

Measuring colonial extraction: the East India Company's rule and the Drain of Wealth (1757–1858)

NOGUES-MARCO, Pilar

Abstract

This paper revisits the relationship between capitalism and colonialism by examining the case of British India under East India Company rule (1757-1858). The Marxist-nationalist historiography claims that colonialism generated a steady drain of wealth and that this drain was responsible for Indian famines, poverty, inequality, and economic retardation. I use the East India Company budgets to measure the extent of the wealth that was drained through three direct channels: oppressive land taxes, unproductive expenditures on the imperial army and civil administration, and the unrequited export of commodities from India to Britain. I conclude that available figures lend empirical support to the Marxist interpretation. There was a drain of wealth and its effects on the underdevelopment of former European colonies deserve further research.

Reference

NOGUES-MARCO, Pilar. Measuring colonial extraction: the East India Company's rule and the Drain of Wealth (1757–1858). *Capitalism*, 2021, vol. 2, no. 1, p. 154-195

DOI : 10.1353/cap.2021.0004

Available at:

<http://archive-ouverte.unige.ch/unige:149178>

Disclaimer: layout of this document may differ from the published version.



UNIVERSITÉ
DE GENÈVE



PROJECT MUSE®

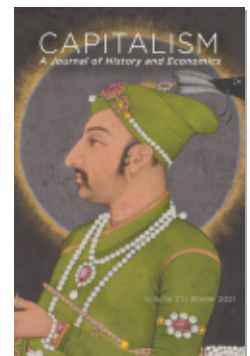
Measuring Colonial Extraction: The East India Company's
Rule and the Drain of Wealth (1757–1858)

Pilar Nogues-Marco

Capitalism: A Journal of History and Economics, Volume 2, Number 1, Winter
2021, pp. 154-195 (Article)

Published by University of Pennsylvania Press

DOI: <https://doi.org/10.1353/cap.2021.0004>



➔ *For additional information about this article*

<https://muse.jhu.edu/article/781336>

Measuring Colonial Extraction: The East India Company's Rule and the Drain of Wealth (1757–1858)

Pilar Nogues-Marco

University of Geneva and Centre
for Economic Policy Research

THIS PAPER TAKES UP a classic subject, the relationship between capitalism and colonialism, on the basis of fresh quantitative data regarding the case of British India under East India Company rule (1757–1858). The East India Company (EIC) began expanding its territorial and political hold on the Indian subcontinent in 1757 at the Battle of Plassey, which led to its conquest of the Bengal *Subah* (province) and control over Bengal's territorial revenues in 1765. After that, the East India Company expanded its territorial, political, and fiscal control across most of the subcontinent until the Indian Rebellion of 1857; the British Crown, rather than the EIC, began ruling India directly in 1858.

Indian colonialism under the East India Company's rule generated a steady flow of capital from India to Britain. Contemporaries interpreted this process as that of capital accumulation on the British side and a drain of wealth from the Indian side. Karl Marx outlined his theory that the primary accumulation of capital through colonial despoliation was an essential prerequisite for the genesis of British industrial capitalism in a series of articles

Note: Pilar Nogues-Marco is very grateful to the anonymous referees and the editors of *Capitalism: A Journal of History and Economics*, as well as members of The Paul Bairoch Institute of Economic History and participants in the Geneva History Seminar (November 2018), the Economic History Seminar at the University of Zaragoza (March 2019), CEPR Economic History Workshop in Odense (April 2019), the Economic History Seminar at the University of Barcelona (May 2019), the EHES Conference in Paris (August 2019), the SSHES in Berne (September 2019), and the Global Capitalism Conference at the Graduate Institute in Geneva (October 2019) for useful comments and suggestions. The author declares no potential conflicts of interest with respect to this research. She received no financial support for the research of this article.

published in the *New-York Daily Tribune*, including “The East India Company: Its History and Results” (1853), “The British Rule in India” (1853), and “The Future Results of British Rule in India” (1853).¹

Espousing Marx’s views, numerous Indian nationalist scholars, beginning with Dadabhai Naoroji, made the drain of wealth a major grievance against British colonialism. Naoroji, a Parsi intellectual, cotton trader, politician, and social leader, provided the first estimates of the drain of wealth and its relationship with starvation in India in speeches he gave at the East India Association, which he had helped found in London in order to raise awareness about India’s plight among the British public. Two such speeches, “England’s Duties to India” (1867) and “Poverty of India” (1876), together with contributions later compiled in his *Poverty and Un-British Rule in India* (1901), amount to the earliest and fullest articulation of the wealth drain theory. In 1867, the Indian National Congress officially adopted Naoroji’s theory and in the 1940s Mahatma Gandhi’s independence movement against British rule drew considerable intellectual legitimacy from it.²

Politically active nationalist intellectuals, such as Mahadev Govind Ranade and Romesh Chunder Dutt, further developed Naoroji’s theory and established the contours of the nationalist economic history whose influence is still felt today.³ After Indian independence in 1947, Marxist Indian scholars systematized this theory and identified three direct channels through which wealth was redirected toward Britain to India’s detriment: (1) oppressive land taxes weakened local agriculture; (2) unproductive expenditures on the army and civil administration for imperial purposes deprived India of productive investments; and (3) the systematic unrequited export of goods from India to Britain—that is, Indian goods for which Britain “did not pay”—amounted to the organized extraction of wealth.⁴ In short, the Marxist-nationalist approach holds the drain of wealth—which was caused

¹ These articles are collected in Husain, ed., *Karl Marx on India*, and Marx and Engels, *On Colonialism*.

² Naoroji and Parekh, *Essays, Speeches, Addresses*; Naoroji, *Poverty and Un-British Rule in India*; Naik, “Forerunners of Dadabhai Naoroji’s Drain Theory”; Ghosh, *Gandhian Political Economy*.

³ Ranade, “Indian Political Economy”; Dutt, *Economic History of India*.

⁴ Sinha, *Economic History of Bengal*; Habib, “Colonialization of the Indian Economy”; Habib and Mitra, *Essays in Indian History*; Habib, “Studying a Colonial Economy”; Bagchi, *Political Economy of Underdevelopment*; Chandra, *Rise and Growth of Economic Nationalism in India and Essays on Colonialism*; Mukherjee, “Return of the Colonial in Indian Economic History”; Tharoor, *Inglorious Empire*.

by exploitative political relationships sustained by colonialism—responsible for Indian famines, poverty, inequality, and economic retardation.⁵

In 1963, Morris D. Morris challenged the Marxist-nationalist interpretation and suggested that Indian development was constrained by productive capacity, not by colonialism, because in India around 1800, there were none of the basic preconditions for an industrial revolution and sustained economic growth.⁶ Traditional India lacked political unity and stability; as a result, according to Morris, no continuous administrative institutions and no persistent bureaucracy could have developed. Political instability also affected transport and market integration. Regional specialization and commercial activity did not increase. Indian agriculture had a very low level of productivity as a consequence of extreme temperatures, exceedingly short growing seasons, and limited soil moisture. The Indian textile industry also had low productivity, as it relied on manual dexterity rather than sophisticated tools and manufacturing techniques. Only with the advent of British rule was public order established, security provided, efficient administration implemented, taxation and commercial regulations rationalized, and a system of transport that integrated the territory created. According to Morris, all of these features probably stimulated economic activity.

Dharma Kumar followed Morris's approach when she edited *The Cambridge Economic History of India, 1757–1970* (1983). Kumar rejected the sturdy Marxist-nationalist consensus, as she considered it out of date.⁷ The volume describes the main macroeconomic magnitudes and economic sectors: general economic trends and changes in regional agrarian structure, national income, population, occupational structure, industry, railways, irrigation, money and credit, foreign trade and balance of payments, the fiscal system, price movements, and fluctuations in economic activity. This approach was oriented to the measurement of economic growth and thus consistent with international (Western) economic historical approaches at that time.⁸ The results seemed to support the revisionist position that Indian underdevelopment had endogenous causes and that British colonial-

⁵ For historiographical overviews, see Roy, "Economic History and Modern India," "Economic History: An Endangered Discipline," and "Rise and Fall of Indian Economic History"; Banerji, "White Man's Burden"; Parthasarathi, "History of Indian Economic History"; Mishra and Rastogi, "Colonial Deindustrialisation of India."

⁶ Morris, "Towards a Reinterpretation."

⁷ Kumar, *Cambridge Economic History of India*, xii.

⁸ Sewell, "Strange Career."

ism was a benign or not-so-relevant factor in Indian economic history.⁹ In response, Irfan Habib criticized Kumar for studying the Indian colonial economy without considering the effects of colonialism and for offering a speculative, incomplete, and tendentious interpretation of modern Indian economic history.¹⁰ According to him, mere impressions had been transformed into statistics and assumptions were turned into pre-determined conclusions. These remarks echo those of a chorus of other scholars, among them Arun Banerji, who have underscored that the manner in which Indian history has been written and is being rewritten by Western scholars erases colonialism.¹¹

More recently, Tirthankar Roy has proposed shifting from the Marxist-nationalist interpretation based on colonial power to a neoclassical interpretation of Indian underdevelopment.¹² He considers the drain of wealth a hard concept to define and an even harder one to measure. In his view, Marxist-nationalist economic historians of India have failed to persuade the present generation of mainstream neoclassical economists worldwide. Roy proposes a new interpretation of Indian underdevelopment based on economic structure: in 1800, in 1900, and as late the 1970s, India had a persistent excess of labor relative to land and capital. He highlights the relevance of private investment, which was unusually low in colonial India, for economic growth. Colonialism aided the integration of India into the nineteenth-century industrial-commercial revolution. Market transactions expanded during the colonial period, but diminishing returns to labor constrained growth. Roy proposes replacing narratives centered on colonial power with narratives that seriously consider long-term continuities in resource-endowments.

In contrast, Prasannan Parthasarathi deplores the disappearance of Marxist theory and the affirmation of mainstream economics in the academic study of Indian economic history. Against this tendency, he acknowledges the relevance of Marxist-nationalist interpretations of Indian underdevelopment anchored in colonial exploitation and points to their potential for reinvigorating economic historical inquiry.¹³

⁹ Roy, "Economic History: An Endangered Discipline," 3240.

¹⁰ Habib, "Studying a Colonial Economy."

¹¹ Banerji, "White Man's Burden."

¹² Roy, "Economic History and Modern India" and "Economic History: An Endangered Discipline."

¹³ Parthasarathi, "The History of Indian Economic History," 290.

This paper contributes to these scholarly debates by measuring the direct channels of the drain of wealth under EIC rule (1757–1858). I focus on the period of EIC rule because Marx wrote on Indian colonialism in the mid-nineteenth century and his interpretation of the drain of wealth reflected EIC rule in India. That is, Marx was not making predictions, but mainly analyzing EIC rule as it unfolded in his lifetime, even though scholars have more often invoked his insights when studying the post-EIC period. EIC rule has received less attention from historians of Indian colonialism than the subsequent period of direct British rule (1858–1947), in part because EIC rule is generally regarded as a transition between the decline of the Mughal Empire and the rule of the British Crown, and in part because the lack of official governmental statistics for EIC rule means that the period is perceived as scarce in data for quantitative research.

The British administration founded the statistical system in India in the 1860s and compiled retrospective statistics that go back only to 1840.¹⁴ However, the EIC produced extensive accounting starting in the late eighteenth century in response to the regulatory reporting requirements that Parliament imposed on its territorial affairs in India at that time. Analyzing these accounts—namely budgets—offers great advantages. On the one hand, the EIC compiled data together with valuable qualitative information that facilitates their interpretation. On the other, the systematic accounting provides both consolidated data and very detailed records that make it possible not only to measure the drain of wealth but also, more importantly, to conceptualize its channels and the interrelations among them.¹⁵

This article is organized as follows. First, I explain the budgets and the regulations on EIC accounting in order to identify the channels of the drain of wealth approved by the British Parliament and executed by the Company. Next, I measure the importance of each direct channel of the drain of wealth—that is, land taxation, unproductive expenditures, and unrequited exports. Finally, I conclude by interpreting the significance of the drain of wealth for the Indian economy based on the data analyzed in the preceding sections.

¹⁴ *Statistical Abstract Relating to British India from 1840 to 1865* (London: Her Majesty's Stationary Office, 1865).

¹⁵ My research measures the legal channels for draining wealth—that is, those legally recognized by the British Parliament's regulations. Corruption was also a channel for draining wealth denounced by Marxist-nationalist scholars; see, for instance, Habib, "Studying a Colonial Economy." This article cannot take corruption into account because it was not registered in the accounting, which reflected only the legal drain of wealth.

Regulations and Primary Sources: East India Company Budgets

In 1757, the East India Company defeated the ruling *nawab* of Bengal on the battlefield of Plassey, an event that led to the conquest of the Bengal Subah. In 1765, the EIC assumed full control of Bengal's finances in exchange for paying an allowance to the *nawab* and his court. Bengal's territorial revenue was the EIC's starting point for expanding its territorial and political control across most of the Indian subcontinent.¹⁶ The subsequent evolution of the EIC as a taxing authority—and thus the information compiled in the EIC's budgets—was a result of the complex and evolving relationship between the EIC and the British Crown.

Between 1767 and 1784, the British Parliament made a series of interventions in the affairs of the EIC.¹⁷ These interventions were implemented in exchange for financial relief. For instance, the Regulating Act of 1773, which was aimed at establishing better management of the EIC, along with an accompanying act, set a ceiling on dividends and regulated the application of commercial profits and territorial revenues to reduce EIC debt.¹⁸ In particular, with Pitt's India Act of 1784, the EIC was held accountable for its Indian territories. The 1784 Act established the Board of Commissioners for the Affairs of India (or "India Board"), which was responsible for managing the government's interest in British India. This arrangement prevailed until the rule of the British Crown replaced that of the Company in 1858.¹⁹ The India Board had control over the government and revenues of the EIC's territorial possessions in India and responsibility for examining its non-commercial accounts. On an annual basis, the EIC was required to submit a profit and loss statement based on trading activity and territorial revenues as well as a statement of its debts.²⁰

The East India Company's charter was renewed in 1793 and 1813. The charter of 1793 extended the EIC's monopoly on trade for twenty years, although more private trade was permitted.²¹ The charter of 1813 abolished the EIC's monopoly on trade with India, so the EIC continued trading with

¹⁶ Marshall, *Bengal: The British Bridgehead*.

