Foreign Investment and Imperial Exploitation: Balance of Payments Reconstruction for Nineteenth-Century Britain and India
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Foreign investment and imperial exploitation: balance of payments reconstruction for nineteenth-century Britain and India[1]

By JAMES FOREMAN-PECK

Q.: Is there a role for the multinationals?

Rajiv Gandhi: We are wary of large companies. You must remember the British East India Co. (Interview with the Indian Prime Minister, *Newsweek*, 3 June 1985)

British economic development in the nineteenth century was closely linked to the international economy. It was also inseparable from the naval and military strength which tied economic relations to both formal and informal empire. By far the largest trading nation and overseas investor, Britain by 1901 ruled a formal empire of 11.2 million square miles, with a population of almost 400 million spread over the whole world. What economic benefits she acquired and conferred through these relationships has remained an emotive issue in world politics to this day. As the largest and economically most important colony, an empire within an empire, India had the most to gain or lose from imperial exploitation or benevolence.[2] British economic and political influence was not confined to the formal empire but extended to a large number of countries which were susceptible to the tenets of economic liberalism or which were closely tied to the British market.[3]

A statement of the transactions between a country and the rest of the world, the balance of payments, should measure at least some of the flows responsible for the transformations wrought by imperial relations, both formal and informal. Precisely what was the nature of those relationships has remained controversial, although Davis and Huttenback's study has

[1] Participants in the Cliometrics Conference, Urbana-Champaign, Illinois, the Economic History Society Conference, Cheltenham and in a seminar at Bielefeld, together with Ian Molho, Oliver Westall, and Bill Kennedy have helped to improve earlier versions of this paper, but are not responsible for remaining errors, omissions, and lapses from good taste.

[2] The balances of payments of the United Kingdom and India in the mid-nineteenth century are described in Foreman-Peck, *History of the world economy*. For most of the period India was second in importance only to the United States as Britain's trading partner.

[3] Gallagher and Robinson maintained that British governments encouraged British trade in the mid nineteenth century and on that basis controlled an informal empire. McLean believes that the informal empire of that period was not based upon economic considerations but that in some respects the Gallagher and Robinson thesis corresponded with late nineteenth- and early twentieth-century economics and policy. Gallagher and Robinson, 'Imperialism' and McLean, 'Finance'.

clarified a great deal.[4] Part of the controversy is based upon definitions and therefore section I first considers the idea of exploitation, so often assumed intrinsic to empire, before discussing how evidence for it might be found in the record of international economic relations. Sections II and III concentrate upon balance of payments reconstructions respectively for nineteenth-century Britain and India, primarily with a view to identifying unrequited transfers and exploitative profits from foreign investment. In so doing, some light can be cast on Platt's contention that the British overseas capital stock in 1870 and 1913 has been greatly overestimated.[5] Although the greater portion of the analysis is concerned with possible exploitation by foreign investment, the final part of section III measures the price effects of one potential major source of gain to Britain and loss to India, the depreciation of the rupee in the last quarter of the nineteenth century consequent upon imperial transfers from India to the United Kingdom.

I

Exploitation may be defined as a relationship in which one party gains at the expense of another. The exploited group will be better off by withdrawing from the relationship whereas the exploiter will be worse off.[6] Only in the context of an alternative world into which parties could withdraw can the notion therefore be given any content.

In a two-way classification of a relationship in terms of gains and losses, two of the cells in figure I correspond with exploitation. For nineteenth-century liberals and neoclassical economists, international market relations provide mutual gains from trade even if monopoly or monopsony power distributes the gains from trade unfairly. This group sees competitive markets as the 'state of nature', so that 'neoclassical exploitation' occurs when bargaining power is asymmetrically distributed. Had the Crown Agents used their right to supply British colonies to charge colonial governments above world prices for stores, then clearly the British would have been neoclassically exploiting their empire and the colonies would have been better off buying on world markets (the relationship would fill the top right cell in figure I).

Imperial relations provide the possibility of exploitation because they seem to create barriers to market entry, redistribute rights, and impose obligations. But some form of property rights, their enforcement, and adjudication of disputes are essential for a market to flourish. The first conception of rights as legal barriers offers a more fundamental form of imperial exploitation, the second draws attention to the possibility of mutual gains from empire. To the extent that the British Empire created conditions in which trade could flourish, by providing law and order, by transferring commercial institutions, technology and capital, and by improving transport and communications facilities, Britain's poorer trading partners must have benefited as she did. If the empire was largely an efficient response to the

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[4] Davis and Huttenback, *Mammon and the pursuit of empire*.

[5] Platt, 'British portfolio investment'; *idem, British investment overseas*.

[6] Roemer, 'Exploitation'. Drummond, *Imperial economic policy*, pp. 427–46 mainly discusses what in this paper is called neoclassical exploitation.
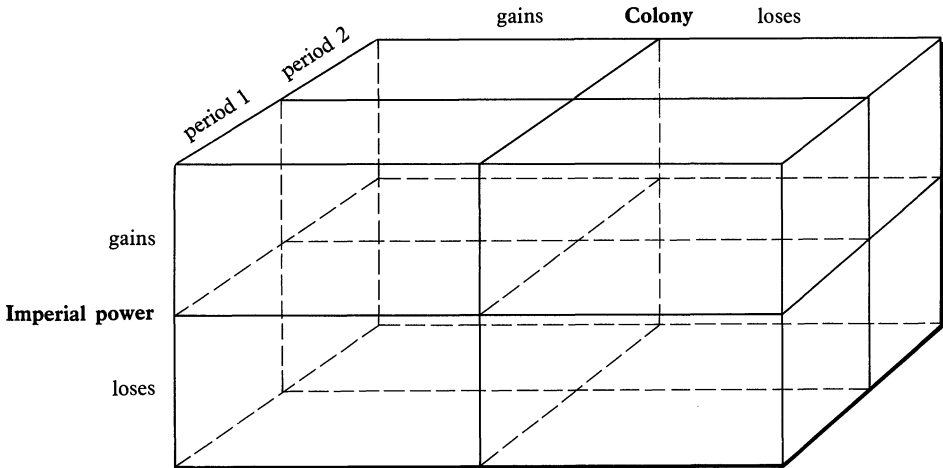
Figure 1. *A taxonomy of gains and losses from empire*

burgeoning of nineteenth-century trade, a means of overcoming transactions costs, then world well-being was enhanced.[7] The British gains from the nineteenth-century British Empire were not exploitative and the relationship occupies the top left cell.

