition with each other for more than three decades. In the 1780s and 1790s, farmers in Georgia and South Carolina were actively searching for an alternative to tobacco, as well as to grains and indigo, whose prices were falling. Chaplin points out that tobacco and cotton 'required remarkably similar techniques of cultivation', including hoeing up the plants into hills or ridges, topping and suckering, and pressing the harvested products into hogsheads. Early cotton promoters pointed to the minimal capital outlay required, predicting 'leveling effects' from its spread through the backcountry, enabling 'the poor' to be 'elevated to this middle grade of society'.

Clearly the demands of the industrial revolution lay behind the new interest in cotton and the search for solutions to the ginning bottleneck. However, as these early observations suggest, the connection to slavery was not driven by technological imperatives. Instead, slave owners led the search for new commercial crops. Chaplin writes: 'Early cotton cultivators used cotton to preserve a world already shaped by commercial agriculture and slavery'. There was no Barbadostype transition to slavery from an alternative system; slavery was an 'initial condition' for southern farmers in the new nation.

<sup>&</sup>lt;sup>70</sup> Broadberry and Gupta, 'Lancashire, India and shifting comparative advantage', p. 290.

<sup>&</sup>lt;sup>71</sup> Beckert, *Empire of cotton*, p. 90.

<sup>&</sup>lt;sup>72</sup> Ibid., p. 91.

<sup>&</sup>lt;sup>73</sup> Edwards, Growth of the British cotton trade, p. 79.

<sup>&</sup>lt;sup>74</sup> Beckert, Empire of cotton, p. 84.

<sup>&</sup>lt;sup>75</sup> Lakwete, *Inventing the cotton gin*; Aiken, 'Examination of the role'.

<sup>&</sup>lt;sup>76</sup> Chaplin, 'Creating a cotton South', p. 188.

<sup>&</sup>lt;sup>77</sup> Klein, *Unification of a slave state*, pp. 248–9. The quotation is from a history of South Carolina written in 1808 by David Ramsay.

<sup>&</sup>lt;sup>78</sup> Chaplin, 'Creating a cotton South', p. 199.

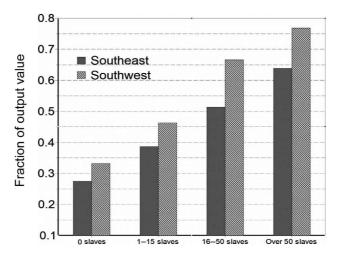


Figure 5. Cotton as share of farm output, 1860

Notes: The original data source is the Parker-Gallman sample. The sample is described in Parker, ed., Structure of the cotton economy. Definitions of prices and outputs follow procedures in Fogel, Gallantine, and Manning, Without consent or contract, pp. 205–9.

Source: Wright, Slavery and American economic development, p. 100.

From the 1790s onward, slavery and cotton were tightly linked. The nature of this association is fundamental to assessing the historical essentiality of slavery for industrial capitalism. For Beckert, the essence of the matter was slavery's inherently violent character:

Cotton demanded quite literally a hunt for labour and a perpetual struggle for its control. Slave traders, slave pens, slave auctions, and the attendant physical and psychological violence of holding millions in bondage were of central importance to the expansion of cotton production in the United States and of the Industrial Revolution in Great Britain.<sup>79</sup>

In this view, Beckert was preceded by no less an authority than Karl Marx, who wrote in 1846:

Without slavery there would be no cotton, without cotton there would be no modern industry. It is slavery which has given value to the colonies, it is the colonies which have created world trade, and world trade is the necessary condition for large-scale machine industry . . . to do away with slavery would be to wipe America off the map. 80

According to Beckert, this argument was 'simply common sense in elite circles'. <sup>81</sup> The cross-sectional relationship between farm size and cotton would seem to support this thesis (figure 5), and Beckert invokes 'economies of scale inherent in slave-based cotton production' to explain this pattern. <sup>82</sup> However, the slavery debates of the 1970s established that the association between cotton and farm size

<sup>&</sup>lt;sup>79</sup> Beckert, Empire of cotton, p. 110.

<sup>&</sup>lt;sup>80</sup> Letter to Pavel Vasilyevich Annenkov, 28 Dec. 1846, reprinted in Marx, Poverty of philosophy, pp. 179–93 (quotation p. 188).

<sup>&</sup>lt;sup>81</sup> Beckert, Empire of cotton, p. 244.

<sup>82</sup> Ibid., p. 110.

was not driven by physical efficiency but by specialization in cotton, otherwise known as commercialization. Controlling for crop mix, there is virtually no evidence for scale economies in the censuses of 1850 and 1860.<sup>83</sup> Drawing on records from 142 plantations and 6,200 slaves, Olmstead and Rhode show that most of the growth in picking productivity (averaging 2.3 per cent per year) was attributable to improved 'picker-friendly' cotton varieties, interacting with westward migration. Plantation fixed effects eliminate scale economies entirely.<sup>84</sup> The unusually high-performing plantations may have been among those whose records are studied by Rosenthal, who reports that planters fixated on picking rates, suggesting analogies to Frederick Winslow Taylor and 'scientific management'.<sup>85</sup>

These assessments of plantation performance focus primarily on picking rates as an index of the productivity of slave labour. This approach is misleading, however, because it ignores the importance of acres planted in cotton as a determinant of output value. Slaves could only pick as much cotton as the fields produced, so that annual production per worker was limited by acres planted as well as by yield per acre. Once the planting decision was made, the only reasons owners would care about picking rates are that cotton in the fields could be damaged or destroyed by extreme weather, and because harvesting the crop quickly was advantageous in marketing. These considerations were important but typically of second order as components of productivity and profit. Thus, the essence of the matter is the extent of cotton acreage planted on large slave plantations.

Writing in the 1970s, I suggested that crop choice could be explained as behaviour towards risk. Small farmers practised 'safety-first' agriculture, planting enough corn to feed their families and livestock, treating cotton as a 'surplus crop'. Slave owners, in contrast, had sufficient wealth to bear these risks and maximize expected profits. With the benefit of a few decades of thought and research, we can now augment this interpretation in at least two dimensions. First is the realization that slavery itself provided insurance against one of the main farming risks in nineteenth-century America: a lack of labour at the time of the harvest. Because cotton had two labour peaks—cultivation from April to June, and harvest from September to December—slavery was in many ways ideally designed for commercialization. A planter could risk a large cotton acreage, knowing that he had a 'captive labour force', even for a bumper yield. Perhaps surprisingly to believers in technological explanations, slavery and wheat displayed a similar affinity in the grain-growing areas of Virginia. The common element was that slavery provided 'labour for the picking'.

A second consideration is that, as Clegg has emphasized, credit markets provided a source of market discipline as well as a means of expansion. So Slavery enabled planters to enlarge their operations and specialize in cash crops, but the same operators may also have been impelled by credit commitments to choose cash flow over safety. The census of 1860 includes remarkable detail about wealth, yet

<sup>83</sup> Wright, 'Efficiency of slavery', pp. 222-5.

<sup>84</sup> Olmstead and Rhode, 'Biological innovation', pp. 1151-4.

