

INTRODUCTION

By 1908 Britain had invested £274 million of capital in Indian railways, making it the largest single investment programme ever undertaken in the British Empire.¹ Railways made up 80 per cent of Britain's industrial investment in India, relying on Indian taxpayers to fund construction and early operations. The size and prominence of this public works project has prompted a continuing scholarly debate on the motivation and results of Indian railways, since Lord Dalhousie's original railway minute of 1853. However, most of the analysis has focused on the earlier period of railway construction up to 1875. Like much historiography of the colonial Indian period, analysis has been characterized by subjective responses to British Imperialism. For example, Daniel Thorner's work on government provision of early Indian railway guarantees complemented Indian nationalist writing on railways, as part of the 'drain' debate. To be fair, Thorner was sensitive to the difficulty of pursuing development policies in British India given the political landscape at Westminster. After all, the India Office was not unique in guiding colonial enterprise towards dependence on manufacturers and financiers at the metropole. In contrast, the 'new Imperialist' scholars, reinterpreting British railway policy as liberal, sensible and benign have ignored the most compelling aspects of Indian nationalist critique. Dutt, Naoroji, Ranade and Wacha may have overstated their case at times, but the complaint that Britain pursued railways in isolation from other legitimate development concerns has never been rebuffed.² The opportunity cost of railways, in a balanced budget environment, in terms of irrigation, sanitation and education expenditure foregone was considerable.

Indian railways have been criticized for absorbing more than their fair share of India's tax receipts. They have also been seen as stifling industrial development and wealth creation in India. It is true that nationalists underestimated the challenges in converting India's eighteenth-century artisan textile businesses into western-style industry. Nevertheless, India's industrial stagnation in the nineteenth century is an awkward fact for apologists of Empire. The British neglect of Indian industry after the fall of the Company is beyond debate, but the extent to which this was understood to place limits on India's growth potential is still

discussed. Even Keynes had seen the terms of trade moving in favour of India's agricultural base over time.³ Modern globalization theory has stressed the benefits of rigorous international specialization. Victorian railways in India were constructed to accelerate that process but, uniquely, India became a major railway power without benefiting from the normal accelerator and multiplier effects of capital investment. The cataclysmic famines of the 1870s and 90s were the most dramatic evidence of the failure of the Raj to create economic growth and combat extreme poverty in India. Over 1875–1913, for example, China generated comparable economic growth to India, without a railway network, while both countries underperformed the average for developing nations.⁴ At the same time, the British focus on overseas capital exports, of which Indian railway bonds and equities made up a significant share, created longer term problems for the UK economy, which suffered from the opportunity cost of capital directed at 'rentier' empire pursuits, rather than new domestic industries like electricity, chemicals and motor cars.⁵

During the late nineteenth century the British were prepared to question the benefits of rail investment at public committees and commissions. However, by 1909, in a memorandum detailing the achievements of the Raj in the half-century since the Mutiny, self criticism had ceased. Railways were emphasized as one of the great achievements of the period since the abolition of the East India Company (the Company). Aggregate gross earnings were £30 million and the benefits of the railways were estimated at a spectacular £100 million per annum, incorporating savings in transport fares per mile travelled but excluding additional benefits of spared time. The railway network employed some 525,000 people of whom 508,000 were Indians. Railways had produced a return that year of 4.33 per cent. Like modern scholars of the Imperialist school, the report failed to consider alternative uses of the enormous capital expended. Indeed, the report pointed to returns of some 8 per cent on more recent irrigation expenditure on an aggregate capital programme of only £32.5 million. These were returns unheard of in the Indian railway sector, outside the Bengal regional monopoly, the East Indian Railway (EIR). The India Office/GOI had over previous years channelled ten times as much capital into the lower yielding railway business in a policy which ignored considerations of market-based returns.⁶ One aim of this monograph is to explain the strength of support for this railway investment programme across large sections of British decision-makers without resorting to a partisan view of the rights or wrongs of the project.⁷ To do so it is necessary to look in detail at debate surrounding the three rationales used by the British to justify prioritization of Indian railways: trade and commerce, famine protection and relief, and military/strategic benefits for the defence of India. The triumvirate of early rail enthusiasts, W. P. Andrews, Macdonald Stephenson and John Chapman used all three aspects in promoting Indian rail projects.⁸ These three

rationales provide a helpful framework for interpreting the period after 1875 when similar arguments persisted.