On the other hand if empire unjustly redistributed property rights and trading privileges, the recipients of the rewards linked with the rights were not entitled to them.[8] They gained at the expense of others and the imperial relationship is placed in the top right cell. Entitlements provide a key to definitions of exploitations because the assets an economy is notionally entitled to take when withdrawing from a relationship determine whether that economy gains or loses. How an economy or society would have been able to employ those assets in succeeding time periods is ultimately of even greater significance for the evaluation of a relationship. Thus a second block of possibilities corresponding to a second period must be entered behind the first in the figure. A relationship then is classified by a pair of cells. 'Socially necessary exploitation' corresponds to a diagonal relationship between cells. The colony may at first have lost because of the expropriation of assets and the imperial power may have gained but here expropriation ultimately raised living standards of colonial workers and their children, a move from the front top right cell to the rear top left cell. Marx believed this was true of

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[7] As Fieldhouse believes (see *Colonialism*).
[8] This is Svedberg's ('Colonial enforcement') maintained hypothesis.

the relationship between Britain and India in the nineteenth century.[9] Alternatively the economy or society of the imperial power may have become distorted by the relationship, so that after initial exploitative gains, vitality is lost and assets employed unproductively, a move from the front top right cell to the bottom rear right cell in the figure.

Gladstonian 'Little Englanders' and free marketeers who are little concerned with the institutional framework which markets need to flourish, place imperial relations in the bottom right cell.[10] Both groups lose from the relationship because empire is costly, coercive, and economically redundant. The emptiest cell is the bottom left but even this is filled by Davis and Huttenback, who believe the United Kingdom bore a disproportionate share of the defence costs of the nineteenth-century British Empire. Perhaps also the Victorian economist Alfred Marshall would place the empire there.[11]

Summarizing a country's economic relations with the rest of the world, a true balance of payments statement must therefore illuminate the contribution of exploitation to the development of an economy as open as the United Kingdom in the nineteenth century. Equally, if India's comparatively slow development stemmed from exploitation by the imperial power, then traces should be found in India's balance of payments.

The basic elements of the balance of payments can be expressed by the following identity:

$$P_x X - P_m M + iK(-1) - I - U = 0 \tag{1}$$

where P_x, P_m, X, and M are respectively the aggregate prices and volumes of exports and imports (so that $P_x X - P_m M$ is the trade balance), i is the average return on net capital stock abroad last period $(K(-1))$, I is net foreign investment within the period of the account and U is transfers such as the 'home charges' that India paid to Britain, international theft, immigrants' remittances, and so on.

Each of the terms of the balance of payments identity has been considered a means of gains from empire or exploitation (which, as has been seen, are not the same thing). Edelstein chose $P_x X$ as the affected variables. If there had been no British Empire, Edelstein maintains that the politically independent former colonies would have placed higher tariffs on British exports and caused a deterioration of the British terms of trade.[12] The United Kingdom would have been made worse off by approximately one half of the product of the higher tariffs and the relevant exports.[13] These gains from empire, however, cannot be called exploitation on any sensible definition for

[9] Melotti, *Marx and the Third World*, pp. 114-5.

[10] Gladstone's views were, of course, more subtle than this classification suggests but the following quotation indicates on what grounds he did not favour empire:

> It is plain that the colonies are not to be desired for revenue, because they do not yield it. It is plain that they are not to be desired for trading monopoly, because that we have entirely abandoned. It is plain they are not to be desired for patronage . . . it is perfectly plain that mere extension of territory is not a legitimate object of ambition.

Address delivered to the members of the Mechanics Institute at Chester, 12 Nov. 1855, in Knapland, *Gladstone and Britain's imperial policy*, pp. 198-9.

[11] Marshall, *Official papers*, pp. 290-1, 312-3.

[12] Edelstein, 'Foreign investment and empire'.

[13] Pearce, *International trade*, p. 171.

two reasons. First, because the relatively small countries (with the exception of India) that made up the empire individually could not have influenced their terms of trade. Rather Britain could have (neoclassically) exploited the colonies in this model by placing tariffs on their exports to Britain, but did not do so. This is essentially McCloskey's optimum tariff argument that Britain would have been better off with more protection against imports in the 1880s.[14] Forced exchange depreciation by a colony operates in a similar manner to an optimum tariff by lowering the price the imperial power has to pay for imports (P_M). Second, Edelstein's gains from empire were not exploitative because from a neoclassical point of view, the norm, deviations from which are exploitative, is the competitive condition of free trade that Britain tried to maintain in relation to her colonies for most of the time.

A Marxist form of exploitation also reflected in import prices P_M, would arise under the empire if there were an unjust acquisition of rights over land. From the viewpoint of the consumers of primary commodities the impact of the 'theft' of land was similar to the coming of the railways. Just as railways shifted rightwards the supply curves of products intensive in transport, so land stealing shifted the supplies of products intensive in such land. The measure of exploitation is how much higher primary commodity prices would have been if the 'theft' had never occurred. These gains will have been positive despite the diversion of resources from other activities to land stealing, in the absence of legal protection for the original inhabitants, until returns were equalized at the margin.[15] Since this source of exploitation associated with British formal and informal imperial relations was almost certainly too small to influence world prices of major commodities under free trade (compared with, say, the opening of the American West), attention is devoted to other elements of the balance of payments. A closely related approach to estimating the maximum impact of exploitation is O'Brien's imputation of the maximum profits that British merchants might have gained at the expense of less developed countries, derived from the prices of eighteenth-century traded goods.[16] The weakness of this measure is apparent from the foregoing analysis. Under competition in the export and import trade, excess profits would be bid away but that will not have prevented British and other consumers benefiting from exploitatively low prices, supposing for instance that land in colonized countries had been stolen from the original inhabitants; quite the reverse.