¹⁷ Marshall, *Problems of Empire*, 31–51; Bowen, *Revenue and Reform and Business of Empire*, 69–78; Stern, *Company-State*, 207–14.

¹⁸ Regulating Act, 1773, 13 Geo 3, c. 63, and 13 Geo 3, c. 64.

¹⁹ Foster, "India Board (1784–1858)"; The East India Company Act, 1784, 24 Geo 3, sess. 2, c. 25.

²⁰ 24 Geo 3, sess. 2, c. 34.

²¹ Charter Act, 1793, 33 Geo 3, c. 52.

India in competition with private traders.²² Both charters regulated the application of commercial profits and territorial revenues. Profits had to be used to reduce EIC debt and a ceiling on dividends was reiterated. After covering the collection costs, territorial revenues had to be used: first, to pay the army and the navy; second, to fund the interest on EIC debt to creditors in India; third, to pay civil and commercial establishments; fourth, to send goods from India and China to Britain; and fifth, to reimburse EIC debts to India. Additionally, the Charter Act of 1813 required the EIC to separate the accounts of its territorial branch from those of its commercial branch. The Court of Directors was required to prepare a plan for arranging the accounts, which then had to be approved by the India Board. This gave rise to much discussion.²³ Consequently, the allocation of a given item did not necessarily reflect the fiscal or commercial nature of the item. In the end, decisions about whether to put an item in the territorial branch's account or the commercial branch's account were shaped by these negotiations between the EIC and the India Board. As a result, commercial and territorial items on the EIC's balance sheets remained *de facto* intermingled, both for assets and for liabilities—that is, whether EIC debts were commercial or fiscal in nature is obscure in the accounting.

In 1833, the Act to Regulate the Trade to China and India ended the EIC's monopoly on trade with China.²⁴ Additionally, although its commercial monopoly in India had already come to an end in 1813, only in 1833 did the EIC stop trading with India. From that moment on, the Company became solely concerned with the territorial government of India and no longer took part directly in the trading affairs of either India or China.

At the same time, the Saint Helena Act of 1833 established that the Indian territories would continue being governed by the Company, but in trust for the Crown of the United Kingdom.²⁵ The EIC maintained property in Indian territories for the service of the government. However, all debts owed by the

²² East India Company Charter Act, 1813, 53 Geo 3, c.155.

²³ In the India Office Records in the British Library, file L/AG/9/1/1 comprises the reports from the Committee of Accounts and a copy of correspondence with the India Board on the new arrangements (November 1813 to September 1818) under the heading, *Plan for keeping and arranging the Books of Account of the East India Company together with the Alterations, Amendments and Additions made by the Board of Commissioners*. The final result of negotiations between the EIC and the India Board is summarized in *A Statement of the Steps which have been taken by the Commissioners for the Affairs of India for carrying into effect the Separation of the Political and Commercial Accounts* (India Office Records, British Library, L/AG/11/1/2).

²⁴ Act to Regulate the Trade to China and India, 1833, 3 & 4 Will 4, c. 93.

²⁵ Saint Helena Act, 1833, 3 & 4 Will 4, c. 85.

Company were charged to the revenue of the Indian territories (that is, they were converted into Indian debt); therefore, neither the EIC's directors nor its proprietors were liable for any of its debts. The EIC was discharged of all claims to any profit except the dividend on its capital stock, payable with the revenue of the Indian territories and secured by Parliament until redemption after 1874. Dividends had to be paid out of Indian revenues in preference to other charges, and Indian debt had to be reduced. The Company had to lay out before Parliament an account of its annual territorial revenue from India, separated by territory, presidency, or settlement, and an account of its debts in each presidency or settlement, or in Britain or elsewhere.

The Government of India Act of 1853 renewed the East India Company's government in India in trust for the Crown.²⁶ While the previous charter acts of 1793, 1813, and 1833 had renewed the EIC's charter vicennially, the 1853 act did not indicate the time period for which it renewed the charter. The Company's rule was to last only five more years, until it was abolished following the Indian Rebellion of 1857. The Government of India Act of 1858 transferred the government of India to the Crown.²⁷ The EIC's real and personal property was vested in the Crown for the purposes of governing India. The EIC's credit was transferred to the Indian secretary, the British cabinet minister who assumed the combined former authority of the Company and the India Board in 1858.²⁸ The act preserved the EIC's rights to its dividend and, as before, dividends on its capital stock were paid out of revenues from India. Additionally, all the debts the EIC had incurred before the act were also paid out of revenues from India. Finally, the East India Stock Dividend Redemption Act of 1873 redeemed the EIC's capital stock upon the credit account of the Indian secretary, and the East India Company was dissolved on January 1, 1874.²⁹

As I indicated, Parliament's regulations required the EIC to compile accounting returns; I use these accounts to ascertain the size the drain of wealth. The sources used here are as follows. First, the collection "Accounts compiled for Parliament, the Treasury and Board of Control, 1788–1858" comprises the aggregated handwritten accounting together with qualitative explanations of it.³⁰ Second, the collection "Budgets—accountant general records" includes the accounting printed for Parliament and internal

²⁶ Government of India Act, 1853, 16 & 17 Vict, c. 95.

²⁷ Government of India Act, 1858, 21 & 22 Vict, c. 106.

²⁸ His formal title was the "Indian secretary of state in council."

²⁹ East India Stock Dividend Redemption Act, 1873, 36 & 37 Vict, c. 17.

³⁰ India Office Records, British Library, 1788–1858, L/AG/10/2/1-15.

documents intended to regulate accounting according to parliamentary directives.³¹ These “budgets” also include the debt accounts used in this article. The accounting logic remained stable over the long run, even though itemization changed substantially, with granularity, in particular, increasing gradually.³²

The accounting reflects the EIC’s three activities: taxation, trade, and finance. First, the fiscal balances comprised the breakdown of revenues from, and expenses for, the Indian presidencies and territories.³³ Second, until 1833, when the EIC ceased commercial activity, the trade accounts registered the EIC’s trade; that is, commodities traded from Britain to EIC territorial possessions³⁴ and commodities traded from India (Bengal, Madras, and Bombay) to Europe.³⁵ However, trade data compiled in the territorial accounting (budgets) are not as complete as the commercial records of the EIC (ledgers and journals). For instance, some of the trading activities of the EIC, such as bullion flows, were never recorded in the budgets, and trade with China was not systematically recorded in these accounts. Finally,

³¹ India Office Records, British Library, 1788–1858, L/AG/11/1/1-6.

³² The Budget of 1788 was forty pages long. The Budget of 1857 had expanded to ninety pages. Accounts were broken down by Indian presidencies and territories and kept in local currencies until 1854–1855. After 1855, the accounts were also aggregated for India and expressed directly in pounds sterling. Exchange rates between the pound and Indian currencies were the official rates defined by the India Board.

³³ They also comprised revenues and expenses of Bencoolen (until 1824), Prince of Wales Island, and St. Helena (until 1833). In the Anglo-Dutch Treaty of 1824, the Dutch colony of Malacca was ceded to the British in exchange for Bencoolen. The whole of Singapore was purchased by the British that year. From that time on, Bencoolen stopped being registered in the accounting, whereas Malacca and Singapore started being registered together with Prince of Wales Island. Furthermore, in 1833, the Saint Helena Act transferred control of the Island of Saint Helena from the EIC to the Crown. After that, Saint Helena was no longer registered in the accounting, while Prince of Wales Island, Singapore, and Malacca started being registered in Bengal Presidency. India Office Records, British Library, 1788–1858, L/AG/11/1/1-6.

³⁴ That is, to India (Bengal, Madras, and Bombay), as well as to Bencoolen (until 1824) and Prince of Wales Island (including Singapore and Malacca after 1824). India Office Records, British Library, 1788–1858, L/AG/11/1/1-6.

³⁵ And from Bencoolen until 1824. Additionally, until 1813, the accounting also reported the amount of goods traded by the EIC to Britain, distinguishing the Company’s goods from private trade goods. India Office Records, British Library, 1788–1858, L/AG/11/1/1-6. According to the Charter Act of 1793 (33 Geo 3, c. 52), the EIC was in charge of shipping private trade in its vessels at the same freight as its own trade. However, after 1813 (Charter Act, 53 Geo 3, c. 155), private traders did not use the EIC’s ships, although ships engaged in private trade between the United Kingdom and Asia were required to have a license from the Court of Directors of the EIC, subject to the control of the India Board.

there was the management of debt. The EIC's debt accumulated both from its territorial deficits and from British trade deficits with India that had not been settled with bullion. The sections that follow analyze EIC fiscal balances and debt dynamics to measure the drain of wealth.

EIC Fiscal Balances: Gross Revenues

In this section, I compile the fiscal balances of the EIC in order to gauge the drain of wealth through the channel of taxation—in particular, land taxation. That heavy land taxation is an impediment to growth is a basic tenet not only of Marxist-nationalist historiography. Economic historians from other traditions, such as David Clingingsmith and Jeffrey Williamson, who take a neoclassical approach, and Abhijit Banerjee and Lakshmi Iyer, who take an institutional approach, have admitted that extractive land-taxation has a negative impact on agricultural productivity and development.³⁶ In the case of colonial India, two different positions exist in the literature. On the one hand, non-Marxists scholars recognize threads of continuity between Mughal and EIC rule because the EIC inherited the precedent set by the Mughal tax system, which was based on agricultural production.³⁷ On the other hand, Marxist-nationalist historical scholarship stresses ruptures between these two governments based on the great increase in land taxation, which, they argue, became excessive under EIC rule.³⁸

The subject remains controversial as measurement of the tax base is not homogeneous. Roy claims that, before large-scale surveys began, measurement of agricultural production suffered from observation biases and a cavalier treatment of units of measurement.³⁹ Moreover, under Mughal rule, tax collection was usually lower than official land tax assessments because villagers underreported cultivated lands. Such “fraud” was brought to light

³⁶ Williamson, *Trade and Poverty*. Clingingsmith and Williamson write, for example, “The lower the share of the output that peasants received, the less incentive they had to be productive” (“Deindustrialization in 18th and 19th century India,” 214); Banerjee and Iyer, “History, Institutions, and Economic Performance.” Acemoglu and Robinson make the same argument about Africa in “Why is Africa Poor?”

³⁷ Bayly, *Rulers, Townsmen, and Bazaars and Indian Society*; Marshall, *Bengal: The British Bridgehead*; Richards, “Fiscal States in Mughal.”

³⁸ For instance, Amiya Kumar Bagchi claims that the East India Company had nearly doubled revenue less than forty years from its establishment, but in fact, he refers to total revenue, not just land revenue. See Bagchi, *Political Economy of Underdevelopment*, 79.

³⁹ Roy, “Economic History of Early Modern India,” 1660–61.

when the EIC later developed new surveys.⁴⁰ Despite these limitations, it is useful to review quantitative evidence so as to give a rough comparison of land taxation under Mughal and EIC rule, respectively.

Mughal rulers before Akbar (1556–1605) requested between one-quarter and one-sixth of the land's produce. Under Akbar, the bar was raised to about one-third of the harvest of food grains and one-fifth of valuable saleable crops, such as indigo, tobacco, poppy, and so on.⁴¹ This rate applied to the provinces of "Hindustan" (the territory from Lahor to Allahabad). Outside these provinces, Akbar demanded one-half of all agricultural produce.⁴² During the reign of Shahjahan (1628–1658), a fifty percent levy was imposed on cotton, barley, gram, and mustard seed, and one-third levy on wheat, rice, pulses, and rapeseed. In the same period, the peasants of Gujarat and Surat paid three-quarters of their crops in taxes. Later, Aurangzeb (1658–1707) ordered that land revenue should amount to half the produce across the empire.⁴³ Therefore, quantitative evidence seems to show that, during Mughal rule, taxation of the land's produce was both high and increasing.

Available evidence suggests that the EIC not only kept land taxation high, but even raised it to new heights in some territories. According to Peter Marshall, for instance, in the early 1790s land revenue in Bengal and Orissa was 20 percent higher in real terms than it had been in 1757.⁴⁴ In 1795, the EIC's assistant collector of revenues in India, Henry Thomas Colebrooke, calculated that in some districts cultivators paid more than half of their gross produce and in others more than a quarter.⁴⁵ In Madras, the first land tax that the EIC imposed in 1765 was half of the land's gross produce.⁴⁶ But in 1817, the Madras Revenue Board assessed the government's share of the land's produce as "in some districts as high as 60 or 70 percent of the whole."⁴⁷ According to Dutt, land tax in Madras was too high, so in the 1820s the EIC reduced it gradually to one-third of the gross produce. But a

⁴⁰ Briggs, *The Present Land-Tax*, 233.

⁴¹ Colebrooke, *Remarks on the Present State*, 40; Habib, *Agrarian System*, 191; Richards, *Mughal Empire*, 85–86; Richards, "Fiscal States in Mughal," 413.

⁴² Habib, *Agrarian System*, 192–93; Moosvi, *Economy of the Mughal Empire*, 118.

⁴³ Habib, *Agrarian System*, 193–95.

⁴⁴ Marshall, *Bengal: The British Bridgehead*, 144.

⁴⁵ See Colebrooke, *Remarks on the Present State*, 15. In Bengal, the EIC fixed land revenues in perpetuity with the "Permanent Settlement" in 1793, and the land tax did not increase after that.

⁴⁶ Dutt, *Economic History of India*, ix.