The commercial rationale for railways had been called into question by 1875. The first generation of government-guaranteed companies, with the exception of the EIR and Great Indian Peninsula Railway (GIPR), had failed to meet their 5 per cent guarantees and absorbed large GOI subsidies. This prompted a shift to direct state funding under the Liberal Viceroy Lawrence, a decision reversed in the early 1880s in an attempt to move railways off the government's balance sheet. The second generation of guaranteed companies provided ample opportunities for City underwriters, financial advisors, stockbrokers, rail promoters, managing agents/traders, shippers and insurers to generate service industry revenues. This was achieved in parallel with large manufacturing orders for locomotives, wagons, steel railings, steel lines, bridge contracts and general engineering products. The extent to which Indian railways could act as a counter-cyclical source of demand during the 'great depression' of the later nineteenth century was much discussed at the parliamentary commission hearings on the depression of trade. Sheffield, Glasgow, Manchester and London Chambers all had significant representation in parallel with the Indian chambers. The book will attempt to disentangle these different interest groups, to draw conclusions on the relative strength of service industry and manufacturing lobbies. This should contribute to the active debate on gentlemanly capitalism which has developed in recent years.⁹

Given that India made up over 80 per cent of the population of the British Empire by 1900, Cain and Hopkins made clear that 'no plausible explanation of the purpose of empire-building can afford to stumble over the sub-continent'.¹⁰ This makes the sub-continent's largest industrial project central to any critique of the 'gentlemanly capitalism' paradigm. Indeed, Dumett criticized the lack of attention paid by the two authors to railways and shipping across the British Empire. He saw their references as 'brief' and argued that the writers failed to link transport technology to 'the wider industrial revolution'. Further, he questioned positing a close relationship between the City and politics, apart from the prominent Bank of England/Treasury relationship (where the requirements of public funding brought them together). There was a lack of 'representative examples' where City people had demonstrably influenced 'overseas political, military and naval operations' or 'the building of new colonies and the extensions of empire'.¹¹ Indian railways provide a test case for these gaps in gentlemanly capitalism's historiography. Equally, scrutiny of British manufacturing lobbies, which pressed railways, should allow consideration of Clive Dewey's view that manufacturing influence in British India was declining by the late Victorian period. Dewey argued that the 'eclipse of the Lancashire [cotton] lobby' could be traced back to 1870. Lancashire's success in overriding 'infant industry'

protection for Indian textiles was said to disguise longer-term weakness. This reflected the 'decline of the provinces in British politics, and the emergence of a highly-centralized class-based political system', in line with Cain and Hopkins assertions.¹² This was a bold statement which would be strengthened if the largest Imperial industry was seen to benefit only British service industries. Further, the overwhelmingly Greater London investor base for the bonds and equities originated by Indian railway companies may give support to the Cain and Hopkins emphasis on the middle-class elite of the South East of England. Certainly the demographics of that investor base differed from the non-guaranteed British railway companies up till the 1840s, which had attracted savings from the regions where they were located.¹³

The trading and commercial aspects of Indian railways occupy a central position in the debate about 'economic imperialism'.¹⁴ W. J. Macpherson took a benign view of the influence of British commerce and finance on the India Office and GOI, including public lobbying by the 'cotton barons'. He largely ignored the informal advisory arrangements between prominent bankers and the India Office, and lobbying activity by Indian Chambers of Commerce. Like Dewey, Macpherson was sceptical of the influence of manufacturers on the dual government. While steel railway lines and sleepers became an important source of demand for British manufacturers he concluded that 'the output of the iron industry, whether British or Indian, was an effect rather than a cause of the construction of lines in India'. He could detect no bias in the tendering process in favour of British manufacturers, and argued 'if anything the bias was towards India, but price was the ultimate determinant'. In short, Macpherson rejected accusations of 'economic imperialism' in Indian railway administration, seeing little evidence of efforts 'to exploit the ryots'. He gave an exhaustive description of 'the new issue market for Indian railway securities' but little insight into the advisory function of City bankers. He was satisfied that the underwriting fees charged on debentures and stocks were reasonable, highlighting the tendency to distribute stock to existing shareholders and so dispensing with underwriters altogether. In support of this contention, he quoted F. Lavington who had characterized railway investors as being motivated by steady returns rather than speculation.¹⁵ Macpherson's research focused on the earlier period up to 1875 but, beyond that, the volume of construction and financing increased, making the stakes for British suppliers greater. Similarly, the extent to which foreign competition could expect to win manufacturing and financing business heightened as other countries industrialized and competed more effectively with Britain. Hence, Macpherson's assertions about the impartiality of the dual government in allocating contracts demand added scrutiny in the period beyond 1875.¹⁶ It is surprising that the period of 'High Imperialism' has received so little attention in the historiography of Indian railways.