Unrequited transfers, U, should be included as part of a broader definition of returns to foreign investment since the expenses of empire were met in part by the same country from which an outflow of investment to the empire took place. What transfers were requited, which were not, and how they should be measured are controversial matters. The use of Indian troops around the Indian Ocean in China, Abyssinia, and Egypt to serve British imperial interests has been represented as an unrequited transfer from India to Britain.[17] Whether an independent India would in any case have

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[14] McCloskey, 'Magnanimous Albion'.
[15] Compare Thomas and McCloskey, 'Overseas trade and empire', pp. 99-100.
[16] O'Brien, 'European economic development'.
[17] Dutt, *India in the Victorian age*, p. 38.

undertaken such operations and how they should be costed is problematic. Experience after independence, when Indian armed forces increased to one million compared with one-fifth of that number under the Raj, suggests that even if the theatres might have been different, the expenditures would have been greater.[18] In any case it is unlikely that Britain would have seen these military operations as in the national interest had India not been part of the empire. Thus abandoning the relationship and forgoing that 'transfer' would not have made the United Kingdom worse off and therefore Britain was not thereby exploiting India.

Reverse exploitation on the grounds of defence spending also seems unlikely in view of Britain's heavy dependence on world trade. Much of the empire was acquired because of prior trading interests and the expensive British navy was employed to protect trade routes rather than colonies. Between 1860 and 1912 expenditures per annum were £1.32 per head by Britain, £0.08 by India, and £0.11 by self-governing colonies.[19] For India and the colonies defence spending was so small that it could not have been a major source of more conventional exploitation, even if some Indians were deprived of the high military office they would otherwise have attained. Where defence is concerned, there were economies of scale and both groups probably gained from the relationship, although these gains in total were not necessarily recorded, even in principle, in a balance of payments statement.

In Anglo-Indian relations, the 'home charges' were the most noticeable transfer that could be labelled 'unrequited'. Whether they were so depends upon the value placed upon the British administration of nineteenth-century India for which these charges paid. In the limit they could be represented as a component of the total return to imperial investment. Then a test of exploitation is whether India could have obtained elsewhere cheaper capital and administration than she received from Britain. For the United Kingdom the question is whether the capital and administrative skills devoted to the empire could have been employed more productively at home or elsewhere in the world.

The penultimate component of the balance of payments identity is the balance of profits, interest, and dividends, the product of the net foreign capital stock and the return on it. Exploitative returns require entry barriers which nationalism and empire could provide. If returns to foreign investment were exploitatively high, in the sense that other investors would have been prepared to provide the capital at lower rates, then market rates of return will not reveal it. The market capitalizes excessive profits in the asset price once the asset is traded so that rates of return are equalized except for risk premia.

· That may be an objection to Edelstein's analysis of 566 first and second class securities for 1870-1913 which yielded a return of 6.61 per cent (arithmetic mean) on domestic equity and 8.66 per cent on non-domestic equity. Overseas assets appeared to have lower *ex ante* risks and higher risk-adjusted returns.[20] Calculations for the internal rate of return to British

[18] Maddison, *Class structure*, p. 80.
[19] Davis and Huttenback, 'Political economy', p. 127.
[20] Edelstein, *Overseas investment*, p. 157.

investment in the nineteenth-century Spanish mineral industry are not vulnerable to the same criticisms. Harvey and Taylor found that for their sample of 123 companies between 1851 and 1913 the returns were 9.78 per cent or 10.45 per cent depending on the method of calculation.[21] Only one in five of the companies was profitable and earlier entrants tended to be more profitable than later. Davis and Huttenback also found a similar tendency for falling profitability on empire investment. In their sample of 482 firms, which included businesses which traded shares, sole proprietorships, and partnerships, empire returns averaged 15.4 per cent between 1860 and 1879 (compared with 12.2 per cent return on domestic equity) and 6.7 per cent between 1880 and 1914 (compared with 8.3 per cent).[22] No comparable studies have analysed returns in the first half of the century to see if this trend can be extrapolated backwards.

The final component of the identity, the net foreign capital stock, has generally been assumed to have reached the colossal figure of around £4 billion for the United Kingdom by the outbreak of the First World War. In a recent book and an earlier article, Platt has proposed radical revisions downwards in the 1913 and 1870 capital stocks.[23] If accepted, these changes obviously carry implications for the whole structure of British international economic relations. Platt suggests that £500 million is a more accurate figure for British portfolio investment holdings overseas in 1870. Previous estimates have been too high, he believes, because they have made insufficient allowance for the fact that foreign securities (government bonds and those of joint stock companies) issued or quoted in London were not necessarily bought by UK residents. Though foreign purchases in London are often conveniently assumed to have been offset by British purchases abroad, there is no evidence that this was the case. Assets initially bought by U.K. residents were often later acquired by foreign residents, yet measures of British-owned capital overseas typically neglect this possibility. In his later book, Platt proposes the figure of £3.1 billion for the 1913-4 stock, of which £2.63 billion was portfolio investment.

II

Platt's method is to examine contemporary source material. He believes the foreign investment and capital stock series derived from balance of payments estimates constructed by Imlah for Britain from 1815 to 1914 are totally unreliable, although widely accepted.[24] Evidence of exploitative transfers or excessive rates of return in Imlah's figures, if any occurred, might reasonably be expected. Unfortunately the method of reconstruction does not allow us to identify such flows even if they existed, in view of the solution adopted for computing invisibles and Imlah's assumption of 'normal' rates of return on investment overseas. However rearrangement of Imlah's estimates makes possible some conjectures about exploitative transfers in

[21] Harvey and Taylor, 'Mineral wealth'.
[22] Davis and Huttenback, *Mammon*, p. 105.
[23] Platt, 'British portfolio investment'; *idem, British investment overseas*.
[24] Imlah, *Economic elements*.

aggregate—and tests of Platt's scepticism about Britain's net foreign assets.

Following Viner's study of the Canadian balance of payments, Imlah's cumulative balance approach to reconstruction gives rise to a first order difference equation in the net overseas capital stock.[25] Typically investigators such as Imlah take a starting value of this capital stock and try to 'hit' another near-terminal value of the stock, or value of net foreign earnings, by manipulating the unknown items of the balance of payments. When a 'hit' is scored, the values of the invisibles and other assumptions are taken to be justified by the consistency of the estimates.[26] Taking equation (1) but substituting TB for the trade balance in visibles, including bullion, and invisibles, where K is the net overseas capital stock, and d the depreciation, bankruptcy, or default rate:

$$I = TB - U + iK(-1) \ldots \text{ the annual balance of payments identity}$$

and:

$$K = (1 - d) K(-1) + I \ldots \text{ the capital stock identity} \ldots (2)$$

The technique is to choose an initial value for the overseas capital stock K_o, and substituting for $K(-1)$, compute I and then K with given values of TB, U, i, and d. Then this value of K is substituted as the lagged value in the next year's balance of payments, repeating the process for the entire period.