⁴⁷ Rickards, *India; or Facts Submitted*, vol. 1, 288. Dutt reports a land tax of 60 percent of average produce in 1800 (*Economic History of India*, 221).

more rigorously systematic collection was simultaneously applied, so that, in the end, total land revenues actually increased.⁴⁸

Focusing on the so-called Ceded and Conquered Provinces that began to be acquired in 1801 and were later known as the North-Western Provinces, Michael Mann reports a high increase in land taxation under the EIC.⁴⁹ The assessment (*jama*) of the first two years following acquisition (1801–1802) was the same as the previous *jama* performed by the nawab of Oude, but after that, between 1803 and 1805, the EIC raised land revenue rates. In the “ceded territories,” land taxes went up by 24 percent in comparison with rates in 1801. In the “conquered provinces,” land taxes were 75 percent higher in 1805–1808 than in 1803–1804. For the Ceded and Conquered Provinces as a whole, land revenue rose more than 50 percent between 1803–1804 and 1817–1818. Indeed, in 1844, the *Directions for Settlement Officers* of the North-Western Provinces defined the assessment as “two-thirds of what may be expected to be the net produce.”⁵⁰

A land revenue amounting to half of total agricultural production can be considered extractive in the Marxist sense, meaning that a small group of individuals exploits the rest of the population.⁵¹ In European history, we have to go back to the Middle Ages to find land tax rates similar to those that prevailed under the EIC. For instance, Michael Postan estimates that the average manorial payments in thirteenth-century England frequently amounted to or even exceeded 50 percent of villein tenants’ gross output.⁵²

The East India Company created various forms of private property for land with the purpose of securing and increasing the tax-paying capacity of India.⁵³ According to Marxist-nationalist historians, colonialism transformed

⁴⁸ Dutt, *Economic History of India*, 231, 369.

⁴⁹ Mann, “Permanent Settlement,” 252.

⁵⁰ *Directions for Settlement Officers*, Section III. 52, p. 14.

⁵¹ Acemoglu and Robinson, “Why is Africa Poor?” 27.

⁵² Postan, “Medieval Agrarian Society in its Prime,” 603.

⁵³ Marx, “India,” *New-York Daily Tribune* (August 5 1853), reprinted in Husain, ed., *Karl Marx on India*, 43–45. The East India Company briefly summarized systems of land revenue under its rule in “Returns of the Gross Revenue derived annually from the Tax on Land in India since 1792,” ordered by the House of Commons to be printed on June 22, 1855, UK Parliamentary Papers. In Bengal, land revenue was collected through the *zamindari* system, in which any portion of land was rated at a certain set sum and an individual called a *zamindar* engaged to pay that sum. The EIC declared the zamindar’s revenue commitment to the government to be fixed in perpetuity in the “Permanent Settlement” of 1793. Revenue-collection rights could be bought and sold as well as inherited. The zamindar had property rights in the land subject to payment of the land taxes. The North-Western Provinces used the village system; that is, each village was assessed an aggregate sum and certain individuals registered with the government were held responsible for collecting

India's agrarian structure and made the taxation system extremely regressive. The tax burden fell more heavily on the poor. This caused high inequality, extreme poverty, and ultimately agricultural stagnation.⁵⁴

Data for calculating the material comfort of workers in the agricultural sector are scarce. To produce a quantitative measurement, I have estimated agricultural laborers' standard of living in 1850 in Banda, in the North-Western Provinces (today Uttar Pradesh). My results show that they lived below subsistence level.⁵⁵ A similar diagnosis of the situation under EIC rule is also borne out by contemporaries. According to one of them, John Capper, in the rural district of Cawnpore in the North-Western Provinces in the mid-nineteenth century a cultivator earned £5 a year and had to pay

that amount from the village's proprietors. Usually, the most influential villagers were left to choose those who were to collect and pay the assessment. The revenue was fixed for a certain number of years, after which it could be revised (see also *Directions for Settlement Officers*). A small portion of the Madras Presidency was under the zamindari system and the remainder under the *ryotwari* system. In the ryotwari system, land was assessed at a certain proportion of its gross produce, which was translated into a monetary payment calculated based on average prices. The total amount of this assessment was settled annually by government officers, with each owner or occupier of land paying according to the extent of his holding. Each owner received an annual lease (*potah*) that specified the extent of his holding and the amount of the year's tax that he had to pay. As long as the fixed tax was paid, every *ryot* was permanently secured in his holding and no higher rate of assessment than the original fixed monetary tax per field could be imposed. In Bombay, the ryotwari system was used for the most part, but in a greatly modified form. Each field was assessed separately and leases were granted for a fixed number of years at a fixed rent. These leases were binding on the government for the full term, but the cultivator could surrender one or more of his fields, or end to his lease altogether, at the end of any given year. Although the ryotwari system was prevalent, the village system was also used in Bombay Presidency. Additionally, the *talookdarry* system also prevailed to some extent in Gujarat; it was the village system extended to a district in the aggregate.

⁵⁴ Naoroji, *Poverty and Un-British Rule in India*, 58–61.

⁵⁵ Agricultural laborers were paid 2.5 *seers* of grain a day (first class), 2 *seers* of grain a day (second class, adults), or 1 *seer* of grain a day (third class, boys) in 1850 and also in 1871 in Banda in the North-Western Provinces (Atkinson, *Statistical Descriptive and Historical Account*, vol. 1, 119). According to my calculations, because 1 *seer* = 1/40 maund of weight and 1 maund = 82.268 avoirdupois pounds (Atkinson, *Statistical Descriptive and Historical Account*, vol. 1, 119), then 1 *seer* = 0.9329 kg. An adult male cultivator consumed 1 *seer* of grain a day, a woman consumed 75 percent of that, and a child 50 percent (Moosvi, *Economy of the Mughal Empire*, 342–43), which implies having to spend the whole wage for food grain and assuming some extra income from boys' wages. Total household consumption is estimated as 2.7987 kg of grain (one second class adult wage plus one boy's wage, or one first class adult wage), consistent with alternative estimations of subsistence grain consumption. According to Broadberry and Gupta, a household of six members (parents and four children) would have had a subsistence consumption of 3.1 kg of rice ("Indian Economic Performance," 19). This is equivalent to 2.56266 kg of rice for a household of 4.5 members (one adult male, one adult female, and 2.5 children), which Moosvi uses as a conventional family size in *The Economy of the Mughal Empire* (343).

a quarter of that for the land tax and another quarter on rent. This left him with only £2 10s for the costs of farming and supporting his family for a year. Capper claims that these were not extreme cases, but actually represented the conditions of a very large portion of the agricultural population of British India.⁵⁶ In fact, my calculations suggest that agricultural laborers' standard of living was very similar to that of the workers who were called "coolies" at the time, who performed unskilled manual labor and constituted the lowest paid category of labor. These unskilled workers lived below bare-bones subsistence levels in the first half of the nineteenth century, as they had to use nearly their entire wage to buy inferior food grains, leaving no margin for non-food expenditure.⁵⁷

This situation contrasts with unskilled workers' standard of living in 1595, at the end of Akbar's reign, when they spent only 47 percent of their wages on the food grains necessary to secure subsistence.⁵⁸ The comparison suggests that at the end of the sixteenth century, unskilled workers could afford food in much greater quantity than in the nineteenth. Admittedly, the end of Akbar's reign was the high point of economic well-being during the Mughal Empire.⁵⁹ Stephen Broadberry and colleagues have recently estimated that Indian per capita GDP actually declined during the seventeenth and eighteenth centuries, before the EIC's takeover of India. However, Mughal India remained well above bare-bones subsistence.⁶⁰ It was only during EIC rule—in the early nineteenth century—that Indian per capita incomes fell close to subsistence levels, precisely as land taxes were kept high and even increased. A fiscal system that relied on heavy land taxes leveraged on an impoverished population as its main source of revenue resulted in agricultural laborers and unskilled workers living below bare-bones subsistence.

EIC budgets help shed further light on these fundamental questions as they enable us to document tax pressure. Moreover, they serve to measure the significance of land tax in relation to the EIC's other sources of tax

⁵⁶ Capper, *Three Presidencies of India*, 278–79.

⁵⁷ The wage of agricultural laborers in mid-nineteenth century, £2 10s a year, was equivalent to 400 annas (1 anna = 1/16 rupee), near the wage of the unskilled worker or "coolie." In 1815, these unskilled workers earned less than 1 anna a day, equivalent to almost 1 seer of flour, in Meerut district. Their wage remained the same up until 1850, when it rose to 2 annas a day for a man and 1 anna for a boy in the North-Western Provinces (Atkinson, *Statistical Descriptive and Historical Account*, vol. 3, part. 2, 303). My estimate for food intake is from Moosvi, *Economy of the Mughal Empire*, 340–45.

⁵⁸ Moosvi, *Economy of the Mughal Empire*, 345.

⁵⁹ Broadberry, Custodis, and Gupta, "India and the Great Divergence," 60

⁶⁰ Broadberry, Custodis, and Gupta, "India and the Great Divergence," 69–70.

revenue. The EIC's other main sources of revenue were customs, salt, and the sale of opium. Customs comprised both internal and maritime customs, with the former remaining in force until the 1830s.⁶¹ Salt was a state monopoly inherited from the Mughal Empire.⁶² The EIC famously introduced a profitable state monopoly on the production and sale of opium in India in the 1770s. Finally, the EIC also collected a variety of small duties, such as post-office collections, stamp duties, mint duties, excise duties, and so on.⁶³

Figure 1 shows the evolution of these various entries and their contribution to the EIC's revenue. I have followed the following decomposition:

$$\begin{aligned} \text{Gross revenues} = & \text{Land revenue} + \text{Customs} + \text{Sale of salt} \\ & + \text{Sale of opium} + \text{Other revenue} \end{aligned} \quad (1)$$

Figure 1 underscores not only the importance of the land tax but also its relative decline as a share of the EIC's revenue. It represented more than three-quarters of total revenue in 1787–1788, but only half of total revenue by 1857–1858. Customs revenue remained stable, averaging about 6 percent of total revenue.⁶⁴ Salt revenue was stable too, averaging around 11 percent of total revenue. The most significant transformation in the EIC's tax base was the rise in opium revenue, which increased from 4 percent of total revenue to nearly 20 percent between 1787–1788 and 1857–1858.

Another important feature of Figure 1 is that the aggregate revenue of British India increased substantially during EIC rule. In 1857–1858, total gross revenue in nominal value was four times what it had been in 1787–1788, an increase that was heterogeneous across presidencies.⁶⁵ To make sense of this increase, we should take into account that it may reflect the expansion of the EIC's geographical scope (that is, revenue went up due to added territory), or an increase in fiscal pressure (that is, revenue went up due to heavier taxation), or both. The nominal GDP, which reflects the size of the economy, is an adequate macroeconomic magnitude for determining

⁶¹ Banerjee, *History of Internal Trade Barriers*; Richards, "Fiscal States in Mughal," 426.

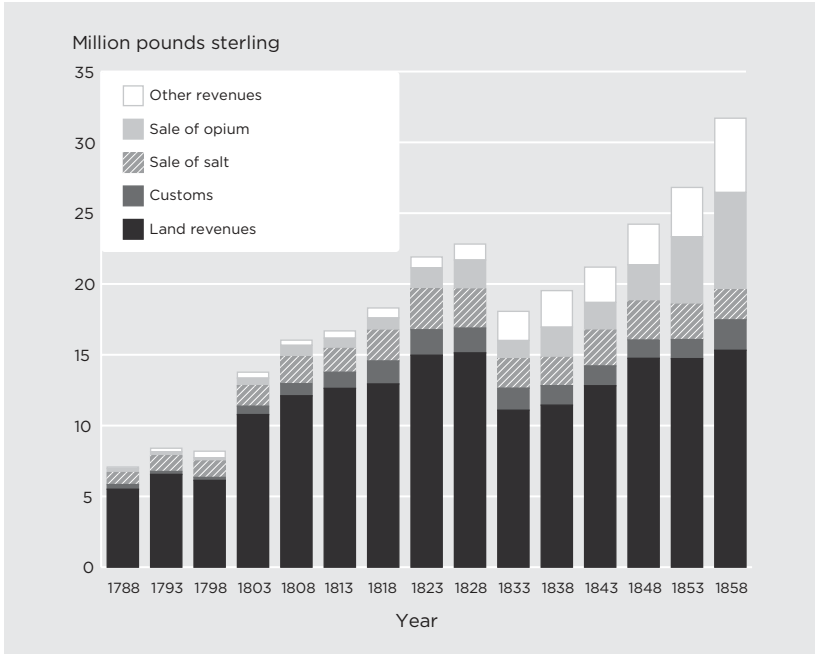
⁶² Colebrooke, in *Remarks on the Present State*, laments the hardship of the salt tax for ordinary people; Richards, "Fiscal States in Mughal," 423.

⁶³ For instance, *Abkarry* was a tax on alcohol. *Sayer* refers to sundry taxes not included in miscellaneous revenues. *Moturpha* was an income tax levied on artisans, shopkeepers, toolmakers, and so on, in the Presidency of Madras (See Hendriks, "On the Statistics," 229, 237).

⁶⁴ During this period, a reduction in inland customs was compensated for by an increase in maritime customs due to the steady rise in India's seaborne trade.

⁶⁵ Gross revenues tripled in Bengal, were multiplied by about five in the North-Western Provinces and Madras Presidency, and increased thirty-fold in Bombay.

FIGURE 1 ♦ THE EAST INDIA COMPANY’S FISCAL BALANCE IN INDIA: GROSS REVENUES, 1788–1858 (SELECTED YEARS, QUINQUENNIAL FREQUENCY), MILLION POUNDS STERLING



Source: Author’s computations. See Table A1 in the Appendix.

the relative importance of these two explanatory factors; it is available from Broadberry and colleagues.⁶⁶ One problem with using GDP as a benchmark is that available estimates rely on a territorial definition of “India” that is fixed over time, while the territory under EIC rule expanded during the period considered here.⁶⁷ Therefore, the ratio can be calculated only at the end of

⁶⁶ Broadberry, Custodis, and Gupta, “India and the Great Divergence.”