<sup>85</sup> Rosenthal, Accounting for slavery, ch. 3.

<sup>86</sup> Wright, Political economy, pp. 55-74.

<sup>&</sup>lt;sup>87</sup> Hanes, 'Turnover cost'.

<sup>88</sup> Irwin, 'Exploring the affinity of wheat and slavery'.

<sup>89</sup> Clegg, 'Credit market discipline'.

unfortunately we cannot yet match this to information about credit status or net worth. Nonetheless, recent research shows that slave values served as backing for extensive networks of credit, within localities and across long distances. Slaves were attractive as collateral, because slave property was mobile and slave wealth was highly liquid. On Mobile wealth allowed slave owners to leapfrog across space onto the best cotton lands in the region, where their captive labourers were set to work draining, clearing, and improving land, and building residential and farm structures.

The reader is entitled to wonder: does this body of scholarship not add up to a more sophisticated version of the Marx–Beckert thesis that slavery was 'of central importance to the expansion of cotton production in the United States'? Appearances can be deceiving. Yes, the advantages of slavery for attracting capital sped the advance of the cotton frontier. But in practice the slave South *underperformed* as a supplier of cotton for three distinct though related reasons. The region closed the African slave trade in 1807 and failed to recruit free labour, making labour supply inelastic. Slaveholders neglected infrastructure, so that large sections of the antebellum South were bypassed by the slave economy and left on the margins of commercial agriculture. Finally, the fixed-cost character of slavery meant that even large plantations aimed at self-sufficiency in foodstuffs, limiting the overall degree of market specialization. 92

In an ironic twist on the Williams debate, closing the African slave trade in 1807 was supported by southern representatives as strongly as by those from free states. Those who deviated from this regional consensus suffered political consequences. Of the 25 South Carolina low country representatives who voted to re-open the trade in 1804, 14 were not returned to office the following year. Has slave prices climbed over time, proposals arose to re-open the trade, reaching their peak in the 1850s. However, no southern state ever adopted such a measure, and the issue was considered politically off-limits everywhere. After voting for secession in 1861 by 84 to 14, the Mississippi convention voted down a re-opening resolution by 66 to 13. The reason for this ostensible contradiction is not difficult to identify: to re-open the African trade was to threaten the wealth of thousands of slaveholders across the South.

Attracting free labour was another option that might have improved the South's performance. However, slave states devoted little or no efforts in this direction, a policy divergence that dates from colonial times but was accentuated after the American Revolution. According to Fogleman: 'in the late eighteenth and early nineteenth centuries, something fundamentally and permanently altered the nature of North American migration . . . These developments transformed an

<sup>&</sup>lt;sup>90</sup> Kilbourne, *Debt, investment, slaves*; Martin, 'Slavery's invisible engine'; idem, 'Neighbor-to-neighbor capitalism'; Gonzalez, Marshall, and Naidu, 'Start-up nation?'

<sup>&</sup>lt;sup>91</sup> Weiman, 'Staple crops and slave plantations'; idem, 'Peopling the land by lottery?'; Miller, 'Plantation labor organization'.

<sup>92</sup> Gallman, 'Self-sufficiency in the cotton economy'; Anderson and Gallman, 'Slaves as fixed capital'.

<sup>&</sup>lt;sup>93</sup> Mason, 'Slavery overshadowed'. Referring to the slave-trade abolition of 1807, Williams, *Capitalism and slavery*, p. 124, wrote that the withdrawal of the 13 colonies 'made abolition easier than it would have been had the 13 colonies been English when the cotton gin revivified a moribund slave economy in the South', apparently forgetting that the US enacted the same measure in the same year, with full support from the slave South.

<sup>&</sup>lt;sup>94</sup> Shugerman, 'Louisiana purchase', pp. 44–5.

<sup>95</sup> Wright, Political economy pp. 150-4.

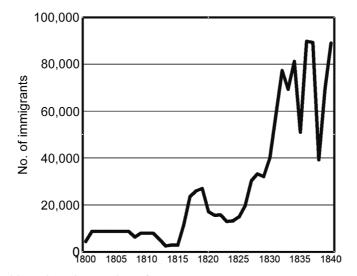


Figure 6. White migration to the US, 1800–40
Sources: Carter et al., eds., Historical statistics of the United States, ser. Ad17. The original source is McClelland and Zeckhauser,

Sources: Carter et al., eds., Historical statistics of the United States, ser. Ad17. The original source is McClelland and Zeckhauser, Demographic dimensions, p. 32, who note that 'all estimates for the period before 1820 are purely conjectural'.

immigration primarily of slaves, convicts, and indentured servants into one of free subjects'. <sup>96</sup> We tend to think of 'mass migration' as beginning with the Irish famine of the 1840s, but immigration to the mainland grew continuously after 1815 (figure 6). Eltis estimates that more than 80 per cent of all migrants to the Americas between 1820 and 1880 were free persons, almost exactly matching the slave share for the preceding 60-year period. <sup>97</sup> These newcomers went overwhelmingly to the free states. In contrast, McClelland and Zeckhauser report that the most prosperous areas of the south-west displayed net white *outmigration*, even during cotton booms, at times when one might have expected a rush of immigration. <sup>98</sup> One result was low population density and a level of cotton production well below potential.

Infrastructure was the slave South's second major shortcoming. Regional transportation patterns diverged even in the early national period. Turnpikes built by state-chartered corporations crisscrossed the north-eastern states between 1792 and the 1830s, but (as de Tocqueville noted) southern states are barely represented on these lists. During the canal boom of the 1830s, five times as many miles were constructed in northern than in southern states. Railroad mileage per square mile was three times greater in the North than in the South, where lines were 'generally inferior in construction, rail, motive power and rolling stock'. Southern underinvestment in infrastructure was directly related to slavery. The two leading explanations are that physical capital formation was 'crowded out' by

<sup>&</sup>lt;sup>96</sup> Fogleman, 'From slaves, convicts and servants to free passengers', pp. 44–5.

<sup>&</sup>lt;sup>97</sup> Eltis, Free and coerced migrations, p. 67.

<sup>98</sup> McClelland and Zeckhauser, Demographic dimension of the new republic, p. 7.

<sup>99</sup> Klein and Majewski, 'Turnpikes and toll roads'.

<sup>&</sup>lt;sup>100</sup> Stover, *Iron road to the west*, pp. 89–90. Stover estimates investment per mile at less than \$27,000 for the southern lines during the 1850s, compared to \$48,000 in the north-east.

the appreciation of slave wealth, and that the mobility of slave property reduced incentives for owners to engage in real estate development. 101

The third drag on cotton supply was southern self-sufficiency in food. Although Johnson refers to 'many plantation owners who planted nothing but cotton', in fact substantial corn crops were grown on virtually all cotton farms, including the largest slave plantations. <sup>102</sup> In his classic early cliometric analysis, Gallman showed that the largest cotton producers exceeded generous targets for the food needs of their human and animal populations. <sup>103</sup> In a subsequent study, Anderson and Gallman attributed these choices to the 'fixed-cost' character of slavery: because rural rental markets were thin and risky, owners strove to keep slaves busy at all times of the year. Peak labour requirements of corn and livestock could be spread to avoid conflict with those of cotton, so that farm-level opportunity costs were low. <sup>104</sup>

The best evidence that slavery was not essential for cotton supply is what happened after slavery's demise. The wartime and postwar years of 'cotton famine' were times of great hardship for Lancashire, only partially mitigated by high-cost imports from India, Egypt, and Brazil. After the war, however, merchants and railroads flooded into the south-east, enticing previously isolated farm areas into the cotton economy. Production in plantation areas gradually recovered, but the biggest source of new cotton came from white farmers in the Piedmont. When the dust settled in the 1880s, India, Egypt, and slave-using Brazil had retreated from world markets, and the price of cotton in Lancashire was back to its antebellum level (figure 7). Moreover, the great majority of southern cotton farms in the postwar era were specialized, purchasing grains and meats from other parts of the country. Other parts of the country.