Alternatively equations (1) and (2) can be solved to obtain:

$$K = [(1 - d) + i] K(-1) + TB - U \qquad\qquad (3)$$

so that a single parameter can be chosen for the rate of profit (r) after defaults, depreciation etc. $[(1 - d) + i]$.

If the rate of profit were characterized by a trend over time, a trajectory for the rate of return on private net foreign investment of the following form might be tried, in addition to the constant average rate:

$$r = r_o + a.\exp (-b. \text{ time}) \qquad\qquad (4)$$

where r_o is the rate to which r is asymptotic and 'a' and 'b' are parameters.

Imlah's original reconstruction exercises were undertaken before relatively cheap computing power allowed the use of 'nested do-loops' to test the sensitivity of balance of payments estimates to alternative, perhaps equally plausible, assumptions. His balance of payments estimates can now be examined much more easily than when they were made. For example, Imlah admitted that his assumed initial value for net capital overseas, £10 million, was a 'guesstimate' and that the correct value may have been zero at the end of the Napoleonic wars. Feinstein reached much the same figure, about £8 million, but he believed the range of error in this estimate was large.[27] The implications of alternative assumptions for the balance of payments and overseas capital stock over the ensuing century can now be quickly

[25] Viner, *Canada's balance.*

[26] It must be admitted that this account is itself a psychological reconstruction because unsuccessful assumptions were not reported.

[27] Feinstein, 'Capital formation'.

computed.[28] In so doing, alternative artefacts are created.

These exercises can also be interpreted as constructing 'counterfacts'—sets of data that would have been generated if conditions had been different. If, for example, Britain had been less successful in the mercantilist wars of the eighteenth century, her foreign assets in 1816 might have been zero instead of £10 million. With this interpretation a further difficulty arises. Adjustments in the domestic and foreign economies could reasonably be expected to have taken place if the balance of payments changes were substantial and these adjustments would feed back to the payments position. None the less the numbers obtained might be interpreted as limiting values for likely outcomes. Lowering the initial value of the capital stock will reduce overseas earnings at the end of the nineteenth century. The resulting figures can be regarded as a lower bound upon the reduction because some investment would probably have been diverted from domestic to foreign assets and perhaps interest rates would have been higher.

Arguably the most doubtful aspect of Imlah's reconstruction was his 'profits on foreign trade and services' for which he allows 4.5 per cent in 1880 on the total value of trade excluding bullion. This is in addition to the 2.25 per cent that he allows for business services—insurance, broking, and shipping commissions (£15.696 million in 1880). Included in 'profits on foreign trade and services' are receipts from marketing and buying, from engineering services, colonial administration, and pensions. The shipping estimate is as soundly based upon Giffen's work as could reasonably be expected, but Giffen, who when he provided the shipping estimates was trying to explain the visible trade deficit (and popularizing the term invisible exports), made no mention of this 'profits' item.[29] The percentage figure appears to come from a 'guesstimate' by Bourne.[30] Of course there is no obvious reason why colonial administrations and pensions should be linked to exports, other than the difficulty of doing better.[31] This whole category is an obvious target for claims of exploitation.

Table 1 compares alternative estimates of selected components of the balance of payments with Imlah's for 1907, 1910, and 1913, years when the most complete data should be available. The Board of Trade devoted more effort than Imlah did to getting right the shipping balance in the years immediately before the First World War, yet obtained results not very dissimilar.[32] Following Feinstein, exports of South African diamonds are included as additional imports.[33] Net tourist expenditure is now available but, since it is difficult to know what allowance to make for smuggling and under-recording of imports, we merely note that the implied allowance for these items drops between 1907 and 1910.[34] Only some of the components of Imlah's category 'Insurance, brokerage and shipping commissions' can be

[28] For example Davis, *Industrial revolution and overseas trade*, p. 85.
[29] Giffen, 'Import and export statistics', p. 222.
[30] Bourne, 'Growing preponderance of imports over exports', p. 29.
[31] Expenditure of the Indian government in England in 1880 amounted to £17 million (although the figure includes debt service and purchase of stores), more than half of Imlah's 4.5 per cent.
[32] *Board of Trade Journal*, 3 Feb. 1921 and 29 March 1923.
[33] Feinstein, *National income, expenditure and output*, pp. 116-7.
[34] Prest and Adams, *Consumers' expenditure*, p. 170.

Table 1.   *Alternative estimates of components of the balance of payments of the United Kingdom, 1907, 1910, and 1913 (£m.)*

	1907 Imlah	1907 Alternative	1910 Imlah	1910 Alternative	1913 Imlah	1913 Alternative
(1) Balance of merchandise trade & bullion + c.i.f. of imports	−132.1	−141.0[a]	−149.4	−157.9[a]	−143.4	−155.5[a]
(2) Shipping income	91.9	85.0[b]	93.5	90.0[b]	107.4	94.0[c]
(3) Insurance, shipping commission, brokerage, bankers [life insurance only]	23.3	25.0[d]	24.2	25.0[d] [0.045]	28.1	24.0[d] [−0.52]
(4) Tourism, smuggling and unrecorded imports [tourism only, Prest and Adams]	−17.0	N/A [−3.7]	−17.2	N/A [−7.85]	−21.0	N/A [−9.009]
(5) Foreign trade and services and emigrants fund	44.2	10.0[e]	46.2	10.0[e]	53.7	10.0[e]
(6) Net income from overseas	143.8	160.0[f]	170.0	180.0	199.6	210.0[g]
(7) Balance for net foreign investment	154.1	105.8[h]	167.3	120.0[h]	224.3	152.0[h]