⁶⁷ GDP estimates “are for the territory of the Indian sub-continent, including Pakistan and Bangladesh as well as modern India, for the whole period 1600–1871” (Broadberry, Custodis, and Gupta, “India and the Great Divergence,” 61). In 1765, the East India Company controlled an area of 378,000 square kilometers with 30 million inhabitants. By 1859, that area had expanded as a consequence of successful wars and aggressive diplomacy to a territory of 2.5 million square kilometers and 145 million inhabitants under direct British rule. Additionally, the so-called “princely states,”—that is, protectorates governed by dependent Indian rulers—comprised another 1.5 million square

the period, when the expansion of British India had almost been completed. The ratio of tax revenue to GDP was, on average, 8.5 percent in 1850s: Indian “fiscal capacity” was very high by international standards at this point. In fact, it was comparable to the fiscal capacity of the United Kingdom, which was also 8.5 percent in the 1850s (see Table A1 in the Appendix for details).

In Western European history, fiscal capacity has been associated with economic performance. The higher the power of a state to extract revenues, the better it was for economic growth in the long run.⁶⁸ Britain is considered the exceptionally successful fiscal state in European history. The state not only provided external security, internal stability, and sustained protection for property rights, but above all funded an effective mercantilist strategy that fostered commercial gains from servicing an expanding global economy.⁶⁹ India, on the contrary, did not achieve economic growth in the long run despite the fact that EIC rule increased its fiscal capacity to a ratio of revenue to GDP similar to that of the United Kingdom.⁷⁰ The expanding global economy associated with colonialism generated different outcomes for European empires and colonized territories. Colonialism’s drain of wealth can be considered a plausible explanatory factor in these differing outcomes as India’s real output stagnated during EIC rule.⁷¹

EIC Fiscal Balances: Net Revenues

The Marxist-nationalist historical scholarship denounces the regressive character of taxation under EIC rule. Poor peasants paid confiscatory land taxes to landlords who received high rents for collecting taxes. Landowners collected taxes in exchange for property, but they failed to invest in land and charged excessive rent in *zamindari* areas, while peasant proprietors fell into debt to exploitative lenders and lost control over their lands in *ryotwari* areas.

kilometers and 48 million inhabitants. Richards, “Fiscal States in Mughal,” 419–20. See Banerjee and Iyer, “History, Institutions, and Economic Performance,” appendix 1, for a detailed description of the territorial expansion of British India.

⁶⁸ Dincecco, *State Capacity*.

⁶⁹ O’Brien, “Nature and Historical Evolution of an Exceptional Fiscal State,” 439, and “Costs and Benefits of Mercantilist Warfare,” 105, 108.

⁷⁰ See Table A1 in the Appendix. The revenue to GDP ratio was similar in the UK and India in the 1840s and 1850s. Before this period, the ratio of revenue to GDP underestimates Indian fiscal capacity because revenue is available only for the territories under EIC rule, while GDP figures refer to all of India.

⁷¹ Indian real output is given by Broadberry, Custodis, and Gupta in “India and the Great Divergence,” 69.

Landlords took no interest in agriculture beyond collecting rent. Instead, they found charging excessive rent and interest far more profitable, safe, and congenial than making productive investments in land. Moneylenders and merchants used their increasing share of agricultural surplus to raise interest rates or to acquire property in land, with the objective of becoming landlords themselves. The vast majority of small landowning peasants, tenants, and sharecroppers had no resources to invest in the improvement of agriculture. Furthermore, the savings of small peasant landowners were usually consumed by famine, scarcity, and economic depression. Throughout the eighteenth and nineteenth centuries, high land taxation eroded the peasants' surplus. The central point for the Marxist-nationalist argument is that the agricultural surplus fell into the wrong hands. Such historians contend that resources were siphoned off without any return, thereby subjecting agriculture to an internal drain of wealth.⁷²

I calculate payments to collect revenue according to the budgets produced by the EIC. Payments to collect revenue were deducted from gross revenue:

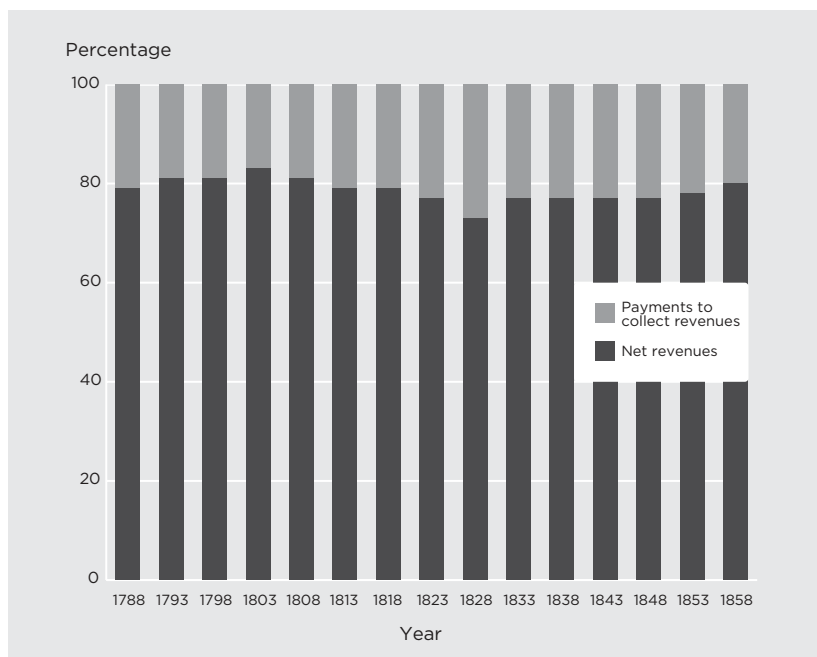
$$\text{Net revenues} = \text{Gross revenues} - \text{Payments to tax collectors} \\ \text{and allowances to local rulers}^{73} \quad (2)$$

Figure 2 shows the cost of revenue collection, which amounted on average to 21 percent and was quite constant from 1787–1788 to 1857–1858. Allowances and assignments to local rulers established in treaties played a significant role in the EIC's diplomatic strategy of territorial expansion. Allowances, pensions, and stipends to local rulers, dependents, adherents, and district and village officers—along with salaries for tax collectors and for local, deputy, and financial commissioners—sustained the tax collection

⁷² Marx, *Capital*, 155; Chandra, "Reinterpretation of Nineteenth Century Indian Economic History," 51; Habib and Mitra, *Essays in Indian History*, 278, 302; Chandra, *Essays on Colonialism*, 88–89, 188.

⁷³ Payments for tax farming and allowances to local rulers were comprised of: (1) collection charges—that is, payments for local commissioners, deputy commissioners, financial commissioners, collectors of revenue, salaries, establishments, and contingent charges, as well as advances on and charges for salt and opium; (2) allowances and assignments in accordance with treaties and other engagements—that is, allowances to local rulers (*rajah*, *nawab*) and their descendants, allowances to chiefs and their families and dependents, territorial pensions and political pensions to the families and dependents of local rulers, stipends to local rulers, and allowances to dependents and adherents; (3) allowances to district and village officers—that is, payments at collectorates in lieu of resumed lands and privileges and allowances to *zamindars*, *muzmoodars*, *dessaes*, and other district and village officers and *enamdars*.

FIGURE 2 ♦ THE EAST INDIA COMPANY'S FISCAL BALANCE IN INDIA:
NET REVENUES (PERCENTAGE), 1788–1858 (SELECTED YEARS,
QUINQUENNIAL FREQUENCY)



Source: Author's computations. See Table A1 in the Appendix.

that permitted the EIC to expand its territorial and political control across most of the Indian subcontinent.⁷⁴

Collecting revenue was indeed less expensive during EIC rule than under the Mughal tax system. The normal cost of tax collection in Northern India in Akbar's later years, near the end of the sixteenth century, was around 37 percent—including the zamindar's share of 10 percent, 7 percent for local officials, and 20 percent for the revenue collector—or nearly double the cost of tax collection under the EIC.⁷⁵ The EIC rationalized tax collection by eliminating intermediaries and developing an official bureaucracy that

⁷⁴ Bayly, *Indian Society*, 111.

⁷⁵ Moosvi, *Economy of the Mughal Empire*, 131.

levied taxes directly.⁷⁶ Between 1757 and 1857, the EIC eliminated three-quarters of the warlord aristocracy (all except those in princely states) and more than half of local chieftains, establishing a bureaucracy in their place.⁷⁷ However, as the following section shows, the EIC had a very expensive colonial service. Therefore, rationalizing tax collection did not reduce costs, but instead transferred the benefits of exploitation from traditional local elites to British colonial officers. According to Angus Maddison and Amiya Kumar Bagchi, at least the local ruling class had consumed domestic luxuries, such as fine muslins, footwear, jewelry, decorative swords, and other high-end craft products, which represented about 5 percent of Mughal national income. But the British colonial administration repatriated gains to London and used only European clothes and shoes. European tastes were adopted by the new Indian “middle class,” which destroyed domestic demand for luxury handicrafts and exacerbated the negative effects of the drain of wealth.⁷⁸

EIC Fiscal Balances: Expenses

According to Marxist-nationalist historians, high taxation and non-productive expenditure by the colonial state led to India’s economic underdevelopment.⁷⁹ Therefore, to understand the relationship between fiscal capacity and economic growth, I consider not only “extractive capacity” (that is, the capacity of the state to extract revenues), but also “productive capacity” (that is, the capacity of the state to play a productive economic role through adequate policies and the provision of public goods that promote growth).⁸⁰

A state’s “productive capacity” is usually measured by non-military state expenditures.⁸¹ Marxist-nationalist historians consider the British imperial pattern of expenditure almost wholly non-productive because high social surplus extracted from the people was channeled to an army and civil administration that did not serve India’s needs. These expenses represented a diversion of India’s revenue for British imperial purposes. As a result, very

⁷⁶ Stokes, “First Century of British Colonial Rule in India,” 144.

⁷⁷ Maddison, *Class Structure and Economic Growth*, 54–55.

⁷⁸ Maddison, *Class Structure and Economic Growth*, 55; Bagchi, *Political Economy of Underdevelopment*, 25–28.

⁷⁹ Naoroji, *Poverty and Un-British Rule in India*, 314; Chandra, *Essays on Colonialism*, 188

⁸⁰ Besley and Persson, “Taxation and Development”; Dincecco and Katz, “State Capacity.”

⁸¹ Dincecco and Katz, “State Capacity,” 197.

little was spent on developing agriculture and industry, on social infrastructure, or on nation-building activities.⁸²

I compile the fiscal expenses recorded in EIC budgets to measure the state's "productive capacity." They are grouped into categories according to the primary source's classifications:

$$\begin{aligned} \text{Fiscal Balance} &= \text{Net revenues} - \text{Civil and Political Charges} \\ &\quad - \text{Interest on Debt} - \text{Judicial and Police Charges} \\ &\quad - \text{Military Charges}^{83} - \text{Marine Charges} \\ &\quad - \text{Buildings and fortifications}^{84} - \text{Charges in England}^{85} \quad (3) \end{aligned}$$

Figure 3 shows aggregated expenses for British India under EIC rule. First, the EIC built up a massive regular army.⁸⁶ The military was by far the largest single expense category, amounting on average to nearly 70 percent of total expenses (see Figure 3 and Table A2 in the Appendix). John Wilson, a member of the Royal Asiatic Society, noted that "our wars in India have not cost our nation a single farthing, but have been defrayed from the revenues or credit of that country itself."⁸⁷

Second, civil and political expenses in India represented more than 10 percent of the total expenses before 1833. After the Charter Act of 1833, charges in England increased substantially. They represented a large and increasing proportion of expenditure. From the 1830s to the 1850s, civil and

⁸² Naoroji, *Poverty and Un-British Rule in India*; Ganguli, "Dadabhai Naoroji," 85–86; Chandra, *Rise and Growth of Economic Nationalism in India*, 652–53; Chandra, *Essays on Colonialism*, 84.

⁸³ Military charges included military buildings. It comprises payments to the presidencies' armies.

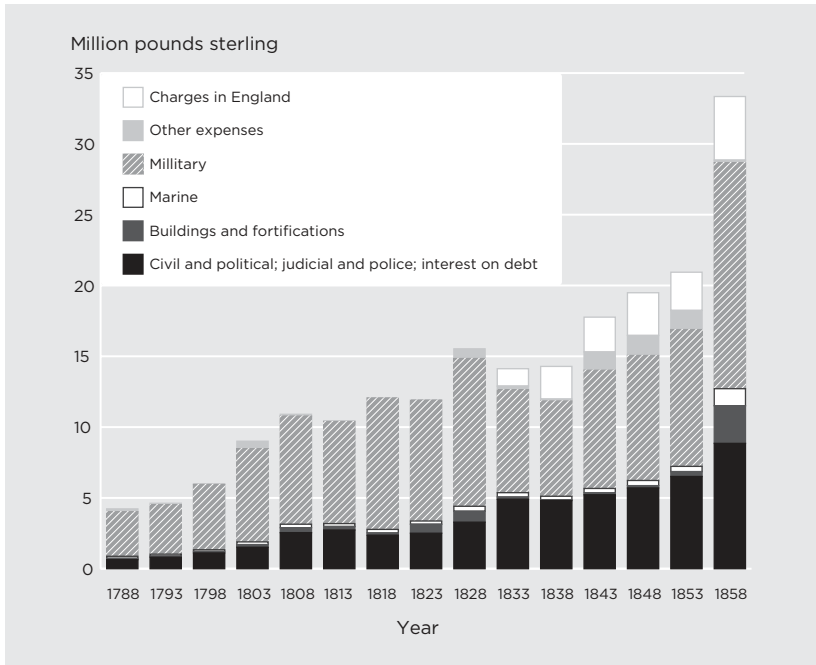
⁸⁴ Buildings and fortifications included roads and other public works, but not repairs, which were included in civil expenses.