Beckert fully acknowledges these post-emancipation developments. He writes:

Reconstruction resulted in a rapid, vast and permanent increase in the production of cotton for world markets in the United States ... So successful was the reconstruction of cotton growing in the United States that it came to be seen by imperial bureaucrats and capitalists everywhere as a model ... The emergence of new forms of cotton-growing labour in the United States was, in the wake of the emancipation of the world's preeminent cotton growers, the single most important change within the empire of cotton. <sup>108</sup>

He does not seem to notice that these sentences undermine the previous 300 pages of his book.

<sup>&</sup>lt;sup>101</sup> Ransom and Sutch, 'Capitalists without capital'; Wright, Old South, new South, pp. 17-33.

<sup>102</sup> Johnson, River of dark dreams, p. 176.

<sup>103</sup> Gallman, 'Self-sufficiency'.

<sup>&</sup>lt;sup>104</sup> Anderson and Gallman, 'Slaves as fixed capital'. An arduous year-round work regime kept slaves from idleness even on the wheat farms of Virginia. See Wright, *Slavery and American economic development*, p. 115.

<sup>&</sup>lt;sup>105</sup> Weiman, 'Economic emancipation'.

<sup>&</sup>lt;sup>106</sup> Harris, 'Crop choices in the Piedmont'; Temin, 'Patterns of cotton agriculture'.

<sup>&</sup>lt;sup>107</sup> Ransom and Sutch, One kind of freedom, pp. 153-9.

<sup>&</sup>lt;sup>108</sup> Beckert, *Empire of cotton*, pp. 291-2.

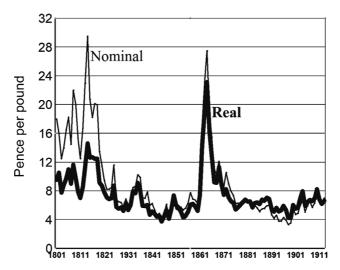


Figure 7. Price of cotton in Liverpool (pence per pound), 1801–1913

Notes: Observations are average prices of Upland or Middling American, the most common US variety. Real price deflated by Rousseaux Overall Price Index (average of 1865 and 1885 = 100).

Source: Mitchell, British historical statistics, pp. 722–4, 760.

## V. Slavery and US growth

What case can be made for the significance of slave-based southern expansion for US economic development? The New Historians of Capitalism have no doubt. In their introduction to a recent collection, Beckert and Rockman assert 'the impossibility of understanding the nation's spectacular pattern of economic development without situating slavery front and center . . . During the eighty years between the American Revolution and the Civil War, slavery was indispensable to the economic development of the United States'. <sup>109</sup> In an earlier article, Rockman wrote: 'But no matter how frequently southern slaveholders denounced bourgeois liberalism, there can be little doubt that the slave system played an indispensable role in the emergence of a national capitalist economy . . . the simultaneous expansion of slavery and capitalism [was] no mere coincidence'. <sup>110</sup>

Beckert and Rockman, along with Baptist, clearly mean to include the rise of cotton in their narrative. Baptist writes: 'And cotton became the dominant driver of US economic growth . . . Cotton also drove US expansion, enabling the young country to grow from a narrow coastal belt into a vast, powerful nation with the fastest-growing economy in the world'. <sup>111</sup> In this formulation, the New Historians of Capitalism are reviving an intellectual tradition associated with Douglass North, often regarded as one of the first contributions in cliometrics. Although he had little to say about slavery, North wrote in 1961:

Cotton was strategic because it was the major independent variable in the interdependent structure of internal and international trade. The demands for western foodstuffs and

<sup>&</sup>lt;sup>109</sup> Beckert and Rockman, Slavery's capitalism, pp. 1, 27.

<sup>&</sup>lt;sup>110</sup> Rockman, 'Unfree origins of American capitalism', pp. 346-7.

<sup>&</sup>lt;sup>111</sup> Baptist, Half has never been told, pp. 83, 113.

northeastern services and manufactures were basically dependent upon the income received from the cotton trade . . . it was cotton which was the most important influence in the growth in the market size and consequent expansion of the economy . . . Cotton played the leading role. 112

There is just one difficulty: this cotton staple growth theory has been overwhelmingly rejected by economic historians as an explanation for US growth in the antebellum era.

Drawing on contemporary southern newspapers, railroad reports, and periodicals, both Lindstrom and Fishlow have shown that the South provided only a limited market for imported foodstuffs: 'the needs of the lower South for flour and corn were insufficient to absorb the output of these products from the upper South, to say nothing of their serving as a major outlet for western produce'. As noted, the reason for this pattern is that most cotton plantations were themselves self-sufficient in food, planting ample corn crops to spread the fixed costs of slave labour across the year. Taken together, the evidence rejects North's claim, and by implication the revival of it by the New Historians of Capitalism, that 'the growth of the market for western foodstuffs was geared to the expansion of the southern cotton economy'. 114

As a market for north-eastern manufactured goods, the South was never dominant and diminished over time. Using capture–recapture methods to analyse the coastal trade from New York City, Herbst estimates that no more than 16.4 per cent of northern manufacturing output went south in 1839, of which only a subset was attributable to surging exports of cotton. In her study of economic development in the Philadelphia region, Lindstrom found that manufacturers rarely sold goods in distant markets before 1840, and when they did, these markets were normally in the east. Longer-distance trade grew over time, but primarily along east—west lines. The transportation revolution hastened both western settlement and commercialization, together comprising the majority of demand growth for US manufactures. Figure 8 shows that the total income of the South steadily declined as a share of national income, from the Revolution to the eve of the Civil War. Even during the 1850s, the most prosperous decade in southern economic history, the region's share of national income ticked downward from 31.4 per cent to 30.5 per cent, primarily because of slower population growth.

What about the sheer magnitude of slave production within the American economy? Baptist asserts that 'almost half of the economic activity of the United States in 1836 derived directly or indirectly from cotton produced by . . . slaves'. <sup>117</sup> As Olmstead and Rhode show, this figure is an egregious overstatement, generated by double-counting outputs, inputs, asset sales, and financial transactions. <sup>118</sup> Cotton production accounted for about 5 per cent of GDP at that time. Cotton

<sup>&</sup>lt;sup>112</sup> North, Economic growth, pp. 67-8, 194.