Notes:
[a] Includes exports of South African diamonds, following Feinstein, *National income.*
[b] An estimate of Giffen for 1910 reduced for 1907 by the Board of Trade.
[c] This figure is based on £7.5m charter money plus £6m port dues (guess) plus £17m bunkering in U.K. ports minus £6m foreign port dues (guess) minus £4m foreign stores (guess) minus £6m foreign bunkers. The charter money figure is based on about 25m deadweight tons of British shipping on overseas trade in 1913 and the average rate, based on one year general time charters but making some allowance for higher liner earnings, was about 5s. per deadweight ton per month. British bunkers in foreign trade were 21.032m tons at an estimated average of 16s. per ton. (*Board of Trade Journal*, 3 Feb. 1921, pp. 115-7).
[d] Giffen's 1903 estimate of bankers, brokers, insurance companies etc. (Board of Trade).
[e] Board of Trade's 'other services'.
[f] Appears to make no allowance for foreign income from investment in the U.K. (Paish, 'Great Britain's capital investment') or for £20m for income from private investment abroad.
[g] Income abroad identified for income tax purposes was £118 m in 1913-4, £19 m more than three years previously. The Board of Trade's calculation was 210 which approximately equals (187 − 99) + 118.
[h] Based on summing the alternatives (1), (2), (3), (5) and Imlah's (4) and (6).
Sources: Imlah, *Economic elements; Board of Trade Journal,* 29 March 1923, p. 386 and 3 Feb. 1921, pp. 115-7; Prest and Adams, *Consumers' expenditure; Statistical abstract for the United Kingdom.*

checked, but Giffen's 1903 estimate seems accurate. The net balance of payments contribution of life insurance within this category was actually negative in 1913. Fire insurance business abroad was about £14 million (double domestic business), but business is not net earnings, even assuming no British payments were made to foreign fire insurance.[35] Profitability on foreign business was in fact volatile (the 1906 San Francisco fire cost British insurance companies £10 million), perhaps averaging about 5 per cent, which generates only a very small proportion of Imlah's 'Insurance etc.' category. Foreign fire insurance business undoubtedly grew rapidly towards the end of the century, a trend not reflected in Imlah's figures.[36] Marine insurance

[35] Westall, *History and business of insurance,* pp. 151-2, n. 26.
[36] Supple, *Royal Exchange Assurance,* pp. 241-2.

on British shipping was of course excluded from invisible exports strictly speaking. Already included in the value of imports as recorded in the *Statistical abstract for the United Kingdom*, it must also be included in the balance.

The big discrepancy is between the Board of Trade's 'other services' and the corresponding figure in Imlah, 'profits on foreign trade and services', as the earlier discussions anticipated. Imlah's balance is higher by a quarter to a half of the compromise balance for net foreign investment, largely because of this discrepancy. If this was a genuine error then either the net foreign capital stock has been overstated (as Platt believes) or there is a missing item in the balance of payments statement which may be an exploitative transfer.

To examine this and other hypotheses a number of balance of payments simulations were run. The results are presented in table 2. Using all Imlah's original data the first simulation in table 2 shows the average rate of return on net foreign assets 1816-1913 that would generate an overseas net capital stock of £3,990 million in 1913. An average profit rate of 5.1 per cent was sufficient to generate approximately Imlah's 1913 capital stock. It proved impossible to find a simple falling trajectory for the rate of return consistent with the data. When the initial capital stock was increased from £10 million to £12 million, the profit rate was reduced to 5.05 per cent. Perhaps the soundest benchmark is the Paish/Imlah/Feinstein net income from abroad of 1907.[37] Targeting on this value yields an average net profit rate of 5.05 per cent. The implied capital stock figures follow Imlah's closely, though what looks like a one-year lag emerges.

An attempt to improve on Imlah's estimates by replacing the import average value index in his freight series by Cairncross's freight index made little difference.[38] The terminal net foreign capital stock was about 10 per cent higher (aiming for the 1907 foreign income target). The 1870 capital stock was close to Platt's £500 million portfolio figure at £527 million and the interest rate fell to 4.75 per cent. What difference would it have made if the proportion of trade allocated to 'profits from trade' were reduced? Suppose 0.5 per cent of the value of exports, imports, and re-exports were derived from income associated with imperial gains made by force, then these ill-gotten gains appear to have more than doubled the overseas capital stock by 1913. The counterfactual terminal value falls to £1,586 million and the 1870 value to £426 million—assuming the same average interest rate as before of 5.05 per cent. Thus 1913 overseas income is cut to £80 million from the figure of £200 million that amounted to nearly 10 per cent of 1913 net national product. When an 1816 initial value of zero is combined with this assumption, the 1913 capital stock drops to £336 million, a fall of more than 90 per cent, and the 1870 value is £283 million.

One interpretation of these results is that they demonstrate the sensitivity of the net foreign capital stock to the percentage of trade chosen for profits on foreign trade, or exploitation. The counterfactual interpretation by

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[37] Paish, 'Great Britain's capital investment'; Feinstein, *National income, expenditure and output*.
[38] Cairncross, *Home and foreign investment*, p. 176.

Table 2. *Simulations of the United Kingdom's balance of payments,
1816–1914*

	Assumed initial net foreign capital stock 1816 (£m)	*Net foreign capital stock 1870 (£m)*	*Net foreign capital stock 1913 (£m)*	*Average rate of return (%)*
(1)	10	670	[3,990] (4,015)	5.10
(2)	12	683	[3,990] (4,021)	5.05
(3)	10	683	4,021	5.05
(4)	0	515	2,551	5.10
(5)[a]	10	527	4,400	4.75
(6)[b]	10	426	1,586	[5.05]
(7)[b]	0	283	336	[5.05]
(8)[b]	10	564	[3,990] (3,988)	6.11
(9)[c]	10	407	[3,990] (3,913)	8.20

Notes: 1907 foreign income target of £143.8m unless the target is otherwise indicated by [ ]. Figures in parentheses underneath indicate the actual value attained.
[a] includes the Cairncross freight index.
[b] 0.5 per cent of foreign trade assumed due to unrequited transfers rather than profits on foreign trade and services and removed.
[c] As [b], but 2.5 per cent of foreign trade removed.

contrast says that if less is earned overseas, the same amount less would have been invested overseas (as Frank believes).[39] The power of compound interest works here because all the exploitative gains are assumed to be ploughed back. With the initial capital stock reduced to zero (no eighteenth-century exploitation), application of the same average profit rate as before lowers the terminal capital stock to £2,551 million (row (4) in table 2). On the other hand, reallocating invisible trade receipts to the returns to capital does not raise profits to exploitative levels. Transferring 1 per cent of the value of exports, imports, and re-exports to profits boosts average returns over the century to a little over 6 per cent and switching 2.5 per cent raises the profit rate to not much above 8 per cent.

These numbers refer to profits from all trading areas, not merely from the formal and informal empire. It is possible that, as Davis and Huttenback showed for their sample in the 1860s and 1870s, empire returns were considerably higher.