⁸⁵ "Charges in England" were the net supplies from the territorial branch to London. The most relevant items were dividends to proprietors of East India Stock, value of stocks consigned to India, interest on the home bond debt, payments to military and marine officers, pensions for civil, military, and maritime officers, payments to British troops serving in India, and so on. From the accounting year 1834–1835 on, dividends to proprietors of East India Stock were recorded as charges in England (3 & 4 Will 4, c. 85), as we have seen in section 1. Until the early 1830s, charges in England were included in charges in India (civil department). From 1830 on, charges in England were separated from charges in India and registered in an independent account named "a statement of the charges defrayed in England on account of the Indian Territory" and paid upon the fiscal balance. In 1854–1855, when accounts were consolidated for India, net supplies to London were transferred directly to the fiscal balance account under the heading "charges in England."

⁸⁶ Roy, "Rethinking the Origins."

⁸⁷ Reproduced in Allen, *India, Ancient and Modern*, 295.

FIGURE 3 ♦ THE EAST INDIA COMPANY’S FISCAL BALANCE IN INDIA: EXPENSES, 1788–1858 (SELECTED YEARS, QUINQUENNIAL FREQUENCY), MILLION POUNDS STERLING



Source: Author’s computations. See Table A2 in the Appendix.

political expenses in India plus charges in England amounted to more than 20 percent of total expenses (see Figure 3 and Table A2 in the Appendix). The EIC had an expensive colonial service. High salaries were supposed to ensure integrity and put an end to the corruption of the first two decades after the battle of Plassey.⁸⁸ The Viceroy, the highest echelon of civil servants in India, received a salary more than 3,500 times the average income of an Indian laborer. A governor’s salary was nearly 1,500 times higher than the average income of an Indian worker.⁸⁹ According to Marx, pensions and allowances for British officials in the Indian government, in addition to the

⁸⁸ Richards, “Fiscal States in Mughal,” 428; Mann, “From Ledger to Budget.”

⁸⁹ Maddison, *Class Structure and Economic Growth*, 63.

cost of the secretary of state's establishment at the India Office, completed the drain of wealth caused by imperialism.⁹⁰

Third, interest on East India Company debt represented, on average, more than 10 percent of total expenses (see Figure 3 and Table A2 in the Appendix). As we have seen, that debt included both territorial and commercial liabilities, but interest on it was paid exclusively with territorial revenue. The Marxist-nationalist historical scholarship also considers the payment of interest on commercial debt with Indian revenue a drain of wealth.

The remaining expenses were for marine navigation, for the judiciary and police, and for buildings, fortifications, roads, and other public works. Marine expenses amounted to 2 percent of total expenses and comprised collections from inward and outward pilotage and the costs of moorings, lighthouses, duties, and so on. Judicial and police expenses represented more than 10 percent of total expenses. The judiciary and police were intended to maintain law and order as well as enforce tax collection. Finally, public works amounted, on average, to 3 percent of total expenses; they were related to non-military EIC buildings, fortifications, and other infrastructure built for the use of the Company (see Figure 3 and Table A2 in the Appendix).⁹¹

The government did not invest in improving agriculture. The land tax was not used to benefit the Indian population. Instead, it was channeled into continuous tribute to Britain.⁹² Marx stressed that no taxes were returned to the Indian people in the form of public works or irrigation infrastructure, and “that nowhere so extravagant is a provision made for the governing class itself.”⁹³ He argued that, historically, in Asia there had been three departments of government: finance, wars, and public works. Irrigation had constituted the basis of Asian agriculture because of climate conditions. However, EIC rule in India entirely neglected the public works department, and hence agriculture deteriorated. Indeed, at the time Marx wrote, “irrigation, the *sine qua non* of farming in the East, might be greatly extended, and

⁹⁰ Marx, “British Incomes in India,” *New-York Daily Tribune* (September 21, 1857), reprinted in Husain, ed., *Karl Marx on India*, 97–100.

⁹¹ The heading “buildings, fortifications, roads and other public works” included EIC commercial infrastructure, buildings, roads, irrigation canals, tanks, embankments, anicuts, dams, bridges, and, in the later period, electric telegraphs and purchases of land for railway purposes.

⁹² Dutt, *Economic History of India*, 408.

⁹³ Marx, “The British Rule in India,” *New-York Daily Tribune* (June 10, 1853); Marx, “Taxation in India,” *New York Daily Tribune* (July 23, 1858), reprinted in Husain, ed., *Karl Marx on India*, 183–187.

the frequently recurring local famines, arising from the want of water, would be averted.”⁹⁴

The EIC failed to repair and maintain the roads, river embankments, and bounded storage tanks for irrigation that had been the responsibility of the state under earlier regimes.⁹⁵ Colebrooke recognized that “reservoirs, water-courses, and dykes were more generally in a process of decay than of improvement.”⁹⁶ Canals—such as the Delhi Canal and the canal west of the Jumna River in the north and the ancient system of anicuts and weirs in the Cauvery delta—were falling into neglect in the early nineteenth century.⁹⁷ Irrigation infrastructure deteriorated because EIC directors decided against investing in public works. Until the early 1840s, little had been done to address neglected infrastructure built by Mughal governments. Roads, canals, and bridges had been allowed to fall into ruin, and the construction and maintenance of village tanks and watercourses were not the responsibility of the EIC government. Great restrictions were placed on financing irrigation infrastructure, and the EIC limited its expenditure to the estimated returns irrigation would bring by enabling the cultivation of new areas and thus increasing land revenue. It was not until late in the EIC’s rule that irrigation infrastructure began to be repaired or built. Canals, such as the West and East Jumna canals, were restored in 1830s, and the Ganges Canal in the North-Western Provinces and the Godavari scheme in Madras were completed in the 1840s and 1850s.⁹⁸

The Marxist-nationalist historical scholarship posits a direct link between the decay of irrigation infrastructure and the intensity of famines. Famines recurred in India during EIC rule without leading to any change in the EIC’s policy of land revenue extraction. Following the Bengal famine of 1769–1770, which claimed the lives of 30 percent of the local population of 10 million inhabitants, the EIC’s pursuit of land revenue continued unabated. Famines kept striking. For instance, the Doji bara famine of 1791–1792 caused the deaths of about 11 million inhabitants in Madras Presidency; the Agra famine of 1837–1838 caused around 800,000 deaths,

⁹⁴ Marx, “The British Rule in India,” *New-York Daily Tribune* (June 10, 1853); Marx, “The Future Results of British Rule in India,” *New-York Daily Tribune* (July 22, 1853), both reprinted in Husain, ed., *Karl Marx on India*, 11–17 and 46–51. Bagchi, *Political Economy of Underdevelopment*.

⁹⁵ Richards, “Fiscal States in Mughal,” 429.

⁹⁶ Colebrooke, *Remarks on the Present State*, 25.

⁹⁷ Whitcombe, “Irrigation,” 678.

⁹⁸ Marriott, Mukhopādhyāya, and Chatterjee, *Britain in India*.

while 5 out of 8.5 million inhabitants were seriously stricken in the North-Western Provinces.⁹⁹

When famines occurred, a policy of non-intervention was generally implemented. Revenue authorities paid little attention to the need for tax remission. Some work-relief agencies were opened, but financial orthodoxy stood in the way of extensive relief efforts. Instead, troops were deployed to restore order. Only after the end of the EIC's rule did British government officials connect famine to insufficient investment in irrigation systems. For example, Edwin Thomas Atkinson, accountant general of the North Western Provinces, recommended taking drought prevention and mitigation measures, such as building more canals.¹⁰⁰

Indeed, a crucial difference between Mughal and EIC rule lay in land tax extraction in times of crisis. According to Dutt, Mughal rulers never levied the full amount of the taxes they claimed and actual revenues varied according to economic conditions.¹⁰¹ Christopher Bayly agrees that the Mughal revenue system was flexible in times of crisis.¹⁰² Mughal tax collection depended on the harvest, adaptable systems of credit and revenue remissions, and the mutual cooperation of a host of rural intermediaries, revenue farmers, and moneylenders. Kali Charan Ghosh highlights the role of remissions or postponements of land taxes that the Mughals rulers extended in times of famine.¹⁰³ Similarly, Kumar writes that the Mughal state tried to counteract the effects of famine with loans and the distribution of grain from public granaries. Moreover, temples and financial elites provided charity in cash and food, although public and private resources were limited.¹⁰⁴

⁹⁹ Ghosh, *Famines in Bengal*, appendix; Mahalanobis and Bhattacharya, "Growth and Population"; Visaria and Visaria, "Population," appendix 5.2; Reddy, *Indian History*, 80; Grove, "The Great El Niño of 1789–93."

¹⁰⁰ Atkinson, *Statistical Descriptive and Historical Account*, vol. 2, part 1, 40. Atkinson considered the increase in irrigated land proof of the effectiveness of canals. For instance, because of the Ganges Canal in the Meerut Division of the North-Western provinces, the acreage that received water in the year 1868–1869 was double that of 1861, while the land area irrigated in 1861 was itself more than four times that of 1837–1838, a year of famine. Whitcombe also recognizes the protective value of irrigation in a situation of famine ("Irrigation," 689).

¹⁰¹ Dutt, *Economic History of India*, ix.

¹⁰² Bayly, *Indian Society*, 89–90.

¹⁰³ Ghosh, *Famines in Bengal*, 1. Ghosh explains that the Mughal emperor Shahjehan (1627–1658) provided relief for the famished, distributed food and money, and remitted all taxes for two years during the famine in Bombay Presidency in 1629–1630. The Mughal emperor Aurangzeb (1658–1707) distributed food among the poorest people, opened his treasury to grant money, and remitted the rents of his cultivators during the famine of 1661 in the North-Western Provinces.

¹⁰⁴ Kumar, "States and Civil Societies in Modern Asia," 2268.

Instead, the EIC scrupulously collected its taxes regardless of harvest yields. According to Ira Klein, millions of Indian lives were sacrificed during the nineteenth century because the pull of humanitarianism was not as strong as that of Malthusianism.¹⁰⁵ Malthusianism inspired the EIC's laissez-faire policies in response to Indian famines, as Thomas Malthus considered famines the result of overpopulation. Famine victims were the poorest of the poor and, if such deaths were prevented, he argued, population growth would reduce available economic resources per capita. Thus, if the government spent more revenue on famine relief, an even larger proportion of the population would become poor. Famines did the work of Nature.¹⁰⁶ Not surprisingly, Malthus was a professor at the East India Company College (1805–1834), an institution that trained EIC administrators.

Refuting the Malthusian framing of famines as a natural phenomenon, Mike Davis attributes famines to the liberal capitalist ideology that legitimized the inaction of imperial states. Indeed, he considers Indian famines under British rule “colonial genocide.”¹⁰⁷ Roy, in contrast, claims that the notion of an adaptive state needs to find a place in the scholarship on famines. According to him, analytic approaches to famines that focus on public policy action overstate the capacity of states because they implicitly assume that the beliefs, intentions, and interests of politicians limit state capacity. Roy instead holds that state power was limited by “nature,” by the paucity of scientific knowledge, and by the small fiscal capacity of the state in colonial India.¹⁰⁸ However, the data I have compiled on the fiscal balances for the period of EIC rule in India offer a different picture. They do not show a small fiscal capacity, but rather a fiscal expenditure deliberately channeled to the army, the civil administration, and the management of debt, according to EIC preferences and with the approval of the British Parliament.

EIC Debt: Unrequited Exports

According to Marxist-nationalist historians, unrequited exports—that is, exports from India to the metropolis in excess of imports from Britain to India, and not met with a counterpart economic return—provided the main

¹⁰⁵ Klein, “When the Rains Failed,” 189.

¹⁰⁶ Caldwell, “Malthus and the Less Developed World,” 683.

¹⁰⁷ Davis, *Late Victorian Holocausts*.

¹⁰⁸ Roy, “Indian Famines: Natural or Manmade?”

channel for draining India's social surplus.¹⁰⁹ Until 1757, Indian exports to Britain were settled with bullion, as reflected in the commercial records of the EIC.¹¹⁰ After 1757, however, the EIC virtually ceased to export bullion in exchange for commodities. India received no specie or goods to balance its trade accounts; instead, money to pay for commodities the EIC shipped to London arose ultimately from land revenue collected in India.¹¹¹ Part of the surplus realized through the trade and revenue system in Bengal was used to extend British dominion over the rest of India and to balance the trade account with China, with which Britain normally had a deficit until about the first-quarter of the nineteenth century. The rest was transferred to Britain as unrequited export surplus; this is interpreted as the drain of wealth—a “tribute” that India paid to Britain for being “civilized.”¹¹² That is, Britain simply consumed this tribute without exporting anything to India in return.¹¹³

In order to determine India's contribution to the British balance of payments during the French Revolutionary Wars (1792–1802) and the Napoleonic Wars (1803–1815), Javier Cuenca-Esteban has estimated the commercial “net transfers” from India to Britain, which amounted to around £30 million from 1758 to 1815.¹¹⁴ His main sources are the commercial records of the EIC and the British Parliamentary Papers. Net transfers are calculated as British imports from India minus British exports of goods and bullion to India. They include imports from China to London minus exports of British goods and bullion to China. The British trade deficit with China is included because it was financed with surpluses accumulated by merchants in India and with Indian goods directly exported to China by the EIC.¹¹⁵ Cuenca-Esteban claims that Indian transfers to Britain have been ignored in recent historiography, despite the vital role that they played in the British balance of international payments during the French Wars. According to him, the neglect might be explained by the use of classic (Western)

¹⁰⁹ Naoroji, *Poverty and Un-British Rule in India*, 32–36; Sinha, *Economic History of Bengal*, vol. 1, 230–38; Ganguli, “Dadabhai Naoroji”; Chandra, *Rise and Growth of Economic Nationalism in India*, 644–49; Habib and Mitra, *Essays in Indian History*, 283; Chandra, *Essays on Colonialism*, 93; Mukherjee, “Empire,” 75–77.