<sup>&</sup>lt;sup>113</sup> Lindstrom, 'Southern dependence upon interregional grain supplies', p. 113. Fishlow's estimates of West–South trade flows are presented in *Railroads*, pp. 275–88.

<sup>&</sup>lt;sup>114</sup> Gallman, 'Self-sufficiency in the cotton economy'. The quotation is from North, *Economic growth*, p. 68.

<sup>&</sup>lt;sup>115</sup> Herbst, *Interregional commodity trade*. Using the census of 1840, Uselding, 'Note on the inter-regional trade in manufactures', reported similar regional shares for that year.

<sup>&</sup>lt;sup>116</sup> Lindstrom, Economic development in the Philadelphia region.

<sup>&</sup>lt;sup>117</sup> Baptist, Half has never been told, p. 322.

<sup>&</sup>lt;sup>118</sup> Olmstead and Rhode, 'Cotton, slavery and the new history of capitalism', p. 13.

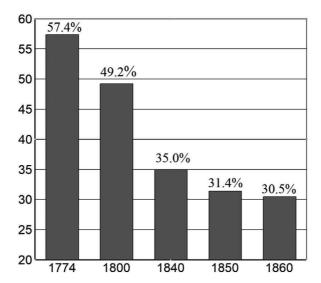


Figure 8. Total southern income as a percentage of US total income

*Notes:* Figures for 1774 and 1800 represent baseline personal income levels for the South Atlantic region, relative to those for all three regions. Figures for 1850 and 1860 represent all three southern census regions, relative to those for the US as a whole. The ratios for the South Atlantic relative to those of the original 13 colonies would be substantially lower in those years. The figure for 1840 is alternative B, without commerce.

Sources: Lindert and Williamson, Unequal gains, pp. 29, 80, 84, 98-9; Easterlin, 'Interregional income differences', pp. 97-8.

dominated US exports after 1820, but exports never exceeded 7 per cent of GDP during the antebellum period. The chief sources of US growth were domestic.

Two other channels have been suggested for slave-grown cotton's lead role in American growth. First, was the supply of cotton a key element in northern industrialization? True, cotton textiles were important for US industrialization, and New England mills used the same slave-grown raw material as their competitors in Lancashire. Schermerhorn asserts that for this reason, 'New England factory owners—upstarts in the new industrial bonanza—took a friendly interest in the expansion of cotton slavery'. 119 But this hypothetical alignment of interests makes little economic sense. As a bulky but lightweight commodity, raw cotton travels easily, and transportation costs play little if any role in textiles geography. It is true that the so-called Cotton Whigs cultivated close personal ties with southern slave owners, and, perhaps fearful of disruptions in cotton supply, favoured compromise on national issues. However, even these moderates opposed the annexation of Texas and the extension of slavery into Kansas. 120 Of far greater importance for the competitiveness of antebellum industry was the protective tariff, initiated in 1816 and strongly opposed by the South. 121 Regional conflict over the tariff nearly destroyed the nation during the Nullification Crisis of 1832-3. Thus, it is utterly inappropriate to combine cotton and cotton textile production into an aggregate index of national economic dependence on slave labour.

<sup>119</sup> Schermerhorn, Unrequited toil, p. 11. No citations are offered in support of this claim.

<sup>120</sup> O'Connor, Lords of the loom, pp. 73, 96, 102; Abbott, Cotton and capital, pp. 26-7, 28-37.

<sup>&</sup>lt;sup>121</sup> Harley, 'International competitiveness'; idem, 'Antebellum tariff'.

The second channel emphasized by New Historians of Capitalism is financial. They emphasize correctly the extensive financial connections between the slave South and northern lenders, servicing not just cotton but the interstate slave trade. However, it is not evident that southern demand for credit was an initiating force for northern financial development: thriving capital markets in north-eastern cities clearly pre-date the rise of cotton, trading primarily US bonds and shares of state-chartered banks, insurance companies, and turnpike and bridge corporations. In the formative early national period, connections to slavery were remote at best. In explaining the rise of New York as the nation's financial centre, monetary historians stress synergies connecting that city's port activity, securities markets, and banks, especially the call loan market. A key turning point in New York's competition with Philadelphia for financial leadership was the Erie Canal—a state project only because of congressional opposition to federal funding for internal improvements—which confirmed and extended the orientation of domestic trade along east—west lines. Leadership was the state of the project of the pr

It is certainly true that flows of 'outside' capital were important for the southern economy, both from northern states and from abroad. The Natchez branch of Biddle's Bank of the US (25 per cent of whose stock was foreign-owned) offered accommodation loans to planters so aggressively during the 1830s that the bank found itself in possession of numerous slaves and several plantations after the failures of 1837 and 1839. 124 During that boom decade, however, a larger share of foreign capital inflows went to the free states, in support of canal and railroad investments. <sup>125</sup> To the extent that outside credit financed moves onto better cotton land, it contributed to productivity growth. Olmstead and Rhode's picking rate graph shows impressive gains, strongly correlated with migration of production to the south-west. 126 Equally evident is the slowing of the rate of advance over time, as one would expect from a growth source driven by geographic shifts (albeit augmented by improvements in cotton plants). Because overall labour supply was inelastic, the primary effect of capital inflows was to drive up the price of the limiting factor. Soaring antebellum slave prices, often taken as signs of robust performance, can also be seen as symptoms of economic dysfunction.

Views on the economics of slavery no doubt reflected the influences of ideology and moral values, as well as objective interests. But many practical men associated with the cotton industry also expressed doubts about slavery's economic value and future. Particularly notable are the views of Thomas Ellison, long-time chronicler and statistician of cotton markets, who observed in 1858: 'That the Southern regions of the United States are capable of producing a much larger quantity of Cotton than has yet been raised is very evident; in fact, their resources are, practically speaking, almost without limit'. What was it that restrained this potential supply? Ellison had no doubt that the culprit was slavery:

<sup>122</sup> Schermerhorn, Business of slavery; pp. 74–91.

<sup>&</sup>lt;sup>123</sup> Sylla, 'US securities markets'; Myers, New York money market, pp. 3-9.

<sup>124</sup> Kilbourne, Slave agriculture and financial markets.

<sup>&</sup>lt;sup>125</sup> Wilkins, *History of foreign investment*, pp. 53–72.

<sup>&</sup>lt;sup>126</sup> Olmstead and Rhode, 'Biological innovation', p. 1148.