III

As the United Kingdom's second most important trading partner for much of the nineteenth century and her largest imperial possession, India had long been a source of profit and a destination for British investment and enterprise. The Warren Hastings trial of 1788-94 was fuelled by the belief that British

[39] Frank, 'Multilateral trade imbalances'.

rulers were taking advantage of their position to enrich themselves.[40] 'Nabob', at first a special term to describe persons returned from India with a fortune, entered the English language to describe any extremely wealthy person. Ever since, questions have remained unanswered as to the returns, broadly interpreted, to British economic and political activity in India. Examples of very profitable investments by British merchants can easily be found from the fragmentary and biased sample of surviving business records. Within 12 years of its founding in 1799 with capital of 50,000 rupees, Binny and Co. returned profits of R140,000. William Mackinnon's partnership began trading in 1847 and by 1850, on a capital of about R72,000, profits of R16,171 were recorded, rising the following year to R68,604. Assets in 1852 were valued at more than nine times the original capital. Mackinnon's India General Steam Navigation Co. paid dividends of up to 44 per cent.[41] The 1852 prospectus of the Chartered Bank of India, Australia, and China announced 'bearing in mind the very high rate of interest which prevails in the East and the very lucrative nature of the Exchange Business . . . a very large Annual Dividend may be looked for with certainty.'[42]

Against these high rates of interest must be weighed the risks, which in the crisis of 1866 eliminated 39 of the 46 Indian exchange banks. What proportion of the handsome returns was remitted to Britain and what proportion was ploughed back is difficult to tell but from the viewpoint of the balance of payments the results were similar; the import surplus increased either British claims on Indian assets or British entitlements to Indian goods and services.

The scale of British enterprise in India increased enormously over the century. By 1898 the Finley Group had £4.36 million invested in tea estates and employed 70,000 workers. The group had acquired jute mills in 1873, moved into shipping in 1882, and into Bombay cotton mills in 1902.[43] By the end of 1911, 373 joint stock companies were estimated to be carrying on business exclusively or almost exclusively in India, but were registered elsewhere. With paid-up capital totalling £77.979 million and debentures of £45.353 million, the average size of the companies dwarfed the more numerous Indian-registered enterprises.[44] The sum of capital and debentures amounts to about one quarter of Platt's estimate of British foreign direct investment in 1913/4 and exceeds Dunning's figure of $450 million total foreign direct investment in India and Ceylon in 1914.[45] Paid-up capital of the 2,463 Indian-registered companies in total was considerably less at £46.251 million, with £6 million debentures. Railways accounted for nearly half of the capital of the companies registered outside India, and tea plantations for about one-fifth. Of the Indian-registered companies, mills and presses were the single largest group.

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[40] At the end of 13 years, first as Governor, then as Governor General, Hastings's fortune amounted to £80,000. As Governor General his salary reached £25,000 a year. Clive accumulated £1 million in a shorter time: Turnbull, *Warren Hastings*, pp. 178-9.
[41] Jones, *Two centuries*, pp. 9, 15, 48.
[42] Mackenzie, *Realms of silver*, p. 142.
[43] Chapman, *Merchant banking*, p. 140.
[44] *Moral and material progress, 1911-2*, pp. 297-8.
[45] Dunning, 'The level and structure of international production'.

British banks controlled India's foreign trade finance and British agencies supplied services for the coastal trade. The insurance and freight on imports were almost entirely paid to the British. Consequently the Indian balance of payments was the mirror image of the British, with a deficit on trade in invisible items, and on the balance of profits interest and dividends. Another term, also reflected in British payments, was the home charges, paying for pensions to British former Indian civil servants and army officers, the purchase of stores and army charges.

The balance of interest, profits and dividends in the Indian balance of payments may be divided into government and non-government components. The sterling debt on government account is readily available from the official statistics, as are the interest payments. Interest payments were the largest single item of the service payments, and become even larger if the payment for the railways is included.[46] But the balance of non-commercial transactions was also substantial, though unlike freight payments, it was not rising in the years before the First World War. Along with the home charges and interest payments, it is these which might be said to constitute the drain on India's economy. The railways were probably a benefit worth paying for and so should perhaps be excluded. The net interest payments in Pandit's reconstruction presuppose a low rate of return. If the returns were higher, foreign investment in India would have had to be higher, or the capital stock lower.

If there had been no British Empire then home charges and the balance of non-commercial transactions would have been eliminated from the nineteenth-century Indian balance of payments and other components would have changed, such as the commodity balance, foreign investment in India, and net interest payments. In addition, the outcome of a hypothetical exercise of this type would be sensitive to the assumed levels of indebtedness at the beginning of the period of analysis.

Since the value of government debt held in the United Kingdom throughout the period is known, equation (3) can be modified to:

$$K_P - K_P(-1) = TB' + H - (K_G - K_G(-1))$$
$$+ rK_P(-1) + iK_G(-1) \tag{4}$$

where H is Indian government expenditure in England including interest on government debt held in England, K_P is private capital, K_G is government debt, TB' is the trade balance, and any private unrequited transfers are included in the net rate of return on private capital, r. The trade balance figures are net of government imports because these figures are already included in the expenditure in England.

The costs of government debt service are included in H, and consequently the only initial value needed is for the private capital stock which is assumed to be the capitalized value of any monopoly and coercive rights, as well as legitimate assets. The private export of funds has been estimated by

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[46] Pandit, *India's balance of indebtedness*, tab. XX and XXI, p. 101 and p. 103. The net interest payments in Pandit's reconstruction presuppose a low rate of return. If the returns were higher, foreign investment in India would have had to be higher, or the capital stock lower.

Chaudhuri at £1 million at the beginning of the period analysed here, but the same source also suggests a figure of £3.5 million per annum for the home charges, so that together with debt repayments, annual transfers may have been £5-6 million.[47] Crawford estimated a total remittance of £4.5 million in 1835-6.[48] Expenditure in England amounted to £2.3 million in 1837-8, the first year of the balance of payments simulation.[49] Then Crawford's figure implies approximately £2 million of private remittances. At 10 per cent, Chaudhuri's assumptions suggest a private capital stock of £10 million and on Crawford's assumption £20 million. The rate of interest in India seems to have been at about that level. Indian bankers charged 12 per cent and Calcutta agency houses offered 8 per cent for deposits, receiving few offers.[50] By the end of the period interest rates had fallen, with the improvement of financial institutions, communications, and transport. A falling rate of return is therefore allowed for in the simulations. The target at which the balance of payments equation is aimed is the private foreign investment in India figure for 1898/9, derived from the *Economist* by Pandit (R37.5m).[51]

With a 3 per cent value for r_0 and an initial net foreign capital stock of £20 million in 1837, the private rate of return fell from 10.9 per cent to 3.02 per cent (row (2) of table 3). The foreign capital stock only began to grow in 1855, rising in 1862 to a temporary peak which was surpassed five years later. Between 1890 and 1913 the private capital stock doubled, as it did also between 1867 and 1890. Judging by the timing, reforms of company law in India, culminating in the 1866 act may well have encouraged this upsurge in foreign investment.[52] The 1913 private capital stock on this calculation was R6,120 million, rather higher than Pandit's estimate, but the definition adopted here is wider than Pandit's and more consistent with Imlah's.