¹¹⁰ Chaudhuri, *Trading World of Asia*; Nogues-Marco, “Trade Imbalances.”

¹¹¹ Bagchi, *Political Economy of Underdevelopment*, 80–81; Habib, “Studying a Colonial Economy,” 358; Banerji, “White Man's Burden,” 2974.

¹¹² Mukherjee, “Empire.”

¹¹³ Marx, *Capital*, 433.

¹¹⁴ Cuenca-Esteban, “British Balance of Payments,” table 1, and “India's Contribution,” table 1.

¹¹⁵ Cuenca-Esteban, “India's Contribution,” 160.

estimations of the drain of wealth to downplay its significance for British national income.¹¹⁶

The balance of payments identity is defined by the following equation:

$$\text{Trade Account} + \text{Capital Account} + \text{Financial Account} = 0 \quad (4)$$

The trade account consists of exports minus imports of goods. It is usually assumed that financial flows were negligible in this period, so trade imbalances would have to be settled with compensatory bullion flows in the capital account.¹¹⁷ However, financial flows were not negligible in the Anglo-Indian balance of payments. In fact, what Cuenca-Esteban describes as “net transfers” from India to Britain were simply a financial balance. As I will now explain, they capture the role of commercial debt in settling the balance of trade. This, in turn, can be used as a meaningful measure of unrequited exports.

In the second half of the eighteenth century, the East India Company began issuing Company bills payable in London for British trade with India and China, and Company bills payable in Bengal (and, rarely, Bombay) for British trade with China.¹¹⁸ Sometimes short-term commercial debt remained unpaid after maturity, so it became *de facto* long-term debt. Other times, short-term commercial debt was consolidated into long-term debt, principally issued in London by the EIC and largely subscribed by the EIC’s British civil servants in India, although some debt was held by Indian business interests as well.¹¹⁹ The EIC’s funding of private trade with India continued after it ceased its trading activity in 1833, since the EIC controlled the system of transferring money between India and Britain until the 1850s.¹²⁰

¹¹⁶ Cuenca-Esteban, “India’s Contribution,” 156. For the classic (Western) estimations, see Marshall, *East Indian Fortunes*, 262–71; Furber, *John Company at Work*, 305–24.

¹¹⁷ Hume, “Of the Balance of Trade.”

¹¹⁸ Greenberg, *British Trade*; Chung, “Britain-China-India Trade Triangle”; Marshall, *East Indian Fortunes*.

¹¹⁹ Chaudhuri, “India’s Foreign Trade,” 346. In 1853, many of the debts were owed in London, but the interest was all payable in India (Allen, *India, Ancient and Modern*, 315). In 1836, out of a total registered debt of £27.6 million, £20.4 million was estimated to be held by Europeans settled in India (74 percent of the total) and £7.2 million by Indians (26 percent of the total) (Chaudhuri, “India’s Foreign Trade,” fn. 1). Roy focuses on the relevance of the transition to colonialism in the process of concentrating Indian capital in EIC ports from the Mughal Empire’s collapse to EIC rule (“Economic History of Early Modern India,” 1661; *A Business History of India*, 22–51). Indian capitalism shifted from overland trade in the Indo-Gangetic plains towards the East India Company’s ports, as private enterprise migrated from the interior to the coasts.

¹²⁰ Suzuki, “Rise and Decline of the Oriental Bank Corporation.”

In general, commercial debt is a legitimate instrument for financing trade because it is later repaid by the indebted party. However, in this case, commercial debt became a form of expropriation because it was never repaid by the EIC, but instead was ultimately repaid by Indian society itself. In summary, the mechanism whereby the EIC managed to use commercial debt legally as a means to generate unrequited exports had three parts. First, as we saw in the opening section of this article, the total amount of “debt” registered in the EIC budgets comprised not only territorial debt, but also commercial debt. These were serviced by drawing on territorial revenues. Aggregating commercial debt with territorial debt thus ensured that commercial debt, just like territorial debt, was serviced from territorial revenues. Therefore, commercial debt was costless for the commercial branch of the EIC because the interest it generated was charged to the territorial account.

Second, the EIC used territorial surpluses to finance British trade deficits with India. In 1812, Sir John Shore, governor-general of India, recognized that “the Company’s trade produces *no equivalent return* . . . The Company are merchants as well as sovereigns of the country. In the former capacity, they engross its trade; whilst in the latter, they appropriate the revenues. The remittances to Europe of revenues are made in the commodities of the country, which are purchased by them.”¹²¹ To understand the mechanism, imagine a private importer in London who wants to pay for commodities in India. He has two options. He can either send bullion, or he can pay through the EIC without sending bullion. If he chooses the latter, the EIC in India will advance the payment to the Indian exporter against its territorial surpluses, and will issue a bill of exchange payable by the English importer in London. This method of settlement permitted the EIC to repatriate territorial surpluses without moving specie.

Finally, the third part of the mechanism for generating unrequited exports consisted in consolidating previously accumulated commercial debt as Indian public debt. Before 1833, the EIC’s total debt—including commercial debt—had been registered in the budget under the heading “Bond and other Debts owing by the East India Company, at their several Presidencies in the East Indies.” But the termination of the EIC’s commercial charter in 1833, because it involved the liquidation of the commercial branch, required the difficult exercise of assigning outstanding assets and

¹²¹ *The Fifth Report from the Select Committee on the Affairs of the East India Company*, London, 1812, vol. 1, p. 183; emphasis added. Indeed, the EIC registered commercial debt under the heading “(Indian) exports not paid for,” which is tantamount to the “unrequited exports” concept of Marxist-nationalist historians (Anderson, *A General View*, 51).

debts (whether territorial or commercial) to different accounts. According to Thomas Macaulay, a member of the ruling Whig majority, “there were two ways of settling the question—adjudication and compromise.” Adjudication presented great difficulties that were “not arithmetical, but political” and arose from the intermingling of the Company’s “two characters,” as “trader” and as “sovereign.” In the end, the EIC’s commercial and political functions were deemed inextricable. Concluding that a satisfactory adjudication could not be found, Macaulay advocated a “compromise” that essentially charged to Indian society the Company’s commercial debts.¹²²

Indeed, the final compromise reached between the EIC and the British Crown transferred the *whole* debt burden from the EIC to Indian public debt. The 1833 acts established that from then on, EIC debts would be serviced by the revenue of the Indian territories.¹²³ As a result, after 1833, EIC debts stopped being registered in the EIC budgets under the heading “Bond and other Debts owing by the East India Company, at their several Presidencies in the East Indies,” and came to be registered under the heading “An account of the *Public Debts*, bearing Interests, outstanding at the several Presidencies in the East Indies,” which underscores that the EIC debt had assumed the character of an Indian public debt.¹²⁴ The heading “Public Debt” now comprised the commercial debt that had not been settled with territorial surpluses during the period from 1757 to 1833 and was thus payable by Indian society. Moreover, this practice of turning commercial debt into Indian public debt continued after 1833 because the EIC retained its role as a financial engine of private trade.

Although Macaulay highlighted the political difficulties of separating commercial and territorial debts, he also recognized the “arithmetical” feasibility of doing so. This is what I undertake next. The approach that I pioneer enables us to understand the magnitude of total unrequited exports, and thus the channel of the drain of wealth directly linked to trade activity. The proper measure for it, I suggest, is a counterfactual measure of the com-

¹²² Macaulay, “Government of India,” 555, 552.

¹²³ Act to Regulate the Trade to China and India, 1833, 3 & 4 Will 4, c. 93, and St. Helena Act, 1833, 3 & 4 Will 4, c. 85. See Section 1. See also “A bill (as passed by the Honourable the House of Commons) for effecting an Arrangement with the East-India Company, and for the better Government of His Majesty’s Indian Territories” (July 27, 1833), in *Preliminary Papers Respecting the East-India Company’s Charter* (London, 1833), 411.

¹²⁴ Emphasis added. Official statistics also registered the EIC debt as Indian public debt. See *Statistical Abstract Relating to British India from 1840 to 1865* (London: Her Majesty’s Stationary Office, 1865), Table 8 “Amount of the Public Debt of British India,” reproduced in Digital South Asia Library (<http://dsal.uchicago.edu/>).

mercial debt—that is, the commercial debt that would have been observed if the commercial and territorial branches of the EIC had operated independently and territorial surpluses had not been used to finance the trade deficit (which is equivalent to the financial account according to the balance of payment identity defined in equation 4).

To that end, I start from the benchmark year 1815. For that date, Cuenca-Esteban has estimated the outstanding commercial debt at £30.2 million.¹²⁵ Because the total debt of the EIC is compiled in the EIC budgets, this in turn gives me the territorial debt in 1815. Territorial debt is the total debt minus the commercial debt (equation 5):

$$\text{Total debt}_{\text{year } i} = \text{Commercial debt}_{\text{year } i} + \text{Territorial debt}_{\text{year } i} \quad (5)$$

Next, given territorial debt in 1815, I calculate territorial debt between 1798 and 1858 using the annual territorial deficits and surpluses provided in EIC budgets. They are generated by the following equation:¹²⁶

$$\text{Territorial debt}_{\text{year } i} = \text{Territorial debt}_{\text{year } i-1} + \text{Fiscal deficit}_{\text{year } i} \quad (6)$$

Once I have calculated annual territorial debt, I can derive annual commercial debt, which is total debt minus territorial debt (equation 5). Results are shown in Figure 4.

The data represented in Figure 4 is consistent with piecemeal estimates offered in the Marxist-nationalist literature. For instance, Habib has calculated total net exports from India to Britain to be around £2.58 million per year between 1799 and 1803.¹²⁷ This is broadly consistent with my estimation as shown in Figure 4: I find that commercial debt increased by £9 million from 1798 to 1803, implying an annual amount of £1.8 million. Likewise, Habib has estimated that the commercial debt in 1803 represented 9 percent of the GDP of the British possessions in India at that time, a figure he considers a “crippling drain of wealth for any economy.”¹²⁸ My own calculation gives a

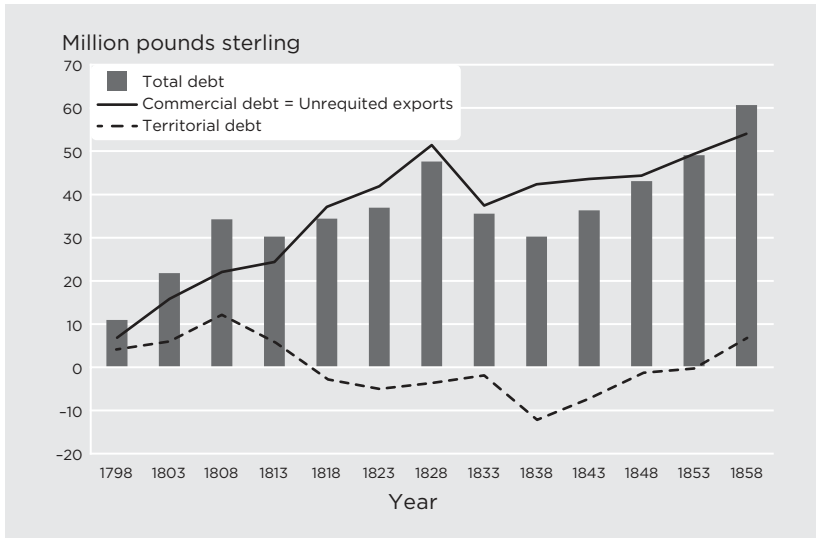
¹²⁵ Cuenca-Esteban writes: “The arguably minimum transfers estimated here for 1758–1815 total £38 million, or £30.2 million once British bullion exports to India are deducted” (“British Balance of Payments,” 66).

¹²⁶ Territorial deficits and surpluses are available in Hendriks, “On the Statistics.”

¹²⁷ Habib, “Colonialization of the Indian Economy,” 28–29.

¹²⁸ Habib, “Colonialization of the Indian Economy,” 28–29. According to him, by 1801, the total rate of capital formation in Britain at this crucial stage of the Industrial Revolution was probably no more than 7 percent of GDP, so India was furnishing a substantial amount of the total British national

FIGURE 4 ♦ UNREQUITED EXPORTS FROM INDIA TO BRITAIN, 1798–1858
(SELECTED YEARS, QUINQUENNIAL FREQUENCY), MILLION POUNDS STERLING



Sources: Author’s computations. India Office Records, British Library, L/AG/11/1/1 - L/AG/11/1/6, 1785–1857; Cuenca-Esteban, “British Balance of Payments”; Cuenca-Esteban, “India’s Contribution”; Hendriks, “On the Statistics.”

ratio of commercial debt to nominal Indian GDP in 1803 of only 4 percent, but this ratio is underestimated because available GDP estimates comprise the whole of India rather than British India alone, as in Habib’s calculation.¹²⁹

Turning to dynamics, Figure 4 shows that commercial debt increased substantially in absolute value during the first half of the nineteenth century, reaching more than 10 percent of total Indian GDP—and nearly 10 percent of British GDP—in 1833, when the EIC’s commercial charter was terminated. In other words, had the EIC paid back its commercial debt in 1833, this would have entailed transferring nearly 10 percent of British GDP from Britain to India. But this did not happen, and commercial debt be-

savings that was transformed into capital. On the contrary, Marshall does not think that the Indian fortunes transferred to London were relevant for Britain because relatively abundant capital resources existed in eighteenth-century Britain and an overall increase in capital accumulation was not a major factor in the development of industry late in the century (Marshall, *East Indian Fortunes*, 256).

¹²⁹ GDP in Broadberry, Custodis, and Gupta, “India and the Great Divergence.”

came unrequited exports. Unrequited exports kept increasing from 1833 to 1858, when the EIC's territorial charter ceased. In 1858, they represented 13 percent of Indian GDP and nearly 9 percent of British GDP. According to Marxist-nationalist historians, if this Indian "tribute" had been invested in India for productive uses instead of being transferred to London, it would have contributed to Indian development.