<sup>&</sup>lt;sup>127</sup> Ellison, Hand-book of the cotton trade, p. 22.

with all these advantages, there is an almost insurmountable barrier to a progress at all equal to that which characterized the trade during the first half of the present century, namely the scarcity of labour. The same retarding influence exists in the Brazils and the West Indies; but so far as these districts are concerned, the remedy is comparatively easy and simple. Not so with the United States: *there* the existence of Slavery is an insuperable bar to all advancement; it is the upas tree which clogs the wheels of the car of progress. <sup>128</sup>

Ellison went on to argue that slavery deterred free labour from migrating to the region, and white farmers from growing cotton. He saw no politically acceptable remedy, but warned: 'notwithstanding the boasting of the southern planters, it is absurd to suppose that they will long be able to keep in subjection the down-trodden African'. 129

It would wrap this analysis into a tidy, self-contained package to conclude that Anglo-American industrial and financial interests recognized this growing dysfunction and, in response, fostered or at least encouraged the anti-slavery campaigns that culminated in Civil War. This is not exactly how it happened. On the British side, political and economic leaders were increasingly apprehensive about reliance on this unsavoury supplier. They searched continually for free-labour sources of cotton, taking a keen interest in the newly independent Republic of Texas as a promising possibility. In 1840, Prime Minister Lord Palmerston offered the prize of diplomatic recognition, but only on condition that the Republic assist the British in suppressing the international slave trade, a measure clearly intended as a first step towards abolition. <sup>130</sup> It hardly needs stating that the Texans had no interest in this plan, since protecting slavery was one of their prime motives for secession from Mexico. But contrary to Beckert's picture of a government led by Lancashire into tacit support for slavery, British leaders did not see slave labour as essential for maintaining an assured cotton supply.

In the US, slave owners had extensive business and financial ties to northern firms, most of whom apparently felt no compunctions and would have happily continued these arrangements indefinitely. In his book on New York City's elite, Beckert reports that most bourgeois New Yorkers, especially merchants and bankers, wanted to accommodate the South politically. During the secession crisis, New York mayor Fernando Wood openly favoured the city seceding from the Union and setting itself up as a free city. Over time, however, the slave South increasingly assumed the role of obstructer to a national pro-growth agenda. Not only did southerners favour low tariffs, but southern presidents vetoed seven Rivers & Harbors bills between 1838 and 1860, frustrating the ambitions of entrepreneurs in the Great Lakes states. The Dred Scott decision of 1857, apparently opening the territories to slavery, sharply depressed the share values of railroad companies that had plans for construction in Kansas. In the 1850s,

<sup>&</sup>lt;sup>128</sup> Ibid., pp. 110-11.

<sup>&</sup>lt;sup>129</sup> Ibid., p. 111.

<sup>&</sup>lt;sup>130</sup> Torget, *Seeds of empire*, pp. 212–17. The proposal was codified in three treaties, whose fate was absorbed in diplomatic confusion. The Texas representative in London, James Hamilton, eagerly signed all three treaties, but sent only the first two to Austin for ratification, intentionally delaying the slave-trade item. Without it, however, Palmerston and Parliament were not willing to approve recognition; ibid., pp. 213–14.

<sup>&</sup>lt;sup>131</sup> Beckert, Monied metropolis, p. 85.

<sup>132</sup> Egnal, Clash of extremes, pp. 101-22.

<sup>133</sup> Wahl, 'Stay east, young man?'.

the South stood in opposition to a Homestead Act, the Pacific Railroad, currency reform, and federal support for agricultural research and education, measures that were favoured by a majority of northern farmers, as well as business interests. <sup>134</sup> Regional differences in economic interests by no means imply that these groups actively favoured abolition. But when the slave South seemed intent on expanding into new territories, perhaps even into the free states through such measures as the Fugitive Slave Act, many northerners came to believe that their economic interests were under threat. Beckert writes that a rising group of upper-class New Yorkers believed: 'the political power of southern slaveholders over the federal government was nothing less than a threat to the development of the United States and to their own economic wellbeing . . . Moreover, the political power of southern slaveholders, these businessmen began to argue, prevented necessary reforms in the banking, currency, credit, and transportation systems'. <sup>135</sup>

Riding the crest of the 1850s cotton boom, southern slave owners came to believe their own rhetoric on the essentiality of slavery for western capitalism. For them, 'King Cotton' meant 'King Slavery'. Mississippi's declaration of secession proclaimed: 'Our position is thoroughly identified with the institution of slavery—the greatest material interests of the world. Its labour supplies the product, which constitutes by far the largest and most important portions of commerce of the earth ... a blow at slavery is a blow at commerce and civilization'. <sup>136</sup> A pro-slavery writer in *De Bow's Review* wrote that 'slavery was the nursing mother of the prosperity of the North', an argument extended in Thomas Kettel's *Southern wealth and northern profits*, published on the eve of secession and applauded throughout the South. <sup>137</sup> These claims proved disastrous for their perpetrators and were refuted by subsequent history. Unfortunately, the New Historians of Capitalism seem to have swallowed them whole.

#### VI. Conclusion

The slave trade and slave-based commerce were core contributors to British economic development during the eighteenth century. Consistent with the Williams thesis, however, slavery was far less valuable for the British economy in the nineteenth century, so that major economic interests were amenable to, if not actively in support of, abolition of the slave trade and, eventually, slavery itself. The new relationship between slavery and economy reflected not just trends in prevailing ideologies and policy regimes, but deep changes in the geopolitical structures of international economic relations. Slavery was a profitable generator of wealth for owners, but the new imperial regime required neither 'captive' markets nor 'captive' workers. Even by the narrow criterion of affordable sugar, abolition did not impose a burden on British consumers, as free trade provided supplies from multiple new sources around the world.

I argue that these insights apply with equal force to the slave-based cotton economy of the US, where adherents of the New History of Capitalism have

<sup>&</sup>lt;sup>134</sup> Ron, 'Summoning the state', pp. 367–74.

<sup>&</sup>lt;sup>135</sup> Beckert, Monied metropolis, pp. 90-1.

<sup>136</sup> Quoted in Karp, Vast southern empire, p. 235.

<sup>137</sup> Quoted in M. Desmond, 'In order to understand the brutality of American capitalism, you have to start on the plantation', New York Times, 14 Aug. 2019; Kettel, Southern wealth and northern profits.

transferred a version of the Williams thesis to account for the acceleration of economic growth in the antebellum era. In colonial times, observers plausibly believed that cash crops could only be produced with slavery; but in the nineteenth century, family farms offered a realistic alternative, as visibly demonstrated by the rapid expansion of commercial farming in the Old Northwest, from which slavery was excluded. The argument here is that the cotton South could have developed in the same way. As history unfolded, cotton was indeed produced on the backs of slaves. But this was not a boon to the American economy; indeed, the slave South underperformed as cotton supplier to the world, in three distinct ways: limiting labour supply, neglecting infrastructure, and maintaining self-sufficiency in food and feed. Slavery was a source of regional impoverishment in nineteenth-century America, not a major contributor to national growth.

In recent decades, scholars have increasingly emphasized the 'modernity' of slavery and slaveholders, pointing to features such as international connections, financial sophistication, and openness to innovation. The aggregate impact of this body of research is powerful and important. Yet it struggles to explain why so many contemporaries outside these areas came to believe that slavery was economically backward as well as morally shameful. Of course, there were sweeping changes in ideologies and worldviews across the centuries. However, this article has argued that an additional contributing factor was that, because of profound changes in technologies and global economic structures, slavery—though still highly profitable to its practitioners—no longer seemed essential for the capitalist economies of the nineteenth-century world.

DOI: 10.1111/ehr.12962

#### References

Abbott, R. H., Cotton and capital: Boston businessmen and antislavery reform, 1854–1868 (Amherst, Mass., 1991). Acemoglu, D., Johnson, S. and Robinson, J., 'The rise of Europe: Atlantic trade, institutional change, and economic growth', American Economic Review, 95 (2005), pp. 546–79.