Table 3. *Indian balance of payments simulations, 1837–1913*

	Initial net foreign capital stock assumed (million rupees)	Net foreign capital stock 1858 (million rupees)	Net foreign capital stock 1913 (million rupees)	Initial rate of profit 1837 (per cent)	Terminal rate of profit 1913 (per cent)
(1)	−100	+104	−5,400	11.9	3.40
(2)	−200	−338	−6,120	10.9	3.02
(3)	−200[a]	−314[a]	−6,100[a]	10.6[a]	3.00[a]
(4)	−300	−541	−6,250	9.9	3.00

Note: [a] assuming an extra 1% on imports as compensation for under–reporting.
Sources: Target value 1898/9 net private foreign investment of R37.5m from Pandit, *India's balance of indebtedness*, tab. XXII, p. 107. (10 rupees = £1 in 1837.) Debt in England from Dutt, *India in the Victorian age*, pp. 217, 374; *Statistical abstract of British India*, 42, pp. 263, 51, 81. Foreign trade from Chaudhuri, 'Foreign trade and balance of payments'.

[47] Chaudhuri, *Economic development*, pp. 35-6.
[48] Ibid., p. 288.
[49] Dutt, *India in the Victorian age*, p. 212.
[50] Chaudhuri, *Economic development*, pp. 290-1, 298.
[51] Pandit, *India's balance of indebtedness*, p. 121.
[52] Jones, *International business in the nineteenth century*, p. 104.

In the earlier years especially, the net foreign capital stock series is quite sensitive to the assumed 1837 value (table 3). The 1858 figure actually indicates that India had a net credit position in foreign assets when a £10 million or R100 million initial value is assumed. Increasing this value from £10 million to £30 million reduces the 1837 rate of profit from 11.9 per cent to 9.9 per cent. The broad outlines of the capital stock and rate of returns levels and trajectories are fairly clear, however, even when an allowance is made for the under-reporting of merchandise imports (or alternatively for additional invisible imports). These lowered the rate of profit and reduced the foreign-owned capital stock.

Even in the late 1830s the rate of profit on foreign investment in India was apparently about the same as the domestic rate of interest. Although British investors may have gained relative to domestic opportunities, Indians could not have obtained cheaper funds from Indian sources, nor, it may be conjectured given the United Kingdom's financial pre-eminence, would money have been available at cheaper rates from other countries. The distribution of the mutual gains tilted increasingly in India's favour as communications and institutions improved. By the last quarter of the nineteenth century there can be no doubt that India had found an extraordinarily cheap source of government and private capital in Britain, judged merely by the rate of return, much lower than Britain actually received from her other overseas investments, if the results of the British balance of payments simulations are to be believed.

Did the home charges in some way offset or more than offset this low cost of capital? In 1913 the results indicate net payments of profits, interest, and dividends of about R182 million on private capital. Had the interest rate been 5 per cent, the average for Britain's foreign investment, there would have been additional charges of R120 million, and 5 per cent cannot be regarded as exploitative. The sum of home charges and non-commercial transactions amounted to R111.7 million in 1913. Even adding in the Secretary of State's balances still yields only 5.42 per cent as a gross 'return'.

A second possible source of gain for Britain at the expense of India was created by the process of transferring the home charges between the different currency areas. Over the period 1861 to 1895 the rupee-sterling exchange fell by almost one half.[53] As a silver standard currency (although up to 26 per cent of paper currency reserves could be held in gold), the falling price of silver obviously dragged down the rate, as rupees were sold to bring the now cheaper silver into India.[54] At the same time Indian government expenditure in England was rising, from R76 million to R274 million over the period.

Two regression models were formulated to test whether these transfers drove down the exchange rate independently of the fall of silver. The first model is based upon a cointegration test for a stable long run relationship between variables.[55] If variables are cointegrated then the error term of the

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[53] Narain, 'Exchange and prices in India'.
[54] Chandavarkar, 'Money and credit', p. 769.
[55] Granger, 'Developments'.

appropriate regression will be stationary and there is a long run relationship. The basic regression equation is:

$$e = 5.536 + .564\ P_s - .152h \tag{5}$$
$$\bar{R}^2 = .985\ DW = 1.627$$

where e is the natural log of the rupee-sterling exchange rate in pence per rupee, P_s is the log of the price of silver, and h is the log of home charges or expenditure in England.[56] Coefficients on indices of Indian and British prices were not statistically significant and the variables were therefore excluded from the reported regression.

There was little statistical evidence that the capital series, derived from (2) in table 3, exercised an influence similar to the state transfers (most probably because, as Imlah notes of the cumulative method, while it may be suitable for averages, it is unlikely to be accurate in the year to year variations). The test for stationarity is based upon:

$$\triangle\ res = .00193 - .815\ RES\ (-1) \tag{6}$$
$$(-4.549)$$

where 'res' is the residuals from equation (5), (-1) indicates a one period lag, and $\triangle$ is a first difference operator. The negative coefficient on the lagged residuals and the t statistic of -4.549 are consistent with stationarity, although the critical values of t in this test are only available for large samples. As a check on the coefficients of equation (5) an estimate was made of a first order error correction model.[57] This formulation has the advantage of encompassing a number of less general dynamic models, such as the partial adjustment model, and imposing long run equilibrium relations as well. If variables are cointegrated then an error correction representation of them is possible.