The famine prevention rationale for Indian railways prompts equal controversy to that surrounding commerce and trade. The failings of railways to protect against famine in the disasters of 1896–97 and 1899–1900 created heightened resistance from Indian nationalists, but little re-examination of government investment priorities. Irrigation and education expenditure still lagged behind, despite assurances at the subsequent famine commissions that this would change. Scholarly analysis of famines and Indian railways has mainly consisted of static regression analyses by Michelle McAlpin and John Hurd, using famine commission data to prove links between food price equalization across regions, and railway investment. However these models could not cope with the complexity of the matter, where high clearing prices for food often worsened matters by spreading famine wider. Cross correlations between variables in simple regression analysis make the pro-railway conclusions problematical.¹⁷ The opportunity cost of scarce resources devoted to railways in the late nineteenth century was significant, but such costs did not become a focus of economic theory until the early twentieth century. McAlpin's confident assertion that railways had played no part in worsening famine conditions in the late nineteenth century requires further research through accounts of the time, to supplement crude price data. This detail is accessible through the voluminous famine commission accounts of Indians present in the affected regions. Furthermore, the extent to which railway transportation was imposed as an isolated government policy, which shocked grain and rice markets without countervailing adjustments in terms of relief food supplies or export bans, is ignored in McAlpin's work. She asserted that railways 'permitted the import of grain into regions of harvest failure and thus helped to limit the mortality from such disasters'.¹⁸

This rather heroic picture of British famine relief and prevention ignores the impact of failed monsoons in the 1870s and 90s, which resulted in unprecedented mortality figures of 13–16 million. Something clearly went wrong although the British account of the period, written in 1909, boasted of rising agricultural prices relieving peasant poverty through wealth accumulation. True, wages rose eventually leaving people less vulnerable to increased grain prices, but in the short term railways wrought rising prices and encouraged Malthusian fatalism amongst officials.¹⁹ It seems reasonable to ask whether policy makers were aware of the dangers of what Amartya Sen subsequently named the the problem of 'exchange entitlement'.²⁰ Equally, with well over £200 million of railway investment sunk into a food distribution network by the advent of the late 1890s famines, one might have expected a better mortality outcome than that suffered in prior famines. Debate on the relative severity of these famines versus prior experiences, in that sense, is missing the point. Again, famine commission testimony should provide insight. Finally, the assertion that famine disappeared after the 1899/1900 crisis, proving the potency of railways in combating hunger,

ignores the more consistent public health concerns in colonial India. Ira Klein attempted to widen debate on the failings of British infrastructure in improving sanitation and disease control. Statistics in Northern India from the first census of 1871, for example, showed stagnant population due to a rising death rate. The death rate reached an unprecedented 5 per cent by 1908. Too much focus on famine outbreak risks diverting attention from the role of railways in disrupting 'traditional socio-economic institutions ... hampering older modes of agrarian production, and ... impoverishing the soil'. In 1905, for example, by which time the Raj boasted that famine had been eradicated, Klein pointed to failed crops, 25 per cent price rises, and famine/disease related death rates comparable to that suffered in 1879. Within two years, wheat prices had risen by a further 50 per cent, and had pulled up prices of cheaper grains to worsen disease-related mortality rates in the region.²¹ In contrast, the Raj's 1909 memorandum stressed the immunity of the Central Provinces and United Provinces to the drought of 1907, where higher grain prices had improved peasant wealth, allowing the avoidance of another catastrophic famine. The Raj tended to view high prices as reflective of a buoyant agricultural sector, perhaps as a rebuff to Dutt's accusations of overbearing land assessments.²² Officials' inability to trace links between railway development in isolation, high prices and general susceptibility to famine and disease needs further explanation. It also encourages consideration of the extent to which British policy was underpinned by Malthusian fatalism on the prospects for India's supposed population problem, notwithstanding the static population over those years.²³