Conclusions

This article has analyzed the Marxist theory of the drain of wealth under East India Company rule (1757–1858). In the existing literature, the drain of wealth is theorized as a diversion of capital from the Indian economy towards the colonial enterprise. Marx critically identified this mechanism and his understanding of the drain of wealth emphasized the role played in it by EIC rule. Subsequent Marxist-nationalist historical scholarship recognized several channels that facilitated the drain of wealth: excessive land taxation hampered agriculture, unproductive spending on the army and an expensive civil administration only served to sustain imperial power, and the systematic unrequited export of goods from India to Britain did not generate a corresponding inflow of capital.

My contribution in this piece has been to conceptualize and measure the channels of the drain of wealth and the interrelations among them on the basis of EIC budgets. The British Parliament held the EIC accountable for its Indian territories with the Regulating Act of 1773 and Pitt's India Act of 1784, and from that moment until the Indian Rebellion of 1857, EIC territorial accounting developed according to the regulations of the British Parliament, for which it was produced and to which it was submitted. As the quantitative registry of EIC territorial affairs in India, EIC accounting is an invaluable primary source for measuring the drain of wealth.

My main findings are the following. Firstly, according to Marxist-nationalist historical scholarship, the land tax levied by the EIC was excessive and paid by poor peasants, causing high inequality, extreme poverty, and agricultural stagnation. My analysis of the EIC budgets has shown that land taxes were indeed the most important source of territorial revenue. Land revenue was an extractive tax, amounting to around half of the gross production according to several estimations. The fact that the EIC's land tax rates were based on those of previous Mughal rulers implies threads of continuity between Mughal rule and that of the EIC, but it does not reduce the extractive nature of land taxation. In fact, the EIC charged extractive land taxes in a society

whose GDP per capita fell close to bare-bones subsistence in the early nineteenth century. Because land taxes primarily affected agricultural laborers, they lived below subsistence levels. Taxation based mainly on land revenues intensified poverty and probably made agriculture less productive.

Secondly, Marxist-nationalist historical scholarship has linked high taxation to non-productive expenditure, including significant expenses for the army and imperial civil administration—spending that was disconnected from the development of the Indian economy and the well-being of its population. My analysis of EIC budgets has shown that military expenditures averaged nearly three-quarters of expenses. Military charges, civil charges, and interest on debt consumed the vast majority of the fiscal budget. As a consequence, productive expenses were tiny. Especially important is the case of the irrigation system. Contrary to Mughal practice, the EIC neither invested in nor repaired irrigation systems, and in so doing reduced agricultural productivity and intensified famines during recurrent episodes of drought.

Finally, the unrequited export of goods from India to Britain is probably the least understood and most controversial channel of the drain of wealth. Using EIC budgets and complementary accounting, I have shed light on the mechanism whereby trade could become a form of exploitation. The EIC conceived of commercial-financial and territorial affairs as complementary and, as a consequence, combined accounting related to the two branches of activity. After 1757, the EIC started to generate debt instead of paying the Anglo-Asian commercial deficit in bullion. Debt is a priori a legitimate mechanism for settling the balance of payments. However, commercial debt was discharged with the fiscal surpluses, which could have instead been used to fund productive expenditures for Indian development. Additionally, commercial debt was higher than the cumulative fiscal surpluses, so the EIC accumulated debt that the British government later transferred from the EIC to Indian public debt. In 1858, when the EIC's territorial charter was terminated, the amount of unrequited exports charged to Indian public debt represented 13 percent of Indian GDP.

My examination of the budgets of the East India Company supports the Marxist-nationalist theory of the drain of wealth. It is particularly remarkable that Indian fiscal capacity was similar to that of the United Kingdom at the end of EIC rule, but Indian real output stagnated during EIC rule. While fiscal capacity has been associated with economic performance in Western European history, the drain of wealth caused by colonialism should be considered a plausible explanatory factor in the different outcomes of the European empires and the colonized territories. The effects of the drain of wealth on underdevelopment deserve further research.

References

- Acemoglu, Daron, and James A. Robinson. "Why is Africa Poor?" *Economic History of Developing Regions* 25, no. 1 (June 2010): 21–50. <https://doi.org/10.1080/20780389.2010.505010>.
- Allen, David Oliver. *India, Ancient and Modern, Geographical, Historical, Political, Social, and Religious: With a Particular Account of the State and Prospects of Christianity*. Boston: J. P. Jewett, 1856.
- Anderson, George. *A General View of the Variations Which Have Been Made in the Affairs of the East-India Company, since the Conclusion of the War, in India, in 1784*. London: John Stockdale, 1792.
- Atkinson, Edwin Thomas. *Statistical Descriptive and Historical Account of the North-Western Provinces of India, Prepared, under Orders of the Govt. of India*. Allahabad: North-West Provinces' Government Press, 1875–1876.
- Bagchi, Amiya Kumar. *The Political Economy of Underdevelopment*. Cambridge, UK: Cambridge University Press, 1982.
- Banerjee, Abhijit, and Lakshmi Iyer. "History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India." *The American Economic Review* 95, no. 4 (September 2005): 1190–1213.
- Banerjee, Tarasankar. *History of Internal Trade Barriers in British India. Bengal Presidency (1765–1836)*. Calcutta: Asiatic Society, 1972.
- Banerji, Arun. "White Man's Burden: India and Britain in the 19th Century." *Economic and Political Weekly* 40, no. 27 (July 2005): 2973–78.
- Bayly, Christopher Alan. *Indian Society and the Making of the British Empire*. The New Cambridge History of India, vol. 2, part 1. Cambridge, UK: Cambridge University Press, 1988.
- . *Rulers, Townsmen, and Bazaars: North India Society in the Age of British Expansion, 1770–1870*. Cambridge, UK: Cambridge University Press, 1983.
- Besley, Timothy, and Torsten Persson. "Taxation and Development." In *Handbook of Public Economics*, edited by Alan Auerbach, Raj Chetty, Martin Feldstein and Emmanuel Saez, 51–110. North Holland: Newnes, 2013.
- Bowen, Huw V. *The Business of Empire: The East India Company and Imperial Britain, 1756–1833*. Cambridge, UK: Cambridge University Press, 2006.
- . *Revenue and Reform: The Indian Problem in British Politics, 1757–1773*. Cambridge, UK: Cambridge University Press, 1991.
- Broadberry, Stephen, Bruce M. S. Campbell, Alexander Klein, Mark Overton, and Bas van Leeuwen. *British Economic Growth, 1270–1870*. Cambridge, UK: Cambridge University Press, 2015.
- Briggs, John. *The Present Land-Tax in India considered as a Measure of Finance, in Order to Show its Effects on the Government and the People of that Country, and on the Commerce of Great Britain*. London: Longman, Rees, Orme, Brown, and Green, 1830

- Broadberry, Stephen, Johann Custodis, and Bishnupriya Gupta. "India and the Great Divergence: An Anglo-Indian Comparison of GDP Per Capita, 1600–1871." *Explorations in Economic History* 55 (January 2015): 58–75. <https://doi.org/10.1016/j.eeh.2014.04.003>.
- Broadberry, Stephen, and Bishnupriya Gupta. "Indian Economic Performance and Living Standards, 1600–2000." In *A New Economic History of Colonial India*, edited by Latika Chaudhary, Bishnupriya Gupta, Tirthankar Roy, and Anand V. Swamy, 15–32. London: Routledge, 2016.
- Caldwell, John C. "Malthus and the Less Developed World: The Pivotal Role of India." *Population and Development Review* 24, no. 4 (December 1998): 675–96. <https://doi.org/10.2307/2808021>.
- Capper, John. *The Three Presidencies of India: A History of the Rise and Progress of the British Indian Possessions*. London: Ingram, Cooke, 1853.
- Chandra, Bipan. *Essays on Colonialism*. London: Orient BlackSwan, 1999.
- . "Reinterpretation of Nineteenth Century Indian Economic History." *The Indian Economic & Social History Review* 5, no. 1 (March 1968): 35–75. <https://doi.org/10.1177/001946466800500103>.
- . *The Rise and Growth of Economic Nationalism in India: Economic Policies of Indian National Leadership, 1880–1905*. New Delhi: People's Publishing House, 1966.
- Chaudhuri, Kirti N. "India's Foreign Trade and the Cessation of the East India Company's Trading Activities, 1828–40." *The Economic History Review* 19, no. 2 (August 1966): 345–63. <https://doi.org/10.2307/2592256>.
- . *The Trading World of Asia and the English East India Company, 1660–1760*. Cambridge, UK: Cambridge University Press, 1978.
- Chung, Tan. "The Britain-China-India Trade Triangle (1771–1840)." *The Indian Economic & Social History Review* 11, no. 4 (January 1974): 411–31. <https://doi.org/10.1177/001946467401100402>.
- Clingingsmith, David, and Jeffrey G. Williamson. "Deindustrialization in 18th and 19th Century India: Mughal Decline, Climate Shocks and British Industrial Ascent." *Explorations in Economic History* 45, no. 3 (July 2008): 209–34. <https://doi.org/10.1016/j.eeh.2007.11.002>.
- Colebrooke, Henry Thomas. *Remarks on the Present State of the Husbandry and Commerce of Bengal*. Calcutta, 1795.
- Cuenca-Esteban, Javier. "The British Balance of Payments, 1772–1820: India Transfers and War Finance." *The Economic History Review* 54, no. 1 (February 2001): 58–86. <https://doi.org/10.1111/1468-0289.00184>.
- . "India's Contribution to the British Balance of Payments, 1757–1812." *Explorations in Economic History* 44, no. 1 (January 2007): 154–76. <https://doi.org/10.1016/j.eeh.2005.10.007>.
- Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. New York: Verso, 2001.

- Dincecco, Mark. *State Capacity and Economic Development: Present and Past*. Cambridge, UK: Cambridge University Press, 2017.
- Dincecco, Mark, and Gabriel Katz. "State Capacity and Long-Run Economic Performance." *The Economic Journal* 126, no. 590 (February 2016): 189–218. <https://doi.org/10.1111/eoj.12161>.
- Directions for Settlement Officers: Promulgated under the Authority of the Honorable the Lieutenant Governor of the North Western Provinces*. Agra: R. Miller, 1844.
- Dutt, Romesh Chunder. *The Economic History of India under Early British Rule: From the Rise of the British Power in 1757, to the Accession of Queen Victoria in 1837*. London: Kegan Paul, Trench, Trübner, 1906.
- Foster, William. "The India Board (1784–1858)." *Transactions of the Royal Historical Society* 11 (1917): 61–85. <https://doi.org/10.2307/3678436>.
- Furber, Holden. *John Company at Work: A Study of European Expansion in India in the Late 18th Century*. Cambridge, MA: Harvard University Press, 1951.
- Ganguli, Birendranath N. "Dadabhai Naoroji and the Mechanism of 'External Drain.'" *The Indian Economic & Social History Review* 2, no. 2 (April 1965): 85–102. <https://doi.org/10.1177/001946466400200201>.
- Ghosh, Baidyanath. N. *Gandhian Political Economy: Principles, Practice and Policy*. Aldershot: Ashgate, 2007.
- Ghosh, Kali Charan. *Famines in Bengal, 1770–1943*. Calcutta: Indian Associated Publishing Co., 1944.
- Greenberg, Michael. *British Trade and the Opening of China, 1800–42*. Cambridge, UK: Cambridge University Press, 1951.
- Grove, Richard H. "The Great El Nino of 1789–93 and its Global Consequences: Reconstructing an Extreme Climate Event in World Environmental History." *The Medieval History Journal* 10, no. 1–2 (2006): 75–98. <https://doi.org/10.1177/097194580701000203>.
- Habib, Irfan. *The Agrarian System of Mughal India, 1556–1707*. London: Asian Publishing House, 1963.
- . "Colonialization of the Indian Economy, 1757–1900." *Social Scientist* 3, no. 8 (March 1975): 23–53. <https://doi.org/10.2307/3516224>.
- . "Studying a Colonial Economy—Without Perceiving Colonialism." *Modern Asian Studies* 19, no. 3 (1985): 355–81. <https://doi.org/10.1017/S0026749X00007654>.
- Habib, Irfan, and Ashok Mitra. *Essays in Indian History: Towards a Marxist Perception*. New Delhi: Tulika Print Communication Services, 1995.
- Hendriks, Frederick. "On the Statistics of Indian Revenue and Taxation." *Journal of the Statistical Society of London* 21, no. 3 (September 1858): 223–96. <https://doi.org/10.2307/2338224>.
- Hume, David. "Of the Balance of Trade." In *Essays and Treatises on Several Subjects*, 172–78. London: A. Millar, 1758.