The error correction equation is:

$$\Delta e = \begin{matrix} 4.49 \\ (4.41) \end{matrix} \begin{matrix} + \Delta 0.62p_s \\ (7.56) \end{matrix} + \begin{matrix} 0.43\ p_{s(-1)} \\ (3.70) \end{matrix} - \begin{matrix} 0.12\ \ h \\ (-4.00) \end{matrix} - \begin{matrix} 0.78\ \ e_{(-1)} \\ (-4.44) \end{matrix} \tag{7}$$

$$n = 33,\ \bar{R}^2 = .76,\ DW = 1.81,\ LM\ (3) = 7.53,\ c\ (5,23) = .85$$

The DW test for first order autocorrelation is almost at the upper bound for unambiguously clearing the critical region at the 5 per cent level and the Lagrange multiplier statistic for third-order autocorrelation (LM (3)) is less than the critical χ^2.05 of 7.81. The Chow test for structural stability (c (5,23)) is easily passed. Equation (7) shows that exchange rate adjustment to a change in the price of silver or in the home charges was rapid, with 90 per cent of the adjustment completed in one and a half years. Both equations (5) and (7) yield similar long run elasticities; a 10 per cent increase in home charges depreciated the exchange rate by 1.52 per cent (equation 5) or 1.54 per cent (equation 7).

Indian government expenditure in the United Kingdom in sterling peaked

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[56] Data from Narain, 'Exchange and prices in India'.
[57] Davidson, Hendry, Srba, and Yeo, 'Econometric modelling'.

in 1894 and so an upper bound on the exchange depreciation caused may be found by multiplying the long run elasticity (0.152 or 0.154) by the maximum rise in expenditure, about 270 per cent. The resulting 41 per cent exchange depreciation imposed an increased tax burden on India and raised the costs of imports. Assuming there was no scope for increasing Indian resource utilization by demand expansion, then the costs of empire for India were enhanced and Britain gained greater benefits in the form of cheaper Indian imports.

Indian commodity imports in the 1890s were about R760 million more than they would have been without the depreciation (ignoring any price responsiveness). Net domestic product in 1895 was R38.1 billion in 1946/7 prices.[58] Between 1895 and 1946 weighted agricultural prices rose 284 per cent and weighted non-agricultural prices rose 223 per cent.[59] Current price net product in 1895 therefore lay between R13.4 billion and R17.08 billion; the additional costs of exchange depreciation lay between 2.3 per cent and 1.8 per cent a year in 1895. The true range of estimates could be higher because imports might have been greater had the rupee not fallen. On the other hand the falling exchange rate may have stimulated the economy and provided a net gain through induced investment.[60]

Taking 1895 as the year when the rupee had been pushed to its lowest by the home charges, the additional costs of induced exchange depreciation were R(0.41 × 760)m in terms of more expensive imports. The denominator is the R3,475 million of private capital and the R981.9 million of government debt in England, which yields an extra 7 per cent charge over the direct return actually paid. This was possibly exploitative even if unintentionally so. The direct gains to the U.K. were derived from the implied lower cost of imports from India. Their cost was 69 per cent lower than it would otherwise have been, and, as imports from India amounted to £26.4 million in 1895, assuming inelastic demand, the saving was £18.2 million, 1.3 per cent of U.K. G.N.P. in that year.

IV

The magnitude of foreign investment and the rate of return on it, broadly defined, have been seen as a means by which empire imposed burdens on colonies and boosted the imperial nation's economy. Post-colonial states therefore sought to withdraw from a type of relationship they regarded as exploitative. Balance of payments reconstruction for nineteenth-century Britain and India suggests that this interpretation of history, and therefore the policy which was based upon it, was probably mistaken, at least for these countries. The method adopted provides a wider coverage of investment returns than does Davis and Huttenback's study, but supports their conclusion that profits from imperial investment were not excessive. Returns on British foreign investment in India were on average no higher even in the late 1830s than

[58] Heston, 'National income', tab. 4.3a, p. 397.
[59] McAlpin, 'Price movements', tab. 11A.1, pp. 903–4.
[60] Nugent, 'Exchange rate movements'; Tomlinson, 'Exchange depreciation'.

Indian domestic rates, and at the end of the period were so low that the question of an unfair return, in neoclassical terms, does not arise.

If the rights that encouraged the investment were unjustly acquired, then from another viewpoint the returns and the administration that went with them were exploitative even so. Two pieces of evidence indicate that such exploitation, as Marx thought, was 'socially necessary'. The first is that the falling rate of profit in nineteenth-century India almost certainly followed from the integration of India into the world economy, and the integration of the Indian economy itself, using British capital, technology, and institutions. The railway, the telegraph, and company law were unlikely to have been transferred either so quickly or to the same extent outside an imperial relationship. Second, defence expenditure and the associated transfers were probably smaller than under any likely alternative regime. Although some in India may have been made worse off immediately by expropriation, the well-being of future generations was improved.

International economic transactions may be exploitative because of the management of trade as well as investment, but nineteenth-century British tariff policy was not a source of unjustified gains from empire. The fall of the rupee consequent upon imperial transfers may have had a strong influence in redistributing the gains from trade from India to Britain in the last quarter of the nineteenth century. That conclusion must remain tentative because it depends upon whether exchange rate depreciation increased Indian activity in total or merely switched resources between activities and markets.

India was only one part of a vast formal and informal empire where, it has been argued, there were opportunities to acquire monopolistic privileges and concomitant inflated profits and transfers. The precise average return to British overseas investment depends critically upon the allowance made in the British balance of payments for invisible trade. For small redistributions of Imlah's invisibles to profits, the overall return to British foreign investment in the nineteenth century averages little more than 5 per cent. Allocating as much as 2.5 per cent of the value of visible trade to return to capital instead of to the category described by Imlah as 'profits on foreign trade and services', only raises the returns on foreign investment to a little over 8 per cent on average over the period 1816 to 1913. There seems little evidence suggesting major exploitative gains here.

Altering the estimated value of the British net foreign capital stock in 1816 from Imlah's £10 million to a different total, either on grounds that Imlah's figure was only an approximation or to consider the possible consequences of alternative economic and military scenarios in the eighteenth century, suggests that the 1913 stock figure is not a robust estimate, but, on the contrary, sensitive to such alterations. Reducing the 1816 stock to zero but maintaining the same average return as before, lowers the 1913 stock figure to five-eighths of the generally accepted value. Imlah's foreign capital stock estimates must be regarded as more fragile than previously thought and a good deal of the foreign income of the United Kingdom in the nineteenth century must be attributed to her success in the wars of the preceding century.

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