Aiken, C. S., 'An examination of the role of the Eli Whitney cotton gin in the origin of the United States cotton regions', *Proceedings of the Association of American Geographers*, 3 (1971), pp. 5–9.

Anderson, R. V. and Gallman, R. E., 'Slaves as fixed capital: slave labor and Southern economic development', *Journal of American History*, 64 (1977), pp. 24–6.

Baptist, E. E., The half has never been told: slavery and the making of American capitalism (New York, 2014).

Beckert, S., Monied metropolis: New York City and the consolidation of the American bourgeoisie, 1850–1896 (Cambridge, 2001).

Beckert, S., Empire of cotton: a global history (New York, 2014).

Beckert, S. and Rockman, S., eds., Slavery's capitalism: a new history of American economic development (Philadelphia, Pa., 2016).

Beckles, H. M., White servitude and black slavery in Barbados, 1627-1715 (Knoxville, Tenn., 1989).

Beckles, H. M. and Downes, A., 'The economics of transition to the black labor system in Barbados: 1630–1680', *Journal of Interdisciplinary History*, 18 (1987), pp. 225–47.

Broadberry, S. and Gupta, B., 'Lancashire, India, and shifting comparative advantage in cotton textiles, 1750–1850: the neglected role of factor prices', *Economic History Review*, 62 (2009), pp. 279–305.

Carrington, S. H. H., The sugar industry and the abolition of the slave trade, 1775–1810 (Gainesville, Fla., 2002).

Carter, S. B., Gartner, S. S., Haines, M. R., Olmstead, A. L., Sutch, R., and Wright, G., eds., *Historical statistics of the United States, earliest times to the present, millennial edition* (New York, 2006).

Chambers, J. D., Workshop of the world: British economic history from 1820 to 1860 (1961).

Chaplin, J. E., 'Creating a cotton South in Georgia and South Carolina, 1760–1815', Journal of Southern History, 57 (1991), pp. 171–200.

Clegg, J. J., 'Capitalism and slavery', Critical Historical Studies, 2 (2015), pp. 281-304.

- Clegg, J. J., 'Credit market discipline and capitalist slavery in antebellum South Carolina', *Social Science History*, 42 (2018), pp. 343–76.
- Cuenca Esteban, J., 'The rising share of British industrial exports in industrial output, 1700–1851', *Journal of Economic History*, 57 (1997), pp. 879–906.
- Curtin, P. D., 'The British sugar duties and West Indian prosperity', Journal of Economic History, 14 (1954), pp. 157-64.
- Dalzell, R. F., Jr., Enterprising elite: the Boston Associates and the world they made (Cambridge, Mass., 1987).
- Davis, R., 'English foreign trade, 1700-1774', Economic History Review, 2nd ser., XV (1962), pp. 285-303.
- Davis, R., The industrial revolution and British overseas trade (Leicester, 1979).
- Domar, E. D., 'The causes of slavery or serfdom: a hypothesis', Journal of Economic History, 30 (1970), pp. 18–32. Draper, N., The price of emancipation: slave-ownership, compensation and British society at the end of slavery (Cambridge, 2010).
- Drescher, S., The mighty experiment: free labor versus slavery in British emancipation (New York, 2002).
- Drescher, S., Econocide: British slavery in the era of abolition (2nd edn., Chapel Hill, NC, 2010).
- Dunn, R. S., "Dreadful idlers" in the cane fields: the slave labor pattern on a Jamaican sugar estate, 1762–1831', *Journal of Interdisciplinary History*, 17 (1987), pp. 795–822.
- Dunn, R. S., A tale of two plantations: slave life and labor in Jamaica and Virginia (Cambridge, Mass., 2014).
- Easterlin, R. A., 'Interregional differences in per capita income, population, and total income, 1840–1950', in W. N. Parker, ed., *Trends in the American economy in the nineteenth century* (Princeton, NJ, 1960), pp. 73–140.
- Edwards, M. M., The growth of the British cotton trade, 1780–1815 (Manchester, 1967).
- Egnal, M., Clash of extremes: the economic origins of the Civil War (New York, 2009).
- Ellison, T., A hand-book of the cotton trade: or, a glance at the past history, present condition, and future prospects of the cotton commerce of the world (1858).
- Eltis, D., Economic growth and the ending of the Transatlantic slave trade (New York, 1987).
- Eltis, D., Coerced and free migrations: global perspectives (Stanford, Calif., 2002).
- Eltis, D. and Engerman, S. L., 'The importance of slavery and the slave trade to industrializing Britain', *Journal of Economic History*, 60 (2000), pp. 123–44.
- Findlay, R., The 'triangular trade' and the Atlantic economy of the eighteenth century: a simple general equilibrium model (Princeton, NJ, 1990).
- Findlay, R. and O'Rourke, K. H., Power and plenty: trade, war, and the world economy in the second millennium (Princeton, NJ, 2007).
- Findlay, R. and O'Rourke, K. H., 'The triangular trade from a global perspective', in C. A. Palmer, ed., *The legacy of Eric Williams: Caribbean scholar and statesman* (Kingston, Jamaica, 2015), pp. 165–89.
- Fishlow, A., American railroads and the transformation of the antebellum economy (Cambridge, Mass., 1965).
- Fogel, R. W., Gallantine, R. and Manning, R. L., eds., Without consent or contract: evidence and methods (New York, 1992).
- Fogleman, A. S., 'From slaves, convicts, and servants to free passengers: the transformation of immigration in the era of the American Revolution', *Journal of American History*, 85 (1998), pp. 43–76.
- Galenson, D., White servitude in colonial America: an economic analysis (New York, 1981).
- Gallman, R. E., 'Self-sufficiency in the cotton economy of the antebellum South', in W. N. Parker, ed., *The structure of the cotton economy of the antebellum South* (Washington, DC, 1970), pp. 5–37.
- Gambles, A., Protection and politics: conservative economic discourse, 1815–1852 (Bury St Edmunds, 1999).
- Gonzalez, F., Marshall, G. and Naidu, S., 'Start-up nation? Slave wealth and entrepreneurship in Civil War Maryland', Journal of Economic History, 77 (2017), pp. 373–405.
- Greene, L. J., The Negro in colonial New England, 1620-1776 (New York, 1942).
- Griffiths, T., Hunt, P. A. and O'Brien, P. K., 'Inventive activity in the British textile industry, 1700–1800', *Journal of Economic History*, 52 (1992), pp. 881–906.
- Griffiths, T., Hunt, P. A. and O'Brien, P. K., 'Scottish, Irish, and imperial connections: Parliament, the three kingdoms, and the mechanization of cotton spinning in eighteenth-century Britain', *Economic History Review*, 61 (2008), pp. 625–50.
- Hall, C., Draper, N., and McClelland, K., eds., Emancipation and the remaking of the British imperial world (Manchester, 2014).
- Hanes, C., 'Turnover cost and the distribution of slave labor in Anglo-America', *Journal of Economic History*, 56 (1996), pp. 307–29.
- Harley, C. K., 'Ocean freight rates and productivity, 1740–1913: the primacy of mechanical invention reaffirmed', *Journal of Economic History*, 48 (1988), pp. 851–76.
- Harley, C. K., 'International competitiveness of the antebellum American cotton textile industry', *Journal of Economic History*, 52 (1992), pp. 559–84.
- Harley, C. K., 'The antebellum tariff: different products or competing sources? A comment on Irwin and Temin', *Journal of Economic History*, 61 (2001), pp. 799–805.
- Harris, W. J., 'Crop choices in the Piedmont before and after the Civil War', Journal of Economic History, 54 (1994), pp. 526-42.