The third rationale for Indian railways, the military and strategic benefits in the defence of India, was emphasized by W. J. Macpherson in the period after 1870.²⁴ The experience of the Indian Mutiny, coupled with increasing tensions on the North West Frontier was said to have reinforced the requirement for railways to despatch troops and materials rapidly. Railways had become the technology of choice for military strategists by the 1870s, based on experience in the American Civil War and Franco-Prussian War. However, it is far from clear how the thinking of Friedrich List and Prussian General Von Moltke was absorbed by the India Office and Calcutta. The expense and engineering challenges implied in constructing even narrow-gauge railways into the Himalayas, to meet the challenge of Russia from Central Asia, presented great difficulties for military planners. It was evident that the low cost military railways built by the Russians were not achievable by the British on the North West Frontier. However, the defence of India placed British military planners in a theatre of war akin to continental wars. This made India less suited to the traditional dominance of the Royal Navy. The British Army was constrained by lack of conscription and the requirement, post-Mutiny, to shift away from native troop concentration. Railways may have been the most suitable solution to the unique

challenges of Russia's railway capacity, but the existing historiography fails to examine the method by which this came to be accepted. The quality of British strategic analysis of Russia's Transcaspian and Orenburg–Tashkent Railways requires consideration. Not all observers were convinced that Russia could readily turn her Central Asian network into a platform for an invasion of British India. Indeed, by 1904 the shortcomings of the Transiberian railway for Russian troop movements were evident for all to see against the Japanese. However, even after the Anglo–Russian concordat of 1907, military railway expenditure in India continued at a high level, casting doubt on whether Russophobia fully explains the phenomenon. Certainly, British India's strategic position was complicated by the 'buffer states' in the North West (Afghanistan and Persia) and North East (Burma). Railway strategy in these states appeared to differ according to the attitude of indigenous rulers and the opposition of local tribes. Relationships between Britain and Russia, as the Great Powers, and buffer states need to be dissected, to understand the dynamics of railway building. The enthusiasts for frontier railways often pressed the commercial and trading benefits of these lines as added benefits though the commercial attributes of Afghanistan, Baluchistan, Persia and Burma were doubtful. It is reasonable to ask whether the construction pattern represented an early version of what Eisenhower would much later christen the 'military industrial complex'. The role of energetic military railway planners in the ICS and India Office warrants further examination. They gave evangelical sponsorship to private guaranteed strategic lines, then the consolidated/nationalized North Western Railway, the largest loss-making institution in Indian railway history.²⁵

This thematic analysis is intended to explain the single-minded investment policy in railways pursued by the dual government, despite anti-railway agitation by nationalists. Indeed, Ambirajan identified unanimity in British India's 'interest in the construction of public works and utilities', but differences over 'execution' of such policy. This 'execution' overlapped with official's ideological attachment to 'laissez faire and Classical theory of economic policy'.²⁶ In assessing the practical implementation of policy, it is helpful to examine case studies of specific Indian railway companies spanning the spectrum of the private to the public sector. This approach serves to identify common ideological themes in the financing and management of companies, and elucidates the extent to which the process was more arbitrary and chaotic. India operated without a written constitution and with limited regulation from Westminster, so one might expect officials in Calcutta and Whitehall to have operated with discretion. This might not lead to corruption in dispensing contracts and concessions, but would involve challenges for modestly remunerated government officials dealing with powerful and well funded counterparts in the private sector.