- Husain, Iqbal, ed. *Karl Marx on India: From the New York Daily Tribune (Including Articles by Fredrick Engels) and Extracts from Marx-Engels Correspondence 1853–1862*. New Delhi: Tulika Books, 2006.
- India Office Records, British Library, London.
- Klein, Ira. “When the Rains Failed: Famine, Relief, and Mortality in British India.” *The Indian Economic and Social History Review* 21, no. 2 (June 1984): 185–214. <https://doi.org/10.1177/001946468402100203>.
- Kumar, Dharma. “States and Civil Societies in Modern Asia.” *Economic and Political Weekly* 28, no. 42 (October 1993): 2266–69.
- Kumar, Dharma, ed. *The Cambridge Economic History of India, 1757–1970*. Cambridge, UK: Cambridge University Press, 1983.
- Macaulay, Thomas B. “Government of India, a Speech Delivered in the House of Commons on the 10th of July, 1833.” In *Miscellaneous Writings and Speeches*, vol. 4, 551–72. London: Longmans, Green, Reader, and Dyer, 1871.
- Maddison, Angus. *Class Structure and Economic Growth: India and Pakistan since the Moghuls*. London: Taylor and Francis, 1971.
- Mahalanobis, Prasanta Chandra, and D. Bhattacharya. “Growth and Population in India and Pakistan, 1801–1961.” *Artha Vijnana* 18 (March 1976): 1–10. <https://doi.org/10.21648/arthavij/1976/v18/i1/116446>.
- Mann, Michael. “From Ledger to Budget: British Fiscal Imperialism, 1750–1800.” *Internationales Asienforum* 33, no. 3–4 (January 2002): 247–70.
- . “A Permanent Settlement for the Ceded and Conquered Provinces: Revenue Administration in North India, 1801–1833.” *The Indian Economic & Social History Review* 32, no. 2 (June 1995): 245–69. <https://doi.org/10.1177/001946469503200205>.
- Marriott, John, Bhāskara Mukhopādhyāya, and Partha Chatterjee. *Britain in India, 1765–1905: The Public Realm*. London: Pickering and Chatto, 2006.
- Marshall, Peter James. *Bengal: The British Bridgehead: Eastern India, 1740–1828*. Cambridge, UK: Cambridge University Press, 1987.
- . *East Indian Fortunes: The British in Bengal in the Eighteenth Century*. Oxford: Clarendon Press, 1976.
- . *Problems of Empire: Britain and India, 1757–1813*. London and New York: Routledge, 1968.
- Marx, Karl. *Capital: A Critique of Political Economy*. Vol. 3, *The Process of Capitalist Production as a Whole*. 1894. New York: International Publishers; proofed and corrected by C. Clayton (2006–2007) and M. Harris (2010). <https://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-III.pdf>.
- Marx, Karl, and Friedrich Engels. *On Colonialism*. Moscow: Progress Publishers, 1968.
- Mishra, Brijesh K., and Siddhartha Rastogi. “Colonial Deindustrialisation of India: A Review of Drain Theory.” *South Asian Survey* 24, no. 1 (March 2017): 37–53. <https://doi.org/10.1177/0971523118782755>.

- Moosvi, Shireen. *The Economy of the Mughal Empire: C.1595; a Statistical Study*. Delhi: Oxford University Press, 1987.
- Morris, Morris D. "Towards a Reinterpretation of Nineteenth-Century Indian Economic History." *The Journal of Economic History* 23, no. 4 (December 1963): 606–18. <https://doi.org/10.1017/S0022050700109271>.
- Mukherjee, Aditya. "Empire: How Colonial India Made Modern Britain." *Economic and Political Weekly* 45, no. 50 (December 2010): 73–82.
- . "The Return of the Colonial in Indian Economic History: The Last Phase of Colonialism in India." *Social Scientist* 36, no. 3/4 (March 2008): 3–44.
- Naik, J. V. "Forerunners of Dadabhai Naoroji's Drain Theory." *Economic and Political Weekly* 36, no. 46/47 (November 2001): 4428–32.
- Naoroji, Dadabhai. *Poverty and Un-British Rule in India*. London: Swan Sonnenschein, 1901.
- Naoroji, Dadabhai, and Chunilal Lallubhai Parekh. *Essays, Speeches, Addresses and Writings, on Indian Politics*. Bombay: Caxton Printing Works, 1887.
- Nogues-Marco. "Trade Imbalances or Specie Arbitrage? Anglo-Asian Bullion Flows in the Early Modern Period, 1664–1811." Unpublished working paper.
- O'Brien, Patrick. "The Costs and Benefits of Mercantilist Warfare." *Financial History Review* 25, no. 1 (2018): 97–112. <https://doi.org/10.1017/S0968565017000312>.
- . "The Nature and Historical Evolution of an Exceptional Fiscal State and its Possible Significance for the Precocious Commercialization and Industrialization of the British Economy from Cromwell to Nelson." *The Economic History Review* 64, no. 2 (May 2011): 408–46. <https://doi.org/10.1111/j.1468-0289.2010.00538.x>.
- Parthasarathi, Prasannan. "The History of Indian Economic History." In *Routledge Handbook of Global Economic History*, edited by Francesco Boldizzoni and Pat Hudson, 281–92. New York: Routledge, 2016.
- Postan, Michael Moisey. "Medieval Agrarian Society in its Prime. England." In *The Agrarian Life of the Middle Ages*, vol. 1 of *The Cambridge Economic History of Europe*, edited by M. M. Postan, 548–632. London: Cambridge University Press, 1966.
- Ranade, Mahadev Govind. "Indian Political Economy." In *Essays on Indian Economics: A Collection of Essays and Speeches*, edited by Mahadev Govind Ranade, 3–25. Bombay: Thacker, 1890.
- Reddy, Krishna. *Indian History*. New Delhi: McGraw-Hill, 2006.
- Richards, John F. "Fiscal States in Mughal and British India." In *The Rise of Fiscal States*, edited by Yun-Casalilla and O'Brien, 410–41. Cambridge, UK: Cambridge University Press, 2012.
- . *The Mughal Empire*. Cambridge, UK: Cambridge University Press, 1993.
- Rickards, Robert. *India; or Facts Submitted to Illustrate the Character and Conditions of the Native Inhabitants*. London: Smith, Elder, 1829.
- Roy, Tirthankar. *A Business History of India: Enterprise and the Emergence of Capitalism from 1700*. Cambridge, UK: Cambridge University Press, 2018.

- . “Economic History: An Endangered Discipline.” *Economic and Political Weekly* 39, no. 29 (July 2004): 3238–43.
- . “Economic History and Modern India: Redefining the Link.” *Journal of Economic Perspectives* 16, no. 3 (Summer 2002): 109–30. <https://doi.org/10.1257/089533002760278749>.
- . “Economic History of Early Modern India: A Response.” *Modern Asian Studies* 49, no. 5 (2015): 1657–66. <https://doi.org/10.1017/S0026749X14000602>.
- . “Indian Famines: Natural or Manmade?” In *Quest of the Historian’s Craft: Essays in Honour of Prof. B.B. Chaudhuri*, edited by Dasgupta and Bandopadhyay, 75–102. New Delhi: Manohar, 2018.
- . “Rethinking the Origins of British India: State Formation and Military-Fiscal Undertakings in an Eighteenth Century World Region.” *Modern Asian Studies* 47, no. 4 (2013): 1125–56. <https://doi.org/10.1017/S0026749X11000825>.
- . “The Rise and Fall of Indian Economic History 1920–2013.” *Economic History of Developing Regions* 29, no. 1 (January 2014): 15–41. <https://doi.org/10.1080/20780389.2014.922843>.
- Sewell, William H. “A Strange Career: The Historical Study of Economic Life.” *History and Theory* 49, no. 4 (December 2010): 146–66. <https://doi.org/10.1111/j.1468-2303.2010.00564.x>.
- Sinha, Narendra Krishna. *The Economic History of Bengal*. Calcutta: Firma K. L. Mukhopadhyay, 1956–1970.
- Stern, Philip J. *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India*. Oxford: Oxford University Press, 2011.
- Stokes, Eric. “The First Century of British Colonial Rule in India: Social Revolution or Social Stagnation?” *Past & Present*, no. 58 (February 1973): 136–60. <https://doi.org/10.1093/past/58.1.136>.
- Suzuki, Toshio. “The Rise and Decline of the Oriental Bank Corporation, 1842–84.” In *The Origins of International Banking in Asia: The Nineteenth and Twentieth Centuries*, edited by Shizuya Nishimura, Toshio Suzuki, and Ranald Michie, 86–111. Oxford: Oxford University Press, 2012.
- Tharoor, Shashi. *Inglorious Empire: What the British Did to India*. London: Hurst, 2017.
- Visaria, Leela, and Pravin Visaria. “Population.” In *The Cambridge Economic History of India, 1757–1970*, edited by Dharma Kumar, 463–532. Cambridge, UK: Cambridge University Press, 1983.
- Whitcombe, Elizabeth. “Irrigation.” In *The Cambridge Economic History of India, 1757–1970*, edited by Dharma Kumar, 677–736. Cambridge, UK: Cambridge University Press, 1983.
- Williamson, Jeffrey. *Trade and Poverty: When the Third World Fell Behind*. Cambridge, MA: MIT Press, 2011.

Appendix: EIC Fiscal Balances in India

TABLE A1. ♦ THE EAST INDIA COMPANY'S FISCAL BALANCES IN INDIA: REVENUES, 1788–1858 (SELECTED YEARS, QUINQUENNIAL FREQUENCY), POUNDS STERLING

YEAR	GROSS REVENUES						TOTAL NET REVENUE	PAYMENTS TO COLLECT REVENUE	INDIA REVENUE TO INDIA GDP RATIO (%)	UK REVENUE TO UK GDP RATIO (%)		
	LAND REVENUE	CUSTOMS	SALE OF SALT	SALE OF OPIUM	TOTAL GROSS REVENUE							
1787-1788	5,505,974	330,293	844,281	12%	289,927	4%	7,075,774	5,556,764	1,519,010	21%	1.93	9.52
1792-1793	6,553,597	203,373	1,101,779	13%	290,916	3%	8,401,927	6,833,506	1,568,421	19%	2.29	8.93
1797-1798	6,129,382	211,259	1,154,525	14%	238,044	3%	8,191,587	6,607,168	1,584,420	19%	2.24	9.03
1802-1803	10,776,663	594,218	1,446,775	11%	534,654	4%	13,771,026	11,386,993	2,384,033	17%	3.76	11.45
1807-1808	12,104,664	852,623	1,906,871	12%	802,739	5%	16,033,032	12,914,409	3,118,623	19%	4.32	14.55
1812-1813	12,628,970	1,139,502	1,674,664	10%	729,940	4%	16,686,329	13,262,908	3,423,421	21%	4.49	13.81
1817-1818	12,940,180	1,625,514	2,163,115	12%	873,598	5%	18,305,266	14,515,380	3,789,886	21%	5.28	11.52
1822-1823	14,968,765	1,797,760	2,889,201	13%	1,493,555	7%	21,908,269	16,784,803	5,123,465	23%	6.31	13.22
1827-1828	15,136,274	1,751,246	2,754,289	12%	2,051,773	9%	22,818,185	16,567,477	6,250,707	27%	6.33	10.73
1832-1833	11,086,787	1,557,625	2,078,308	12%	1,283,336	7%	18,066,503	13,955,042	4,111,461	23%	5.01	10.17
1837-1838	11,443,721	1,374,610	1,991,343	10%	2,138,610	11%	19,530,680	15,066,302	4,464,378	23%	6.92	8.80
1842-1843	12,813,304	1,401,939	2,521,943	12%	1,957,215	9%	21,190,259	16,419,931	4,770,327	23%	7.51	9.21
1847-1848	14,750,564	1,293,607	2,753,678	11%	2,564,184	11%	24,221,578	18,544,896	5,676,681	23%	8.43	8.27
1852-1853	14,728,025	1,346,232	2,495,782	9%	4,770,173	18%	26,816,508	20,947,426	5,869,082	22%	9.33	8.81
1857-1858	15,317,337	2,148,834	2,131,346	7%	6,864,209	22%	31,706,776	25,480,941	6,225,835	20%	7.66	8.28

Sources: Author's computations. India Office Records, British Library, L/AG/11/1/1 - L/AG/11/1/6, 1785-1857. Nominal India GDP calculated from Broadberry, Custodis, and Gupta, "India and the Great Divergence," tables 9, 12, and 15. GDP is given in ten-year frequencies and revenue data is quinquennial. I use the GDP closest to the revenue year to calculate the revenue to GDP ratio. The UK revenue to GDP ratio is from the Bank of England, "A millennium of macroeconomic data," version 3.1, March 2, 2017 (sheet A.27, column AX).

TABLE A2. ♦ THE EAST INDIA COMPANY'S FISCAL BALANCES IN INDIA: EXPENSES, 1788-1858
(SELECTED YEARS, QUINQUENNIAL FREQUENCY), POUNDS STERLING

YEAR	CHARGES IN ENGLAND	CIVIL AND POLITICAL CHARGES	INTEREST ON DEBT	JUDICIAL AND POLICE CHARGES	MILITARY CHARGES	MARINE CHARGES	BUILDINGS AND FORTIFICATIONS	TOTAL	SURPLUS = NET REVENUES - EXPENSES
1787-1788			639,667	15%	3,146,357	74%	95,436	4,225,459	1,331,305
1792-1793			813,391	18%	3,490,440	76%	84,187	4,621,840	2,211,667
1797-1798			1,114,146	19%	4,613,149	77%	102,660	5,972,777	634,391
1802-1803			1,515,018	17%	6,571,147	73%	186,809	9,003,841	2,383,152
1807-1808			2,547,953	23%	7,635,018	70%	347,447	10,905,300	2,009,109
1812-1813			2,732,171	26%	7,204,616	69%	248,841	10,438,841	2,824,067
1817-1818		1,382,102	11%	986,032	8%	9,279,598	157,868	12,055,078	2,460,301
1822-1823		1,636,751	14%	869,480	7%	8,533,781	635,107	11,902,623	4,882,181
1827-1828		2,164,896	14%	1,121,313	7%	10,433,629	773,455	15,527,724	1,039,753
1832-1833	1,227,536	1,555,073	12%	1,718,293	13%	7,254,934	306,289	14,123,821	-168,779
1837-1838	2,304,445	1,777,571	12%	1,365,382	10%	6,725,937	247,992	14,285,984	780,318
1842-1843	2,458,193	1,941,200	13%	1,627,246	11%	8,347,256	311,217	17,765,257	-1,345,326
1847-1848	3,016,072	1,951,836	12%	1,979,077	12%	8,825,810	162,551	19,488,893	-943,997
1852-1853	2,697,488	2,082,225	10%	2,346,801	11%	9,658,754	344,116	20,938,024	9,402
1857-1858	4,492,470	4,019,886	12%	2,196,672	7%	15,962,708	2,660,485	33,345,163	-7,864,222

Sources: Author's computations. India Office Records, British Library, L/AG/11/1-1 L/AG/11/1/6, 1785-1857.