- Herbst, L. A., Interregional commodity trade from the north to the south and American economic development in the antebellum period (New York, 1978).
- Higman, B. W., Slave population and economy in Jamaica, 1807-1834 (Cambridge, 1976).
- Higman, B. W., Slave populations of the British Caribbean, 1807-1834 (Baltimore, Md., 1984).
- Hilt, E., 'Economic history, historical analysis, and the "new history of capitalism", Journal of Economic History, 77 (2017), pp. 511–36.
- Hudson, P., 'Slavery, the slave trade and economic growth: a contribution to the debate', in C. Hall, N. Draper and K. McClelland, eds., *Emancipation and the remaking of the British imperial world* (Manchester, 2014), pp. 36–59.
- Huzzey, R., Freedom burning: anti-slavery and empire in Victorian Britain (Ithaca, NY, 2012).
- Inikori, J. E., Africans and the industrial revolution in England: a study in international trade and economic development (Cambridge, 2002).
- Irwin, J. R., 'Exploring the affinity of wheat and slavery in the Virginia piedmont', *Explorations in Economic History*, 25 (1988), pp. 295–322.
- Johnson, A. M. and Supple, B. E., Boston capitalists and western railroads (Cambridge, Mass., 1967).
- Johnson, W., River of dark dreams: slavery and empire in the cotton kingdom (Cambridge, Mass., 2013).
- Karp, M., This vast Southern empire: slaveholders at the helm of American foreign policy (Cambridge, Mass., 2016).
- Kean, S., 'Historians expose early scientists' debt to the slave trade', Science, 364 (2019), pp. 16-20.
- Kelly, M. and Ó Gráda, C., 'Speed under sail during the early industrial revolution, (c. 1750–1830)', Economic History Review, 72 (2019), pp. 459–80.
- Kettel, T. P., Southern wealth and northern profits, as exhibited in statistical facts and official figures (Tuscaloosa, Ala., 1965).
- Kilbourne, R. H., Jr., Debt, investment, slaves: credit relations in East Feliciana parish, Louisiana, 1825–1885 (Tuscaloosa, Ala., 1995).
- Kilbourne, R. H., Jr., Slave agriculture and financial markets in antebellum America: the Bank of the United States in Mississippi, 1831–1852 (2006).
- Klein, D. B. and Majewski, J., 'Turnpikes and toll roads in nineteenth-century America', in R. Whaples, ed., eh.net encyclopedia (10 Feb. 2008).
- Klein, R. N., Unification of a slave state: the rise of the planter class in the South Carolina backcountry, 1680–1808 (Chapel Hill, NC, 1990).
- Kulikoff, A., Tobacco and slaves: the development of southern cultures in the Chesapeake, 1680–1800 (Chapel Hill, NC, 1986).
- Kupperman, K. O., 'Fear of hot climates in the Anglo-American colonial experience', William and Mary Quarterly, 41 (1984), pp. 213–40.
- Lakwete, A., Inventing the cotton gin: machine and myth in antebellum America (Baltimore, Md., 2003).
- Lindert, P. H. and Williamson, J. G., Unequal gains: American growth and inequality since 1700 (Princeton, NJ, 2016).
- Lindstrom, D. L., 'Southern dependence upon interregional grain supplies: a review of the trade flows, 1840–1860', in W. N. Parker, ed., *The structure of the cotton economy of the antebellum South* (Washington, DC, 1970), pp. 101–13.
- Lindstrom, D. L., Economic development in the Philadelphia region, 1810–1850 (New York, 1978).
- McClelland, P. D. and Zeckhauser, R. J., Demographic dimensions of the new republic: American interregional migration, vital statistics, and manumissions, 1800–1860 (Cambridge, 1982).
- McCusker, J. J. and Menard, R. R., The economy of British America, 1607-1789 (Chapel Hill, NC, 1985).
- Macleod, C., 'Strategies for innovation: the diffusion of new technology in nineteenth-century British industry', Economic History Review, XLV (1992), pp. 285–307.
- Main, G. L., Tobacco colony: life in early Maryland, 1650-1720 (Princeton, NJ, 1982).
- Martin, B., 'Slavery's invisible engine: mortgaging human property', *Journal of Southern History*, 76 (2010), pp. 817-66.
- Martin, B., 'Neighbor-to-neighbor capitalism: local credit networks and the mortgaging of slaves', in S. Beckert and S. Rockman, eds., *Slavery's capitalism: a new history of American economic development* (Philadelphia, Pa., 2016), pp. 107–21.
- Marx, K., The poverty of philosophy (New York, 1963).
- Mason, M. E., 'Slavery overshadowed: Congress debates prohibiting the African slave trade to the United States, 1806–1807', *Journal of the Early Republic*, 20 (2000), pp. 59–81.
- Menard, R. R., 'From servants to slaves: the transformation of the Chesapeake labor system', *Southern Studies*, 16 (1977), pp. 355–90.
- Menard, R. R., 'Economic and social development of the South', in S. L. Engerman and R. E. Gallman, eds., The Cambridge economic history of the United States, 1: The colonial era (New York, 1996), pp. 249–95.
- Menard, R. R., Sweet negotiations: sugar, slavery, and plantation agriculture in early Barbados (Charlottesville, Va., 2006).
- Miller, R., Britain and Latin America in the nineteenth and twentieth centuries (1993).

Miller, S. F., 'Plantation labor organization and slave life on the cotton frontier: the Alabama-Mississippi black belt, 1815–1840', in I. Berlin and P. D. Morgan, eds., *Cultivation and culture: labor and the shaping of slave life in the Americas* (Charlottesville, Va., 1993), pp. 155–69.

Mitchell, B. R., British historical statistics (Cambridge, 1988).

Morgan, P. D., 'The poor: slaves in early America', in D. Eltis, F. D. Lewis and K. L. Sokoloff, eds., *Slavery in the development of the Americas* (New York, 2004), pp. 288–323.

Myers, M., The New York money market, 1: Origins and development (New York, 1931).

Newman, S. P., A new world of labor: the development of plantation slavery in the British Atlantic (Philadelphia, Pa., 2013).

North, D. C., The economic growth of the United States, 1790–1860 (New York, 1966).

O'Brien, P. K., 'The geopolitics of a global industry: Eurasian divergence and the mechanization of cotton textile production in England', in G. Riello and P. Parthasarathi, eds., *The spinning world: a global history of cotton textiles*, 1200–1850 (Oxford, 2009), pp. 351–65.