The hybrid ownership and management of guaranteed railway companies, with private London boards tempered by India Office appointees, make them a suitable case study for examining the workings of India's early mixed economy. The debate and negotiation between government officials, railway promoters, financiers, lobbyists, railway executives, diplomats and provincial representatives might be expected to reveal much about the consistency and transparency of politics and business. The process was dynamic with government accounting and administrative rules changing over time, offering opportunities for nimble traders, manufacturers and financiers to benefit from links to government and information on the tendering process. Private papers at the India Office Library, and elsewhere, should give insight into the intimacy of these relations. In the detail of deals negotiated it is possible to assess the benefits that private individuals extracted from these relationships. Technical expertise might allow informal advisory functions for financiers and managing agents, or membership of government commissions on railway matters, and related currency, famine, trade, military and expenditure forums. This area of research has attracted little attention in the 'gentlemanly capitalism' debate. A representative study of Indian railway companies gives insight into the preponderance of these 'experts' on the board and share registers of businesses. The tendency for ex-officials to switch from 'gamekeeper' to 'poacher' profile will be examined. The case studies are intended to cover a substantial share of the asset base of Indian railways, a diversity of private/public ownership/management structures, and a geographic spread across regions touched by railway development. Of course, the choices are partly constrained by the availability of research material to recount the company's narrative in sufficient depth.²⁷

In presenting a picture of the largest Empire investment programme over a period of almost forty years, the underlying political, strategic and financial landscape of Britain and her Empire impinges. This was a period of relative economic decline for Britain. The so-called 'Great Depression' of the 1880s, when price deflation afflicted domestic consumer confidence, made export markets like India more important for British industrialists. SB Saul has identified the central position of India as a customer for British manufactures and services/capital, and a Trojan horse for exports into protected markets like France and USA.²⁸ Railways played a prominent role in facilitating this foreign trade on British terms, but suffered from London's need to administer India without net British contributions. The costs of the Second Afghan War and the annexation of Upper Burma, coupled with declining opium revenues and arguments with Manchester over the legitimacy of Indian tariff revenues, put pressure on the Viceroy's Finance Member to balance his books. While House of Commons scrutiny of administration remained slight, the requirement of the Secretary of State to lay before Parliament an annual budget statement for India created some

check and balance. The Indian railways present a clear picture of early attempts by government to finance and manage businesses within draconian budget conditions. Off balance sheet financing structures resemble modern government financing methods, like Private Finance Initiatives in health and education. It is important to understand the extent to which creative public accounting was viewed as controversial at the time.²⁹ Equally, Indian railways wrestled with many of the same problems of pure private British rail companies operating in markets, where damaging price competition could undermine financial integrity and deliver poor value to both shareholders and customers.³⁰ The case studies should demonstrate the extent to which industrial combination and regional monopolies were courted by Indian decision-makers, paralleling moves towards railway amalgamation in Britain. At the same time, the lack of democracy amongst Indian taxpayers made the advent of a railway rates controversy comparable to that in Britain unthinkable. Further, more covert methods of state support for joint stock companies need to be examined. Critics of the time, like Sir George Campbell, saw the companies as benefiting from multiple gold plating provided by the India Office. Case studies should serve to clarify the existence of government subsidies, regional monopolies, land gifts and off-market acquisitions. Widespread efforts to disguise state support would suggest greater requirements amongst government officials to maintain a façade of *laissez-faire*. This has been a controversial debate for scholars, with the extent of British India's adherence to free markets much disputed.³¹ As ever, the particulars of financing discussions bring these pressures most clearly to the fore, as officials wrestled with financing and refinancing deadlines.

Finally, the scale of the Indian railway project, in the context of malleable *laissez-faire*, gives a unique insight into the extent to which late Victorian India represented a meaningful first attempt at a national development plan. In the 1850s Marx had highlighted the potential of railways to create a more dynamic Indian economy, warning of the risks to Britain in creating something of a 'Frankenstein's monster'. He predicted in the 1850s that railways would encourage Indian assertiveness since 'when you have introduced machinery into the locomotion of a country, which possesses iron and coals, you are unable to withhold it from its fabrication'.³² However, in reviewing Indian railways, Ambirajan was sceptical about the coherence of the Raj as a platform for development. He argued that 'development' policy was exclusively targeted at agriculture and 'was to be achieved through individual initiative without *direct* government assistance'. Public works were to combine with legal and monetary systems, business entrepreneurs, and education as a platform for agriculture-focused government assistance. However, departures from *laissez-faire* in Smith and Mill allowed 'carte blanche to the Raj' with pursuit of development where it wished.³³ Daniel Thorner went further arguing that London-listed Indian railway companies had