O'Brien, P. K. and Engerman, S. L., 'Exports and the growth of the British economy from the glorious revolution to the peace of Amiens', in B. L. Solow, ed., *Slavery and the rise of the Atlantic system* (Cambridge, 1991), pp. 177–209.

O'Connor, T. H., Lords of the loom: the cotton Whigs and the coming of the Civil War (New York, 1968).

O'Rourke, K. H., 'The worldwide economic impact of the French Revolutionary and Napoleonic Wars, 1793–1815', Journal of Global History, 1 (2006), pp. 123–49.

Oakes, J., 'Capitalism and slavery and the Civil War', *International Labor and Working-Class History*, 89 (2016), pp. 195–220.

Olmstead, A. L. and Rhode, P. H., 'Biological innovation and productivity growth in the antebellum cotton economy', *Journal of Economic History*, 68 (2008), pp. 1123–71.

Olmstead, A. L. and Rhode, P. H., 'Cotton, slavery, and the new history of capitalism', *Explorations in Economic History*, 67 (2018), pp. 1–17.

Palmer, C. A., ed., The legacy of Eric Williams: Caribbean scholar and statesman (Kingston, Jamaica, 2015).

Parker, W. N., ed., The structure of the cotton economy of the antebellum South (Washington, DC, 1970).

Price, J. M., Capital and credit in the British overseas trade: the view from the Chesapeake, 1700–1776 (Cambridge, Mass., 1980).

Price, J. M. and Clemens, P. G. E., 'A revolution of scale in overseas trade: British firms in the Chesapeake trade, 1675–1775', *Journal of Economic History*, 47 (1987), pp. 1–43.

Ransom, R. L. and Sutch, R., 'Capitalists without capital: the burden of slavery and the impact of emancipation', *Agricultural History*, 62 (1988), pp. 133–60.

Ransom, R. L. and Sutch, R., One kind of freedom: the economic consequences of emancipation (2nd edn., New York, 2001).

Richardson, D., 'Slavery, trade, and economic growth in eighteenth century New England', in B. Solow, ed., *Slavery and the rise of the Atlantic system* (Cambridge, 1991), pp. 237–64.

Riello, G. and Parthasarathi, P., eds., The spinning world: a global history of cotton textiles, 1200–1850 (Oxford, 2009).

Roberts, J., Slavery and the Enlightenment in the British Atlantic, 1750–1807 (Baltimore, Md., 2013).

Rockman, S., 'The unfree origins of American capitalism', in C. Matson, ed., *The economy of early America: historical perspectives and new directions* (University Park, Pa., 2006), pp. 335–62.

Ron, A., 'Summoning the state: northern farmers and the transformation of American politics in the midnineteenth century', Journal of American History, 103 (2016), pp. 347–74.

Rosenthal, C., Accounting for slavery: masters and management (Cambridge, Mass., 2018).

Ryden, D. B., West Indian slavery and British abolition, 1783–1807 (Cambridge, 2009).

Saxonhouse, G. R. and Wright, G., 'National leadership and competing technological paradigms: the globalization of cotton spinning, 1878–1933', *Journal of Economic History*, 70 (2010), pp. 535–66.

Shepherd, J. F. and Walton, G. M., Shipping, maritime trade, and the economic development of colonial North America (Cambridge, 1972).

Schermerhorn, C., The business of slavery and the rise of American capitalism, 1815–1860 (New Haven, Conn., 2015).

Schermerhorn, C., Unrequited toil: a history of United States slavery (Cambridge, 2018).

Schumpeter, E. B., English overseas trade statistics, 1697–1808 (Oxford, 1961).

Shugerman, J. H., 'The Louisiana purchase and South Carolina's reopening of the slave trade in 1803', *Journal of the Early Republic*, 22 (2002), pp. 263–90.

Smail, J., Merchants, markets and manufacture: the English wool textile industry in the eighteenth century (New York, 1999).

Smith, S. D., 'British exports to colonial North America and the mercantilist fallacy', *Business History*, 37 (1995), pp. 45–63.

Solow, B. L., The economic consequences of the Atlantic slave trade (Lanham, Md., 2014).

Stover, J. F., Iron road to the west: American railroads in the 1850s (New York, 1978).

- Sutch, R. C., 'The economics of African American slavery: the cliometrics debate', National Bureau of Economics Research working paper no. 25197 (2018).
- Sylla, R., 'US securities markets and the banking system, 1790–1840', Federal Reserve Bank of St Louis Review (1998), pp. 83–98.
- Temin, P., 'Patterns of cotton agriculture in post-bellum Georgia', Journal of Economic History, 43 (1983), pp. 661–7.
- Temin, P., 'Two views of the British industrial revolution', Journal of Economic History, 57 (1997), pp. 63–82.
- Tomlins, C., Freedom bound: law, labor, and civic identity in colonizing English America, 1580–1865 (Cambridge, 2010).
- Torget, A. J., Seeds of empire: cotton, slavery, and the transformation of the Texas borderlands, 1800–1850 (Chapel Hill, NC, 2015).
- Uselding, P. J., 'A note on the inter-regional trade in manufactures in 1840', Journal of Economic History, 36 (1976), pp. 428–35.
- Wahl, J. B., 'Stay east, young man? Market repercussions of the *Dred Scott* decision', *Chicago-Kent Law Review*, 82 (2006), pp. 361-91.
- Weiman, D. F., 'The economic emancipation of the non-slaveholding class: upcountry farmers in the Georgia cotton economy', *Journal of Economic History*, 45 (1985), pp. 71–93.
- Weiman, D. F., 'Staple crops and slave plantations: alternative perspectives on regional development in the antebellum cotton South', in L. Ferleger, ed., *Agriculture and national development: views on the nineteenth century* (Ames, Iowa, 1990), pp. 119–61.
- Weiman, D. F., 'Peopling the land by lottery? The market in public lands and the regional differentiation of territory on the Georgia frontier', Journal of Economic History, 51 (1991), pp. 835–60.
- Wilder, C. S., Ebony and ivy: race, slavery, and the troubled history of America's universities (New York, 2013).
- Wilkins, M., The history of foreign investment in the United States to 1914 (Cambridge, Mass., 1989).
- Williams, E., Capitalism and slavery (Chapel Hill, NC, 1944).
- Williams, E., The economic aspect of the abolition of the West Indian slave trade and slavery, D. Tomich, ed., intro. by W. Darity, Jr. (Lanham, Md., 2014).
- Wright, G., The political economy of the cotton South: households, markets, and wealth in the nineteenth century (New York, 1978).
- Wright, G., 'The efficiency of slavery: another interpretation', American Economic Review, 69 (1979), pp. 219-26.
- Wright, G., Old South, new South: revolutions in the Southern economy since the Civil War (New York, 1986).
- Wright, G., Slavery and American economic development (Baton Rouge, La., 2006).
- Zahedieh, N., 'London and the colonial consumer in the late seventeenth century', *Economic History Review*, XLVII (1994), pp. 239–61.
- Zahedieh, N., 'Economy', in D. Armatage and M. J. Braddick, eds., *The British Atlantic world*, 1500–1800 (Basingstoke, 2002), pp. 51–68.