ignored considerations of development since it was 'simply not their concern'. He expressed sympathy for fellow American Leland Jenks' assertion that in their first seventy-five years, the Indian railways had 'destroyed more occupational opportunities than they opened'.³⁴ Thorner saw a deliberate effort to maintain the 'buy British' approach towards railway equipment, which explained part of the underperformance of the Indian economy. This was facilitated by the charging of low freight rates on Indian exports to ports and British exports from Indian ports. The policy was aimed at deepening 'the country's economic dependence on the United Kingdom'.³⁵ More recently, Tirthankar Roy pressed the legacy of the railway network bequeathed to India as representing a valuable resource for future economic development, but characterized the British motivation for building the infrastructure as 'governance rather than development'. The government's share of the Indian economy by the early twentieth century was only 5 per cent, meaning economic growth was still overwhelmingly dependent on the private sector (primarily agricultural).³⁶

In reviewing British railway policy over these years it will be possible to assess the extent and sophistication of British development policy in India. Juland Danvers as India Office Public Works member, for example, was pressing in the 1860s to have more rail material produced in India, but the shift to Indian railway line and locomotive manufacture never really occurred. The British maintained a control of railway equipment manufacture in their 'formal' Indian Empire, in a manner which they failed to achieve in 'informal' Argentina.³⁷ By the first committee dedicated to Indian rail finance in 1908, Danvers's ambitions had been suppressed. A study of individual companies, their financing and governance may give insight into the abandonment of industrial development, as a policy pursued even indirectly in India. Moreover, the activities of James Mackay and his managing agent/City associates at the railway-related committees should give more colour to the view that there was a consistent opposition from business to government development. The role of James Mackay, himself, in participating in different Indian council committees and chairing the 1908 railway committee demands attention. Scrutiny of his committee, and the extent to which he was able to choose members/witnesses and choreograph events, should reveal much about the extent of the India Office's development ambitions and the dominance of commerce/trading elites up to the end of our period. While Dewey presented Mackay as a bastion of business independence, who opposed Curzon's 'new industrial policy', his activities on Indian railway finance may suggest a more symbiotic relationship with Whitehall.³⁸

The Mackay railway committee supported the continuation of London-based boards, managing railway assets from a distance of 6,000 miles albeit with India Office interference on overall capital expenditure budgets. John Stuart Mill had questioned the efficacy of shareholders holding management

to account in the context of mid-Victorian joint stock companies (the modern principal-agent problem). The extent to which guaranteed London shareholders in Indian railway companies could really be expected to maintain private-sector discipline on ex-ICS/India Office railway directors must be open to doubt. Again the activities of these executives in the practical running of their companies will add to this debate. Mackay and fellow committee members like Sir David Barbour doubted the capacity of Bengali or Bombay entrepreneurs to run railway companies, even as Acworth positioned the industry for nationalization in 1921. The veneer of private-sector efficiency and shareholder accountability, which the hybrid financing arrangements allowed, gave these businessmen immunity to criticism from government officials although they shared the same paymaster in the Indian taxpayer. In the same way that Mill struggled to applaud laissez-faire in his writings, while providing entry points for government intervention in almost any industry, the contradictions of Indian railway policy may well have delivered the worst of all worlds. We must ask whether the accumulation of minor scandals and inefficiencies allowable in India's hybrid companies represented an inferior alternative to a more rational planned approach, pursued for a time by Viceroy Lawrence. At the same time, the level of scrutiny achieved may have been just rigorous enough to constrain industrialization through a stifling of private sector dynamism. As Clive Dewey characterised the failings of Curzon's 'new industrial policy':

'Few countries have ever industrialised...in which entrepreneurs have been unable to corrupt the state, exploiting taxpayers and consumers far beyond the limits set by proper tolerance...'³⁹